FORBEG

A European comparison of electricity and natural gas prices for residential, small professional and large industrial consumers

May 2025

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List of acronyms

AMR	Automatic meter reading
BE	Belgium
BT	Basse Tension It encompasses consumers connected to the distribution grid on a voltage level < 1 kV.
CHP	Combined Heat and Power
CU	Consumption unit
CHPC	Combined Heat and Power Certificates
DCM	Distribution Charging Methodology
DE	Germany (abbreviation from ‘Deutschland’)
DSO	Distribution System Operator
EAN	European Article Number
EEAG	Guidelines on State aid for environmental protection and energy 2014-2020
EHV	Extra-High Voltage
FR	France
FPS	Federal Public Service (see FOD in Dutch or SPF in French)
GC	Green Certificates
GRAPA	La Garantie de revenus aux personnes âgées
GRDF	Gaz Réseau Distribution France
HH	Half Hourly
HHI-Index	Herfindahl-Hirschman Index
HS	Hoogspanning (High Voltage)
HT	Haute Tension (High Voltage)
IGO	Inkomensgarantie voor ouderen
kV	kilo Volt
kWh	kilo Watt-hour
KWKG	Kraft-Wärme-Kopplungsgesetz (see CHP in English)
LS	Laagspanning It encompasses consumers connected to the distribution grid on a voltage level < 1 kV.

LT	Long-term
LTSO	Local Transmission System Operator
MPA	Meter Point Administration Number
MS	Middenspanning (Medium Voltage) It encompasses consumers connected to the distribution grid on a voltage level ranging from 1 to 26 kV.
MT	Moyenne Tension (Medium Voltage) It encompasses consumers connected to the distribution grid on a voltage level ranging from 1 to 26 kV.
MWh	Mega Watt-hour
NBB	National Belgian Bank
NBP	National Balancing Point
NHH	Non-Half Hourly
NL	The Netherlands
OFGEM	Office of Gas and Electricity Markets (UK)
PPP	Purchasing Power Parities
PSO	Public Service Obligation
PSWC	Public Social Welfare Centre
RTI	Reference Tax Income
SME	Small and medium-sized enterprise
SR	Switching rate
ST	Short-term
TRANS-HS	TRANS-HS comes from “Transformatorstation hoogspanning” for which DSOs are directly connected to the transformer stations.
TRANS-MT	TRANS-MT comes from “Transformation moyenne tension” for which DSOs are directly connected to the transformer stations.
TSO	Transmission System Operator
UK	The United Kingdom
VAT	Value-Added Tax
YMR	Yearly meter reading

1. Executive summary

1. Executive summary

English version

This study provides a comparative analysis of electricity and natural gas prices for residential, small professional, and industrial consumers across Belgium and four neighbouring countries: France, Germany, the Netherlands, and the UK. In some instances, results are presented at a regional level to offer a more nuanced perspective.

This report focuses explicitly on energy prices in force in January 2025. This is an important aspect to keep in mind considering the current volatility of electricity and natural gas prices.

Key findings in comparison with the situation observed in January 2024:

- **Electricity prices:**

  For residential customers, electricity bills generally increased, largely driven by changes in commodity prices[1]. In contrast, small businesses saw a reduction in their electricity costs. Large enterprises experienced a noticeable decrease in total electricity expenditures compared to 2024, with medium and large industrial consumers benefiting from declining commodity prices that more than offset increases in local network charges. Various support and protection mechanisms, including exemptions and reductions, have helped moderate costs, creating a mixed but increasingly competitive landscape for electro intensive and non-electro intensive industries alike.

- **Natural gas prices:**

  2025 witnessed a marked rise in natural gas commodity prices across most consumer categories, except for G-RES in the UK, where a decrease was noted due to a lower per unit price cap. Despite the general upward trend, Belgium continues to maintain a competitive edge over its neighbouring countries with its relatively low natural gas prices.

The study examined 13 distinct consumer profiles: eight for electricity (covering one residential, two small professional, and five industrial users) and five for natural gas (including one residential, one small professional, and three industrial users).

The profiles under review are defined in the Terms of Reference of this study. Notably, the electricity profiles were updated for this year's analysis, with retroactive adjustments applied to the 2024 data, reflecting changes in consumption hours, connection and contracted capacities, and peak demands. The updated parameters include the (1) consumption hours equivalent (E-BSME to E1), (2) connection capacity (E0 to E1), (3) contracted capacity (E-BSME to E1), (4) annual peak (E-RES to E1), and (5) monthly peak (E-RES to E1). Aside from these changes, this study builds on previous comparative studies conducted by PwC, for CREG, Brugel, CWaPe and VNR[2], maintaining methodological consistency while adapting to evolving market conditions.

Detailed descriptions and assumptions regarding consumer profiles are provided in Chapter 3.

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[1] Commodity prices refer to the prices for the electricity or natural gas itself, including any fixed charges levied by the energy supplier.

[2] Previous year's studies on the residential and industrial consumers can be found on the CREG website:
https://www.creg.be/sites/default/files/assets/Publications/Studies/F20240515EN.pdf (2024 edition)
https://www.creg.be/sites/default/files/assets/Publications/Studies/F20230515EN.pdf (2023 edition)
https://www.creg.be/sites/default/files/assets/Publications/Studies/F20220513EN.pdf (2022 edition)
https://www.creg.be/sites/default/files/assets/Publications/Studies/F20210517EN.pdf (2021 edition)

Electricity consumer profiles

Profile	Consumer type	Annual demand (MWh)	Contracted capacity (kW)	Annual peak (kW)
E-RES	Residential	3.5	7.36	5
E-SSME	Small professional	30	37.5	18
E-BSME	Large professional	160	105	95
E0	Industrial	2,000	750	725
E1	Industrial	10,000	4,400	4,300
E2	Industrial	25,000	5,000	5,000
E3	Industrial	100,000	13,000	10,400
E4	Industrial	500,000	62,500	50,000

Natural gas consumer profiles

Profile	Consumer type	Annual demand (MWh)	Contracted capacity (kW)
G-RES	Residential	17	-
G-PRO	Small professional	300	-
G0	Large professional	1,250	-
G1	Industrial	100,000	20,000
G2	Industrial	2,500,000	312,500

The comparison examines three key components of the energy bill: commodity costs, network costs, and other costs (including taxes, levies, and public service obligations, such as certificate schemes). A fourth component, VAT, is applicable only to residential profiles for both electricity and natural gas.

Before delving into the price comparison results in Chapter 6, the report provides a comprehensive overview of the composition and breakdown of energy prices in Chapters 4 and 5. Utilising a bottom-up approach, this analysis offers a detailed exploration of the various price components and their application across the countries included in this study.

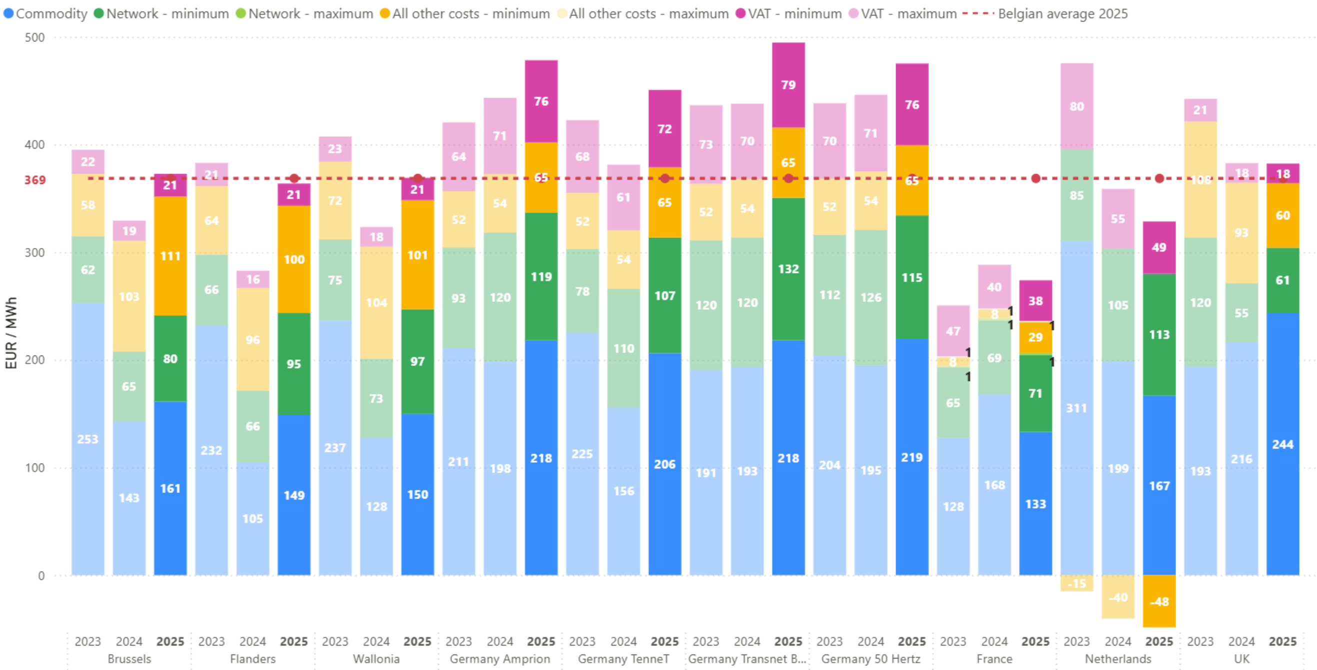
The report highlights considerable variations in the price structure for both electricity and natural gas across different regions and countries. These differences encompass a range of factors, such as network cost configurations and tax regimes, which introduce an additional layer of complexity in conducting meaningful comparisons across all the countries and regions covered in this study.

Comparison of electricity prices

To deliver a detailed narrative for the specified profiles using the collected data, we undertake a comprehensive examination of each profile. This entails articulating the conclusions and implications for each consumer category, with a focus on the regions and countries under consideration. Particular attention is given to the competitive landscape across the Belgian regions.

Comparison of electricity prices for residential and small professional consumers

Electricity price by component in EUR/MWh (profile E-RES)[3]



Between 2024 and 2025, the most notable changes for residential consumers are the overall increase in total invoices, except in the two most competitive countries, France and the Netherlands. The largest rise in total bills was observed in Flanders, with an increase of 283 EUR. This rise is primarily attributed to higher commodity and network costs, with network costs being significantly impacted by a nearly doubled transport cost billed by Elia from 2024 to 2025[4].

Conversely, the Netherlands experienced the largest decrease, with bills falling by 135 EUR, largely due to reduced commodity costs and taxes. The Netherlands remains unique in having a virtually negative value for the "all other costs" component of the invoice due to tax rebates (e.g., *belastingvermindering per elektriciteitsaansluiting*). In Belgium, Flanders stands as the most competitive region, trailed by Wallonia and Brussels, with minimal differences separating them[5].

[3] The legend is applicable to the data for 2025, while the other years use a lighter variant of these same colours to enhance readability.

[4] (Elia, 2023)

[5] In Belgium, the price comparison tools used for the 3 regions use forward looking prices. Hence, the products selection for E-RES, G-RES and E-SSME have been fetched through these websites, but products tariffs were taken using historical-looking indexation parameters. This enables a fair and adequate comparison of Belgian energy products with neighbouring countries.

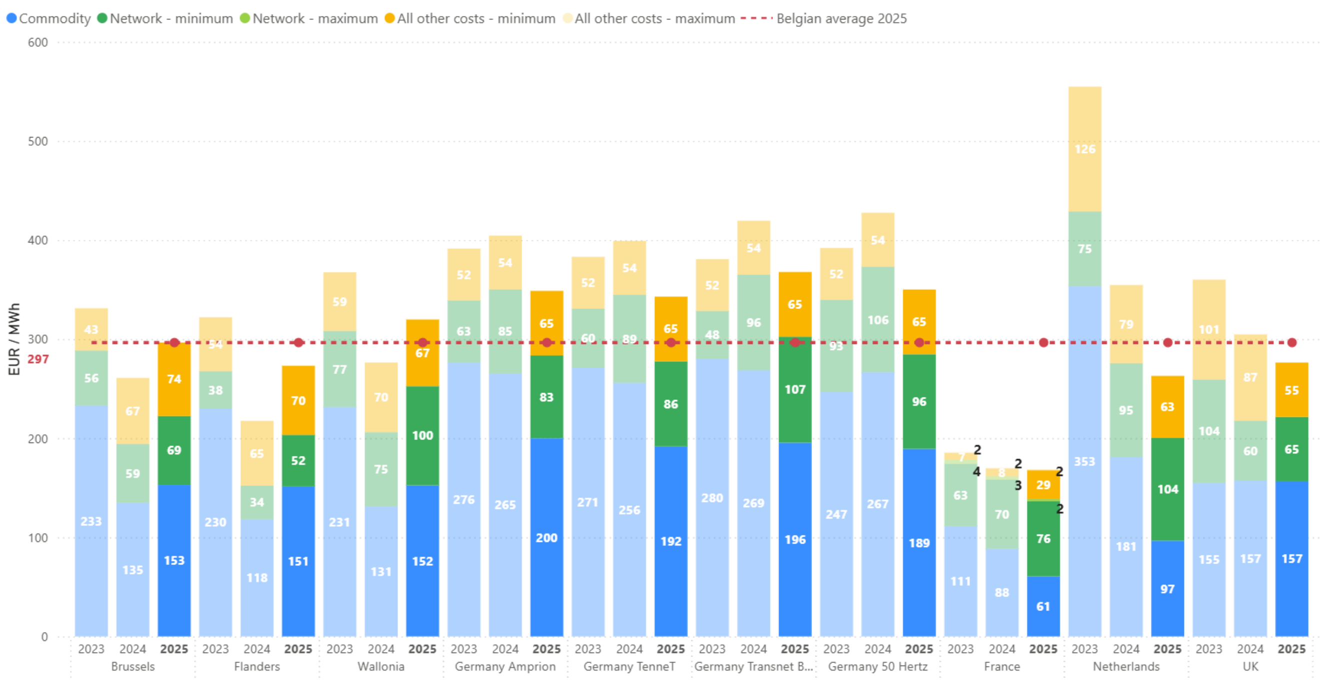
Interestingly, France and the Netherlands, which are the only countries reporting a decrease in bills, also saw reductions in commodity costs, unlike other countries where costs rose. The UK bears the highest commodity costs, while France has the lowest, largely because the government-regulated standard product limits price hikes for French residential consumers.

Network costs generally followed an upward trend, except in most regions of Germany. These costs are driven by transmission operators implementing planned grid investments to bolster resiliency and prepare for transitions, which in turn increase network costs. Germany records the highest network costs, particularly in the Transnet BW region, with the Amprion and 50 Hertz regions close behind. The UK continues to enjoy the lowest network costs, akin to 2024. In Belgium, distribution costs significantly influence the network cost component, with increases in all three regions due to rising transmission tariffs cascading down to distribution tariffs. The highest distribution costs are in Wallonia, followed by Flanders – where this cost component saw the steepest rise in the country – and Brussels.

The “all other costs” component saw an increase in most reviewed countries, except in the UK, which experienced a notable decrease due to a reduction in Energy Company Obligation costs. France had the largest increase, driven by the partial lifting of the *bouclier tarifaire*, which raised excise duties on electricity to previous levels. In Belgium, Brussels incurs the highest costs in this category, while Wallonia and Flanders are on a similar cost base, thanks to a slight reduction in Wallonia's "all other costs" between 2024 and 2025. Brussels’ elevated costs stem from higher Public Service Obligations and green certificate scheme expenses.

VAT rates on electricity have remained unchanged in the reviewed countries. Although VAT is a significant cost for consumers in Germany, it is comparatively low in the UK and Belgium due to reduced VAT rates and a lower cost base. France is the only country studies with a dual VAT rate, with a consumption rate on the one hand (20%) and a subscription rate on the other hand (5.5%).

Electricity price by component in EUR/MWh (profile E-SSME)

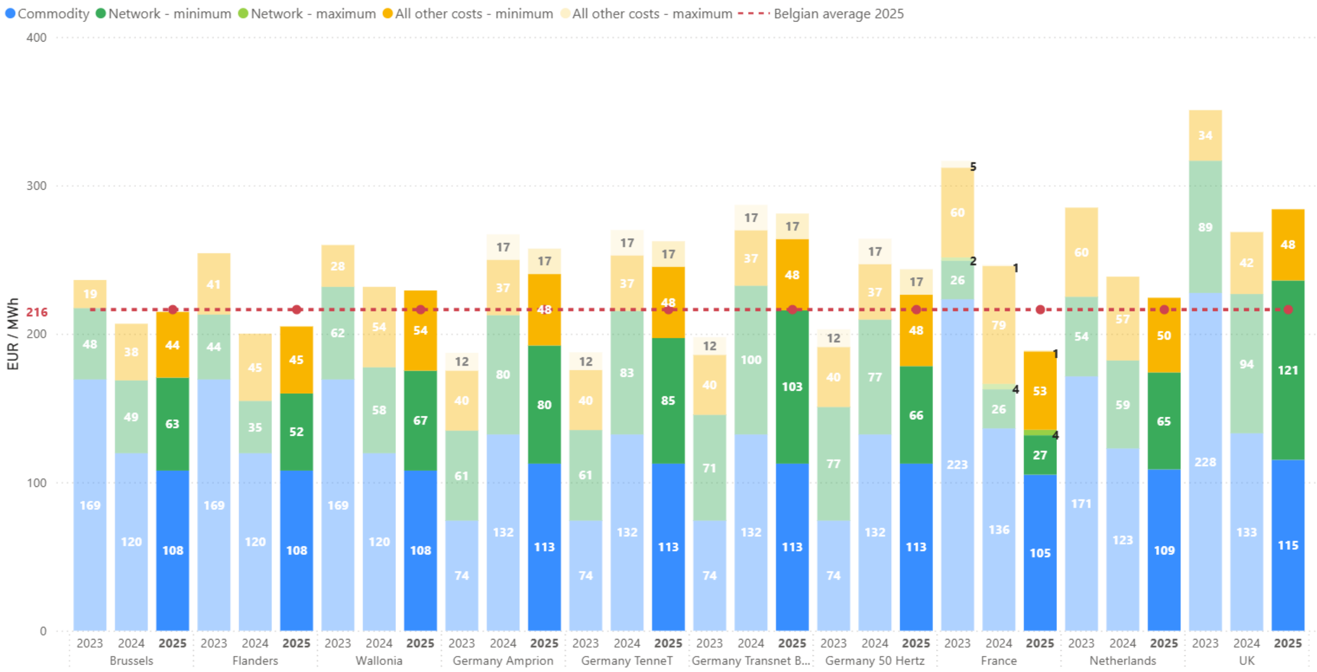


In 2025, the total invoice for small professional consumers saw a decrease in most regions, except for Belgium. This overall reduction was primarily driven by lower commodity costs, while the increase in Belgium was attributed to rising commodity and network costs. Within Belgium, Flanders presented the lowest invoice for this profile, followed by Brussels, with Wallonia experiencing the highest costs among the three regions. Belgium's competitiveness has decreased compared to 2024, as France becomes more competitive, and invoices in the Netherlands and the UK position them on par with Flanders. Although Brussels and Wallonia are more expensive, they still outperform the four German regions. France remains the least expensive country for this profile, similar to the situation with residential consumers, largely due to its continued price guarantee mechanism, resulting in the lowest commodity costs among the reviewed countries. France retains its top competitive position for this profile, as was the case in 2024, while Germany ranks as the least competitive due to high commodity, network, and other costs.

Network costs increased across all regions, with exceptions in certain German areas (Amprion, TenneT, and 50 Hertz). Belgium and the Netherlands, in particular, faced a substantial rise in network costs. In Belgium, distribution tariffs surged in all regions – most notably in Flanders and Wallonia – similar to the E-RES profile, as a consequence of increased transmission tariffs. However, Flanders continues to benefit from the lowest network costs, akin to 2024, with costs being nearly half those of Wallonia, while Brussels stands in between.

The "all other costs" component showed mixed trends across different countries. Increases were noted in Germany, Brussels, Flanders, and France, while reductions occurred in other regions. France observed a significant increase due to the removal of the *bouclier tarifaire*, similar to the residential profile. The most substantial decrease was in the UK, attributed to lower ECO scheme costs. Conversely, Germany experienced an increase driven by escalating costs in various measures, with the StromNEV levy, designed to manage charges associated with access to electricity networks, experiencing a particularly pronounced rise.

Electricity price by component in EUR/MWh (profile E-BSME)

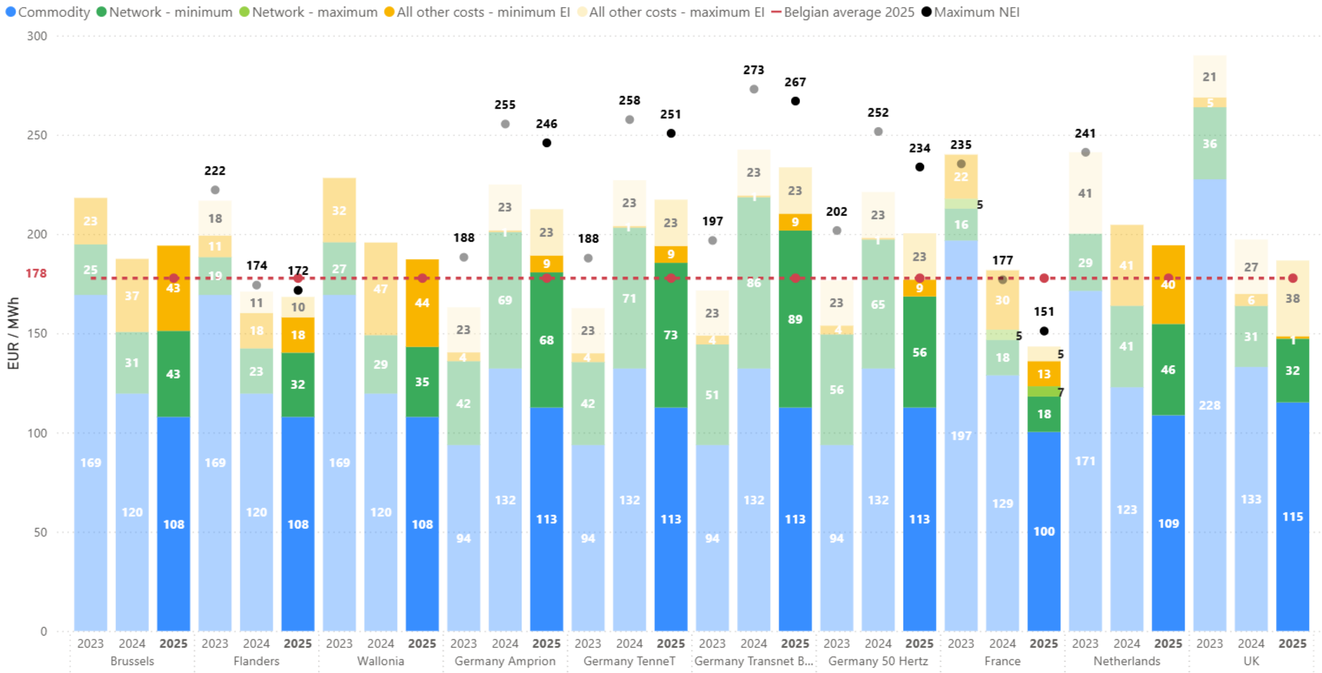


A substantial decrease in commodity prices has contributed to lowering electricity costs for industries, with similar trends observed across all other countries and regions included in this study, as well as other larger profiles. This downward trend in market prices can be partially attributed to the methodologies used in calculating energy prices for these profiles. France has secured the most competitive position, overtaking Flanders compared to 2024. The UK stands out as the most expensive country due to high network costs associated with this profile. Belgium ranks second, with Flanders being the most competitive region within the country, trailed by Brussels and Wallonia.

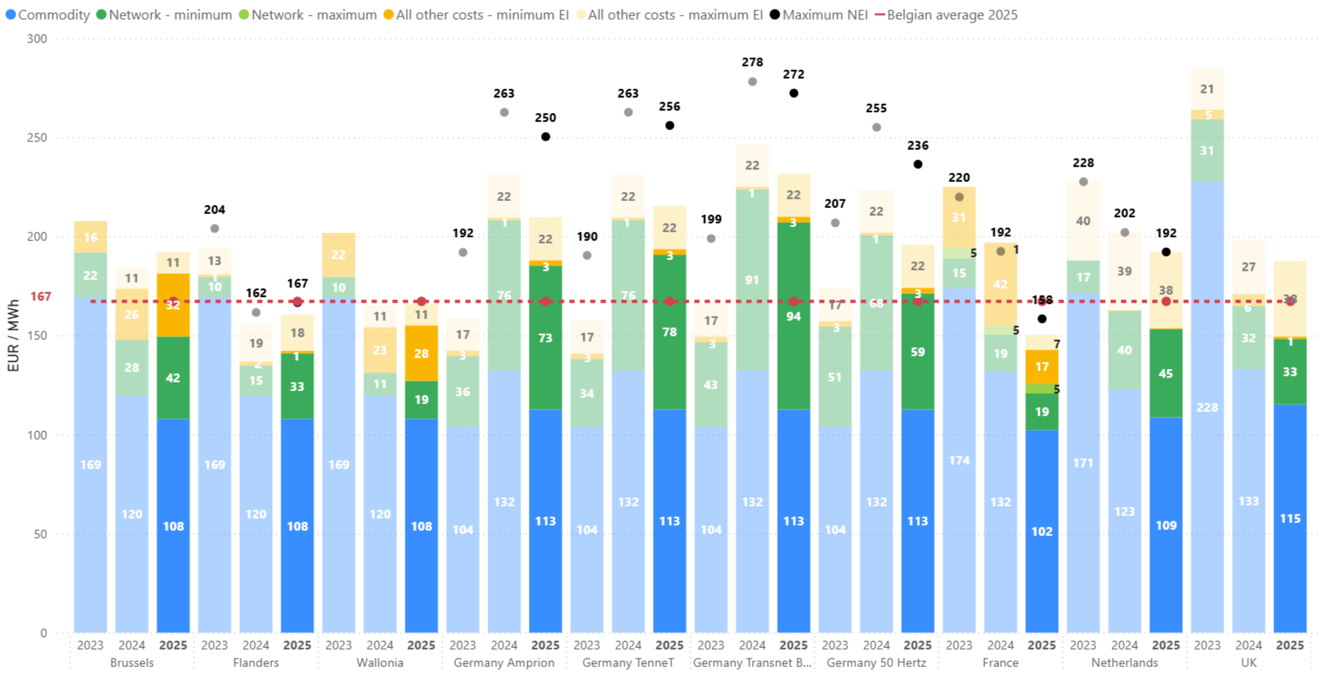
Given that commodity and "all other costs" components are relatively consistent across the observed countries/regions, with some exceptions, the network component plays a crucial role in determining the overall competitiveness of the countries under review.

Comparison of electricity prices for industrial consumers

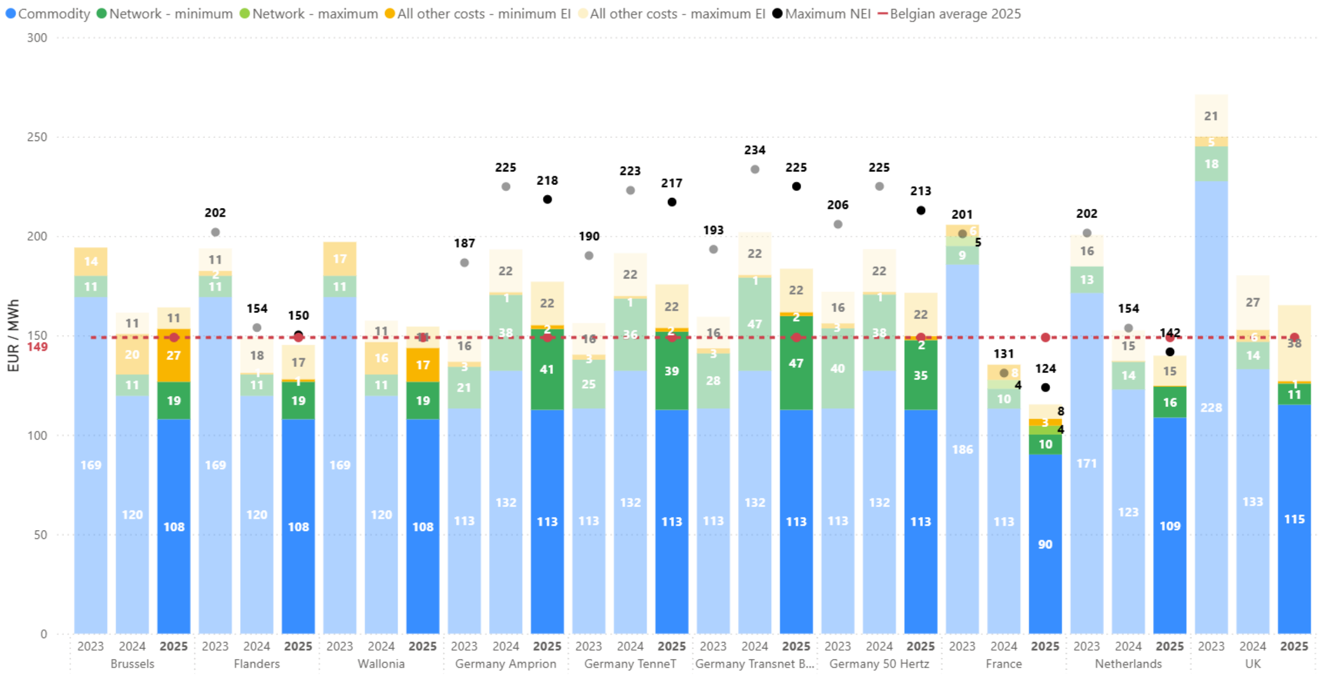
Electricity price by component in EUR/MWh (profile E0)



Electricity price by component in EUR/MWh (profile E1)



Electricity price by component in EUR/MWh (profile E2)



Across all regions and countries, larger consumers have consistently benefited from declining commodity prices, in contrast to the mixed trends observed for smaller profiles. For electro intensive consumers within the E0 – E2 profiles, France offers the most competitive electricity costs, surpassing Flanders' lead for the E0 and E1 profiles as observed in 2024. The UK ranks second for the E0 profile, Flanders for the E1 profile, and the Netherlands for the E2 profile. Unlike the clearer competitive landscape of 2024, this year shows heightened competition among countries across different profiles, with the gap in total bills narrowing between Flanders, the Netherlands, and the UK as we approach the E2 profile.

Flanders' competitive edge is largely attributed to low commodity costs, potential reductions through green and CHCP certificate schemes, and special excise duty exemptions starting from the E1 profile (these exemptions also apply to the other Belgian regions). The UK's enhanced competitiveness begins at the E0 profile, significantly bolstered by full exemptions under the Renewable Obligations scheme. In the Netherlands, pricing outcomes vary based on exemptions, as reductions are provided through energy tax concessions affecting the "all other costs" components, beginning with the E1 profile. Nonetheless, other industrial consumers in the Netherlands face less competitive positions without these reductions. Although Germany does not rank among the most competitive due to high network costs, it does offer notable reductions, allowing regions like 50 Hertz to reach levels similar to those in Brussels and Wallonia.

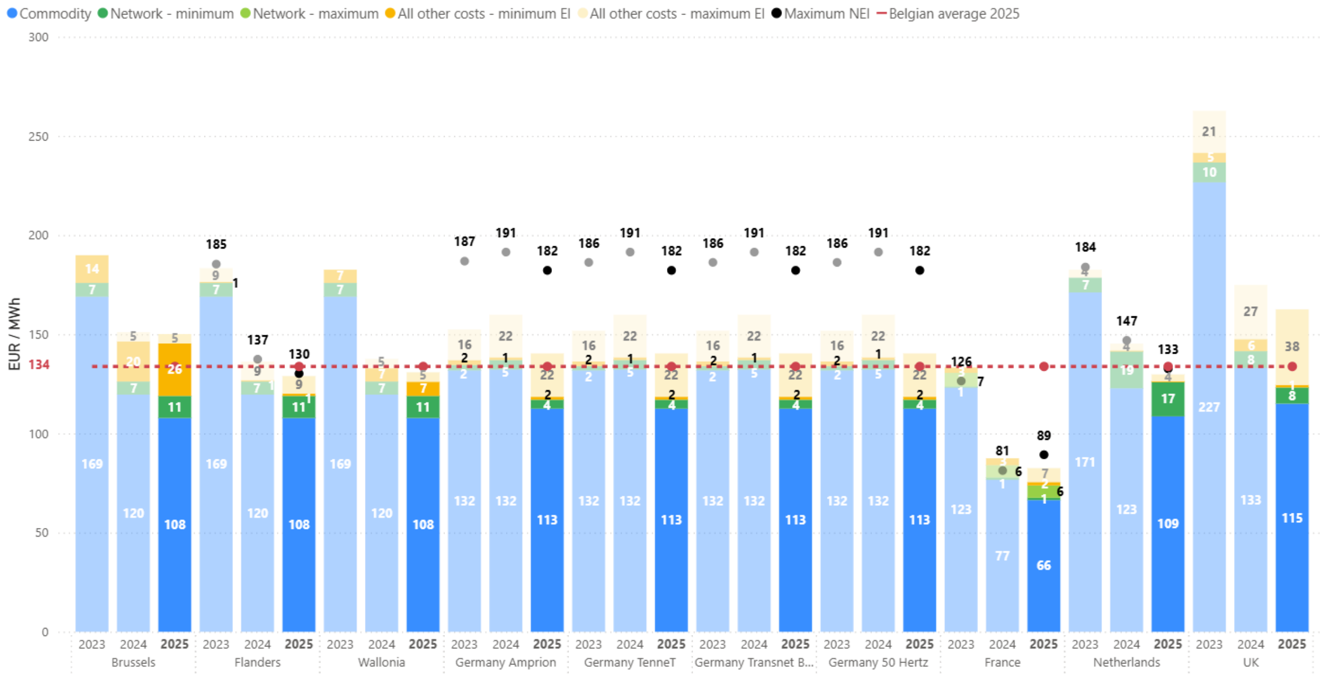
For non-electro intensive consumers, Belgium remains moderately competitive, with Flanders and Wallonia demonstrating greater competitiveness than Brussels. Brussels' comparatively weaker position is due to its predominantly service-oriented economy and higher urban network costs, which limit access to industrial-scale tariff reductions and exemptions that can be found in Wallonia and Flanders. Flanders is the second most competitive region for E0 and E1 profiles, while the Netherlands takes second place for the E2 profile. Germany remains the costliest country for non-electro intensive consumers across the E0, E1, and E2 profiles

In Brussels, the cost difference between electro intensive consumers benefiting from discounts and non-electro intensive consumers is relatively small, mirroring trends in Belgium and France when compared to other reviewed countries. This reflects the more generous incentives offered to electro intensive consumers in other countries. It is important to recognize that government support can also manifest in commodity costs through mechanisms such as France's ARENH[6] and the UK's price guarantees, as well as network costs reflected in grid fee cost reductions through government financial support to network operators, such as in France or Germany.

[6] ARENH stands for « Accès Régulé à l'Électricité Nucléaire Historique » (Regulated Access to Historic Nuclear Electricity). This is a mechanism that allows all alternative suppliers to obtain electricity from EDF (the historical electricity supplier in France) under conditions set by the public authorities.

In Belgium, electricity costs are highest in Brussels, followed by Wallonia for E0, E1, and E2 profiles[7]. Although differences for the E0 profile are minor, the gap widens considerably for the E1 and E2 profiles due to the limited reductions available to Brussels-based companies, given their sparse representation in the region. Conversely, Flanders consistently remains the least expensive region in Belgium across these profiles, largely due to lower minimum costs in the "all other costs" component. Network costs demonstrate notable variability within Belgium across different profiles. For the E0 profile, the network costs are relatively similar across the three regions, while Wallonia enjoys a distinct competitive advantage in this component for the E1 profiles. In terms of network costs, Brussels experiences the highest costs in the country from the E0 through to the E1 profile. As from the E2 profile, all Belgian regions have the same network costs, as they are connected to the transmission network and not the regional distribution network anymore. As a consequence, the difference in competitiveness from the E2 profile onwards stems directly from the "all other costs" component.

Electricity price by component in EUR/MWh (profile E3)



For the E3 and E4 profiles, France continues to offer the lowest total invoices among all countries and consumer types examined in this study, primarily due to the ARENH mechanism. In contrast, Germany remains the most expensive country for the E3 and E4 non-electro intensive profiles, with the UK and Brussels following closely. This high cost is mainly due to the elevated "all other costs" component in the UK and Germany relative to other regions. For these profiles, France consistently stands out as the cheapest country due to low energy component costs, similarly to 2024.

In contrast, Belgium and the Netherlands face higher network costs, which affects their competitive position for electro intensive consumers. Brussels is comparatively on the expensive end of the spectrum, standing as an exception, where Flanders and Wallonia compete with other countries within a narrow price range. For non-electro intensive consumers, Belgium's position is better due to a low base of "other costs," allowing it to be more competitive than Germany and the UK. For this type of consumer, Flanders, Wallonia, and the Netherlands converge towards similar cost levels due to comparable total component costs.

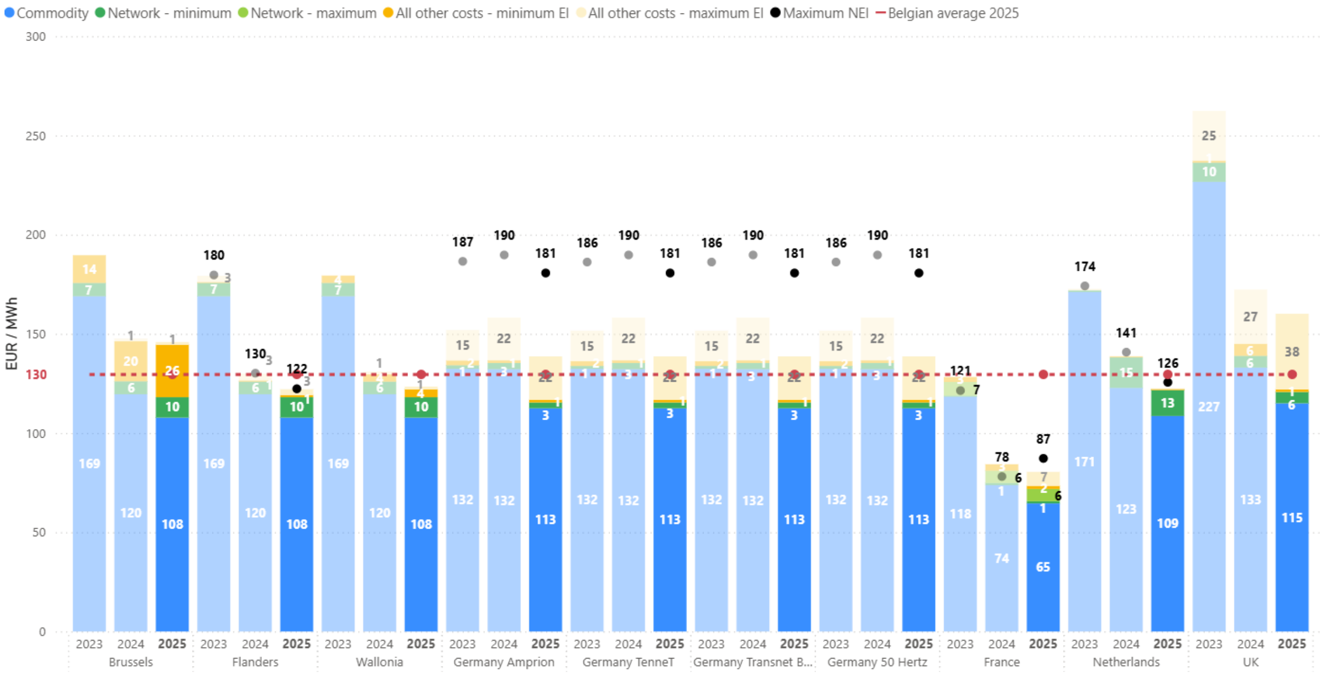
[7] The degression factor on the Walloon transport costs has been applied since 2023. This degressive factor of the costs according to the electro-intensity of the consumer, enables the reduction of transport costs paid by the Walloon E0 and E1 profiles. It is therefore necessary to take this into account when making comparative analyses between Wallonia and other regions, or Belgium and other countries.

In Belgium, Flanders consistently holds the most competitive position for electro intensive consumers in the E3 and E4 profiles, although this position is challenged for non-electro intensive consumers, aligning with last year's results. Since commodity and network costs are harmonized across Belgian regions, any differences depend on the "all other costs" component. It is noteworthy to mention that the largest energy consumer in Brussels now aligns more closely with an E2 profile rather than an E3 or E4 profile, making the E3 and E4 profiles fundamentally theoretical for this region due to the scarcity of very large industrial consumers.

Starting from the E3 profile, all consumers connect to the transmission network, aligning the costs across all Belgian regions and making them lower than previous profiles. The relatively high network costs in Belgium stem, on the one hand, from the nearly doubled transmission rates by Elia between 2024 and 2025, and, on the other hand, from the absence of a transport tariff reduction mechanism targeting certain categories of users (as observed in some neighbouring countries). In the Netherlands, similar to the situation in Belgium, the high network costs result from the high TenneT tariffs in place since 2024, as well as the discontinuation in 2024 of the previously existing transport tariff reduction mechanism.

For the E3 and E4 profiles, Belgium shows a low commodity price, second only to France and comparable to the Netherlands. For these profiles, Belgium has a higher "all other costs" component compared to its neighbouring countries. The benefits of electro intensity through reductions or exemptions do not generate as many reductions in Wallonia and Brussels as they do in Flanders, where this component is lower than in other regions. Overall, Belgium remains in tight competition with the Netherlands for non-electro intensive profiles, just behind France. Although Belgium offers limited reductions for electro intensive consumers in Wallonia and Brussels, its low base of "other costs," especially in Flanders, provides a favourable energy landscape for non-electro intensive users.

Electricity price by component in EUR/MWh (profile E4)



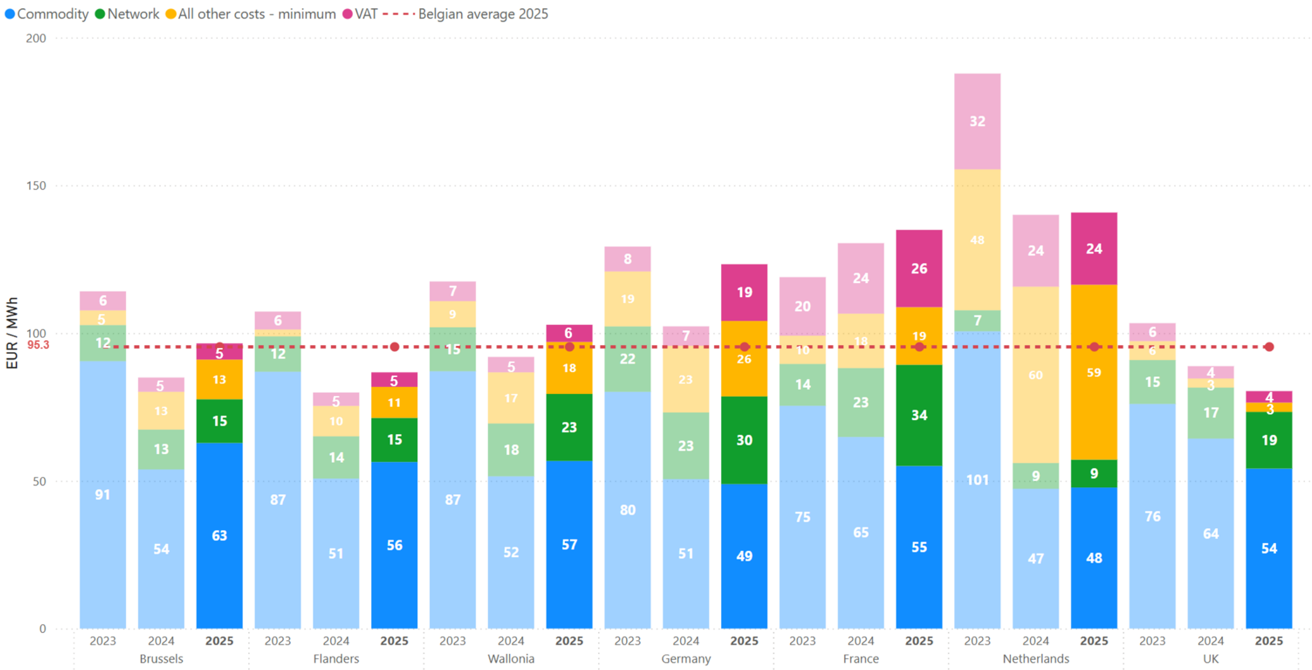
Comparison of natural gas prices

Comparison of natural gas prices for residential and small professional consumers

In 2025, natural gas bills for residential consumers under the G-RES profile experienced a modest increase across all Belgian regions, driven primarily by rising commodity and network costs. This upward trend in total invoices was reflected in Germany and, to a lesser extent, in France, whereas the UK saw a decline in their total invoices. The prices in the Netherlands remained stable at a high level. The increase in Germany, and to a lesser degree in France, was mainly attributed to higher network and "all other costs" components. The UK's decline can be attributed to a 15% drop in commodity prices, likely due to a reduction in the per-unit price cap, coupled with a low "all other costs" component. This allowed the UK to surpass Flanders as the leading region/country in terms of competitiveness. In contrast, Flanders experienced a 9% increase, leading to the loss of its top position from 2024. However, within Belgium, Flanders remains the most competitive region, followed by Brussels and then Wallonia.

The Netherlands continues to be the most expensive country under review due to the impact of its energy tax within the "all other costs" component, which accounts for more than 40% of the total invoice and constitutes the largest portion of the bill. France and Germany have seen a decline in competitiveness due to significant increases in specific cost components. Specifically, France has experienced a substantial rise in network costs, along with an increase in the "all other costs" component, driven by elevated TICGN rates. Similarly, Germany has encountered higher network costs, increased taxes in the "all other costs" category, and most notably, the VAT rate has reverted to 19% after a temporary reduction to 7% in 2022 to address inflation.

Natural gas price per component in EUR/MWh (profile G-RES)

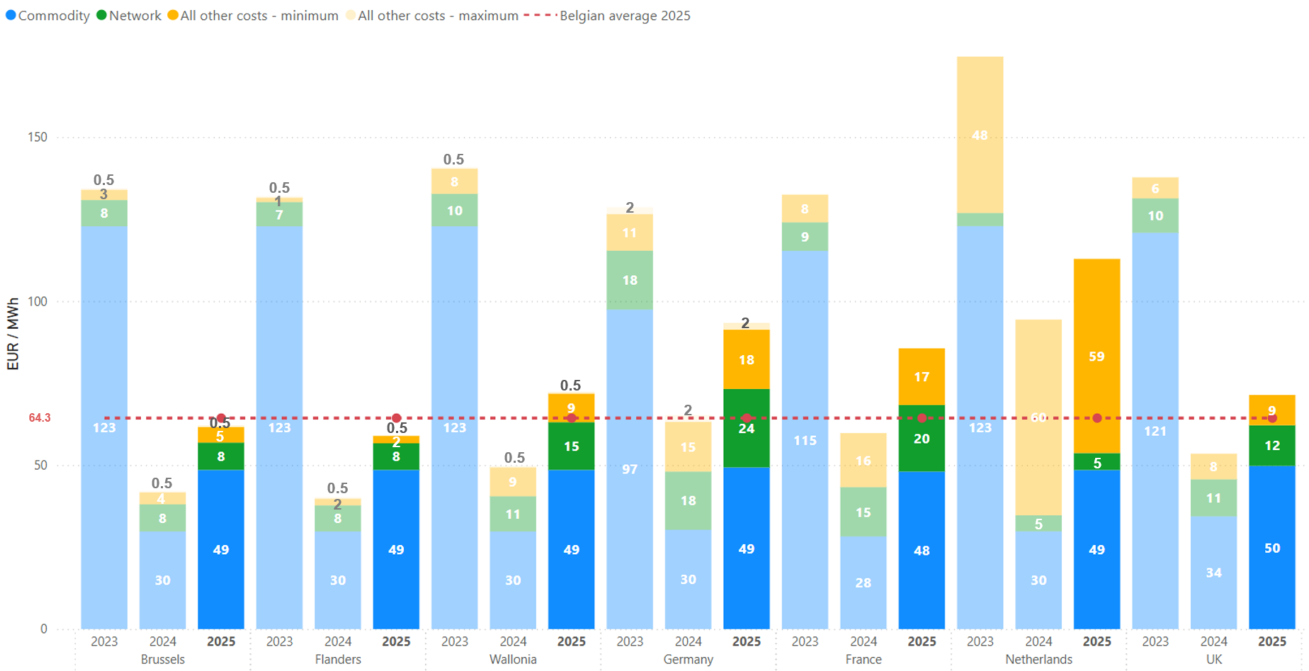


For small professional consumers (G-PRO), 2025 shows a similar upward trend in total gas invoices across most countries and regions, primarily driven by increases in both commodity and network costs. Despite these general increases, Belgium retains its position as the most competitive country under review, consistent with the situation in 2024. This competitiveness is largely due to its relatively low network tariffs and limited "all other costs".

Within Belgium, Flanders maintains the top position, benefiting from the lowest regional "all other costs" component. Brussels follows closely, ranking second both nationally and across all countries studied. In contrast, Wallonia is significantly less competitive due to higher network charges and a substantially larger regional "all other costs" burden. As a result, the UK has now become slightly more competitive than Wallonia, though it still remains above the Belgian average.

France, Germany, and especially the Netherlands are less competitive compared to the Belgian regions and the UK, mainly due to high network costs in Germany and elevated "all other costs" components in the Netherlands. The substantial impact of energy taxes on the total invoice in the Netherlands further cements its position as the least competitive country under review.

Natural gas price per component in EUR/MWh (profile G-PRO)

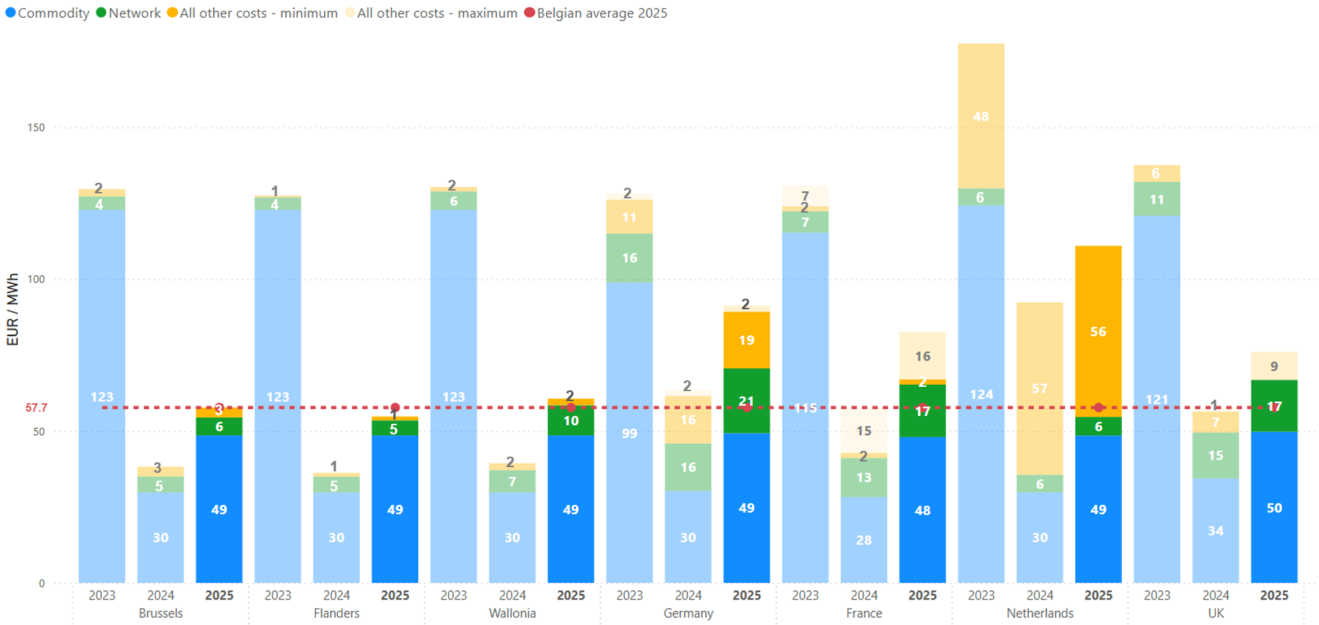


Comparison of natural gas prices for industrial consumers

For larger industrial consumers, a consistent trend of increasing total gas invoices is observed across all countries and regions. This rise is primarily driven by escalating commodity costs and, to a lesser extent, higher network charges. Despite these increases, Belgium has retained its position as the most competitive country under review, even when accounting for potential reductions available in countries like the UK, France, and Germany. This strong performance is underpinned by Belgium's comparatively low network tariffs and limited "all other costs" component. Within Belgium, regional differences are less pronounced than for smaller profiles such as G-RES and G-PRO. Flanders continues to be the most competitive region, narrowly outpacing Brussels, while Wallonia lags behind due to higher network costs.

The Netherlands remains the least competitive country, despite having one of the lowest network cost components. Its competitiveness is primarily undermined by a high energy tax, which dominates the "all other costs" section of the invoice. In France and the UK, access to specific tax reductions – such as the TICGN[8] rebate in France or the climate change levy reduction in the UK – remains critical for maintaining competitive parity. These reductions are increasingly decisive in shaping competitiveness for larger industrial consumers in these countries. Germany continues to be the second least competitive country, due to more substantial network and "all other costs" components compared to other countries under review.

Natural gas price per component in EUR/MWh (profile G0)



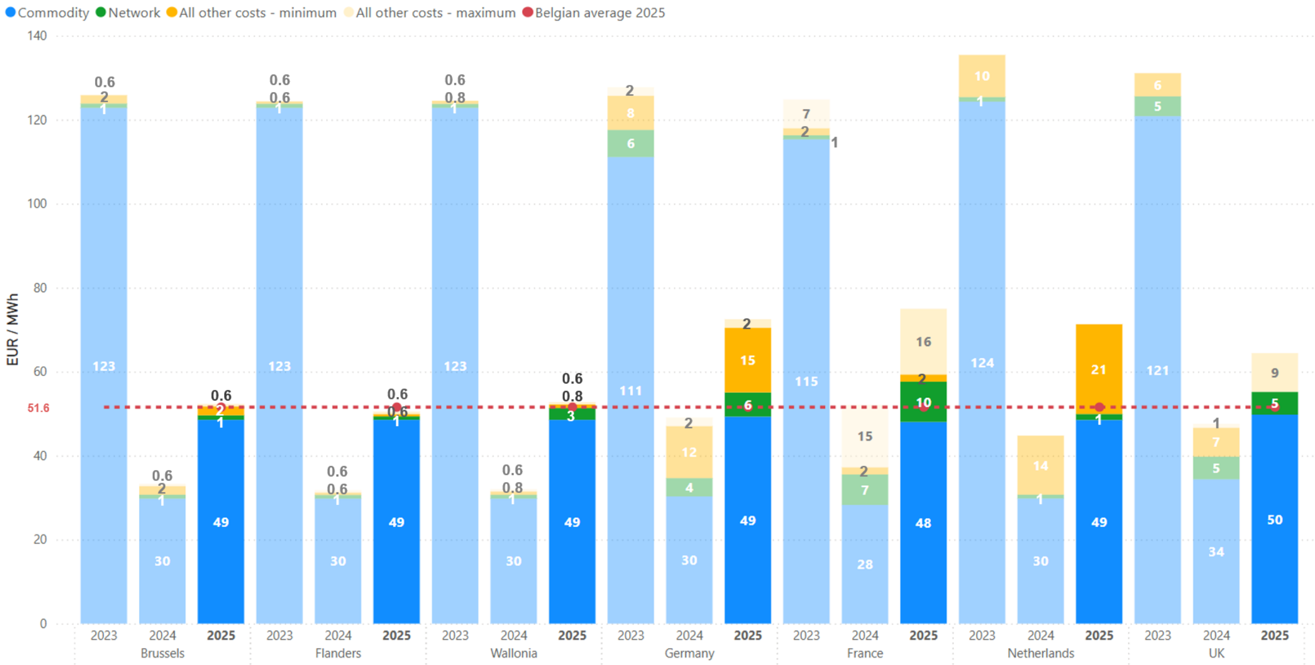
[8] La taxe intérieure de consommation sur le gaz naturel (Domestic tax on natural gas consumption)

For the G1 profile, the relative significance of network and "all other costs" components in the total invoice diminishes, leading to more intense competition between countries, particularly when reductions are applied. Despite this, Belgium retains its position as the most competitive country, with regional differences narrowing further compared to smaller consumer profiles. Now, Flanders, Brussels, and Wallonia exhibit only marginal differences in competitiveness.

In Germany, the ability to apply a reduction on the energy tax ("*Energiesteuer*") is crucial to prevent it from becoming the most expensive country in this profile group. Similarly, in France, applying a reduction on the TICGN[9] tax is vital to avoid slipping down in the rankings. In contrast, the Netherlands has experienced a notable decrease in "all other costs" compared to the G0 profile, thanks to lower energy tax rates applied to higher consumption levels. While it remains the least competitive country when all possible reductions are considered, it surpasses both France and Germany in competitiveness when such reductions are not accounted for.

The UK becomes the second most competitive country when the exemption on the climate change levy is applied, narrowing the gap with the Belgian average. This highlights the crucial role that targeted reductions play in shaping competitive outcomes.

Natural gas price per component in EUR/MWh (profile G1)

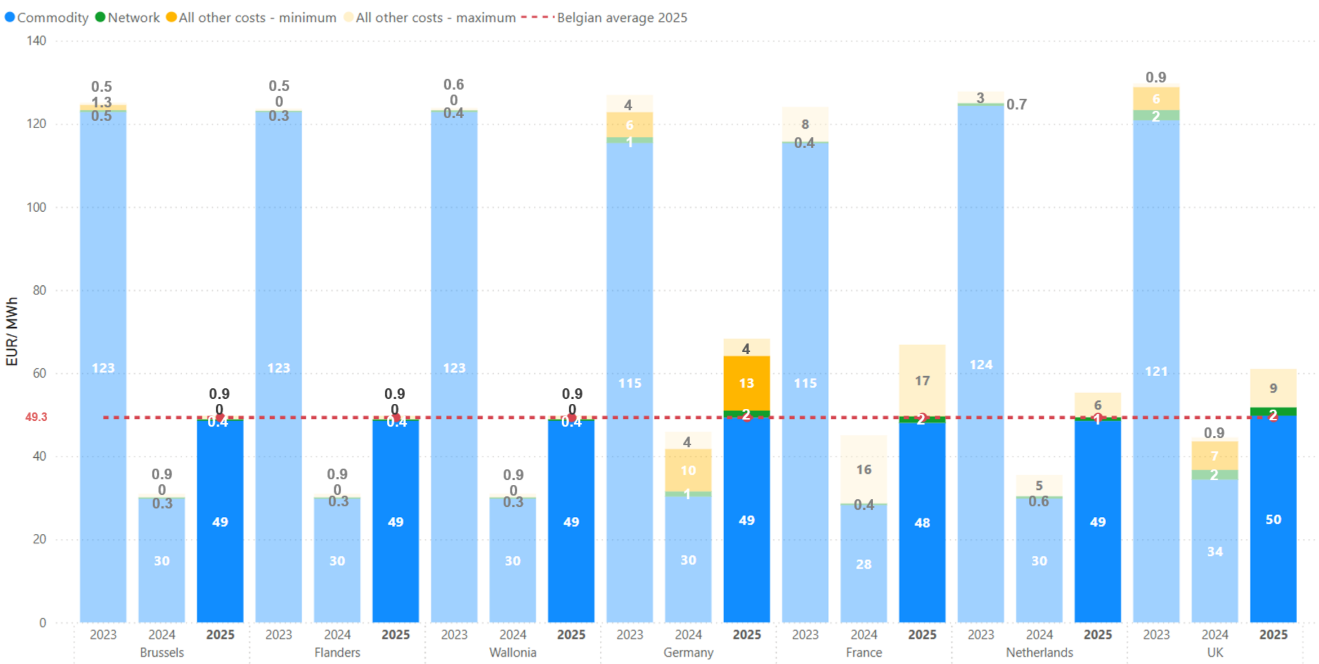


[9] *Taxe intérieure de consommation sur le gaz naturel* (Domestic tax on natural gas consumption)

For the G2 profile, competition intensifies significantly as commodity costs are largely consistent across countries and network costs play only a minor role. Consequently, a nation's competitive standing is predominantly influenced by the availability of exemptions or reductions on national "all other costs" components. G2 consumers greatly benefit from full exemptions on the TICGN tax in France, the energy tax in the Netherlands, and the climate change levy in the UK, fostering fierce competition among these countries and Belgium when such reductions are applied.

Despite this competitive landscape, Belgium continues to hold its position as the most competitive country, with only minimal differences observed between its regions. Conversely, Germany has become the least competitive country under review, as it offers only a reduced rate – rather than a full exemption – on the energy tax ("*Energiesteuer*"), thereby maintaining a relatively high "all other costs" component.

Natural gas price per component in EUR/MWh (profile G2)



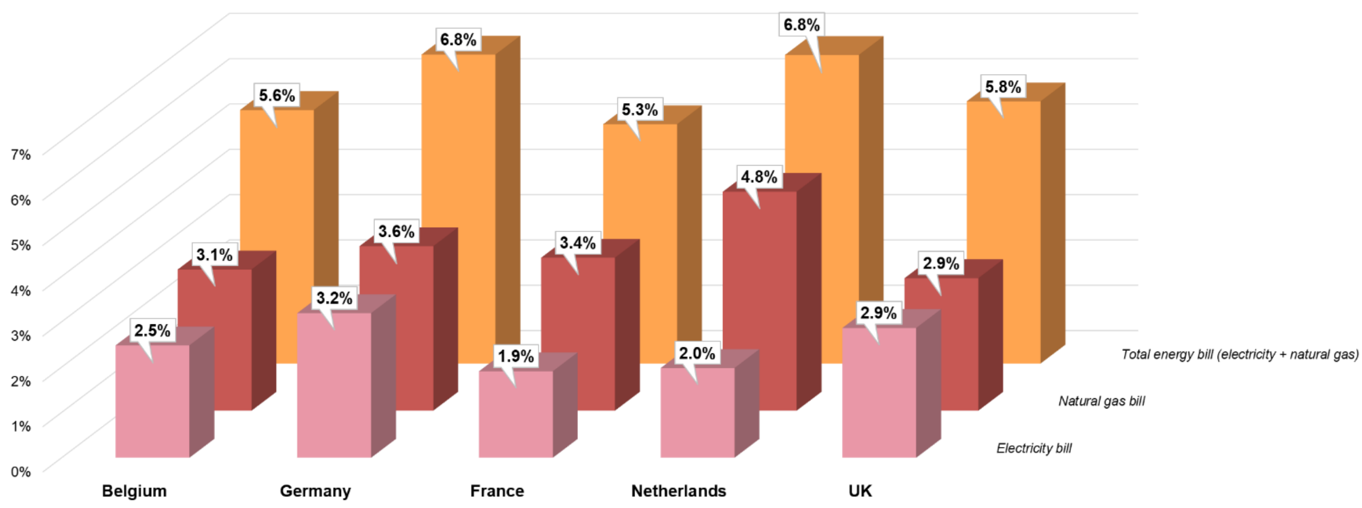
Efforts in supporting vulnerable consumers amid rising energy costs

Our study examines the various measures implemented across the countries included in this analysis, aimed at mitigating the impact of rising energy prices and inflation on residential consumers. These measures range from social tariffs to direct financial assistance designed to reduce consumer bills. However, the diversity of these measures makes cross-country comparisons complex.

Effort rates relative to average disposable income (housing costs being deducted)

In this initial analysis, we focus on the proportion of the energy bill within a household's budget with an average disposable income (both partners working), after deducting one of the most significant expenditures, namely housing costs. The figure below illustrates that, across all countries included in this study, the electricity bill constitutes a smaller portion of the household budget compared to the natural gas bill.

Energy bill effort rate compared to average disposable income (in %)



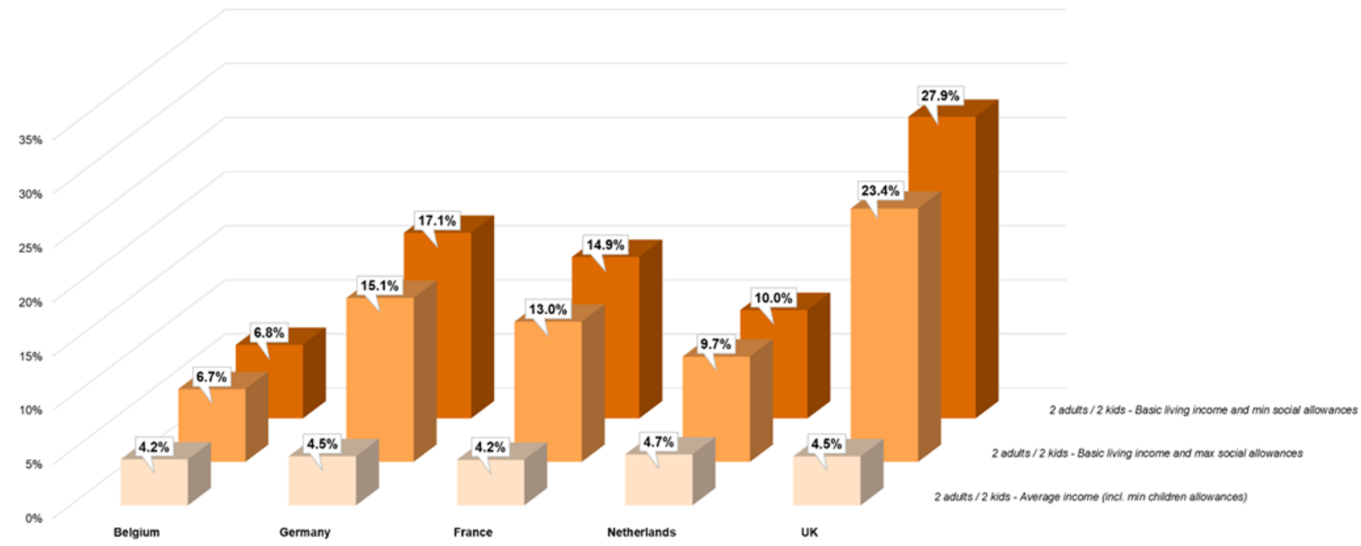
In January 2025, France emerged as the country with the lowest proportion of energy bills relative to disposable income, at 5.3%, surpassing Belgium's lead from 2024 (5.2%). This advantage is mainly attributed to competitive electricity prices facilitated by the ARENH mechanism. Belgium ranks second in 2025, with energy costs accounting for 5.6% of disposable income, impacted by less competitive electricity pricing. The UK falls in the middle, with total annual energy bills representing 5.8% of disposable income – 1.5 percentage points better than in 2024 – while the Netherlands and Germany trail with a tied effort rate of 6.8%. In terms of changes from 2024, Germany and Belgium's effort rates increased by 0.4 percentage points and 0.2 percentage points, respectively, whereas other countries saw reductions ranging from 0.5 percentage points in France to 1.5 percentage points in the UK.

Focusing on electricity costs[10], France demonstrates the lowest burden, with electricity bills representing 1.9% of annual disposable income (housing costs deducted). The Netherlands follows closely, with electricity accounting for 2.0% of disposable income, while Belgium, now third after dropping two ranks, stands at 2.5%. The UK and Germany have the heaviest electricity burden, each around 3% of disposable income.

Regarding natural gas prices, the UK leads with the least weight on disposable income, averaging 2.9%. Belgium, stepping down one rank, is next at 3.1%, closely followed by France and Germany, both around 3.5%. In contrast to electricity trends, the Netherlands has the highest natural gas bill in proportion to disposable income, just under 5%.

[10] Considering natural gas and electricity bills taken separately and not in combined plans

Energy bill effort rate compared to living income (in %)



In this second analysis, we evaluate the impact of the average energy bill for individuals earning the national average income compared to its effect on the most vulnerable populations. To do this, we incorporate all quantifiable social measures into the baseline income of a typical household (comprising two adults and two children) that has no additional revenue streams. Importantly, we do not deduct housing costs from disposable income since households with minimum incomes often receive substantial aid in this area, which would otherwise skew the results. Consequently, the weight of the energy bill for a household with an average income is automatically reduced compared to the previous analysis.

As illustrated in the figure above, a comparison of the effort rate for the total energy bill across countries for a household with an average income shows that, similar to 2024, Belgium ranks as the country where the energy bill carries the least proportional weight at 4.2%, alongside France. These are closely followed by Germany and the UK at 4.5%, and the Netherlands at 4.7%.

Predictably, the situation becomes more challenging for households with modest incomes. However, compared to 2024, the energy bill relative to basic incomes has decreased for all countries under review, except Germany. For families with modest incomes benefiting from a social tariff, Belgium maintains a relatively low energy bill impact of around 6.7%, which is over 56% higher than that for an average household. The Netherlands follows with an energy bill accounting for about 10% of available income. France's energy effort ranges from 13% to 15%, while Germany's range from 15% to 17%. The UK presents the heaviest energy bill in relation to living income for the most vulnerable households, with figures between 23% and 28% of available income (a notable improvement from previous years). Nonetheless, the total energy bill in the UK could still place a disproportionate burden on households most at risk of energy poverty.

Note

The approach adopted in this section has certain limitations, as it may not accurately reflect the consumption profile of individuals experiencing energy poverty, such as someone living alone without children. Furthermore, it does not account for the potential behaviour of more vulnerable individuals who might reduce their energy consumption to manage their bills. Despite these limitations, the primary aim of this chapter is to determine the effort rate required to pay the energy bill and to compare this across countries to understand its relative impact. We believe this approach is sufficiently robust to draw meaningful conclusions. Additional insights on these observations can be found in Chapter 8.

Evaluation of Belgian industries competitiveness

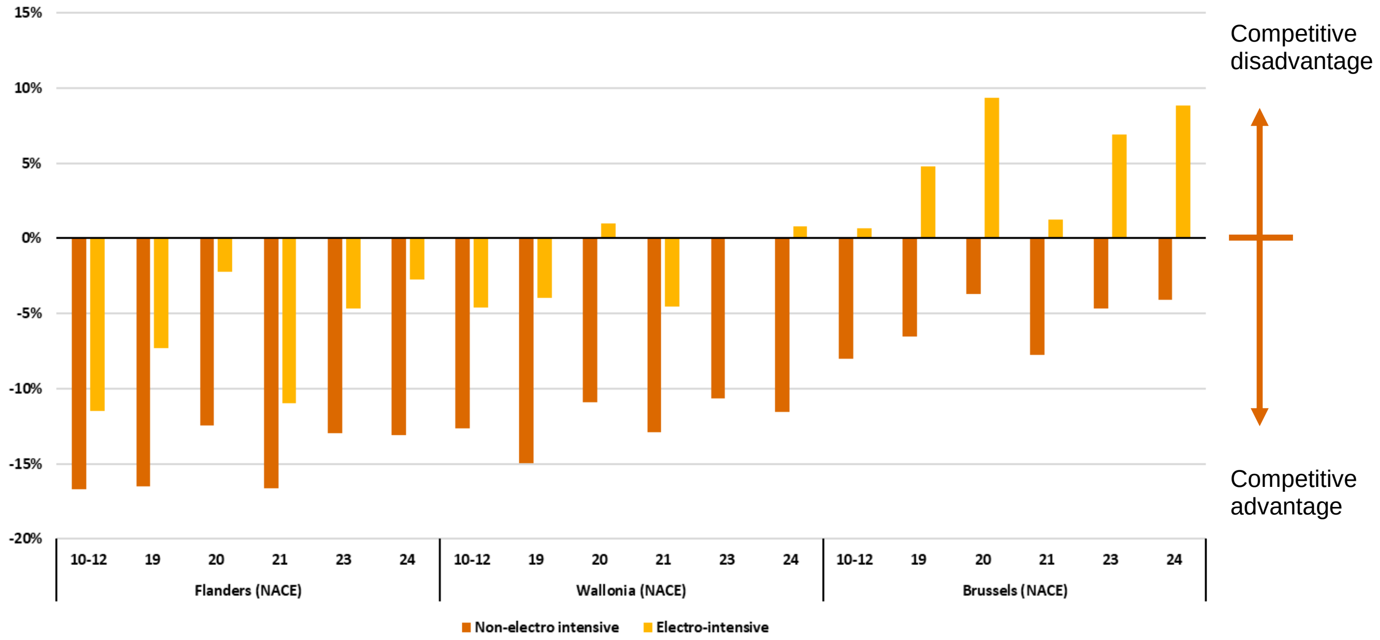
Including the UK

In 2025, the Belgian industry maintains a relatively competitive standing in terms of weighted energy costs, particularly for non-electro intensive consumers. Across Flanders, Wallonia, and Brussels, all sectors benefit from a competitive edge compared to the average weighted energy prices in Germany, France, the Netherlands, and the UK. This advantage is most pronounced in Flanders, where sectors such as food and beverages (NACE 10–12), refined petroleum products (NACE 19), and pharmaceuticals (NACE 21) enjoy the lowest weighted energy costs. Although electricity prices are higher in Wallonia and Brussels, low natural gas prices bolster overall competitiveness for non-electro intensive industries.

The picture is more complex for electro intensive consumers. Flanders remains competitive across all sectors, with weighted costs providing more than a 10% competitive advantage for the food and beverages industry, as well as the pharmaceutical industry. In Wallonia, the competitiveness is mixed; while sectors like food and beverages (NACE 10–12), refined petroleum products (NACE 19), and pharmaceuticals (NACE 21) maintain a slight advantage, industries such as chemicals (NACE 20) and metals (NACE 24) face modest competitive disadvantages. Conversely, Brussels consistently suffers from a competitive disadvantage for electro intensive consumers, with this gap reaching up to 10% due to high electricity costs.

The inclusion of the UK deteriorates Belgium's relative position, particularly for electro intensive profiles, because the UK's tax relief mechanisms lower the overall average and the impact of low prices in France is diluted in the average of neighbouring countries. Belgium’s significant natural gas advantage – with cost differences exceeding 10% in all sectors and regions and up to more than 25% for some sectors and regions – remains a key strategic strength, particularly for gas-intensive production processes.

Weighted energy (electricity and natural gas) cost differences between the Belgian regions and the average costs of neighbouring countries (including the UK) for electro intensive and non-electro intensive consumers

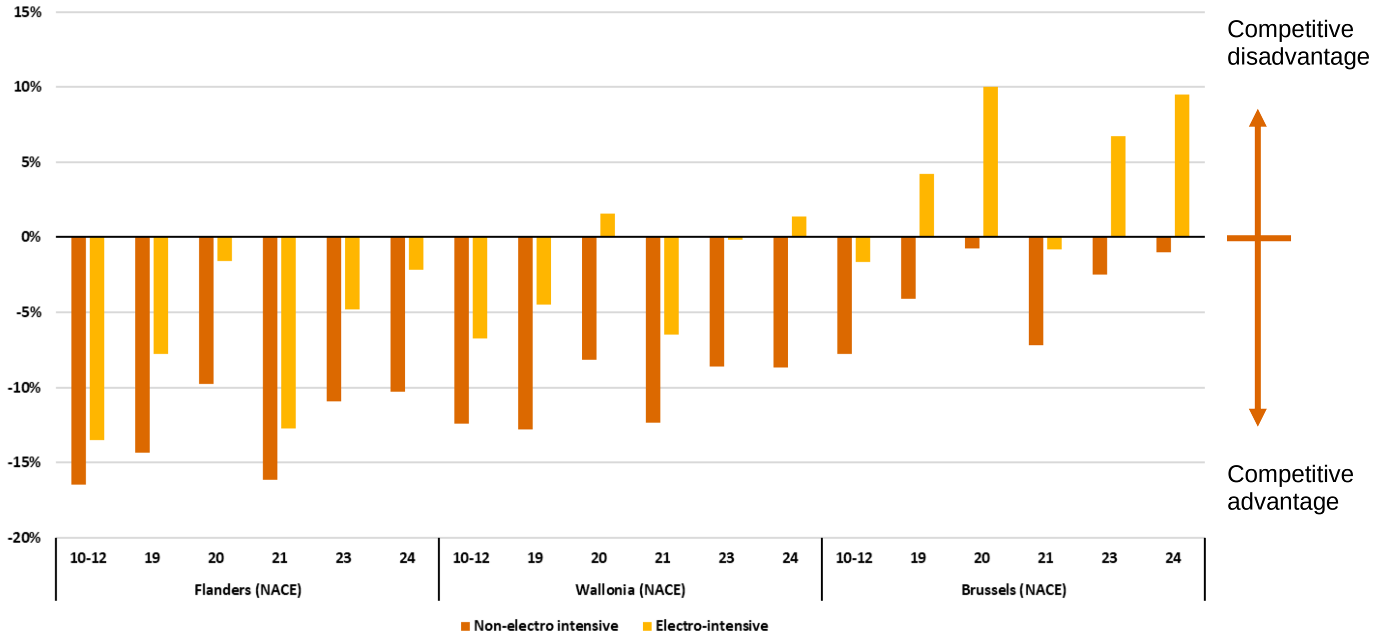


Excluding the UK

Excluding the UK from the benchmark, Belgium's overall energy competitiveness remains positive, though its relative advantage diminishes, especially for electro intensive consumers. Flanders continues to perform well across all sectors, whereas in Wallonia, industries such as chemicals (NACE 20) and metals (NACE 24) face increased disadvantages of approximately 1.5 percentage points. While these gaps may not yet prompt relocation, they highlight growing competitive pressure on electricity-intensive sectors. Brussels continues to encounter structural challenges for electro intensive consumers, yet it gains a modest competitive edge in the industrial sectors of food and beverages (NACE 10–12) and pharmaceuticals (NACE 21) compared to when the UK was part of the analysis.

For non-electro intensive consumers, all three Belgian regions maintain a favourable competitive position across all sectors.

Weighted energy (electricity and natural gas) cost differences between the Belgian regions and the average costs of neighbouring countries (excluding the UK) for electro intensive and non-electro intensive consumers



Final remarks

While this analysis offers a valuable macroeconomic perspective on the competitiveness of Belgian industry based on weighted energy costs, it is crucial to supplement it with sector-specific and company-specific investigations. Although Belgium demonstrates a clear competitive advantage in certain sectors – particularly for non-electro intensive consumers – significant variations in actual competitiveness can emerge depending on the emphasis on natural gas versus electricity in a company's or sector's energy mix.

Natural gas prices remain highly competitive across all Belgian regions, consistent with the trends seen in 2024. However, electricity prices reveal a contrasting pattern, with some competitive disadvantages apparent across regions and sectors for electro intensive consumers. This represents a deterioration compared to 2024, when Belgium maintained a competitive advantage in most sectors due to stronger competitiveness based on electricity.

To achieve a more precise and detailed understanding of Belgium's true competitive position, it is essential to conduct deeper, sector-specific assessments that clearly differentiate between electricity and natural gas dependencies at the company level. This approach will be critical for guiding effective industrial policy, reforming energy costs, and shaping long-term investment strategies.

Dutch version

Dit rapport biedt een vergelijkende analyse van elektriciteits- en aardgasprijzen voor residentiële, kleine professionele en industriële verbruikers in België en de vier buurlanden: Frankrijk, Duitsland, Nederland en het Verenigd Koninkrijk. In sommige gevallen worden resultaten op regionaal niveau gepresenteerd om een genuanceerder perspectief te bieden.

Dit rapport richt zich expliciet op de energieprijzen die van kracht waren in januari 2025. Dit is een belangrijk aspect om in gedachten te houden, gezien de huidige volatiliteit van elektriciteits- en aardgasprijzen.

Belangrijkste bevindingen in vergelijking met de situatie zoals waargenomen in januari 2024:

- **Elektriciteitsprijzen:**

  Voor residentiële verbruikers zijn de elektriciteitsrekeningen over het algemeen gestegen, grotendeels gedreven door veranderingen in commodity prijzen[11]. Daarentegen zagen kleine bedrijven een vermindering van hun elektriciteitskosten. Grote ondernemingen ervaarden een merkbare daling van hun totale elektriciteitsuitgaven vergeleken met 2024, waarbij middelgrote en grote industriële verbruikers profiteerden van dalende commodity prijzen die de stijgingen in lokale netwerkkosten meer dan compenseerden. Diverse ondersteunings- en beschermingsmechanismen, waaronder vrijstellingen en kortingen, hebben geholpen om de kosten te temperen, waardoor een gemengd maar steeds competitiever landschap is ontstaan voor zowel elektro-intensieve als niet-elektro-intensieve industrieën.

- **Aardgasprijzen:**

  In 2025 werd een aanzienlijke stijging van de commodity prijzen voor aardgas waargenomen in de meeste verbruikscategorieën, behalve voor G-RES in het Verenigd Koninkrijk, waar een daling werd vastgesteld als gevolg van een lager prijsplafond per eenheid. Ondanks de algemene stijging blijft België competitief t.o.v. zijn buurlanden dankzij de relatief lage aardgasprijzen.

De studie onderzocht 13 verschillende verbruiksprofielen: acht voor elektriciteit (waaronder één residentieel, twee kleine professionele en vijf industriële gebruikers) en vijf voor aardgas (waaronder één residentieel, één kleine professionele en drie industriële gebruikers).

De onderzochte profielen zijn gedefinieerd in de Terms of Reference van deze studie. De elektriciteitsprofielen voor deze analyse zijn bijgewerkt, met retroactieve aanpassingen toegepast op de gegevens van 2024, die veranderingen in verbruiksuren, aansluitcapaciteit, gecontracteerde capaciteiten en piekvraag weerspiegelen. De geüpdatete parameters omvatten (1) het equivalent van verbruiksuren (E-BSME tot E1), (2) aansluitcapaciteit (E0 tot E1), (3) gecontracteerde capaciteit (E-BSME tot E1), (4) jaarlijkse piek (E-RES tot E1) en (5) maandelijkse piek (E-RES tot E1). Naast deze wijzigingen bouwt deze studie voort op eerdere vergelijkende onderzoeken uitgevoerd door PwC, voor CREG, Brugel, CWaPE en VNR[12] waarbij methodologische consistentie wordt gehandhaafd en tegelijkertijd wordt ingespeeld op evoluerende marktomstandigheden.

Gedetailleerde beschrijvingen en aannames over verbruiksprofielen worden toegelicht in Hoofdstuk 3.

[11] Met commodity prijzen worden de prijzen bedoeld voor de elektriciteit of het gas zelf, incl. een eventuele vaste vergoeding zoals aangerekend door de energieleverancier.

[12] De studies van voorgaande jaren over residentiële en industriële consumenten zijn te vinden op de website van de CREG:
https://www.creg.be/sites/default/files/assets/Publications/Studies/F20240515EN.pdf (2024 editie)
https://www.creg.be/sites/default/files/assets/Publications/Studies/F20230515EN.pdf (2023 editie)
https://www.creg.be/sites/default/files/assets/Publications/Studies/F20220513EN.pdf (2022 editie)
https://www.creg.be/sites/default/files/assets/Publications/Studies/F20210517EN.pdf (2021 editie)

Elektriciteit verbruiksprofielen

Profiel	Type verbruiker	Jaarlijkse vraag (MWh)	Gecontracteerde capaciteit (kW)	Jaarlijkse piek (kW)
E-RES	Residentieel	3.5	7.36	5
E-SSME	Klein professioneel	30	37.5	18
E-BSME	Groot professioneel	160	105	95
E0	Industrieel	2,000	750	725
E1	Industrieel	10,000	4,400	4,300
E2	Industrieel	25,000	5,000	5,000
E3	Industrieel	100,000	13,000	10,400
E4	Industrieel	500,000	62,500	50,000

Aardgas verbruikersprofielen

Profiel	Type verbruiker	Jaarlijkse vraag (MWh)	Gecontracteerde capaciteit (kW)
G-RES	Residentieel	17	-
G-PRO	Klein professioneel	300	-
G0	Groot professioneel	1,250	-
G1	Industrieel	100,000	20,000
G2	Industrieel	2,500,000	312,500

De vergelijking onderzoekt drie belangrijke componenten van de energierekening: commodity kosten, netwerkkosten en overige kosten (waaronder belastingen, heffingen en openbare dienstverplichtingen, zoals certificaatverplichtingen). Een vierde component, btw, is uitsluitend van toepassing op residentiële profielen voor zowel elektriciteit als aardgas.

Voordat de prijsvergelijkingsresultaten in hoofdstuk 6 worden besproken, biedt het rapport een uitgebreid overzicht van de samenstelling en onderverdeling van energieprijzen in hoofdstukken 4 en 5. Met een bottom-up benadering wordt een gedetailleerde analyse gemaakt van de verschillende prijscomponenten en hun toepassing in de landen die in deze studie zijn opgenomen.

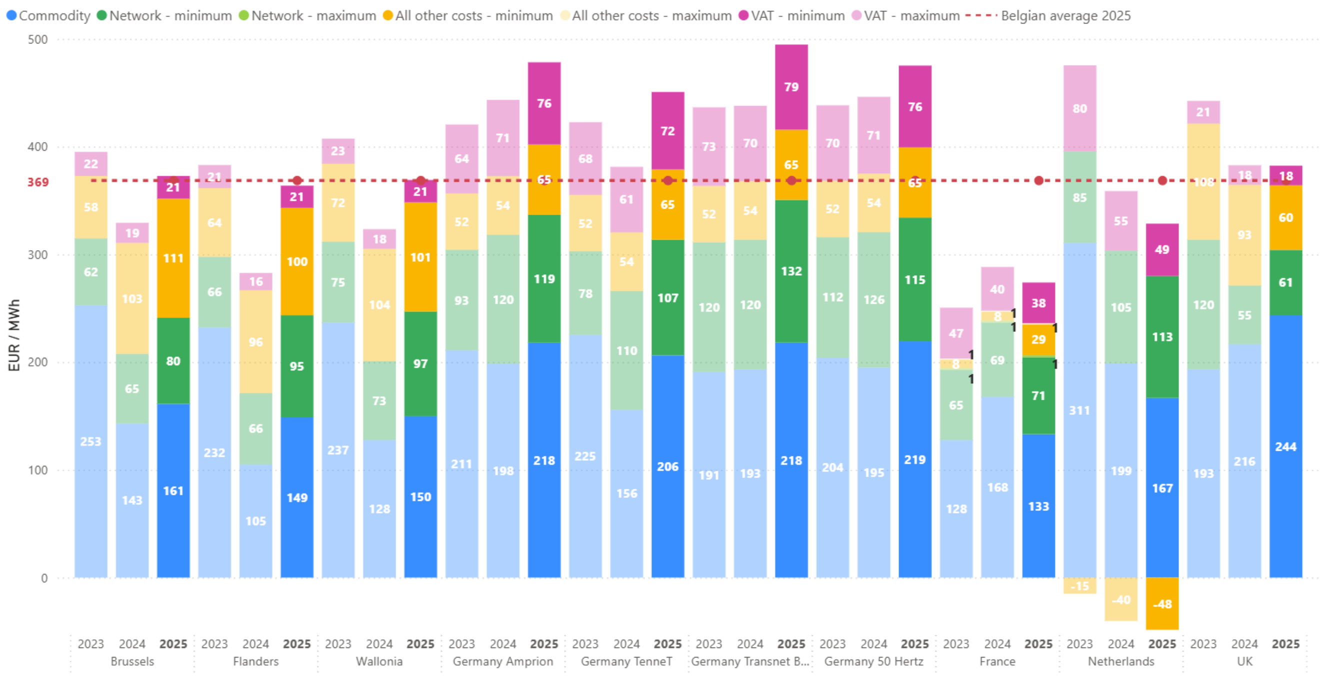
Het rapport benadrukt aanzienlijke variaties in de prijsstructuur voor zowel elektriciteit als aardgas in verschillende regio’s en landen. Deze verschillen omvatten diverse factoren, zoals netwerkkostenconfiguraties en belastingstelsels, die de vergelijking tussen alle betrokken landen en regio’s complexer maken.

Vergelijking van de elektriciteitsprijzen

Om een gedetailleerde beschrijving te geven van de gespecificeerde profielen op basis van de verzamelde gegevens, analyseren we elk profiel grondig. Dit houdt in dat we de conclusies en gevolgen voor elke verbruikscategorie in kaart brengen, met een specifieke focus op de onderzochte regio's en landen. Daarbij wordt extra aandacht besteed aan het concurrentieklimaat binnen de Belgische regio's.

Vergelijking van de elektriciteitsprijzen voor residentiële en kleine professionele verbruikers

Elektriciteitsprijs per component in EUR/MWh (profiel E-RES)[13]



Tussen 2024 en 2025 is de meest opvallende verandering voor residentiële consumenten de algemene stijging van de totale factuur, behalve in de twee meest competitieve landen, Frankrijk en Nederland. De grootste toename in de totale factuur werd waargenomen in Vlaanderen, met een stijging van 283 EUR. Deze toename is voornamelijk te wijten aan hogere commodity- en netwerkkosten, waarbij de netwerkkosten aanzienlijk werden beïnvloed door de bijna verdubbelde door Elia aangerekende transportkost in 2025 t.o.v. 2024[14].

Omgekeerd kende Nederland de grootste daling, waarbij de facturen met 135 EUR daalden, voornamelijk dankzij lagere commoditykosten en belastingen. Nederland blijft uniek vanwege de vrijwel negatieve waarde van de component "alle overige kosten" op de factuur, als gevolg van belastingverminderingen (bijvoorbeeld *belastingvermindering per elektriciteitsaansluiting*). In België is Vlaanderen de meest competitieve regio, gevolgd door Wallonië en Brussel, met slechts geringe verschillen tussen hen[15].

[13] De legenda is van toepassing op de gegevens voor 2025, terwijl de andere jaren een lichtere variant van dezelfde kleuren gebruiken om de leesbaarheid te verbeteren.

[14] Elia, 2023)

[15] In België gebruiken de prijsvergelijkingsinstrumenten voor de drie regio's prijsinschattingen voor de komende 12 maanden. Daarom is de productselectie voor E-RES, G-RES en E-SSME gebeurd via deze websites, maar zijn de commodity prijzen berekend op basis van historisch-gebaseerde indexatieparameterwaarden. Dit zorgt voor een eerlijke en nauwkeurige vergelijking van Belgische energieproducten met die van de buurlanden.

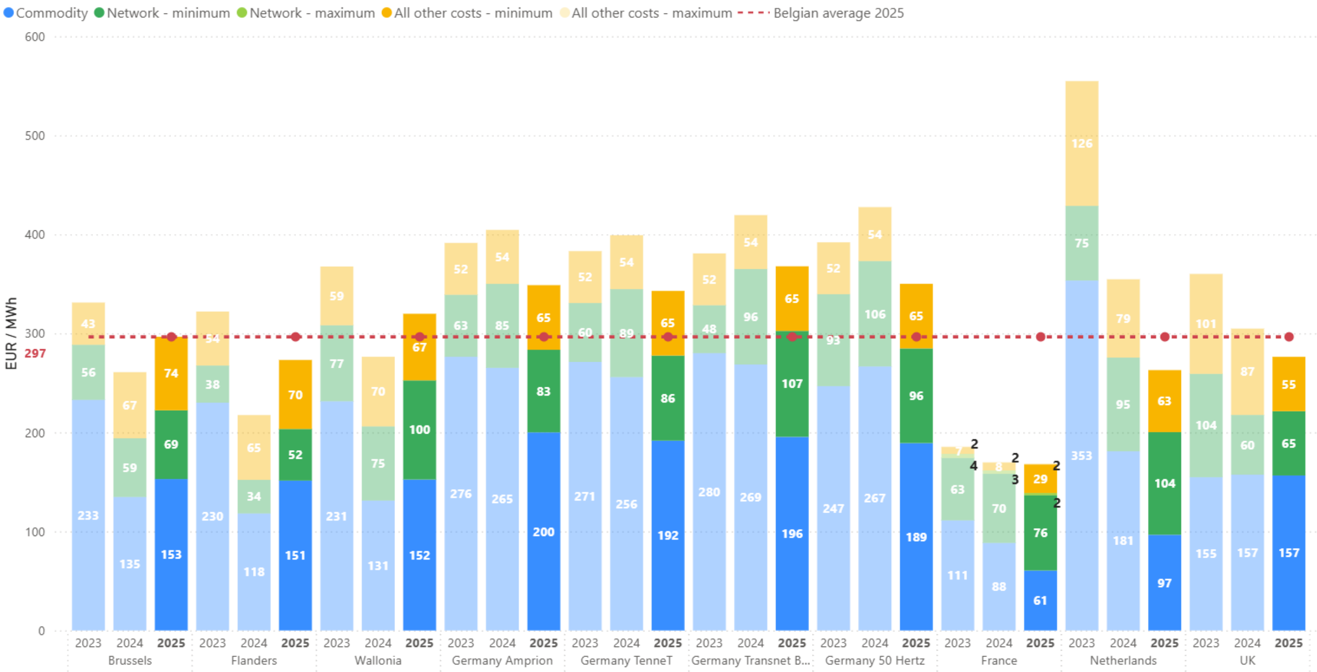
Interessant genoeg zijn Frankrijk en Nederland de enige landen waar de facturen zijn gedaald. Zij zagen tegelijkertijd een afname van de commoditykosten, in tegenstelling tot andere landen waar deze stegen. Het Verenigd Koninkrijk heeft de hoogste commoditykosten, terwijl Frankrijk de laagste kent; dit komt vooral door de door de overheid gereguleerde standaardtarieven, die prijsstijgingen voor Franse residentiële consumenten beperken.

Netwerkkosten vertoonden over het algemeen een stijgende trend, behalve in de meeste regio’s van Duitsland. Deze stijging komt voort uit geplande investeringen in het elektriciteitsnet door de transmissienetbeheerders, gericht op het versterken van de robuustheid van het net en het voorbereiden op toekomstige transities, wat de netwerkkosten opdrijft. Duitsland heeft de hoogste netwerkkosten, vooral in de Transnet BW-regio, gevolgd door Amprion en 50 Hertz. Het Verenigd Koninkrijk blijft profiteren van de laagste netwerkkosten, vergelijkbaar met 2024. In België hebben distributiekosten een grote invloed op de netwerkkosten. In alle drie de regio’s stegen deze kosten door de hogere transmissienettarieven, die vervolgens worden doorgerekend in de distributienettarieven. Wallonië kent de hoogste distributiekosten, gevolgd door Vlaanderen - waar deze kosten het sterkst stegen binnen België - en Brussel.

De component "alle overige kosten" nam toe in de meeste onderzochte landen, met uitzondering van het Verenigd Koninkrijk, waar een aanzienlijke daling werd opgetekend door een vermindering van de kosten binnen de Energy Company Obligation. Frankrijk zag de grootste stijging, veroorzaakt door de gedeeltelijke afschaffing van het bouclier tarifaire, waardoor de accijnzen op elektriciteit terugkeerden naar eerdere niveaus. In België heeft Brussel de hoogste kosten binnen deze categorie, terwijl Wallonië en Vlaanderen een vergelijkbare kostenbasis hebben, mede dankzij een lichte daling van "alle overige kosten" in Wallonië tussen 2024 en 2025. De hogere kosten in Brussel komen vooral door hogere openbare dienstverplichtingen en uitgaven binnen het systeem van groenestroomcertificaten.

De btw-tarieven op elektriciteit zijn in de onderzochte landen onveranderd gebleven. Hoewel btw een aanzienlijke kost is voor consumenten in Duitsland, blijft deze relatief laag in het Verenigd Koninkrijk en België, dankzij verlaagde btw-tarieven en een lagere kostenbasis. Frankrijk is het enige land met een dubbel btw-tarief, met enerzijds een tarief van 20% op het verbruik en anderzijds een tarief van 5.5% op het vaste deel van de factuur.

Elektriciteitsprijs per component in EUR/MWh (profiel E-SSME)



In 2025 vertoonden de totale facturen voor kleine professionele verbruikers uiteenlopende trends per regio. In de meeste regio's daalden de facturen door lagere commodity kosten, terwijl België een stijging kende door hogere commodity- en netwerkkosten. Binnen België had Vlaanderen de laagste facturen, gevolgd door Brussel, terwijl Wallonië de duurste regio was. In vergelijking met 2024 is België minder competitief geworden, aangezien Frankrijk aan concurrentiekracht wint, en de facturen in Nederland en het Verenigd Koninkrijk nu vergelijkbaar zijn met die in Vlaanderen. Ondanks de hogere kosten in Brussel en Wallonië, blijven deze lagere prijzen hanteren dan de vier Duitse regio's. Frankrijk blijft het goedkoopste land in deze categorie, net als bij residentiële consumenten, dankzij het prijsbeschermingsmechanisme dat resulteert in de laagste commodity kosten van de onderzochte landen. Frankrijk behoudt zijn leidende concurrentiepositie, terwijl Duitsland het minst competitieve land blijft door de hoge commodity-, netwerk- en "alle overige kosten".

De netwerkkosten stegen in de meeste regio's, behalve in bepaalde Duitse gebieden (Amprion, TenneT en 50 Hertz). België en Nederland ondervonden forse stijgingen. In België stegen de distributienettarieven in alle regio's sterk - vooral in Vlaanderen en Wallonië - gelijklopend met het E-RES-profiel, door de hogere transmissienettarieven. Vlaanderen blijft profiteren van de laagste netwerkkosten, net als in 2024, met tarieven die bijna de helft lager zijn dan in Wallonië, terwijl Brussel daar tussenin zit.

De component "alle overige kosten" vertoonde verschillende trends per land. Duitsland, Brussel, Vlaanderen en Frankrijk zagen stijgingen, terwijl andere regio's een daling kenden. Frankrijk kende een forse stijging door de afschaffing van het bouclier tarifaire, net zoals bij het residentiële profiel. De sterkste daling deed zich voor in het Verenigd Koninkrijk, door lagere ECO-schema kosten. Duitsland kende daarentegen een kostenstijging door verschillende maatregelen, waaronder de fors gestegen StromNEV-heffing, die de kosten voor toegang tot elektriciteitsnetwerken reguleert.

Elektriciteitsprijs per component in EUR/MWh (profiel E-BSME)

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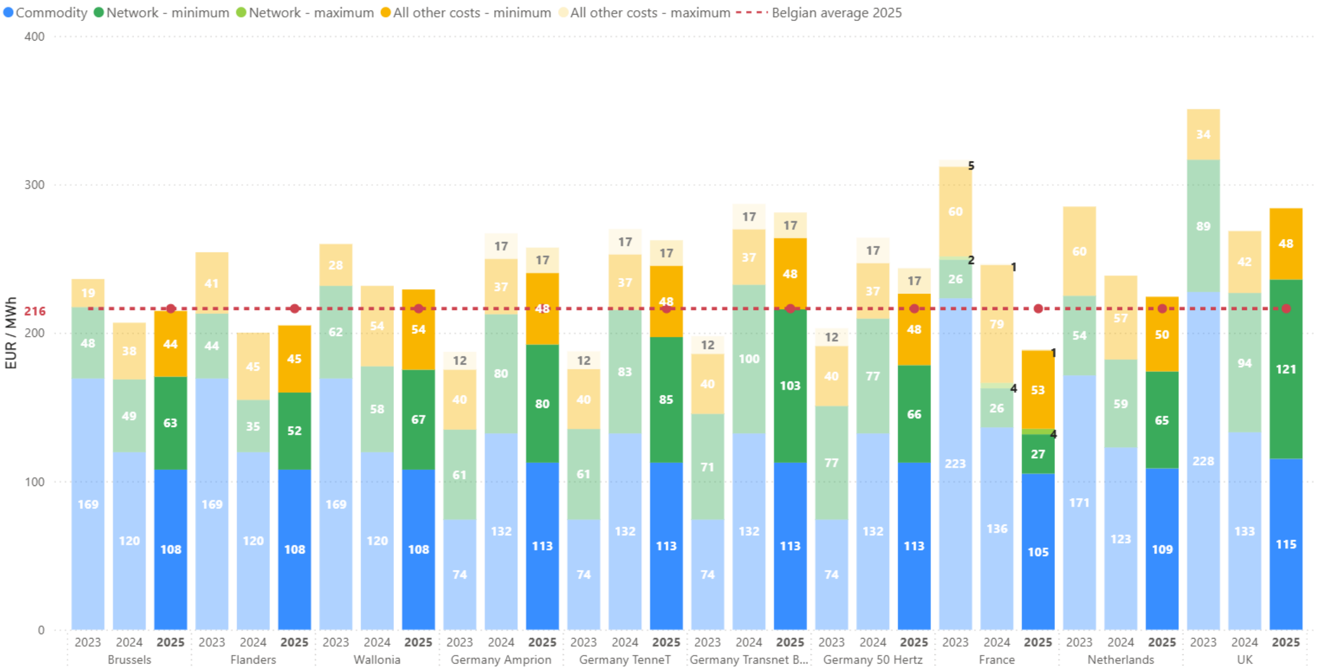
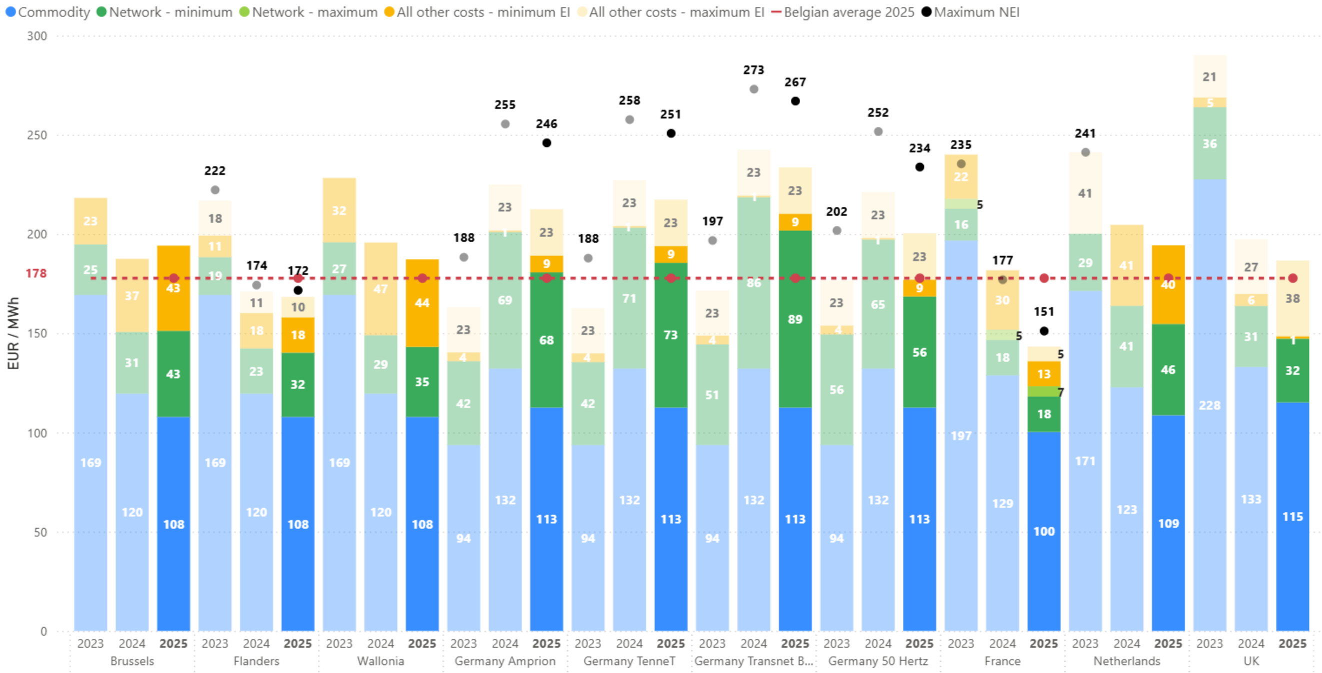


Een aanzienlijke daling van de commodity prijzen heeft bijgedragen aan lagere elektriciteitskosten voor de industrie, met vergelijkbare trends in alle landen en regio's die in deze studie zijn opgenomen, evenals bij andere grotere verbruiksprofielen. Deze neerwaartse trend in marktprijzen is deels te verklaren door de gebruikte methodologieën voor de berekening van energieprijzen voor deze profielen. Frankrijk heeft de meest competitieve positie verworven en heeft Vlaanderen ingehaald in vergelijking met 2024. Het Verenigd Koninkrijk valt op als het duurste land vanwege de hoge netwerkkosten die gepaard gaan met dit profiel. België staat op de tweede plaats, waarbij Vlaanderen de meest competitieve regio binnen het land is, gevolgd door Brussel en Wallonië.

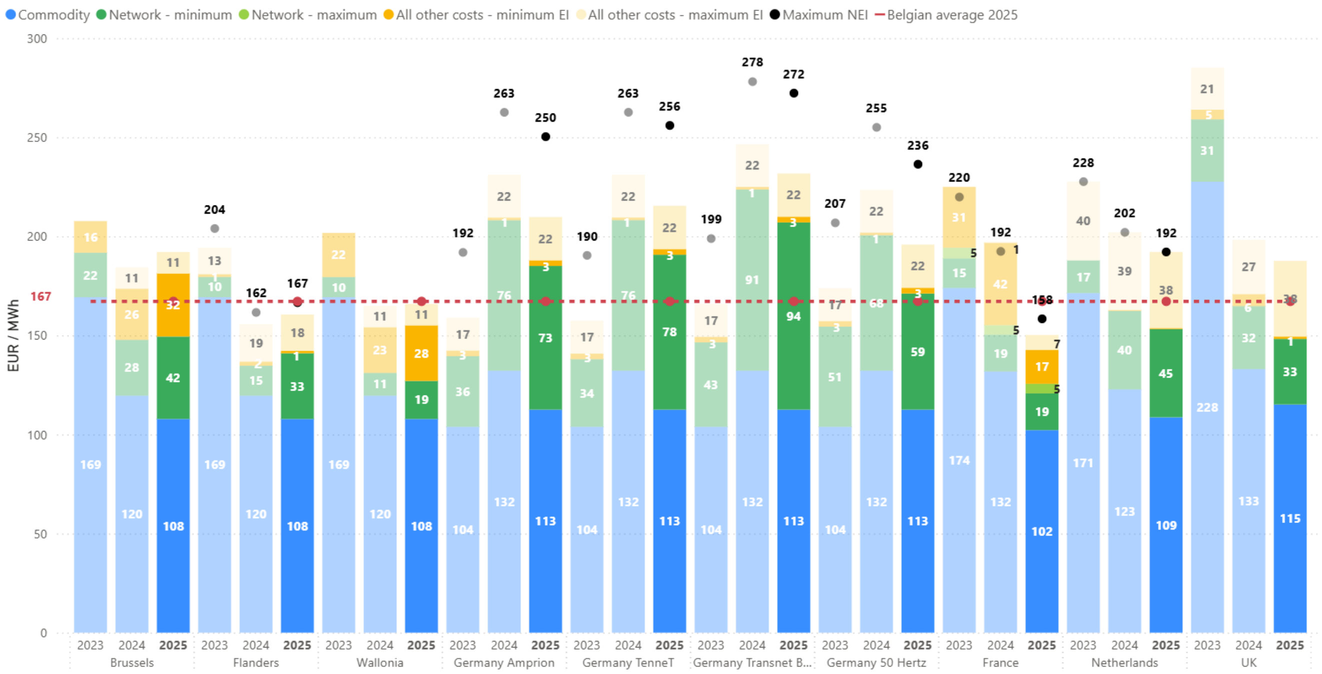
Aangezien de componenten commodity kosten en "alle overige kosten" relatief consistent zijn in de onderzochte landen en regio's, op enkele uitzonderingen na, speelt de netwerkcomponent een cruciale rol bij het bepalen van de totale concurrentiepositie van de beoordeelde landen.

Vergelijking van elektriciteitsprijzen voor industriële verbuikers

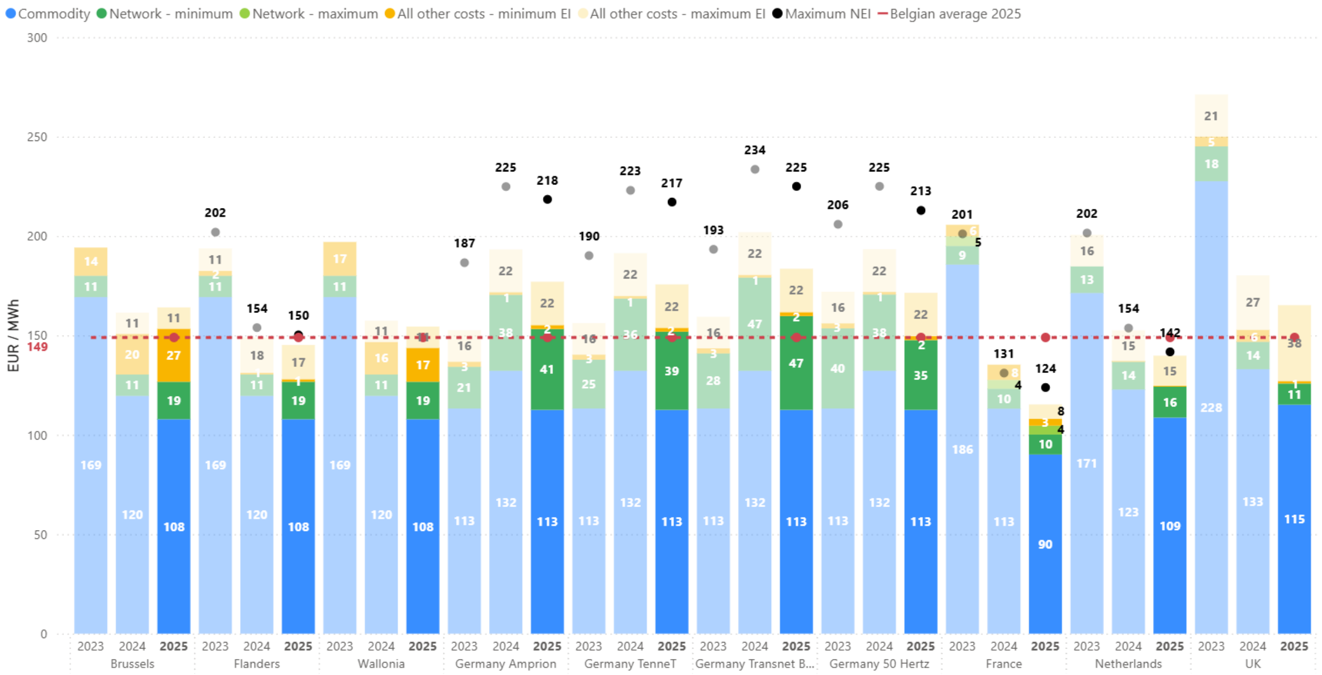
Elektriciteitsprijs per component in EUR/MWh (profiel E0)



Elektriciteitsprijs per component in EUR/MWh (profiel E1)



Elektriciteitsprijs per component in EUR/MWh (profiel E2)



In alle regio's en landen profiteren grote verbruikers consequent van dalende commodity prijzen, in tegenstelling tot de wisselende trends die bij kleinere profielen worden waargenomen. Voor elektro-intensieve verbruikers biedt Frankrijk de meest competitieve elektriciteitskosten voor de E0-, E1- en E2-profielen, waarmee het Vlaanderen t.o.v. 2024 voorbijsteekt voor de E0- en E1-profielen. Het Verenigd Koninkrijk staat op de tweede plaats voor het E0-profiel, Vlaanderen voor E1, en Nederland voor E2. In tegenstelling tot de duidelijkere concurrentiesituatie in 2024 is er dit jaar een sterkere concurrentiestrijd tussen landen binnen verschillende profielen, waarbij het verschil in totale facturen kleiner wordt tussen Vlaanderen, Nederland en het VK naarmate we richting het E2-profiel gaan.

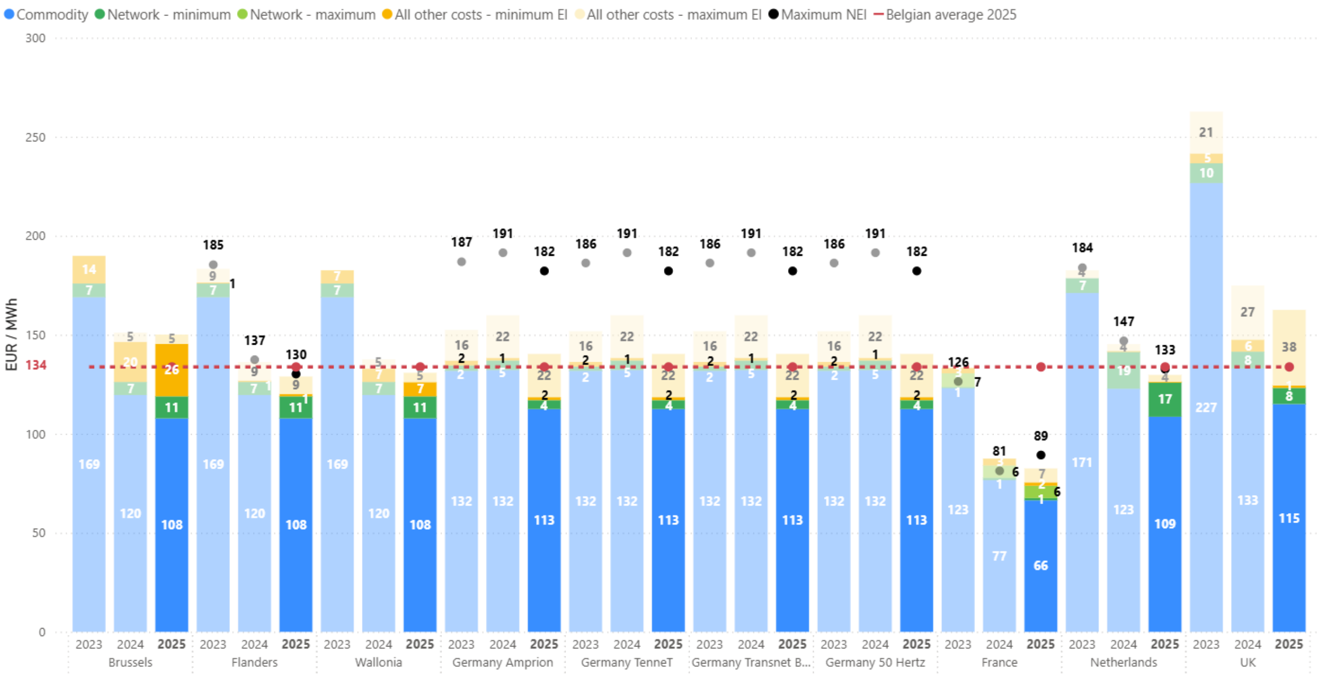
Vlaanderens competitieve positie wordt grotendeels toegeschreven aan lage commodity kosten, mogelijke verminderingen op de groenestroom- en WKK-certificaatverplichtingen, en vrijstellingen van bijzondere accijnzen vanaf het E1-profiel. De laatste zijn ook van toepassing op de andere Belgische regio's. De verhoogde concurrentiekracht van het Verenigd Koninkrijk begint bij het E0-profiel, dankzij volledige vrijstellingen onder het Renewable Obligations-schema. In Nederland verschillen de resultaten per profiel door de vrijstellingen, waarbij energietaks-verminderingen leiden tot verlagingen in de component "alle overige kosten", beginnend bij het E1-profiel. Andere industriële verbruikers in Nederland hebben echter een minder competitieve positie zonder deze verlagingen. Hoewel Duitsland niet tot de meest competitieve landen behoort vanwege hoge netwerkkosten, kent het aanzienlijke reducties, waardoor regio's zoals 50 Hertz vergelijkbare prijsniveaus bereiken als Brussel en Wallonië.

Voor niet-elektro-intensieve verbruikers blijft België matig competitief, waarbij Vlaanderen en Wallonië competitiever zijn dan Brussel. Brussel heeft een zwakkere positie door zijn hoofdzakelijk dienstgerichte economie en hogere stedelijke netwerkkosten, die de toegang tot industriële tariefverminderingen en vrijstellingen beperken, zoals die in Wallonië en Vlaanderen. Vlaanderen is de op een na meest competitieve regio voor E0 en E1, terwijl Nederland die positie voor het E2-profiel inneemt. Duitsland blijft het duurste land voor niet-elektro-intensieve verbruikers binnen de E0-, E1- en E2-profielen.

In Brussel is het verschil tussen elektro-intensieve verbruikers die profiteren van kortingen en niet-elektro-intensieve verbruikers relatief klein, zoals ook in België en Frankrijk in vergelijking met andere onderzochte landen. Dit weerspiegelt de ruimere incentives die elektro-intensieve verbruikers in andere landen ontvangen. Overheidssteun kan zich bovendien manifesteren in grondstofkosten, zoals via ARENH[16] in Frankrijk en prijswaarborgen in het Verenigd Koninkrijk, evenals in netwerkkosten, door kortingen op nettarieven via overheidssteun aan netwerkbeheerders, zoals in Frankrijk en Duitsland.

In België zijn elektriciteitskosten het hoogst in Brussel, gevolgd door Wallonië binnen de E0-, E1- en E2-profielen[17]. De verschillen voor E0 zijn klein, maar de kloof wordt aanzienlijk groter voor E1 en E2, aangezien bedrijven in Brussel minder toegang hebben tot verminderingen, gezien hun beperkte vertegenwoordiging in de regio. Vlaanderen blijft daarentegen de goedkoopste regio binnen België voor deze profielen, grotendeels dankzij lagere minimumbasiskosten in de component “alle overige kosten”. Binnen België zijn er grote verschillen in netwerkkosten per profiel. Voor het E0-profiel zijn de netwerkkosten in de drie regio’s relatief vergelijkbaar, terwijl Wallonië een duidelijke concurrentievoordeel geniet binnen het E1-profiel. Brussel heeft de hoogste netwerkkosten van het land, vanaf het E0- tot en met het E2-profiel. Vanaf het E2-profiel hebben alle Belgische regio’s dezelfde netwerkkosten, aangezien zij zijn aangesloten op het transmissienetwerk en niet langer op het regionale distributienetwerk. Als gevolg daarvan vloeit het verschil in competitiviteit vanaf het E2-profiel rechtstreeks voort uit de component “alle overige kosten”.

Elektriciteitsprijs per component in EUR/MWh (profile E3)



Voor de E3- en E4-profielen biedt Frankrijk nog steeds de laagste totale factuur van alle landen en verbruikstypes die in deze studie worden onderzocht, voornamelijk dankzij het ARENH-mechanisme. Duitsland blijft daarentegen het duurste land voor de E3- en E4-profielen van niet-elektro-intensieve verbruikers, met het Verenigd Koninkrijk en Brussel die kort daarop volgen. Deze hoge kosten zijn vooral te wijten aan de verhoogde component “alle overige kosten” in het Verenigd Koninkrijk en Duitsland ten opzichte van andere regio’s. Voor deze profielen blijft Frankrijk, net als in 2024, opvallen als het goedkoopste land dankzij de lage energiekostencomponenten.

[16] ARENH staat voor « Accès Régulé à l’Électricité Nucléaire Historique » (Regulated Access to Historic Nuclear Electricity). Dit mechanisme laat alle leveranciers toe om elektriciteit aan te kopen bij EDF (de historische elektriciteitsleverancier in Frankrijk) tegen voorwaarden bepaald door de publieke authoriteiten.

[17] De degressiviteitsfactor op de Waalse transportkosten wordt sinds 2023 toegepast. Deze degressieve factor, die de kosten aanpast op basis van de elektro-intensiteit van de consument, maakt een verlaging van de transportkosten mogelijk voor de Waalse E0- en E1-profielen. Het is daarom belangrijk om hiermee rekening te houden bij vergelijkende analyses tussen Wallonië en andere regio’s, of tussen België en andere landen.

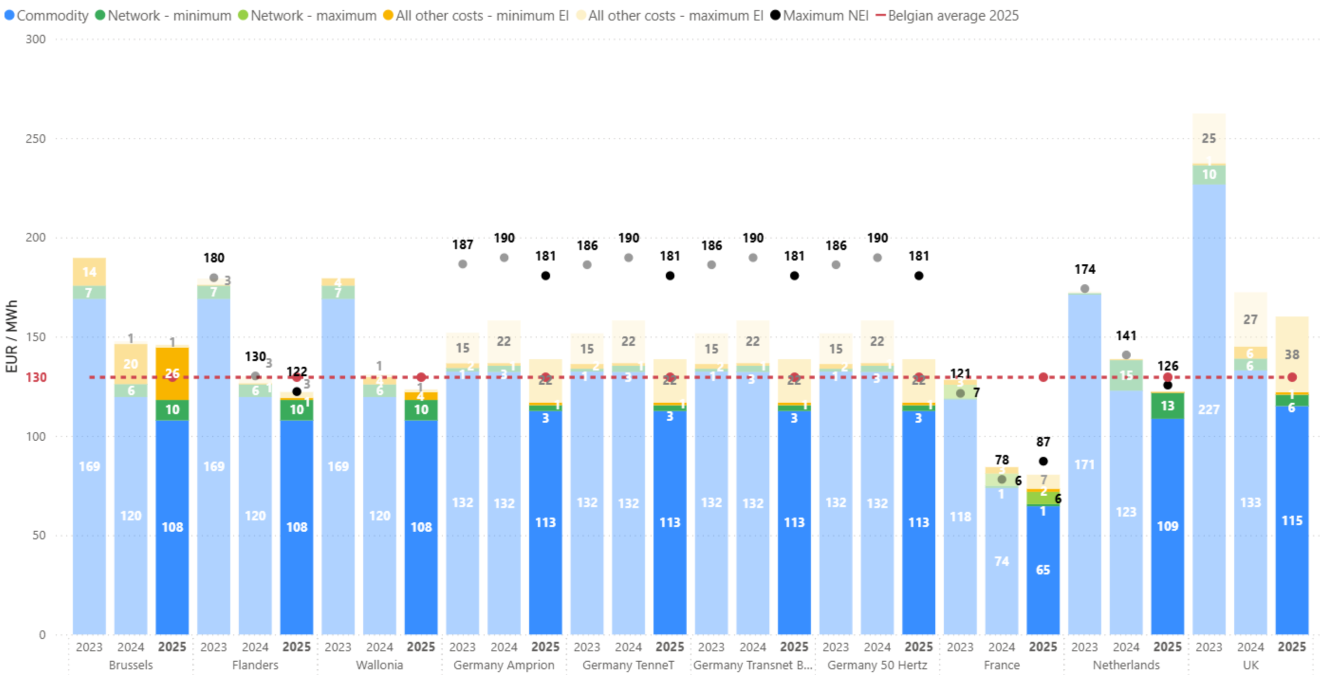
België en Nederland ondervinden daarentegen hogere netwerkkosten, wat hun concurrentiepositie schaadt voor elektro-intensieve verbruikers. Brussel bevindt zich relatief aan de dure kant van het spectrum, als uitzondering, terwijl Vlaanderen en Wallonië binnen een beperkte prijsmarge concurreren met andere landen. Voor niet-elektro-intensieve verbruikers is België beter gepositioneerd dankzij een lage basis van “overige kosten”, waardoor het competitiever is dan Duitsland en het Vereningd Koninkrijk. Voor dit type verbruiker convergeren Vlaanderen, Wallonië en Nederland naar vergelijkbare kostenniveaus als gevolg van gelijkaardige totale componentkosten.

In België behoudt Vlaanderen consequent de meest competitieve positie voor elektro-intensieve verbruikers in de E3- en E4-profielen, hoewel die positie voor niet-elektro-intensieve verbruikers minder uitgesproken is, in lijn met de resultaten van vorig jaar. Aangezien de commodity- en netwerkkosten geharmoniseerd zijn over de Belgische regio’s, zijn eventuele verschillen volledig toe te schrijven aan de component “alle overige kosten”. Het is vermeldenswaardig dat de grootste energieverbruiker in Brussel vandaag de dag meer overeenkomt met een E2-profiel dan met een E3- of E4-profiel, waardoor de E3- en E4-profielen in Brussel eerder theoretisch zijn, gezien het beperkte aantal zeer grote industriële verbruikers.

Vanaf het E3-profiel zijn alle verbruikers aangesloten op het transmissienetwerk, wat de kosten gelijkstelt over de Belgische regio’s en lager maakt dan bij de vorige profielen. De relatief hoge netwerkkosten in België zijn enerzijds te wijten aan de bijna verdubbelde transmissienettarieven door Elia tussen 2024 en 2025, en anderzijds aan het ontbreken van een mechanisme voor het verlagen van de transporttarieven voor bepaalde gebruikerscategorieën (zoals in sommige buurlanden wel het geval is). In Nederland, vergelijkbaar met België, zijn de hoge netwerkkosten het gevolg van de hoge TenneT-tarieven die sinds 2024 van kracht zijn, evenals de stopzetting van het eerder bestaande mechanisme voor transportreducties in datzelfde jaar.

Voor de E3- en E4-profielen vertoont België lage commoditykosten, enkel Frankrijk heeft een nog lagere prijs, en de tarieven zijn vergelijkbaar met Nederland. Voor deze profielen ligt de component “alle overige kosten” in België hoger dan in de buurlanden. De voordelen van elektro-intensiteit via reducties of vrijstellingen leiden in Wallonië en Brussel niet tot evenveel reducties als in Vlaanderen, waar deze component lager ligt dan in de andere regio’s. Over het algemeen blijft België in nauwe competitie met Nederland voor niet-elektro-intensieve profielen, net achter Frankrijk. Hoewel België slechts beperkte reducties aanbiedt voor elektro-intensieve verbruikers in Wallonië en Brussel, zorgt de lage basis van “overige kosten”, vooral in Vlaanderen, voor een gunstig energieklimaat voor niet-elektro-intensieve verbruikers.

Elektriciteitsprijs per component in EUR/MWh (profiel E4)



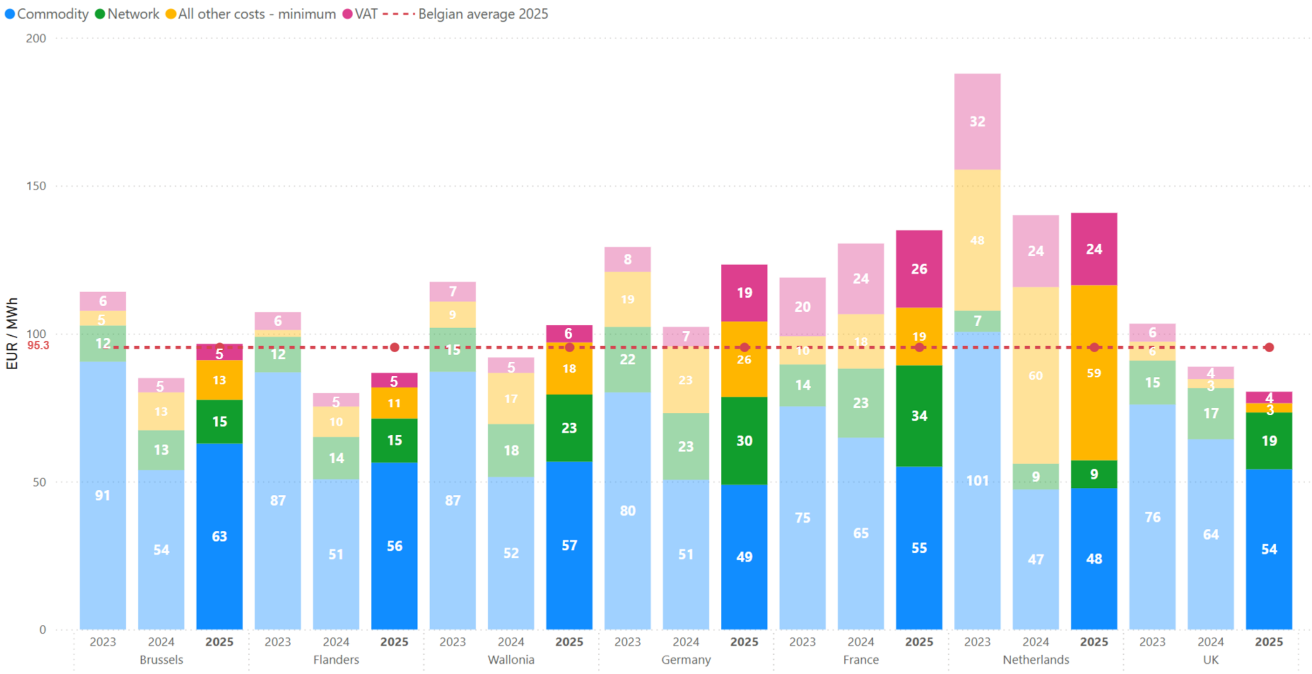
Vergelijking van de aardgasprijzen

Vergelijking van de aardgasprijzen voor residentiële en kleine professionele verbruikers

In 2025 kende de aardgasfactuur voor residentiële consumenten onder het G-RES-profiel een bescheiden stijging in alle Belgische regio's, voornamelijk gedreven door toenemende commodity kosten en netwerkkosten. Deze opwaartse trend in de totale factuur is ook zichtbaar in Duitsland en, in mindere mate, in Frankrijk, terwijl het Verenigd Koninkrijk een daling kende. De prijzen in Nederland bleven stabiel op een hoog niveau. De stijging in Duitsland, en in mindere mate in Frankrijk, is vooral toe te schrijven aan hogere netwerkkosten en stijgende "alle overige kosten". De daling in het Verenigd Koninkrijk is te verklaren door een daling van de commodity prijzen met 15%, waarschijnlijk als gevolg van een verlaging van het prijsplafond per eenheid, gecombineerd met een laag aandeel "alle overige kosten". Hierdoor wist het Verenigd Koninkrijk Vlaanderen te overtreffen als meest competitieve regio/land. Vlaanderen kende daarentegen een stijging van de commodity component met 9%, wat leidde tot het verlies van zijn toppositie t.o.v. 2024. Binnen België blijft Vlaanderen echter de meest competitieve regio, gevolgd door Brussel en dan Wallonië.

Nederland blijft het duurste land in de vergelijking door de impact van de energiebelasting binnen de component "alle overige kosten", die meer dan 40% van de totale factuur uitmaakt en daarmee de grootste component vormt. Frankrijk en Duitsland hebben aan competitiviteit ingeboet door aanzienlijke stijgingen in specifieke kostencomponenten. Frankrijk kende een forse stijging in de netwerkkosten, samen met een toename van de "alle overige kosten"-component, gedreven door hogere TICGN[18]-tarieven. Ook Duitsland werd geconfronteerd met hogere netwerkkosten, toegenomen belastingen binnen de categorie "alle overige kosten", en vooral een terugkeer van het btw-tarief naar 19%, na een tijdelijke verlaging naar 7% in 2022 om de inflatie te bestrijden.

Aardgasprijzen per component in EUR/MWh (profiel G-RES)



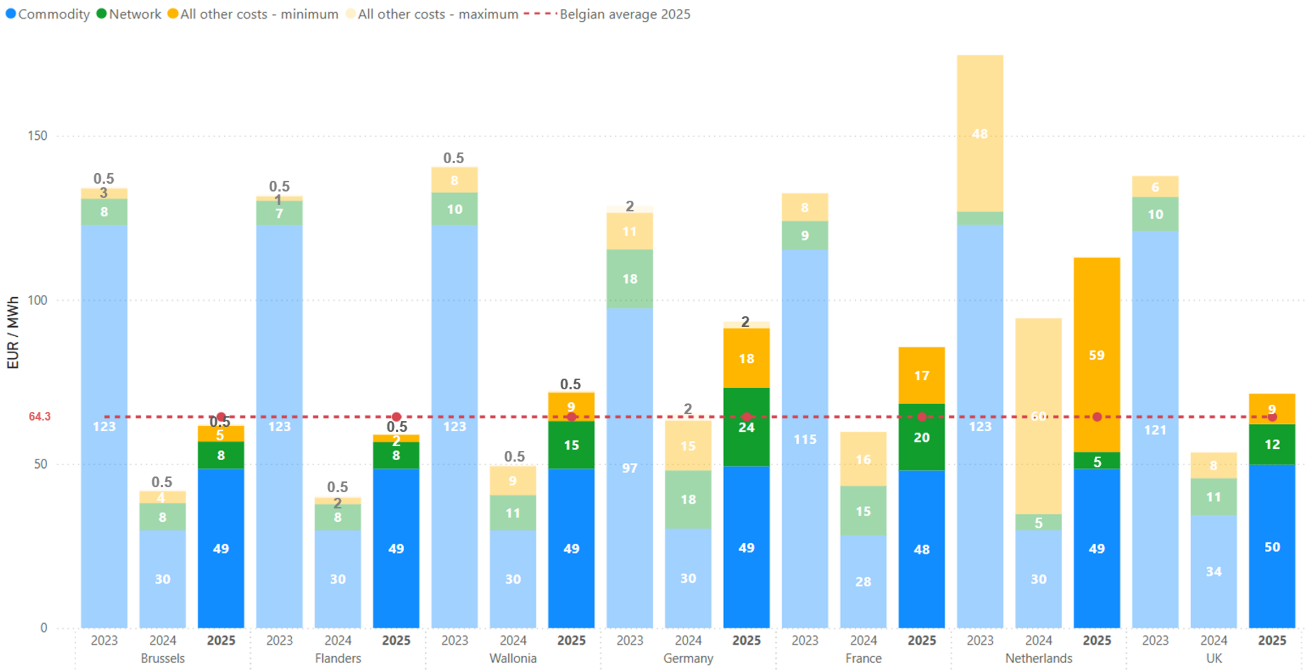
Voor kleine professionele verbruikers (G-PRO) vertoont 2025 een gelijkaardige opwaartse trend in de totale aardgasfacturen in de meeste landen en regio's, voornamelijk gedreven door stijgende commodity kosten en netwerkkosten. Ondanks deze algemene stijgingen behoudt België zijn positie als meest competitieve land in de vergelijking, in lijn met de situatie in 2024. Deze competitiviteit is grotendeels te danken aan de relatief lage netwerktarieven en beperkte "alle overige kosten".

[18] La taxe intérieure de consommation sur le gaz naturel (Binnenlandse belasting op aardgasverbruik)

Binnen België blijft Vlaanderen de best scorende regio, dankzij de laagste regionale kosten binnen de component "alle overige kosten". Brussel volgt kort daarop, en staat zowel nationaal als internationaal op de tweede plaats. Wallonië is daarentegen aanzienlijk minder competitief, als gevolg van hogere netwerkkosten en een aanzienlijk groter aandeel regionale kosten binnen de component "alle overige kosten". Hierdoor is het Verenigd Koninkrijk nu iets competitiever dan Wallonië, hoewel het VK nog steeds boven het Belgische gemiddelde blijft.

Frankrijk, Duitsland en vooral Nederland zijn minder competitief in vergelijking met de Belgische regio's en het Verenigd Koninkrijk, voornamelijk door hoge netwerkkosten in Duitsland en een verhoogde "alle overige kosten"-component in Nederland. De substantiële impact van de energiebelasting op de totale factuur in Nederland verstevigt bovendien zijn positie als minst competitieve land in de vergelijking.

Aardgasprijzen per component in EUR/MWh (profiel G-PRO)



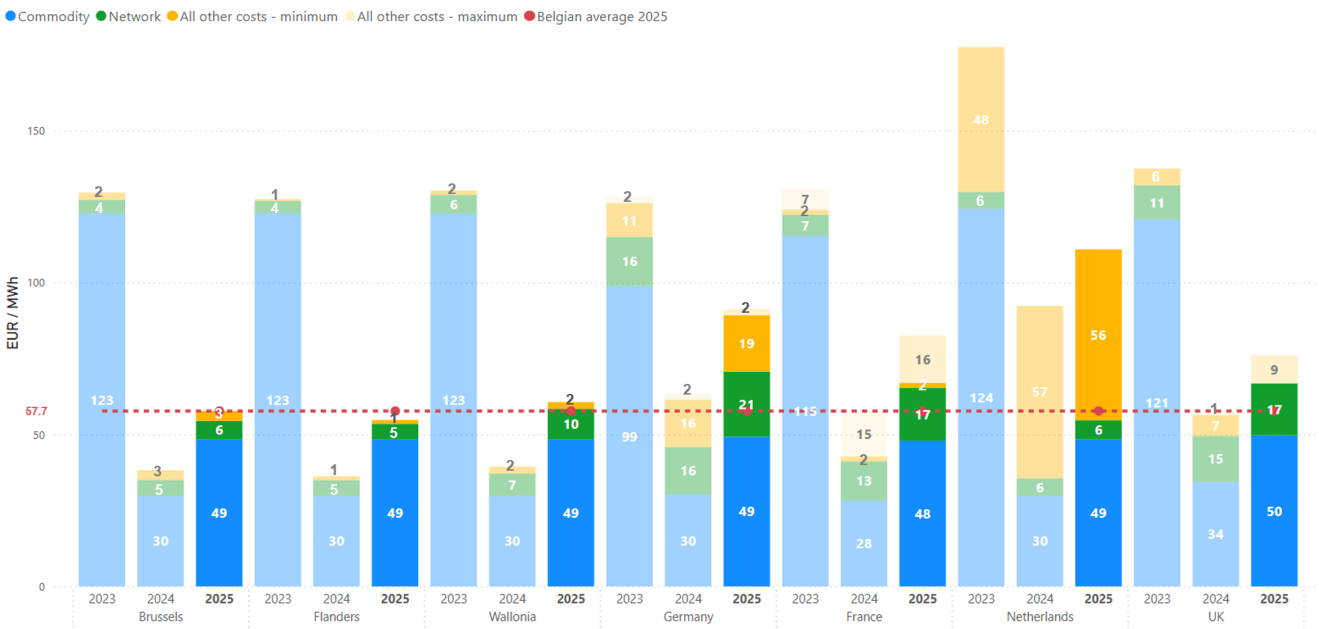
Vergelijking van de aardgasprijzen voor industriële verbruikers

Voor grotere industriële verbruikers is in alle onderzochte landen en regio's een consistente stijging van de totale aardgasfacturen zichtbaar. Deze stijging wordt voornamelijk aangedreven door oplopende commodity kosten en, in mindere mate, hogere netwerkkosten. Ondanks deze toename behoudt België zijn positie als meest competitieve land in de vergelijking, zelfs wanneer rekening wordt gehouden met mogelijke verminderingen in landen zoals het Verenigd Koninkrijk, Frankrijk en Duitsland. Deze sterke prestatie is te danken aan de relatief lage netwerktarieven en een beperkte component "alle overige kosten".

Binnen België zijn de regionale verschillen minder uitgesproken dan bij de kleinere profielen zoals G-RES en G-PRO. Vlaanderen blijft de meest competitieve regio, net vóór Brussel, terwijl Wallonië achterop blijft door hogere netwerkkosten.

Nederland blijft het minst competitieve land, ondanks een van de laagste netwerkkosten. De competitiviteit wordt er vooral ondermijnd door de hoge energiebelasting, die de "alle overige kosten"-component van de factuur domineert. In Frankrijk en het Verenigd Koninkrijk blijft de toegang tot specifieke belastingverminderingen – zoals de TICGN[19]-reductie in Frankrijk of de vermindering van de *climate change levy* in het Verenigd Koninkrijk – cruciaal om het concurrentievermogen te behouden. Deze reducties worden steeds bepalender voor het concurrentieprofiel van grotere industriële verbruikers in deze landen. Duitsland blijft het op één na minst competitieve land, door relatief hoge netwerkkosten en "alle overige kosten" in vergelijking met de andere onderzochte landen.

Aardgasprijzen per component in EUR/MWh (profiel G0)

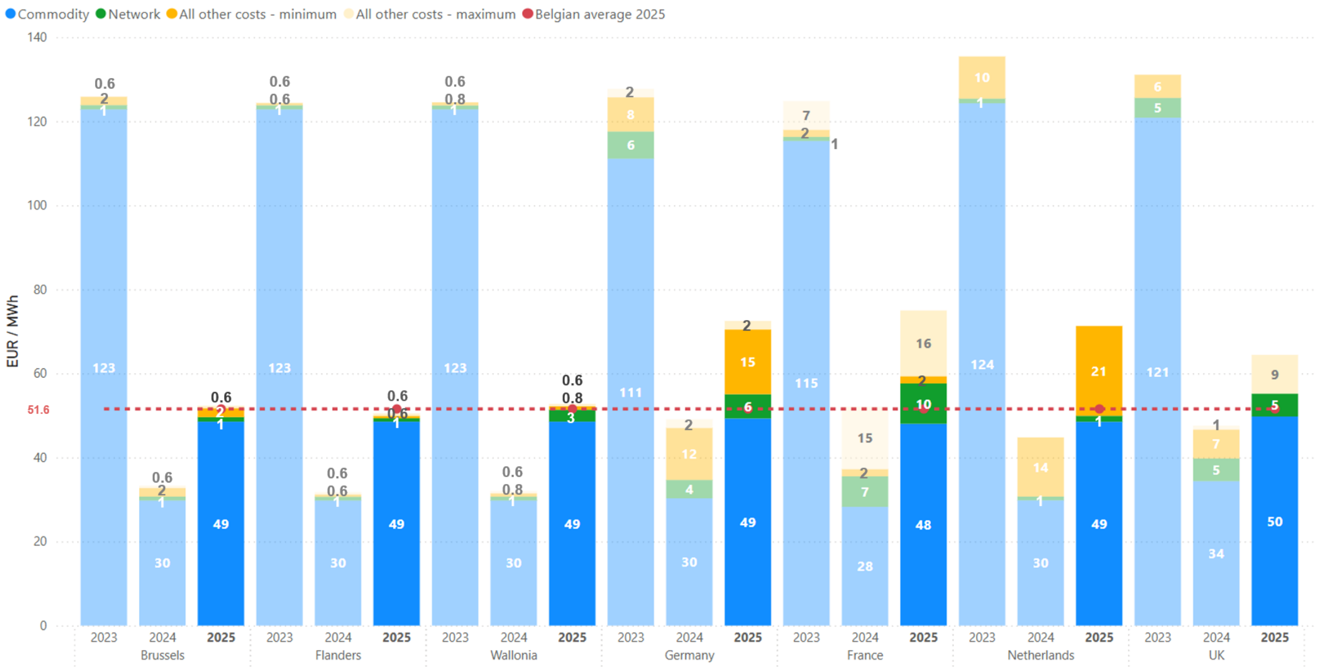


[19] La taxe intérieure de consommation sur le gaz naturel (Binnenlandse belasting op aardgasverbruik)

Voor het G1-profiel neemt het relatieve belang van de componenten netwerkkosten en “alle overige kosten” binnen de totale factuur af, wat leidt tot intensere concurrentie tussen landen, vooral wanneer verminderingen worden toegepast. Desondanks behoudt België zijn positie als meest competitieve land, waarbij de regionale verschillen nog verder afnemen in vergelijking met kleinere verbruiksprofielen. Vlaanderen, Brussel en Wallonië vertonen nu slechts marginale verschillen in competitiviteit.

In Duitsland is de mogelijkheid om een vermindering toe te passen op de energiebelasting (“Energiesteuer”) cruciaal om te vermijden dat het land de duurste wordt binnen deze profielgroep. Ook in Frankrijk is het toepassen van een vermindering op de TICGN -belasting essentieel om niet lager in de rangschikking te eindigen. Nederland daarentegen kende een duidelijke daling van de “alle overige kosten” ten opzichte van het G0-profiel, dankzij lagere tarieven voor de energiebelasting bij hogere verbruiksniveaus. Hoewel het land nog steeds het minst competitieve blijft wanneer alle mogelijke verminderingen in rekening worden gebracht, overtreft het zowel Frankrijk als Duitsland qua competitiviteit wanneer deze verminderingen niet worden meegerekend. Het Verenigd Koninkrijk wordt het op één na meest competitieve land wanneer de vrijstelling op de climate change levy wordt toegepast, waardoor het verschil met het Belgische gemiddelde kleiner wordt. Dit onderstreept het cruciale belang van gerichte verminderingen in het bepalen van het concurrentievermogen.

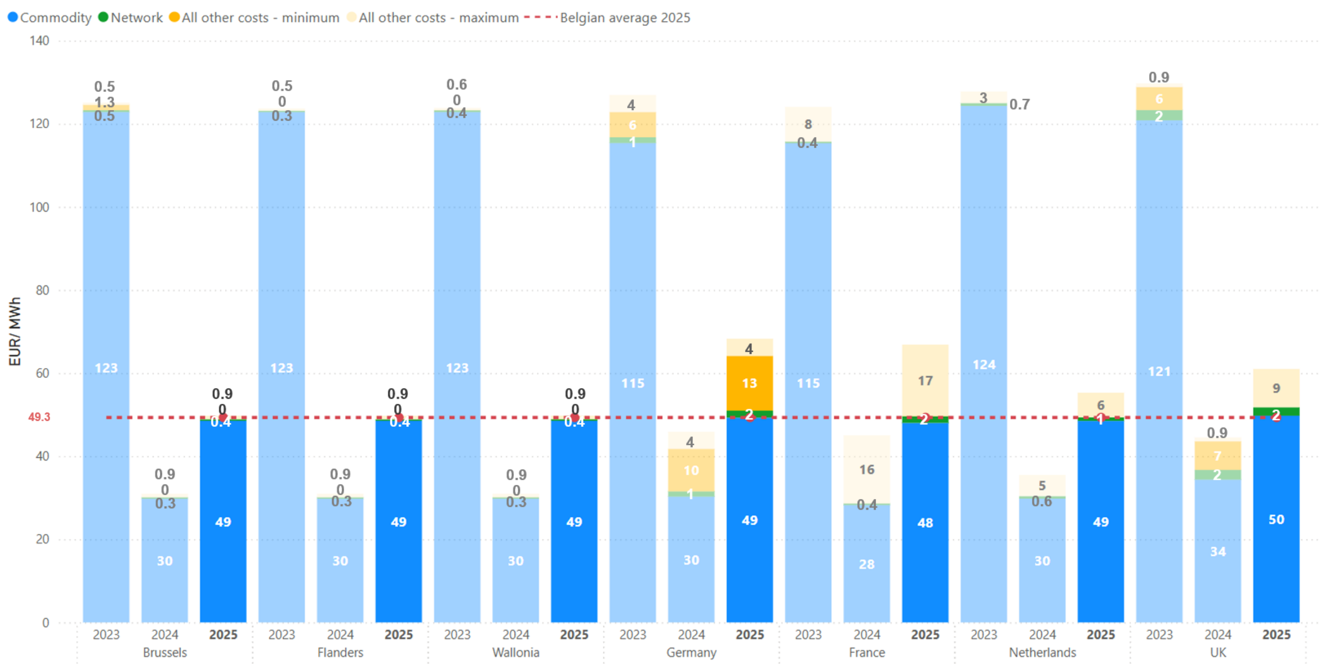
Aardgasprijzen per component in EUR/MWh (profiel G1)



Voor het G2-profiel tenslotte neemt de concurrentie aanzienlijk toe, aangezien de commodity kosten grotendeels gelijk zijn tussen landen en de netwerkkosten slechts een beperkte rol spelen. Daardoor wordt de competitieve positie van een land voornamelijk bepaald door de beschikbaarheid van vrijstellingen of verminderingen op belastingen binnen de “alle overige kosten” component. G2-verbruikers halen aanzienlijk voordeel uit volledige vrijstellingen op de TICGN-taks in Frankrijk, de energiebelasting in Nederland en de climate change levy in het Verenigd Koninkrijk, wat leidt tot hevige concurrentie tussen deze landen en België wanneer dergelijke verminderingen worden toegepast.

Ondanks dit competitieve landschap blijft België zijn positie als meest competitieve land behouden, met slechts minimale verschillen tussen de regio’s. Duitsland is daarentegen het minst competitieve land in de vergelijking geworden, aangezien het enkel een verlaagd tarief aanbiedt – en geen volledige vrijstelling – op de energiebelasting (“Energiesteuer”), wat resulteert in een relatief hoog aandeel “alle overige kosten”.

Aardgasprijzen per component in EUR/MWh (profiel G2)



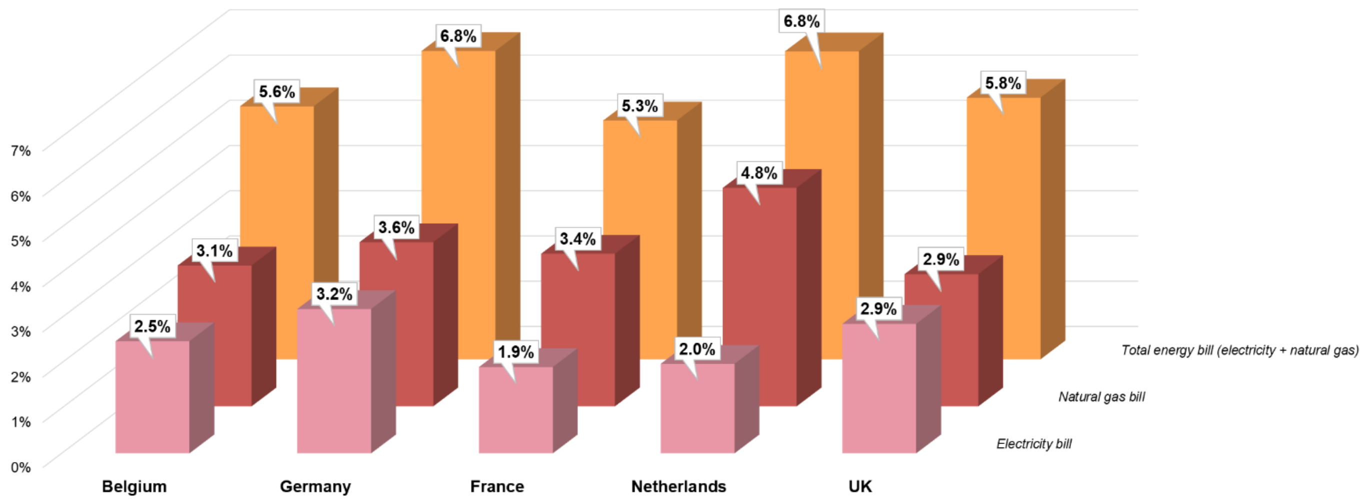
Inspanningen voor het betalen van de energiefacturen voor kwetsbare consumenten

Onze studie onderzoekt de verschillende maatregelen die in de landen binnen deze analyse zijn genomen om de impact van stijgende energieprijzen en inflatie op residentiële consumenten te verzachten. Deze maatregelen variëren van sociale tarieven tot rechtstreekse financiële ondersteuning, die gericht is op het verlagen van de energiefactuur voor consumenten. De grote verscheidenheid aan maatregelen maakt het echter moeilijk om landen onderling op een uniforme manier te vergelijken.

Inspanningsgraad in vergelijking met het gemiddeld beschikbaar inkomen (woonlasten afgetrokken)

In deze eerste analyse focussen we op het aandeel van de energiefactuur binnen het budget van een huishouden met een gemiddeld beschikbaar inkomen (beide partners werken), na aftrek van een van de belangrijkste uitgavenposten, namelijk de huisvestingskosten. De onderstaande figuur toont aan dat in alle landen die in deze studie zijn opgenomen, de elektriciteitsfactuur een kleiner deel van het gezinsbudget uitmaakt dan de aardgasfactuur.

Belang van de energiefactuur ten opzichte van het gemiddelde beschikbaar inkomen (in %)



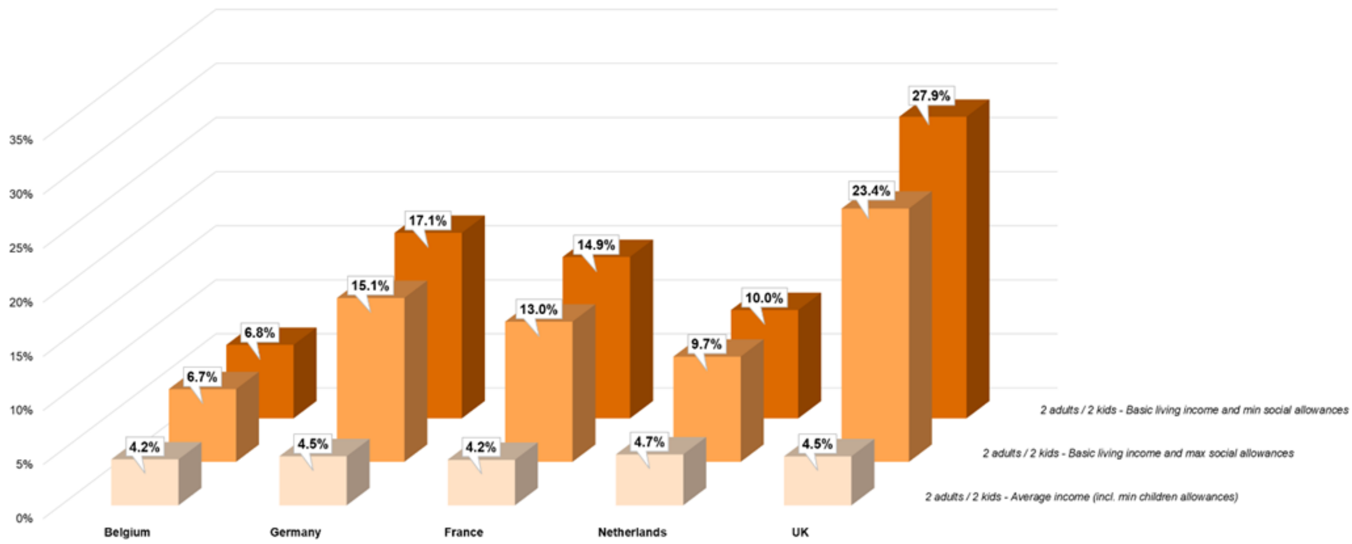
In januari 2025 kwam Frankrijk naar voren als het land met het laagste aandeel van de energiefacturen in het beschikbaar inkomen, met 5,3%, waarmee het België (5,2% in 2024) van de eerste plaats heeft gestoten. Dit is voornamelijk te danken aan competitieve elektriciteitsprijzen die mogelijk worden gemaakt door het ARENH-mechanisme. België staat in 2025 op de tweede plaats, waarbij energiekosten 5,6% van het beschikbare inkomen vertegenwoordigen, beïnvloed door minder competitieve elektriciteitsprijzen. Het Verenigd Koninkrijk bevindt zich in de middenmoot, met jaarlijkse energiefacturen die 5,8% van het beschikbaar inkomen uitmaken – een verbetering van 1,5 procentpunt ten opzichte van 2024 – terwijl Nederland en Duitsland achterblijven met een gelijk inspanningspercentage van 6,8%.

Als we specifiek kijken naar elektriciteitskosten[20], toont Frankrijk de laagste lasten, met elektriciteitsfacturen die 1,9% van het jaarlijkse beschikbaar inkomen vertegenwoordigen (na aftrek van huisvestingskosten). Nederland volgt met elektriciteitskosten die 2,0% van het inkomen uitmaken, terwijl België – na twee plaatsen te zijn gedaald – op de derde plaats staat met 2,5%. Het Verenigd Koninkrijk en Duitsland dragen de zwaarste elektriciteitslast, met elk ongeveer 3% van het beschikbaar inkomen.

Wat betreft aardgaskosten staat het Verenigd Koninkrijk bovenaan met het laagste aandeel in het beschikbaar inkomen, gemiddeld 2,9%. België, dat één plaats zakt, volgt met 3,1%, kort daarop gevolgd door Frankrijk en Duitsland, die beide rond de 3,5% liggen. In tegenstelling tot wat werd gezien bij elektriciteit heeft Nederland de hoogste aardgasfactuur in verhouding tot het beschikbaar inkomen, net onder de 5%.

[20] Rekening houdend met het feit dat facturen voor aardgas en elektriciteit afzonderlijk worden genomen en niet in gecombineerde plannen.

Inspanningsgraad energiefactuur ten opzichte van het beschikbaar inkomen (in %)



In deze tweede analyse evalueren we de impact van de gemiddelde energiefactuur op personen met een gemiddeld nationaal inkomen in vergelijking met het effect op de meest kwetsbare bevolkingsgroepen. Hiervoor verwerken we alle kwantificeerbare sociale maatregelen in het referentie-inkomen van een typisch huishouden (bestaande uit twee volwassenen en twee kinderen) zonder bijkomende inkomstenbronnen. Belangrijk is dat we de huisvestingskosten niet aftrekken van het beschikbaar inkomen, aangezien gezinnen met een minimuminkomen vaak aanzienlijke steun ontvangen op dit vlak, wat anders de resultaten zou vertekenen. Hierdoor ligt het gewicht van de energiefactuur voor een gemiddeld inkomen automatisch lager dan in de vorige analyse.

Zoals weergegeven in de bovenstaande figuur, toont een vergelijking van de inspanningsgraad tussen landen voor de totale energiefactuur voor een huishouden met een gemiddeld inkomen aan dat, net als in 2024, België het land is waar de energiefactuur het minst zwaar doorweegt, met 4,2%, samen met Frankrijk. Deze worden op de voet gevolgd door Duitsland en het Verenigd Koninkrijk met elk 4,5%, en Nederland met 4,7%.

Zoals verwacht, wordt de situatie moeilijker voor gezinnen met een bescheiden inkomen. Vergeleken met 2024 is de energiefactuur ten opzichte van het basisinkomen echter gedaald in alle onderzochte landen, met uitzondering van Duitsland. Voor gezinnen met een bescheiden inkomen die genieten van een sociaal tarief, blijft de impact van de energiefactuur in België relatief laag, rond de 6,7% – dat is meer dan 56% hoger dan bij een gemiddeld inkomen. Nederland volgt met een energiefactuur die ongeveer 10% van het beschikbaar inkomen vertegenwoordigt. In Frankrijk ligt het energiebeslag tussen 13% en 15%, terwijl Duitsland uitkomt tussen 15% en 17%. Het Verenigd Koninkrijk kent de zwaarste energiefactuur in verhouding tot het leefloon van de meest kwetsbare huishoudens, met cijfers tussen 23% en 28% van het beschikbaar inkomen (een duidelijke verbetering ten opzichte van voorgaande jaren). Niettemin blijft de totale energiefactuur in het Verenigd Koninkrijk een onevenredige last vormen voor huishoudens die het meeste risico lopen op energiearmoede.

Opmerking

De in deze sectie gehanteerde benadering kent bepaalde beperkingen, aangezien ze mogelijk niet volledig het verbruiksprofiel weerspiegelt van personen die met energiearmoede kampen, zoals alleenstaanden zonder kinderen. Daarnaast wordt geen rekening gehouden met het mogelijke gedrag van kwetsbare individuen die hun energieverbruik bewust verminderen om hun facturen beheersbaar te houden. Ondanks deze beperkingen is het primaire doel van dit hoofdstuk om de inspanningsgraad te bepalen die nodig is om de energiefactuur te betalen, en om deze te vergelijken tussen landen om de relatieve impact te begrijpen. Wij zijn van mening dat deze methode voldoende robuust is om relevante conclusies te trekken. Verdere inzichten bij deze vaststellingen zijn terug te vinden in Hoofdstuk 8.

Evaluatie van de Belgische industriële competitiviteit

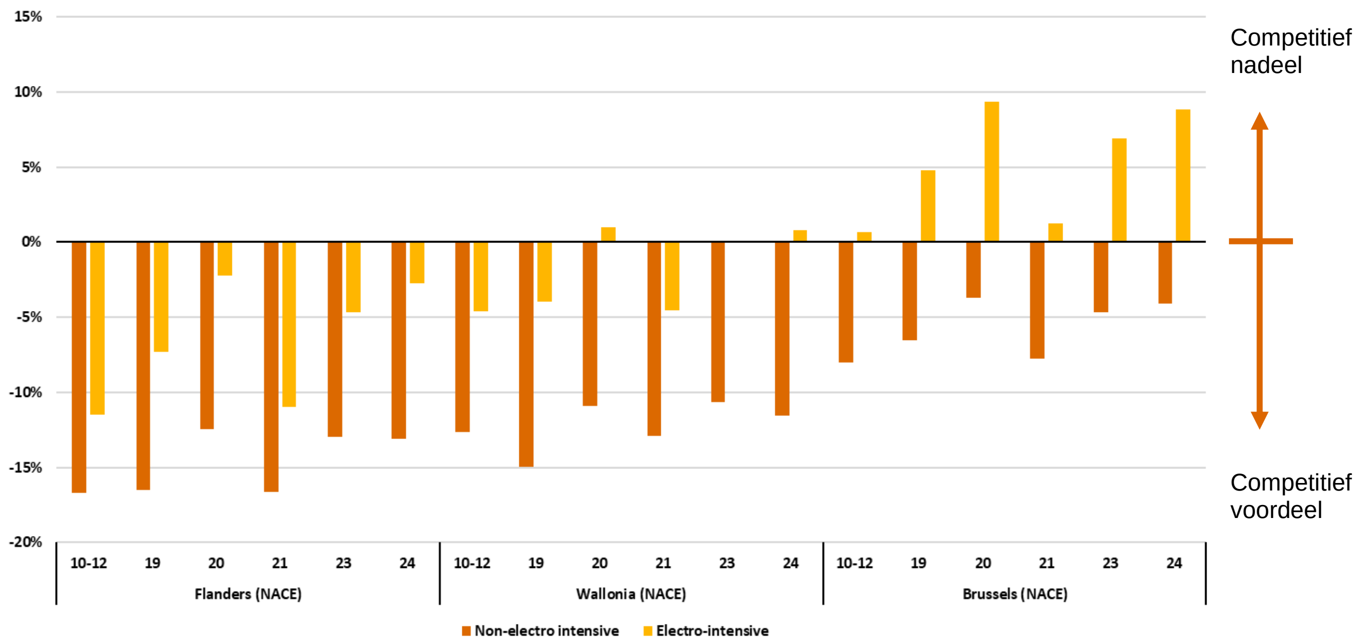
Inclusief het Verenigd Koninkrijk

In 2025 behoudt de Belgische industrie een relatief competitieve positie op het vlak van gewogen energiekosten, in het bijzonder voor niet-elektro-intensieve verbruikers. In Vlaanderen, Wallonië en Brussel genieten alle sectoren van een concurrentievoordeel ten opzichte van de gemiddelde gewogen energieprijzen in Duitsland, Frankrijk, Nederland en het Verenigd Koninkrijk. Dit voordeel is het sterkst in Vlaanderen, waar sectoren zoals voeding en dranken (NACE 10–12), aardolieverwerking (NACE 19) en farmaceutica (NACE 21) de laagste gewogen energiekosten kennen. Hoewel de elektriciteitsprijzen hoger liggen in Wallonië en Brussel, zorgen lage aardgasprijzen voor een stevige boost in de algemene competitiviteit van de niet-elektro-intensieve industrie.

Voor elektro-intensieve verbruikers is het beeld complexer. Vlaanderen blijft competitief in alle sectoren, met gewogen kosten die meer dan 10% voordeel opleveren voor zowel de voedings- en drankenindustrie als de farmaceutische industrie. In Wallonië is het plaatje gemengd: terwijl sectoren zoals voeding en dranken (NACE 10–12), aardolieverwerking (NACE 19) en farmaceutica (NACE 21) een licht voordeel behouden, ondervinden sectoren zoals chemie (NACE 20) en de metaalindustrie (NACE 24) een beperkt concurrentienadeel. Brussel lijdt daarentegen consequent onder een concurrentienadeel voor elektro-intensieve verbruikers, met verschillen tot 10% als gevolg van hoge elektriciteitsprijzen.

Belangrijk is dat de opname van het Verenigd Koninkrijk de relatieve positie van België verzwakt, vooral voor elektro-intensieve profielen, aangezien de Britse belastingverminderingen het algemene gemiddelde drukken en door de impact van de lage prijzen in Frankrijk wordt het gemiddelde van de buurlanden afgezwakt. Het aanzienlijke aardgasvoordeel in België – met prijsverschillen van meer dan 10% in alle sectoren en regio's, en oplopend tot meer dan 25% in sommige gevallen – blijft een strategisch sterke troef, in het bijzonder voor aardgas-intensieve productieprocessen.

Gewogen verschillen in de energiekost (elektriciteit en aardgas) tussen de Belgische regio's en de gemiddelde kosten in de buurlanden (inclusief het VK) voor elektro-intensieve en niet-elektro-intensieve consumenten

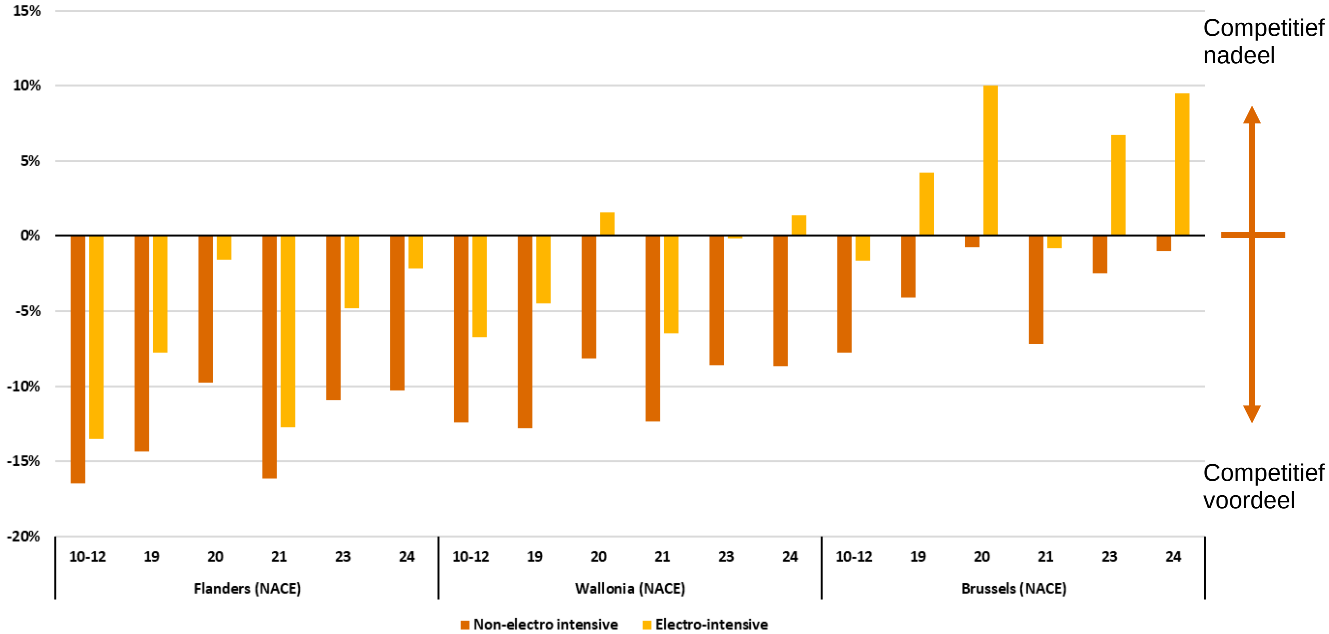


Exclusief het Verenigd Koninkrijk

Zonder het Verenigd Koninkrijk in de benchmark blijft de algemene competitiviteit van België positief, al neemt het relatieve voordeel af, vooral voor elektro-intensieve verbruikers. Vlaanderen blijft goed presteren in alle sectoren, terwijl in Wallonië sectoren zoals chemie (NACE 20) en de metaalindustrie (NACE 24) toenemende nadelen ondervinden van ongeveer 1.5 procentpunt. Hoewel deze verschillen op dit moment mogelijk nog geen relocatie veroorzaken, wijzen ze wel op een groeiende competitieve druk op elektriciteits-intensieve sectoren. Brussel blijft kampen met structurele uitdagingen voor elektro-intensieve verbruikers, maar wint wel een beperkt concurrentievoordeel in de industriële sectoren voeding en dranken (NACE 10–12) en farmaceutica (NACE 21) ten opzichte van de situatie waarin het Verenigd Koninkrijk deel uitmaakte van de analyse.

Voor niet-elektro-intensieve verbruikers behouden alle drie de Belgische regio's een gunstige concurrentiepositie over alle sectoren heen.

Gewogen energieprijsverschillen (elektriciteit en aardgas) tussen de Belgische regio's en de gemiddelde kosten van de buurlanden (exclusief het VK) voor elektro-intensieve en niet-elektro-intensieve verbruikers



Slotopmerkingen

Hoewel deze analyse een waardevol macro-economisch perspectief biedt op de competitiviteit van de Belgische industrie op basis van gewogen energiekosten, is het cruciaal om ze aan te vullen met sector- en bedrijfsspecifiek onderzoek. Hoewel België in bepaalde sectoren – met name voor niet-elektro-intensieve verbruikers – een duidelijk concurrentievoordeel vertoont, kunnen er aanzienlijke verschillen ontstaan in de werkelijke competitiviteit, afhankelijk van het aandeel aardgas versus elektriciteit in de energiemix van een bedrijf of sector.

Aardgasprijzen blijven in alle Belgische regio's sterk competitief, in lijn met de trends die in 2024 werden waargenomen. Elektriciteitsprijzen tonen echter een afwijkend patroon, waarbij voor elektro-intensieve verbruikers in verschillende regio's en sectoren competitieve nadelen zichtbaar zijn. Dit vormt een duidelijke verslechtering ten opzichte van 2024, toen België nog in de meeste sectoren een concurrentievoordeel behield dankzij sterkere elektriciteit gerelateerde competitiviteit.

Om een preciezer en gedetailleerder beeld te krijgen van de werkelijke concurrentiepositie van België, is het essentieel om diepgaandere, sectorspecifieke analyses uit te voeren die duidelijk het verschil maken tussen elektriciteits- en aardgasafhankelijkheid op bedrijfsniveau. Deze aanpak zal cruciaal zijn om een doeltreffend industriebeleid uit te stippelen, de energiekosten te hervormen en langetermijninvesteringsstrategieën vorm te geven.

French version

Cette étude compare les prix de l'électricité et du gaz naturel[21] pour les consommateurs résidentiels, les petites entreprises et les consommateurs industriels pour la Belgique et quatre de ses pays voisins (la France, l'Allemagne, les Pays-Bas et le Royaume-Uni). Lorsqu'ils sont jugés plus pertinents, les résultats de cette étude sont présentés au niveau régional plutôt qu'au niveau national.

Ce rapport se concentre explicitement sur les prix de l'énergie en vigueur en janvier 2025. Il s'agit d'un aspect important à garder à l'esprit compte tenu de la volatilité actuelle des prix de l'électricité et du gaz naturel.

Changements les plus pertinents observés par rapport à la situation de 2024 :

- **Électricité :**

  Pour les clients résidentiels, les factures d'électricité ont augmenté de manière générale, principalement en raison de l'évolution des prix de la composante énergétique. En revanche, nous observons une baisse des coûts d'électricité pour les petites entreprises. Les grandes entreprises ont enregistré une diminution notable de leurs dépenses totales en électricité par rapport à 2024. Les moyens et grands consommateurs industriels ont bénéficié d'une baisse des prix de la composante énergétique, qui a plus que compensé les augmentations des coûts de réseau. Divers mécanismes de soutien et de protection, y compris des exonérations et des réductions, ont contribué à modérer les coûts, créant ainsi un environnement de plus en plus concurrentiel pour les industries électro-intensives et non électro-intensives.

- **Gaz naturel :**

  L'année 2025 a été marquée par une hausse notable du prix de la composante énergétique du gaz naturel pour la majorité des catégories de consommateurs, à l'exception de G-RES en Grande Bretagne, où une diminution a été observée en raison d'un prix plafond unitaire inférieur. Malgré cette tendance générale à la hausse, la Belgique continue de conserver un avantage concurrentiel par rapport à ses pays voisins grâce à des prix relativement bas pour le gaz naturel.

L'étude a examiné 13 profils de consommateurs distincts : huit pour l'électricité (couvrant un résidentiel, deux petits professionnels et cinq industriels) et cinq pour le gaz naturel (incluant un résidentiel, un petit professionnel et trois industriels).

Les profils étudiés sont définis dans les Termes de Référence de cette étude. Il est à noter que les profils de consommation d'électricité ont été mis à jour pour l'analyse de cette année, avec des ajustements rétroactifs appliqués aux données de 2024, reflétant les modifications des heures de consommation, des capacités de connexion et des capacités souscrites, ainsi que des pics de demande. Les paramètres mis à jour incluent : (1) les heures de consommation équivalentes (de E-BSME à E1), (2) la capacité de connexion (de E0 à E1), (3) la capacité souscrite (de E-BSME à E1), (4) le pic annuel (de E-RES à E1), et (5) le pic mensuel (de E-RES à E1). En dehors de ces modifications, cette étude s'appuie sur les études comparatives précédentes menées par PwC pour le compte de la CREG, Brugel, CWaPe et VNR[22], maintenant une cohérence méthodologique tout en s'adaptant aux évolutions des conditions du marché.

Les tableaux ci-dessous synthétisent, de manière non-exhaustive, les caractéristiques des types de profils de consommateurs pour lesquels d'autres hypothèses peuvent être trouvées dans le chapitre 3.

[21] Les prix de la composante énergétique désignent les prix de l'électricité ou du gaz naturel en tant que tel, en incluant une éventuelle redevance fixe facturée par le fournisseur d'énergie.

[22] Les études des années précédentes sur les consommateurs résidentiels et industriels sont disponibles sur le site web de la CREG:
https://www.creg.be/sites/default/files/assets/Publications/Studies/F20240515EN.pdf (édition 2024)
https://www.creg.be/sites/default/files/assets/Publications/Studies/F20230515EN.pdf (édition 2023)
https://www.creg.be/sites/default/files/assets/Publications/Studies/F20220513EN.pdf (édition 2022)
https://www.creg.be/sites/default/files/assets/Publications/Studies/F20210517EN.pdf (édition 2021)

Profils des consommateurs d'électricité

Profil	Type de consommateur	Demande annuelle (MWh)	Capacité contractée (kW)	Pointe annuelle (kW)
E-RES	Résidentiel	3,5	7,36	5
E-SSME	Petit professionnel	30	37,5	18
E-BSME	Grand professionnel	160	105	95
E0	Industriel	2.000	750	725
E1	Industriel	10.000	4.400	4.300
E2	Industriel	25.000	5.000	5.000
E3	Industriel	100.000	13.000	10.400
E4	Industriel	500.000	62.500	50.000

Profils des consommateurs de gaz naturel

Profil	Type de consommateur	Demande annuelle (MWh)	Capacité contractée (kW)
G-RES	Résidentiel	17	-
G-PRO	Petit professionnel	300	-
G0	Grand professionnel	1.250	-
G1	Industriel	100.000	20.000
G2	Industriel	2.500.000	312.500

La comparaison porte sur trois composantes de la facture énergétique : les coûts de la composante énergétique ("commodity"), les coûts de réseau et tous les autres coûts (taxes, prélèvements et systèmes de certificats). Une quatrième composante, la TVA, n'est prise en compte que pour les profils résidentiels de l'électricité et du gaz naturel.

Une description détaillée de la composition et des composantes des prix de l'énergie (chapitres 4 et 5) précède les résultats de la comparaison des prix (chapitre 6). Les coûts de l'énergie sont analysés selon une approche « bottom-up », ce qui conduit à une description détaillée des différentes composantes des prix et de leur application dans les pays considérés dans cette étude.

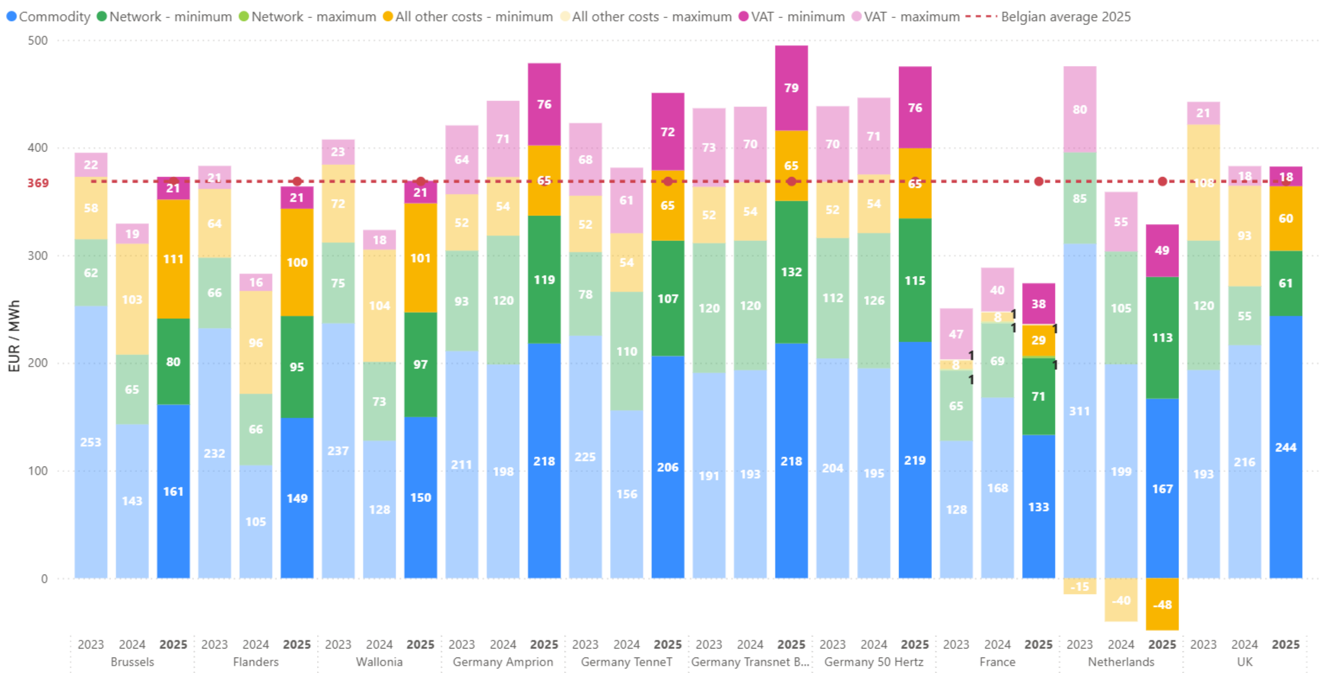
Tant pour l'électricité que pour le gaz naturel, le présent rapport constate de grandes différences dans la structure des prix entre les différentes régions et les différents pays, notamment en ce qui concerne la fixation des coûts de réseau et des régimes fiscaux. Cela ajoute un niveau de complexité supplémentaire pour une comparaison pertinente entre tous les pays/régions couverts par cette étude.

Comparaison des prix de l'électricité

Un examen approfondi de chaque profil est effectué afin de fournir un récit détaillé des profils étudiés en utilisant les données collectées. Cela implique de formuler les conclusions et les implications pour chaque catégorie de consommateurs, en mettant l'accent sur les régions et les pays pris en compte. Une attention particulière est portée à l'environnement concurrentiel des différentes régions belges.

Comparaison des prix de l'électricité pour les profils résidentiels et petites entreprises

Prix de l'électricité par composante en EUR/MWh (profil E-RES)[23]



Entre 2024 et 2025, les changements les plus notables identifiés pour les consommateurs résidentiels est l'augmentation globale de la facture d'électricité, sauf dans les deux pays les plus compétitifs : la France et les Pays-Bas. La plus importante hausse du coût de la facture a été observée en Flandre, avec une augmentation de 283 EUR comparé à 2024. Cette hausse est principalement attribuée à l'augmentation des coûts de la composante énergétique et des coûts de réseau. Les coûts de réseau ont fortement été impactés par l'augmentation du coût de transport facturé par Elia qui a presque doublé entre 2024 et 2025[24].

Inversement, les Pays-Bas ont enregistré la plus importante diminution avec une baisse de 135 EUR sur la facture d'électricité, principalement dû à une réduction des coûts de la composante énergétique et des taxes. Les Pays-Bas demeurent uniques avec une valeur négative pour la composante "autres coûts" de la facture grâce aux réductions fiscales (par exemple, *belastingvermindering per elektriciteitsaansluiting*). En Belgique, la Flandre se trouve être la région la plus compétitive, suivie de la Wallonie et Bruxelles, des différences minimes les séparant[25].

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[23] La légende s'applique aux données de 2025, tandis que les autres années utilisent une version plus claire de ces mêmes couleurs afin d'améliorer la lisibilité.

[24] (Elia, 2023)

[25] En Belgique, les outils de comparaison des prix utilisés pour les trois régions se basent sur des prix prospectifs. Ainsi, la sélection des produits pour E-RES, G-RES et E-SSME a été effectuée via ces sites web, mais les tarifs des produits ont été déterminés en utilisant des paramètres d'indexation rétrospectifs. Cela permet une comparaison équitable et adéquate des produits énergétiques belges avec ceux des pays voisins.

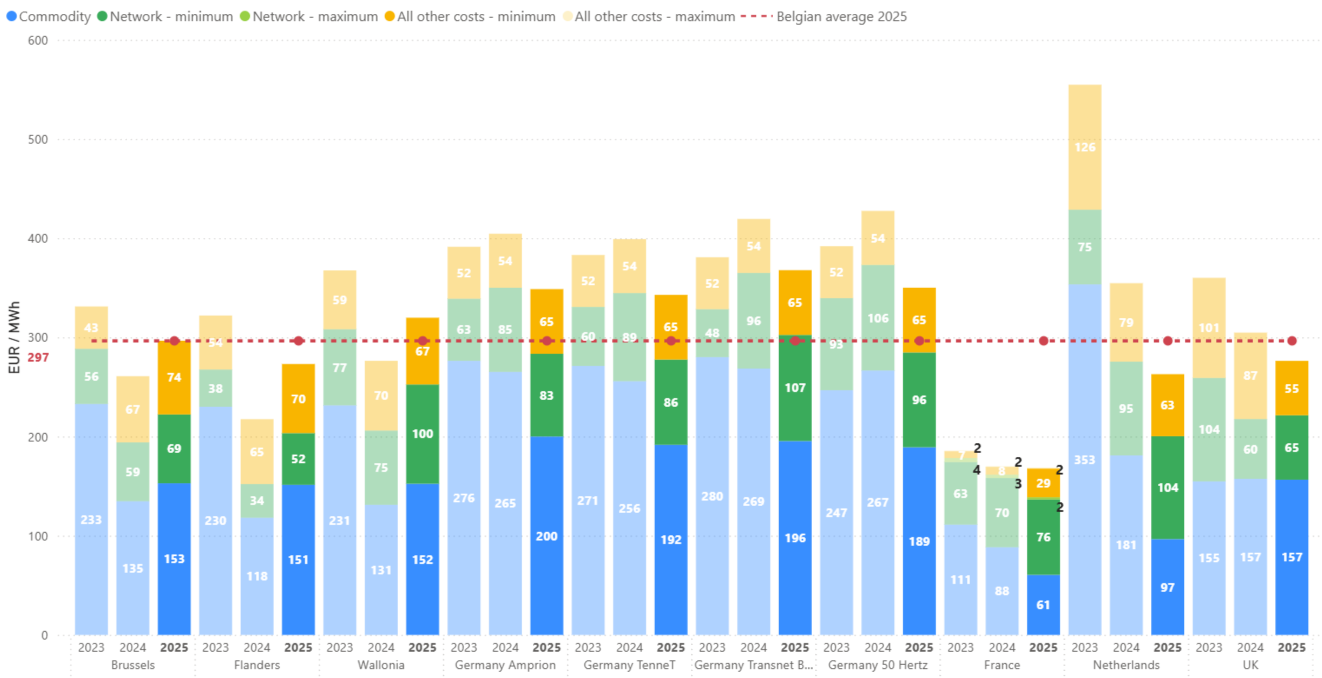
Il est intéressant de noter que la France et les Pays-Bas sont les seuls pays à faire preuve d'une diminution dans la facture finale. Ces derniers montrent également une réduction des coûts de la composante énergétique, contrairement aux autres pays où celle-ci a augmenté. Le Royaume-Uni possède un coût de la composante énergétique le plus élevé, tandis que la France possède les coûts les plus bas pour cette composante. Ces coûts compétitifs sont dûs au produit standard, réglementé par le gouvernement, limitant les augmentations de prix pour les consommateurs résidentiels français.

Les coûts de réseau ont suivi une tendance haussière sauf dans la plupart des régions allemandes. Ces coûts sont poussés à la hausse dû aux opérateurs de transmission d'électricité mettant en œuvre des investissements planifiés sur le réseau pour renforcer la résilience et préparer à la transition. Ceci a pour conséquence d'augmenter les coûts de réseau. L'Allemagne possède les coûts de réseau les plus élevés, notamment dans la région opérée par Transnet BW, suivie de près par les régions opérées par Amprion et 50 Hertz. Le Royaume-Uni continue de bénéficier des coûts de réseau les plus faibles, de manière similaire à 2024. En Belgique, les coûts de distribution influencent considérablement la composante des coûts de réseau, avec des augmentations observées pour les trois régions en raison des tarifs de transmission plus importants se répercutant sur les tarifs de distribution. Les coûts de distribution les plus élevés se trouvent en Wallonie, suivis de la Flandre – où cette composante a subi la plus forte hausse dans le pays – et Bruxelles.

Le composant "autres coûts" a augmenté dans la plupart des pays étudiés, sauf pour le Royaume-Uni qui connait une notable diminution du coût de cette composante en raison de la réduction des coûts liés à l'Energy Company Obligation (ECO). La France enregistre la plus forte augmentation du coût de cette composante, entraînée par la levée partielle du *bouclier tarifaire*, qui a permis de relever les droits d'accise sur l'électricité à des niveaux similaires à leur situation avant la crise énergétique. En Belgique, Bruxelles a les coûts les plus élevés pour cette composante, tandis que la Wallonie et la Flandre sont sur une base de coûts similaire, grâce à une légère réduction des "autres coûts" en Wallonie entre 2024 et 2025. Les coûts élevés à Bruxelles proviennent de l'augmentation des coûts liés aux Obligations de Service Public et des dépenses liées au mécanisme de certificats verts.

Les taux de TVA sur l'électricité sont restés inchangés dans les pays étudiés. Bien que la TVA représente un coût important pour les consommateurs en Allemagne, elle est relativement basse au Royaume-Uni et en Belgique en raison de taux de TVA réduits et d'une base de coûts plus faible. La France est le seul pays étudié avec un taux de TVA double, comprenant un taux sur la consommation d'une part (20 %) et un taux sur l'abonnement d'autre part (5,5 %).

Prix de l'électricité par composante en EUR/MWh (profil E-SSME)

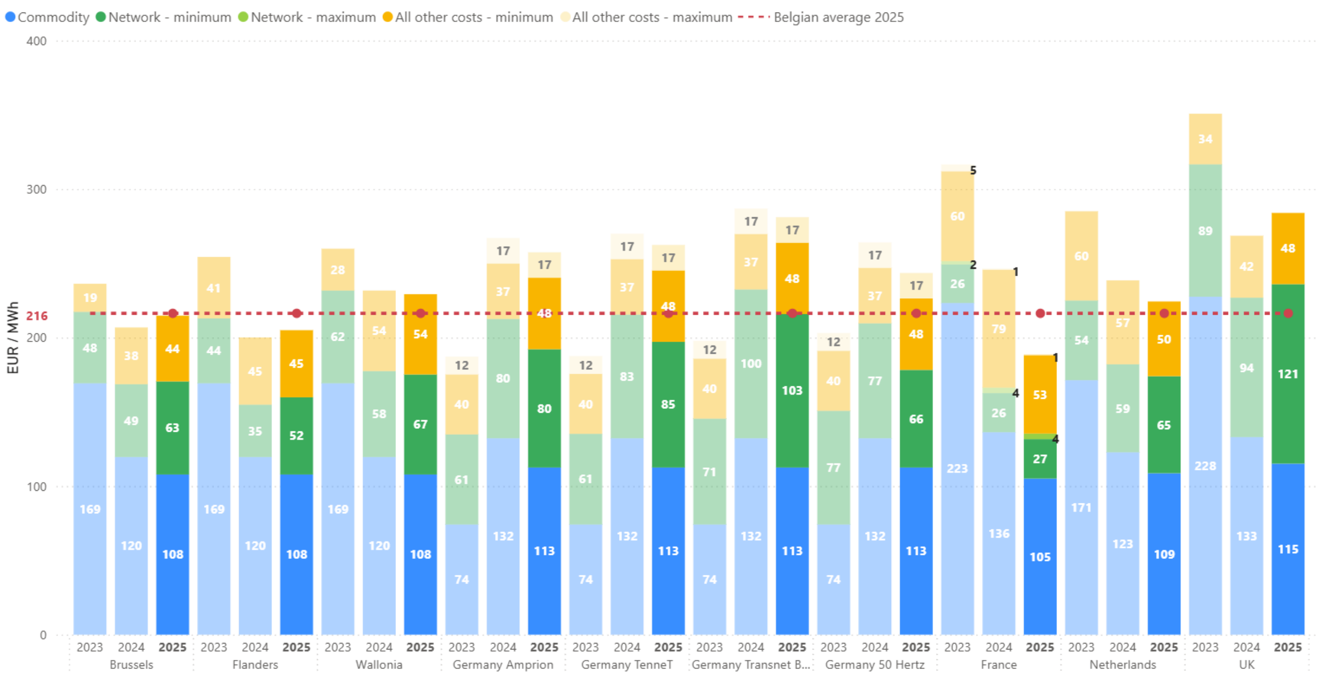


En 2025, la facture totale pour les petits consommateurs professionnels a diminué dans la plupart des régions, sauf en Belgique. Cette réduction globale a été principalement poussée par la baisse des coûts de la composante énergétique, tandis que l'augmentation survenue en Belgique est attribuée à la hausse des coûts de la composante énergétique ainsi que de la composante des coûts de réseau. En Belgique, la Flandre présente la facture d'électricité la plus faible pour ce profil, suivi de Bruxelles. La Wallonie enregistre les coûts les plus élevés parmi les trois régions. La compétitivité de la Belgique a diminué par rapport à 2024, dû à une hausse de la compétitivité de la France, ainsi qu'aux Pays-Bas et au Royaume-Uni. Les factures d'électricité de ces deux derniers pays se positionnent au même niveau que celles de la Flandre. Bien que Bruxelles et la Wallonie soient plus chères, elles surpassent toujours les quatre régions allemandes. La France reste le pays le moins cher pour ce profil, semblable à la situation des consommateurs résidentiels. Ceci est en grande partie dû à son mécanisme de garantie des prix, ce qui entraîne un coût de la composante énergétique la plus faible parmi les pays étudiés. La France conserve sa position de leader compétitif pour ce profil, comme cela était déjà le cas 2024, tandis que l'Allemagne se classe comme le pays le moins compétitif en raison de coûts élevés de ses composantes énergétiques, de réseau et d'autres coûts.

Les coûts de réseau ont augmenté dans toutes les régions étudiées, à l'exception de certaines zones allemandes (Amprion, TenneT et 50 Hertz). La Belgique et les Pays-Bas ont connu une hausse substantielle des coûts de réseau. En Belgique, les tarifs de distribution ont grimpé dans toutes les régions – notamment en Flandre et en Wallonie – de manière similaire au profil E-RES, en conséquence de l'augmentation des tarifs de transmission. Cependant, la Flandre continue de bénéficier de coûts de réseau plus faibles, tout comme en 2024, avec des coûts presque deux fois inférieurs à ceux observés en Wallonie, tandis que Bruxelles se situe entre les deux.

La composante "autres coûts" a évolué selon des tendances variées en fonction des pays. Des augmentations ont été notées en Allemagne, à Bruxelles, en Flandre et en France, tandis que des réductions sont observées dans d'autres régions. La France a connu une augmentation significative de ses coûts en raison de la suppression du *bouclier tarifaire*, de manière identique au profil résidentiel. La diminution la plus importante a été enregistrée au Royaume-Uni, celle-ci étant attribuée à des coûts réduits du mécanisme ECO. À l'inverse, l'Allemagne a connu une augmentation de cette composante dû à l'escalade des coûts dans diverses mesures, dont notamment la redevance StromNEV enregistrant une hausse particulièrement prononcée (cette redevance est conçue pour gérer les charges associées à l'accès aux réseaux électriques).

Prix de l'électricité par composante en EUR/MWh (profil E-BSME)

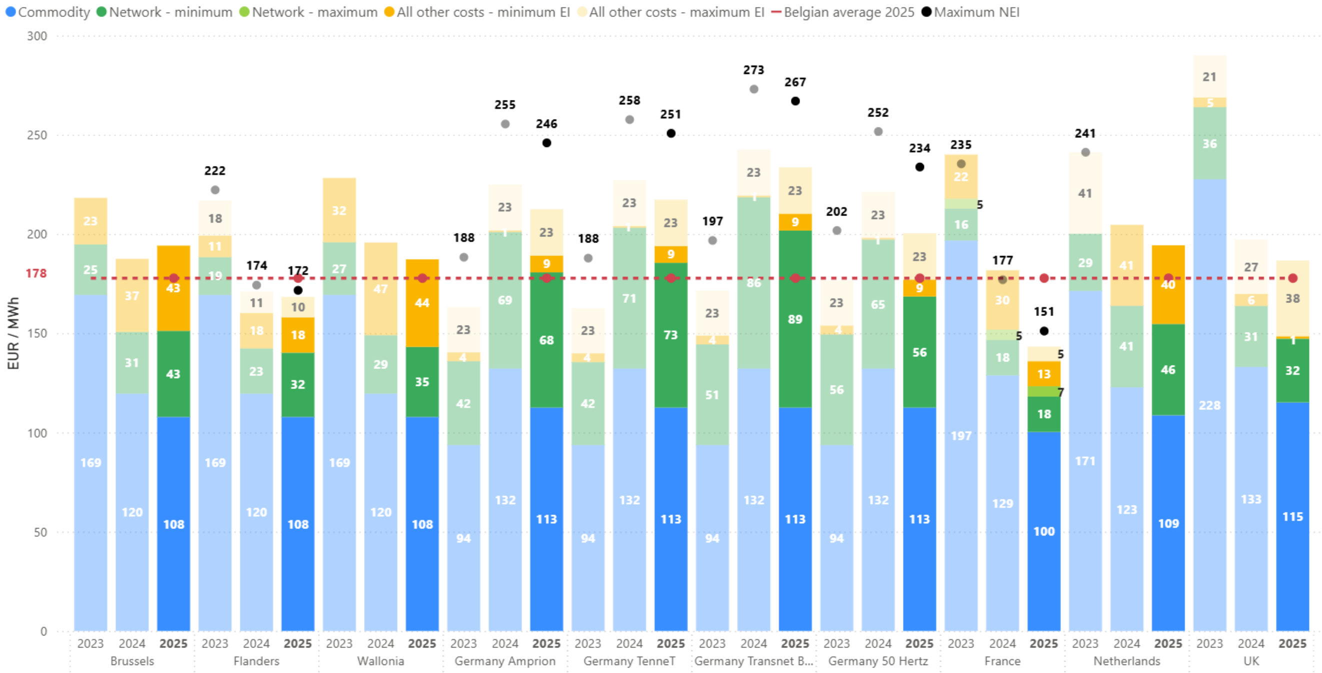


Une baisse substantielle du prix de la composante énergétique a contribué à abaisser les coûts de l'électricité pour les consommateurs industriels. Des tendances similaires sont observées dans tous les pays et régions inclus dans cette étude, ainsi que pour les profils de consommation plus importants. Cette tendance à la baisse des prix de marché peut être partiellement attribuée aux méthodologies utilisées pour calculer les prix de l'énergie pour ces profils. La France a obtenu la position la plus compétitive, surpassant la Flandre par rapport à 2024. Le Royaume-Uni se distingue comme le pays le plus cher en raison de ses coûts de réseau élevés pour ce profil. La Belgique se classe deuxième, la Flandre étant la région la plus compétitive du pays, suivie par Bruxelles et la Wallonie.

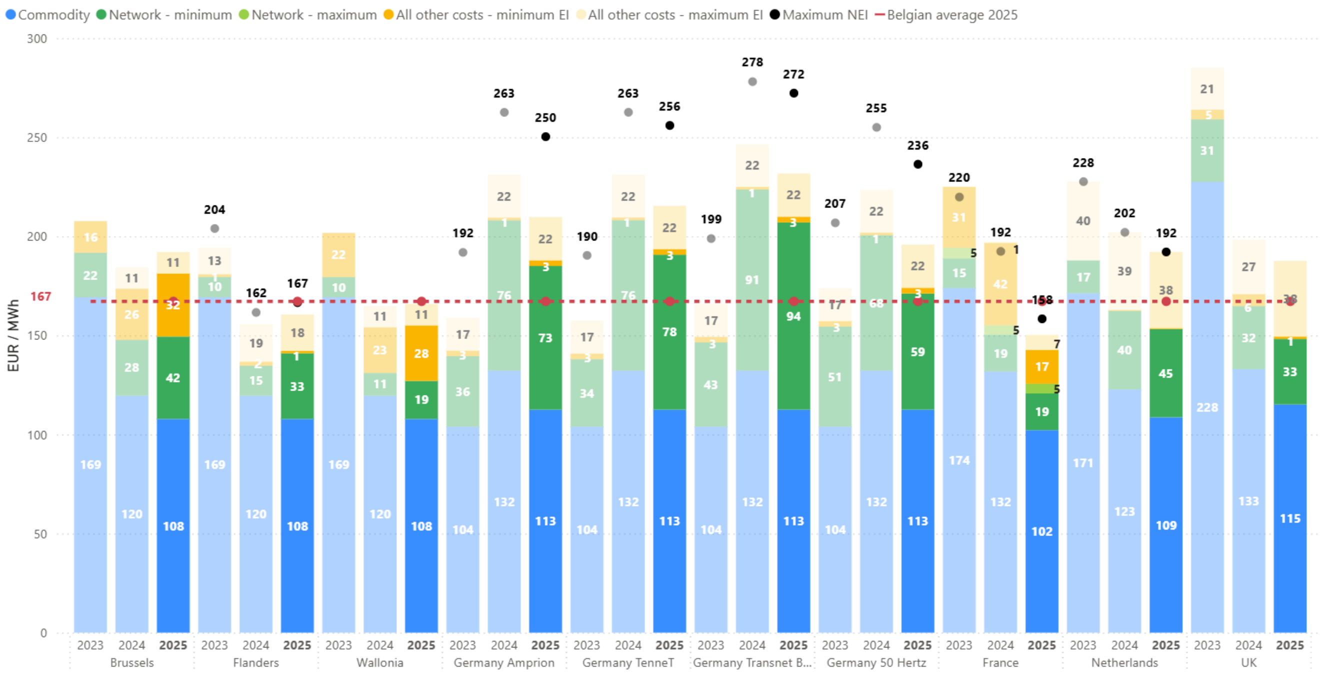
Étant donné que les composantes énergétiques et des "autres coûts" ont des valeurs relativement constantes à travers les pays/régions observés, à quelques exceptions près, la composante des coûts de réseau joue un rôle crucial et déterminant pour évaluer la compétitivité globale des pays étudiés.

Comparaison des prix de l'électricité pour les consommateurs industriels

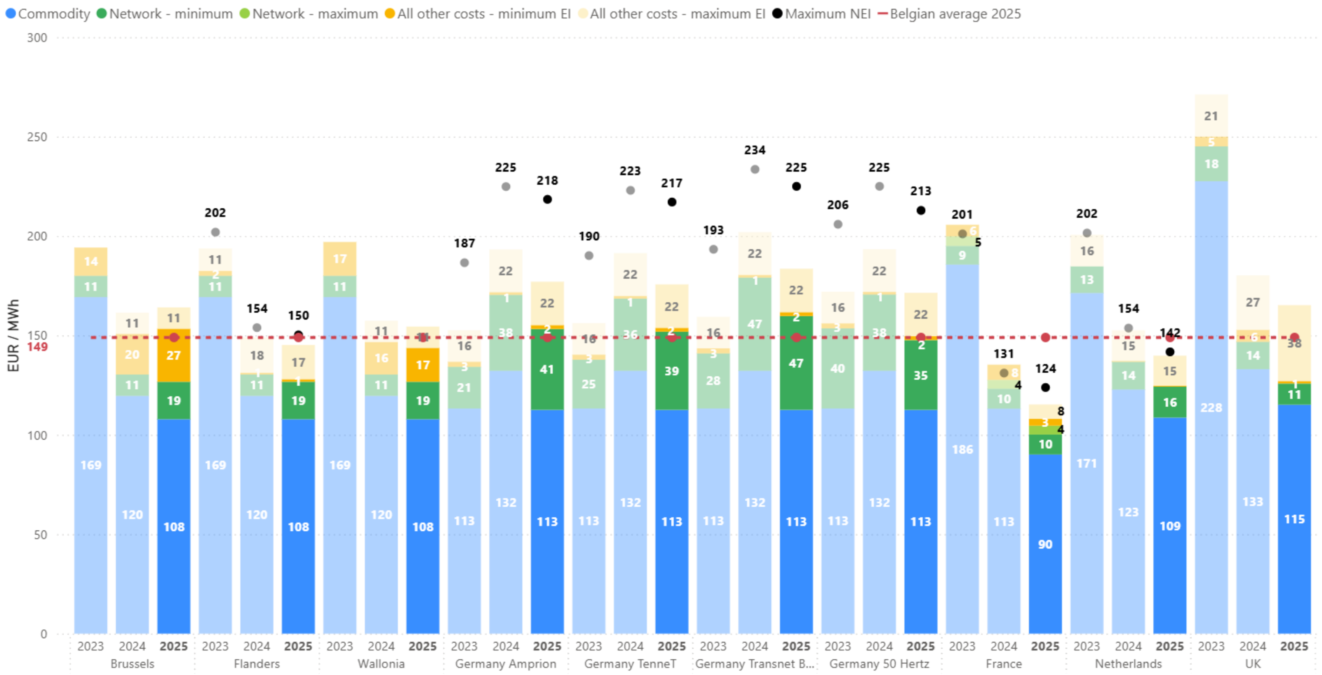
Prix de l'électricité par composante en EUR/MWh (profil E0)



Prix de l'électricité par composante en EUR/MWh (profil E1)



Prix de l'électricité par composante en EUR/MWh (profil E2)



Dans toutes les régions et tous les pays, les consommateurs industriels ont constamment bénéficié de la baisse des prix de la composante énergétique, contrairement aux tendances mixtes observées pour les plus petits profils. En ce qui concerne les **consommateurs électro intensifs**, la France offre un coût de l'électricité le plus compétitif pour les profils E0, E1 et E2, surpassant la Flandre pour les profils E0 et E1 en 2024. Le Royaume-Uni se classe deuxième pour le profil E0, la Flandre deuxième pour le profil E1 et les Pays-Bas deuxième pour le profil E2. Contrairement au paysage concurrentiel plus clair de 2024, cette année voit une concurrence accrue entre les pays pour les différents profils, avec le rapprochement des coûts totaux entre la Flandre, les Pays-Bas et le Royaume-Uni à mesure que le profil E2 est approché.

L'avantage compétitif de la Flandre est principalement attribué à un coût de la composante énergétique faible, à des potentielles réductions et/ou exemptions via les mécanismes de certificats verts et de cogénération, ainsi qu'à des exemptions particulières de droits d'accise à partir du profil E1 (ces exemptions s'appliquent également aux autres régions belges). La compétitivité renforcée du Royaume-Uni débute avec le profil E0, étant significativement soutenu par des exemptions dans le cadre du schéma Renewable Obligations (RO). Aux Pays-Bas, les résultats varient en fonction des exemptions, car des réductions sont accordées grâce à des concessions sur les taxes affectant la composante "autres coûts" à partir du profil E1. Néanmoins, d'autres consommateurs industriels aux Pays-Bas se trouvent dans des positions moins compétitives sans ces réductions. Bien que l'Allemagne ne figure pas parmi les plus compétitifs en raison de coûts de réseau élevé, le pays offre des réductions notables permettant à des régions comme celle opérée par 50 Hertz d'atteindre des niveaux de prix similaires à ceux observés à Bruxelles et en Wallonie.

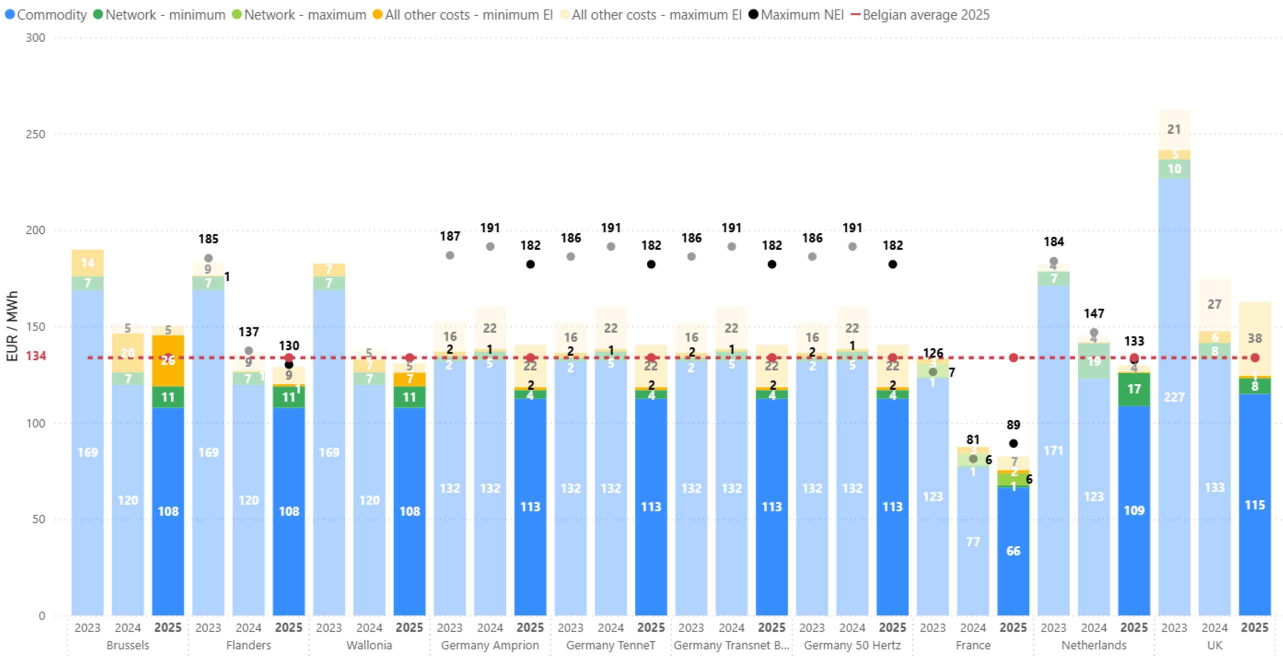
Pour les **consommateurs non électro intensifs**, la Belgique reste modérément compétitive, avec la Flandre et la Wallonie affichant une plus grande compétitivité que Bruxelles. La position relativement plus faible de Bruxelles est due à son économie principalement orientée vers les services et à des coûts de réseau urbain plus élevés, ce qui limite l'accès aux réductions et exemptions à l'échelle industrielle que l'on trouve en Wallonie et en Flandre. La Flandre est la deuxième région la plus compétitive pour les profils E0 et E1, tandis que les Pays-Bas occupent la deuxième place pour le profil E2. L'Allemagne demeure le pays le plus cher pour les consommateurs non électro intensifs pour les profils E0, E1 et E2.

À Bruxelles, la différence de coût entre les consommateurs électro intensifs bénéficiant de réductions et les consommateurs non-électro intensifs est relativement faible, similaire aux tendances observées en Belgique et en France, et à contre-courant des autres pays étudiés. Cela témoigne des incitations plus importantes offertes aux consommateurs électro intensifs dans d'autres pays.

Il est important de reconnaître que le soutien gouvernemental peut également se manifester dans d'autres composantes que celle des “autres coûts”, comme par exemple dans la composante énergétique au travers de mécanismes tels que le dispositif ARENH[26] en France et les garanties de prix au Royaume-Uni, ainsi que dans la composante des coûts de réseau, reflétés par des réductions des coûts de réseau au travers un soutien financier gouvernemental alloué aux opérateurs de réseau, comme en France ou en Allemagne.

En Belgique, les coûts de l'électricité sont les plus élevés à Bruxelles, suivis par la Wallonie pour les profils E0, E1 et E2[27]. Bien que les différences pour le profil E0 soient mineures, l'écart se creuse considérablement pour les profils E1 et E2 en raison des réductions disponibles limitées pour les entreprises basées à Bruxelles, compte tenu de leur faible présence dans la région. En revanche, la Flandre demeure constamment la région la moins chère en Belgique pour ces profils, principalement grâce aux coûts inférieurs de la composante "autres coûts". Les coûts de réseau suivent une variabilité notable en Belgique selon les différents profils. Pour le profil E0, les coûts de réseau sont relativement similaires dans les trois régions, tandis que la Wallonie bénéficie d'un avantage compétitif distinct concernant cette composante pour le profil E1. En termes de coûts de réseau, Bruxelles connaît les coûts les plus élevés du pays du profil E0 au profil E1. À partir du profil E2, toutes les régions belges ont des coûts de réseau identiques car elles sont toutes connectées au réseau de transport et non plus au réseau de distribution régional. Par conséquent, la différence de compétitivité existant à partir du profil E2 découle directement des différences entre les composantes "tous les autres coûts" régionales.

Prix de l'électricité par composante en EUR/MWh (profil E3)



Pour les profils E3 et E4, la France continue d'offrir des coûts totaux les plus faibles parmi tous les pays et types de consommateurs examinés dans cette étude, principalement grâce au mécanisme de l'ARENH. En revanche, l'Allemagne reste le pays le plus cher pour les profils E3 et E4 non-électro intensifs, suivi de près par le Royaume-Uni et Bruxelles. Ce coût élevé par rapport aux autres régions est principalement dû à la hausse de la composante "autres coûts" au Royaume-Uni et en Allemagne. Pour ces profils, la France se distingue constamment comme le pays le moins cher grâce à de faibles coûts de la composante énergétique, de manière similaire à la situation observée en 2024.

[26] ARENH signifie « Accès Régulé à l'Électricité Nucléaire Historique ». Il s'agit d'un mécanisme qui permet à l'ensemble des fournisseurs alternatifs d'obtenir de l'électricité auprès d'EDF (le fournisseur historique d'électricité en France) selon des conditions fixées par les pouvoirs publics.

[27] Le facteur de dégressivité sur les coûts de transport en Wallonie est appliqué depuis 2023. Ce facteur, qui fait varier les coûts en fonction de l'électro-intensité du consommateur, permet de réduire les coûts de transport payés par les profils E0 et E1 en Wallonie. Il est donc essentiel d'en tenir compte lors de l'analyse comparative entre la Wallonie et d'autres régions, ou entre la Belgique et d'autres pays.

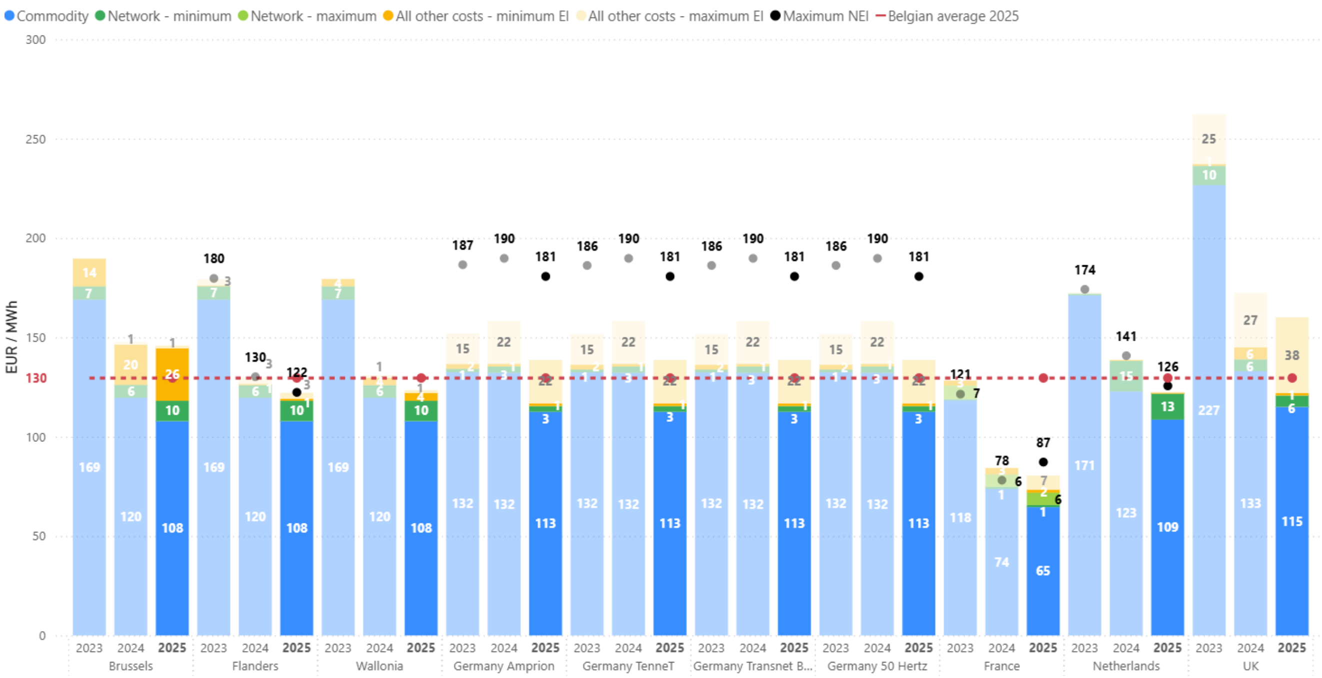
En revanche, la Belgique et les Pays-Bas font face à des coûts de réseau plus élevés, ce qui impacte leur position compétitive pour les consommateurs électro intensifs. Bruxelles est comparativement aux autres pays à l'extrémité chère du spectre, faisant figure d’exception, là où la Flandre et la Wallonie se concurrencent avec les autres pays dans une fourchette de prix étroite. Pour les consommateurs non-électro intensifs, la position de la Belgique est meilleure dû à une faible base d’« autres coûts », lui permettant d’être plus compétitive que l’Allemagne et le Royaume-Uni. Pour ce type de consommateur, la Flandre, la Wallonie et les Pays-Bas convergent vers des niveaux de coûts similaires en raison de coûts de composantes totales comparables.

En Belgique, la Flandre maintient la position la plus compétitive du pays pour les consommateurs électro intensifs des profils E3 et E4, bien que cette position soit remise en question pour les consommateurs non-électro intensifs. Étant donné que les coûts des composantes énergétiques et de réseau sont harmonisés dans les régions belges, les différences dépendent de la composante "autres coûts". Il est à noter que le plus grand consommateur d'énergie à Bruxelles se rapproche désormais davantage d'un profil E2 que d’un profil E3 ou E4, rendant les profils E3 et E4 foncièrement théorique pour cette région en raison de la rareté des très grands consommateurs industriels.

À partir du profil E3, tous les consommateurs se connectent au réseau de transmission, égalisant ainsi les coûts dans toutes les régions belges et les rendant plus faibles que les profils précédents. Les coûts de réseau relativement élevés en Belgique proviennent, d’une part, du quasi doublement des tarifs de transmission d'Elia intervenue entre 2024 et 2025 et, d’autre part, de l’absence de mécanisme de réduction de tarifs de transport ciblant certaines catégories d’utilisateurs (comme observé dans certains pays voisins). Aux Pays-Bas, de manière semblable à la situation en Belgique, les coûts de réseau élevés résultent des tarifs élevés de TenneT en place depuis 2024 ainsi que de la suppression en 2024 du mécanisme de réduction de tarifs de transport précédemment en vigueur.

Pour les profils E3 et E4, la Belgique présente un faible coût de sa composante énergétique, seulement devancé par la France et comparable aux Pays-Bas. Pour ces profils, la Belgique possède une composante "tous les autres coûts" plus élevée que ses pays voisins. Les avantages de l’électro intensité au travers de réductions ou exemptions ne génèrent pas autant de réductions en Wallonie et à Bruxelles qu'en Flandre où cette composante est inférieure à celle des autres régions. Globalement, la Belgique reste en compétition étroite avec les Pays-Bas pour les profils non électro-intensifs, juste derrière la France. Bien que la Belgique propose des réductions limitées pour les consommateurs électro-intensifs en Wallonie et à Bruxelles, sa base faible d’ "autres coûts", surtout en Flandre, offre un paysage énergétique favorable pour les utilisateurs non électro-intensifs.

Prix de l’électricité par composante en EUR/MWh (profil E4)



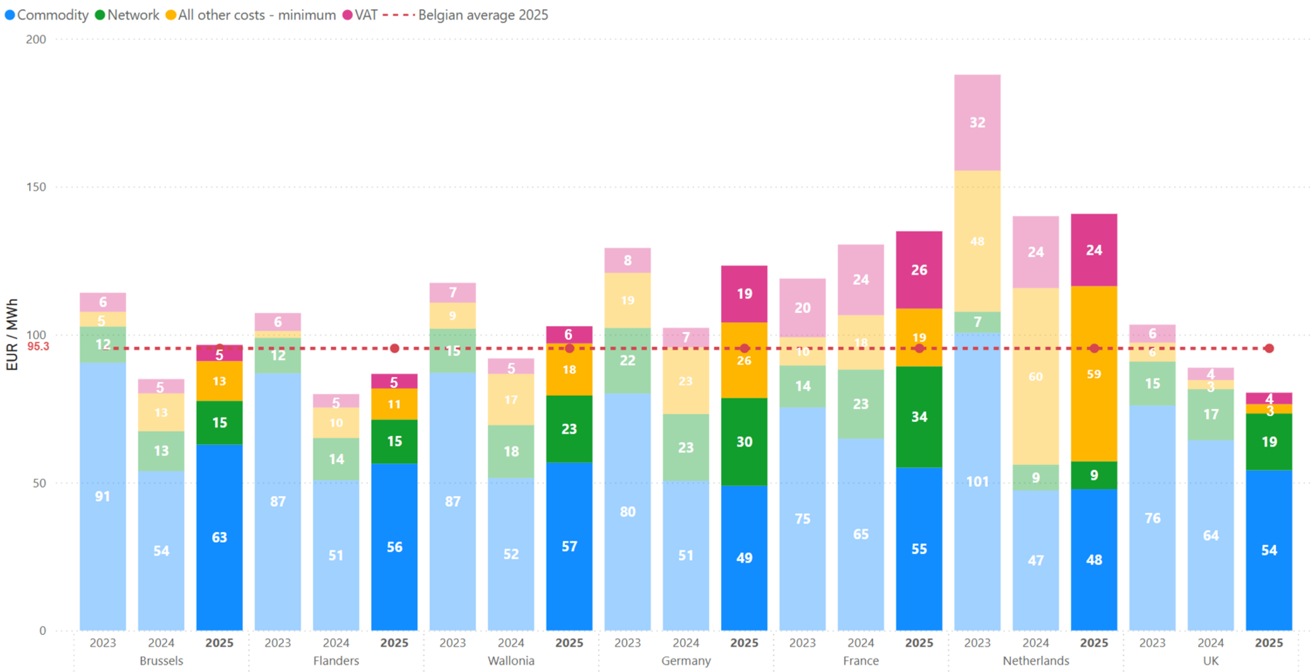
Comparaison des prix du gaz naturel

Comparaison des prix du gaz naturel pour les consommateurs résidentiels et petits professionnels

En 2025, les factures de gaz naturel pour les consommateurs résidentiels relevant du profil G-RES ont enregistré une légère augmentation dans toutes les régions belges, principalement en raison de la hausse des composantes énergétiques et des coûts de réseau. Cette tendance haussière des coûts de l’énergie se manifeste également en Allemagne et, dans une moindre mesure, en France. Le Royaume-Uni a connu une diminution du coût de ses factures de gaz. Les prix aux Pays-Bas sont restés stables à un niveau élevé. L'augmentation observée en Allemagne, et dans une moindre mesure en France, est principalement attribuée à une hausse des coûts de réseau ainsi que des “autres coûts”. La baisse observée au Royaume-Uni peut être attribuée à une diminution de 15 % des prix de la composante énergétique probablement due à une réduction du plafond de prix unitaire, couplé à une faible composante “autres coûts”. Cela a permis au Royaume-Uni de dépasser la Flandre en tant que région/pays la plus compétitive. En revanche, la Flandre a connu une augmentation de 9 % de ses coûts, perdant ainsi sa position de leader par rapport à 2024. Au sein de la Belgique, la Flandre reste la région la plus compétitive, suivie de Bruxelles, puis de la Wallonie.

Les Pays-Bas continuent d'être le pays le plus cher parmi ceux étudiés en raison de l'impact de sa taxe énergétique dans sa composante “autres coûts”, qui représente plus de 40 % de la facture totale et en constitue donc la plus grande partie. La France et l'Allemagne ont vu leur compétitivité diminuer en raison d'augmentations significatives de certaines composantes de coûts. En particulier, la France a connu une hausse substantielle des coûts de réseau, ainsi qu'une augmentation de la composante “autres coûts” portée par des taux de la taxe TICGN[28] élevés. De même, l'Allemagne possède des coûts de réseau plus élevés ainsi que des “autres coûts” élevés dus à une augmentation de taxe et, surtout, le taux de TVA revenant à 19 % après une réduction temporaire à 7 % depuis 2022 afin de faire face à l'inflation.

Prix du gaz naturel par composante en EUR/MWh (profil G-RES)



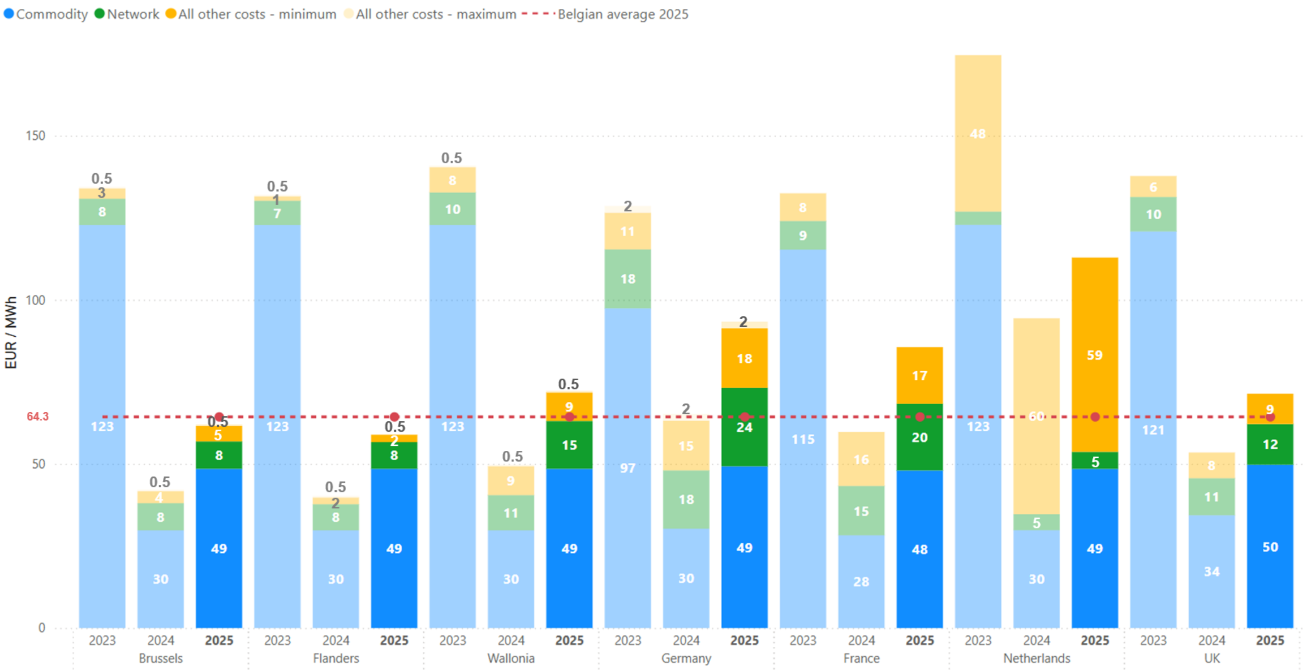
Pour les petits consommateurs professionnels (G-PRO), 2025 est signe d'une tendance similaire à la hausse des factures totales de gaz dans la plupart des pays et régions, principalement due à l'augmentation des composantes énergétiques et des coûts de réseau. Malgré ces augmentations généralisées, la Belgique conserve sa position de pays le plus compétitif de l'étude, tout comme en 2024. Cette compétitivité est principalement due à des coûts de réseau relativement bas et à des “autres coûts” limités.

[28] La taxe intérieure de consommation sur le gaz naturel

En Belgique, la Flandre maintient la première position, bénéficiant de la composante régionale “autres coûts” la plus faible. Bruxelles suit de près, se classant deuxième tant au niveau national que parmi tous les pays étudiés. En revanche, la Wallonie est nettement moins compétitive en raison de coûts de réseau plus élevés et d'un poids considérablement plus important des "autres coûts” régionaux. En conséquence, le Royaume-Uni est désormais légèrement plus compétitif que la Wallonie, bien qu'il reste en dessous de la moyenne belge.

La France, l'Allemagne et surtout les Pays-Bas sont moins compétitifs par rapport aux régions belges et au Royaume-Uni, principalement en raison des coûts de réseau élevés en Allemagne et des "autres coûts" élevés aux Pays-Bas. L'impact substantiel des taxes énergétiques sur la facture de gaz aux Pays-Bas renforce davantage sa position en tant que pays le moins compétitif de l'étude.

Prix du gaz naturel par composante en EUR/MWh (profile G-PRO)



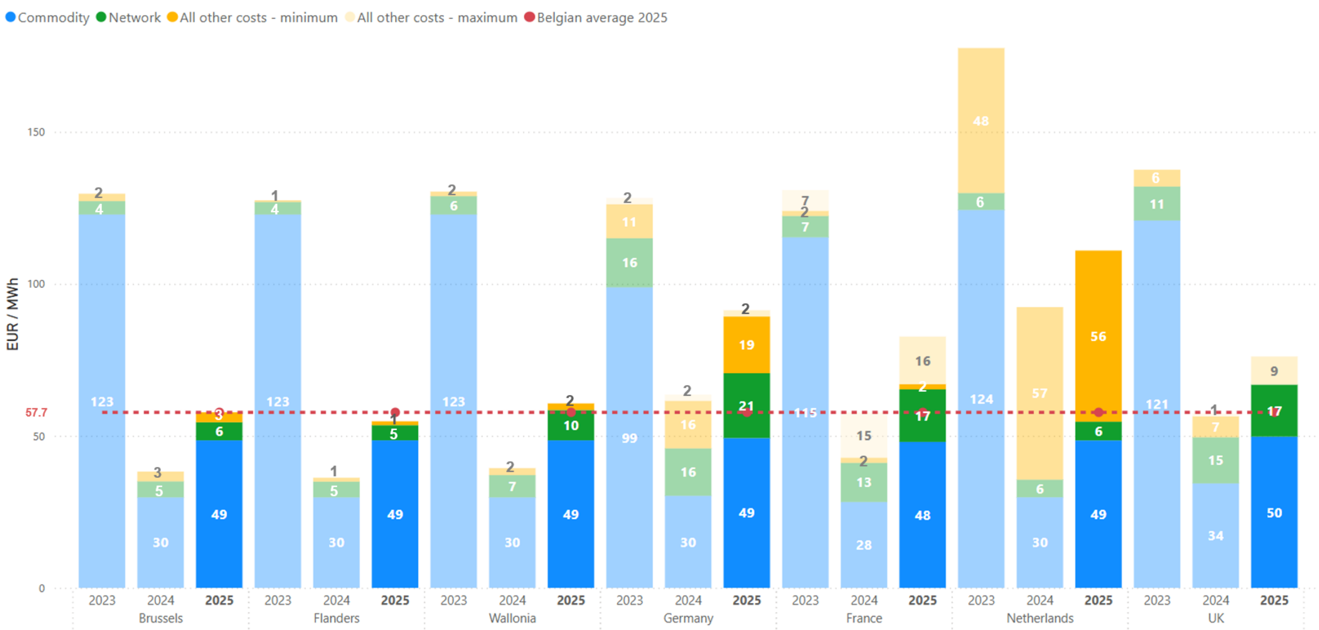
Comparaison des prix du gaz naturel pour les consommateurs industriels

Pour les grands consommateurs industriels, une tendance à l'augmentation des factures totales de gaz est observée dans tous les pays et régions. Cette hausse est principalement due à l'augmentation des composantes énergétiques et, dans une moindre mesure, à des coûts de réseau plus élevés. Malgré ces augmentations, la Belgique a conservé sa position de pays le plus compétitif de l'étude, même en tenant compte des réductions potentielles disponibles dans des pays comme le Royaume-Uni, la France et l'Allemagne. Cette solide performance est soutenue par des tarifs de réseau relativement bas et une composante "autres coûts" limitée.

En Belgique, les différences régionales sont moins marquées que pour les profils plus petits tels que G-RES et G-PRO. La Flandre demeure la région la plus compétitive, devançant de peu Bruxelles, tandis que la Wallonie reste en retrait en raison de coûts de réseau plus élevés.

Les Pays-Bas restent le pays le moins compétitif, malgré l'une des composantes de coûts de réseau les plus faibles. Leur compétitivité est principalement mise à mal par une taxe énergétique élevée, reflétée dans la section "autres coûts" de la facture. En France et au Royaume-Uni, l'accès à des réductions fiscales spécifiques – telles que le rabais TICGN en France ou la réduction de la taxe sur le changement climatique au Royaume-Uni – reste essentiel pour maintenir une compétitivité. Ces réductions deviennent de plus en plus déterminantes pour la compétitivité des grands consommateurs industriels dans ces pays. L'Allemagne continue d'être le deuxième pays le moins compétitif, en raison de composantes de réseau et des “autres coûts” plus élevés par rapport aux autres pays étudiés.

Prix du gaz naturel par composante en EUR/MWh (profile G0)

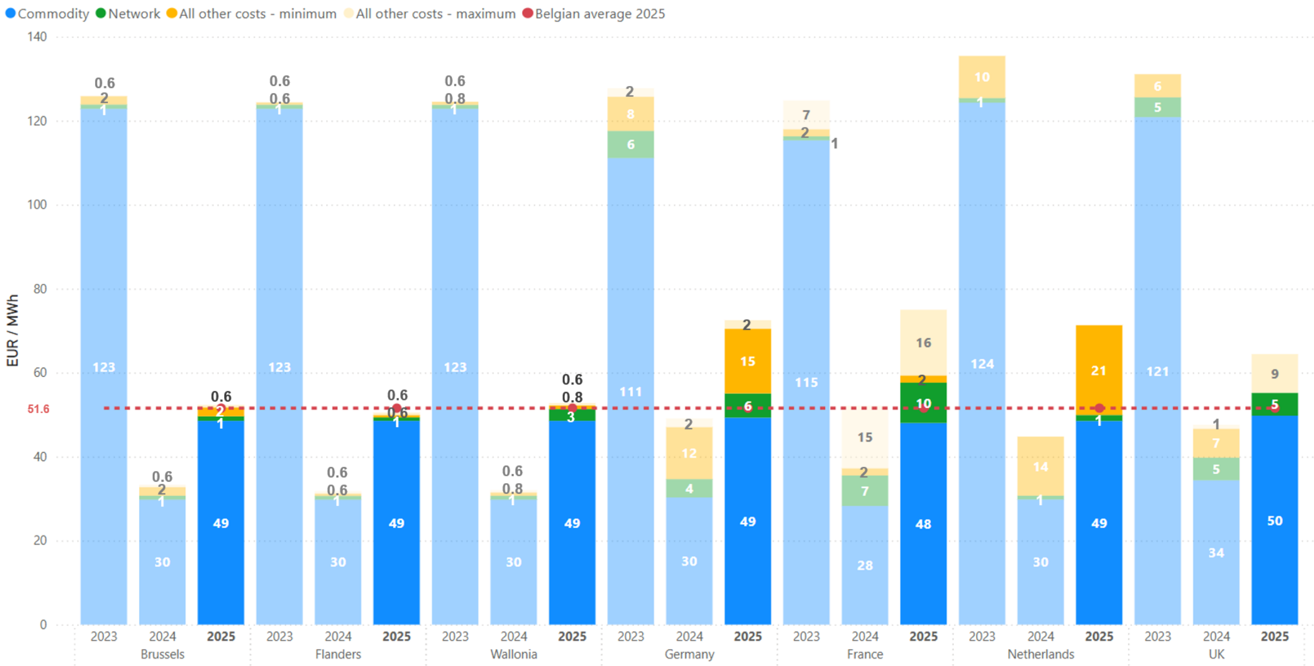


Pour le profil G1, la part relative des composantes de réseau et des "autres coûts" dans la facture totale diminue, entraînant une concurrence plus intense entre les pays, notamment lorsque des réductions sont appliquées. Malgré cela, la Belgique conserve sa position de pays le plus compétitif, avec des différences régionales qui s'amenuisent encore davantage par rapport aux profils de consommateurs plus petits. Désormais, la Flandre, Bruxelles et la Wallonie n'affichent que des différences marginales en termes de compétitivité.

En Allemagne, la possibilité d'appliquer une réduction sur la taxe énergétique (« Energiesteuer ») est cruciale pour éviter qu'elle ne devienne le pays le plus cher pour ces profils industriels. De même, en France, l'application d'une réduction sur la taxe TICGN est essentielle pour éviter une baisse de compétitivité. En revanche, les Pays-Bas enregistrent une diminution notable des “autres coûts” par rapport au profil G0, grâce à des taux de taxes énergétiques plus faibles appliqués aux niveaux de consommation plus élevés. Bien qu'ils restent le pays le moins compétitif lorsque toutes les réductions possibles sont prises en compte, ils surpassent à la fois la France et l'Allemagne en termes de compétitivité lorsque ces réductions ne sont pas appliquées.

Le Royaume-Uni devient le deuxième pays le plus compétitif lorsque l'exonération de la taxe sur le changement climatique est appliquée, réduisant l'écart avec la moyenne belge. Cela met en évidence le rôle crucial des réductions ciblées dans l’évaluation des résultats en matière de compétitivité.

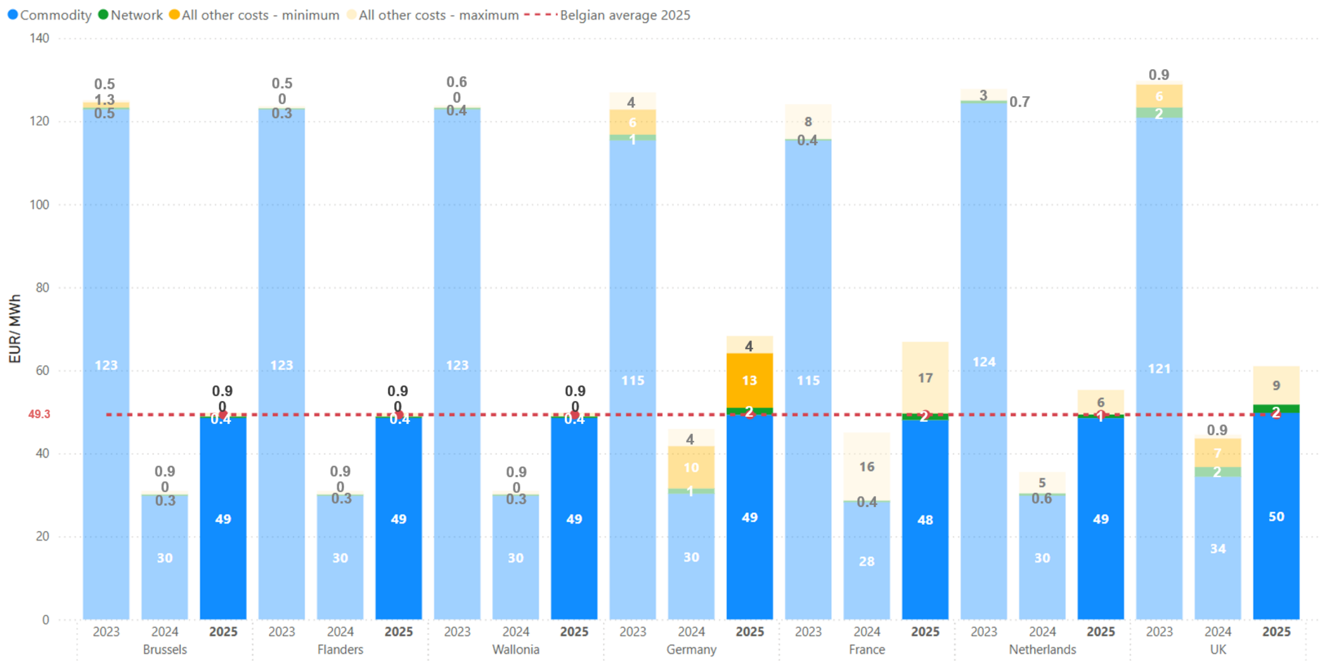
Prix du gaz naturel par composante en EUR/MWh (profile G1)



Pour le profil G2, la concurrence s'intensifie considérablement puisque les coûts des composantes énergétiques sont largement homogènes entre les pays, ajouté au fait que les coûts de réseau jouent un rôle mineur. Par conséquent, le positionnement compétitif d'un pays est principalement influencé par la disponibilité d'exonérations ou de réductions sur les composantes nationales « coûts divers ». Les consommateurs G2 bénéficient grandement des exonérations complètes sur la taxe TICGN en France, la taxe énergétique aux Pays-Bas et la taxe sur le changement climatique au Royaume-Uni, favorisant une concurrence intense entre ces pays et la Belgique lorsque ces réductions sont appliquées.

Malgré ce paysage concurrentiel, la Belgique continue de conserver sa position de pays le plus compétitif, avec des différences régionales minimales. À l'inverse, l'Allemagne est devenue le pays le moins compétitif de l'étude, car elle n'offre qu'un taux réduit — plutôt qu'une exonération complète — sur la taxe énergétique (« Energiesteuer »), maintenant ainsi une composante "autres coûts” relativement élevée.

Prix du gaz naturel par composante en EUR/MWh (profile G2)



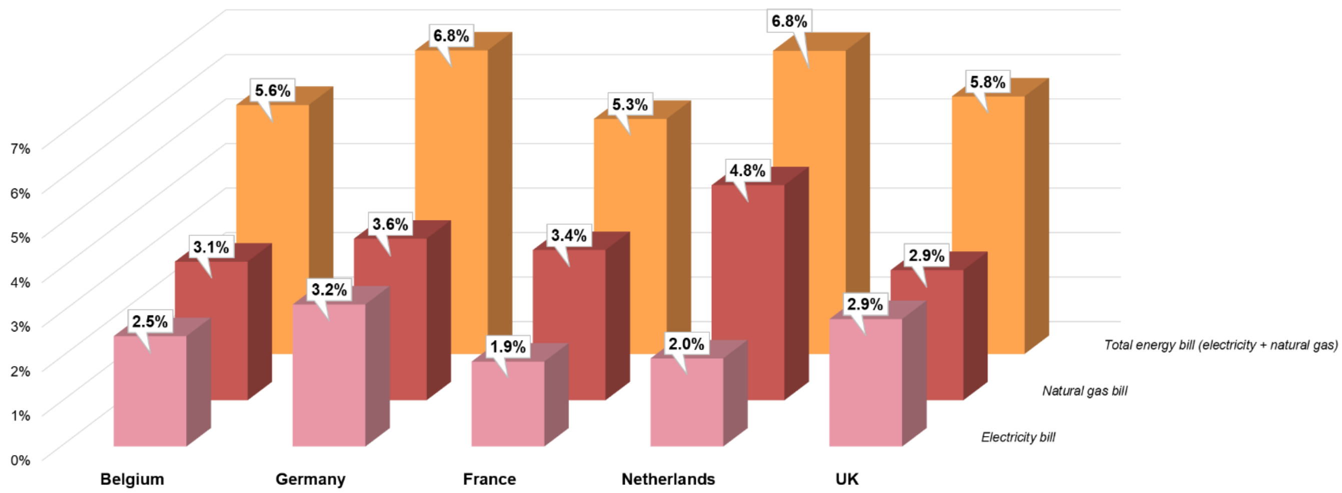
Efforts pour soutenir les consommateurs vulnérables face à la hausse des coûts de l'énergie

Notre étude examine les différentes mesures mises en place dans les pays faisant l'objet cette analyse, et visant à atténuer l'impact de la hausse des prix de l'énergie et de l'inflation sur les consommateurs résidentiels. Ces mesures vont des soutiens sociaux à l'aide financière directe destinée à réduire les factures des consommateurs. Cependant, la diversité de ces mesures rend les comparaisons entre pays complexes.

Taux d'effort par rapport au revenu disponible moyen (après déduction des coûts de logement)

Dans cette analyse initiale, nous nous concentrons sur la part de la facture énergétique dans le budget des ménages disposant d'un revenu disponible moyen (les deux partenaires travaillant), après déduction de l'une des dépenses les plus importantes, à savoir les coûts de logement. La figure ci-dessous illustre que, dans tous les pays inclus dans cette étude, la facture d'électricité constitue une part plus faible du budget des ménages par rapport à la facture de gaz naturel.

Taux d'effort des factures énergétiques par rapport au revenu disponible moyen (en %)



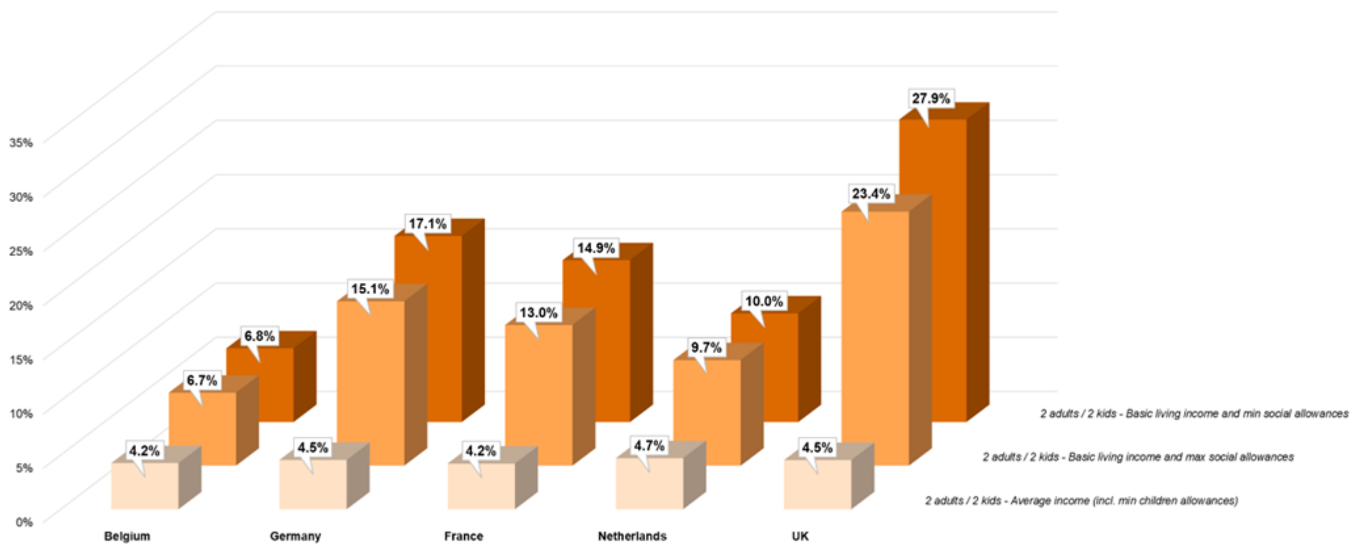
En janvier 2025, la France est devenue le pays affichant la plus faible proportion des factures énergétiques par rapport au revenu disponible, avec un taux de 5,3 %, surpassant ainsi la Belgique qui détenait la première place en 2024 (5,2 %). Cet avantage est principalement attribué à des prix de l'électricité compétitifs, facilités par le mécanisme ARENH. La Belgique se classe deuxième en 2025, avec des coûts énergétiques représentant 5,6 % du revenu disponible, impactée par des prix de l'électricité moins compétitifs. Le Royaume-Uni se situe au milieu du classement, avec des factures énergétiques annuelles totalisant 5,8 % du revenu disponible – soit une amélioration de 1,5 point de pourcentage par rapport à 2024 – tandis que les Pays-Bas et l'Allemagne ferment la marche avec un taux d'effort de 6,8 % chacun. En termes d'évolution par rapport à 2024, les taux d'effort de l'Allemagne et de la Belgique ont augmenté respectivement de 0,4 et 0,2 point de pourcentage, tandis que les autres pays ont enregistré des réductions allant de 0,5 point de pourcentage en France à 1,5 point de pourcentage au Royaume-Uni.

En se concentrant sur les coûts de l'électricité[29], la France affiche le fardeau le plus faible, avec des factures d'électricité représentant 1,9 % du revenu disponible annuel (après déduction des coûts de logement). Les Pays-Bas suivent de près, avec l'électricité représentant 2,0 % du revenu disponible, tandis que la Belgique, désormais troisième après avoir perdu deux places, se situe à 2,5 %. Le Royaume-Uni et l'Allemagne présentent le fardeau électrique le plus lourd, chacun autour de 3 % du revenu disponible.

En ce qui concerne les prix du gaz naturel, le Royaume-Uni se place en tête avec la plus faible part du revenu disponible consacrée au gaz naturel, avec une moyenne de 2,9 %. La Belgique, reculant d'un rang, est ensuite à 3,1 %, suivie de près par la France et l'Allemagne, toutes deux autour de 3,5 %. Contrairement aux tendances observées pour l'électricité, les Pays-Bas affichent la facture de gaz naturel la plus élevée en proportion du revenu disponible, juste en dessous de 5 %.

[29] En tenant compte séparément des factures de gaz naturel et d'électricité, et non de formules combinées.

Taux d'effort des factures énergétiques par rapport au revenu de subsistance (en %)



Dans cette deuxième analyse, nous évaluons l'impact de la facture énergétique moyenne pour les individus percevant le revenu moyen national, comparé à son effet sur les populations les plus vulnérables. Pour ce faire, nous intégrons toutes les mesures sociales quantifiables dans le revenu de base d'un ménage type (composé de deux adultes et deux enfants) n'ayant pas d'autres sources de revenus. Il est important de noter que nous ne déduisons pas les coûts de logement du revenu disponible, car les ménages à revenus minimaux reçoivent souvent une aide substantielle dans ce domaine, ce qui aurait autrement faussé les résultats. Par conséquent, le poids de la facture énergétique pour un ménage ayant un revenu moyen est automatiquement réduit par rapport à l'analyse précédente.

Comme illustré dans le graphique ci-dessus, une comparaison du taux d'effort pour la facture énergétique totale entre les pays pour un ménage à revenu moyen montre que, tout comme en 2024, la Belgique se classe comme le pays où la facture énergétique pèse le moins proportionnellement (4,2 %), aux côtés de la France. Ces pays sont suivis de près par l'Allemagne et le Royaume-Uni à 4,5 %, et les Pays-Bas à 4,7 %.

De manière prévisible, la situation devient plus difficile pour les ménages aux revenus modestes. Toutefois, par rapport à 2024, la facture énergétique par rapport aux revenus de base a diminué pour tous les pays étudiés, à l'exception de l'Allemagne. Pour les familles à revenus modestes bénéficiant d'un soutien social, la Belgique maintient un impact relativement faible de la facture énergétique, autour de 6,7 %, soit plus de 56 % de plus que pour un ménage moyen. Les Pays-Bas suivent avec une facture énergétique représentant environ 10 % du revenu disponible. En France, le taux d'effort énergétique varie de 13 % à 15 %, tandis qu'en Allemagne, il oscille entre 15 % et 17 %. Le Royaume-Uni présente le fardeau énergétique le plus lourd en proportion du revenu de subsistance pour les ménages les plus vulnérables, avec des chiffres compris entre 23 % et 28 % du revenu disponible (une amélioration notable par rapport aux années précédentes). Néanmoins, la facture énergétique totale au Royaume-Uni pourrait encore constituer un fardeau disproportionné pour les ménages les plus exposés au risque de précarité énergétique.

Remarque

L'approche adoptée dans cette section présente certaines limites, étant donné qu'elle peut ne pas refléter avec précision le profil de consommation des personnes en situation de précarité énergétique, telles que celles vivant seules sans enfants. De plus, elle ne tient pas compte du comportement potentiel des individus plus vulnérables qui pourraient réduire leur consommation d'énergie pour gérer leurs factures. Malgré ces limitations, l'objectif principal de ce chapitre est de déterminer le taux d'effort requis pour payer la facture énergétique et de le comparer entre les pays afin de comprendre son impact relatif. Nous estimons que cette approche est suffisamment robuste pour tirer des conclusions significatives. Des informations supplémentaires sur ces observations sont disponibles au chapitre 8.

Évaluation de la compétitivité des industries belges

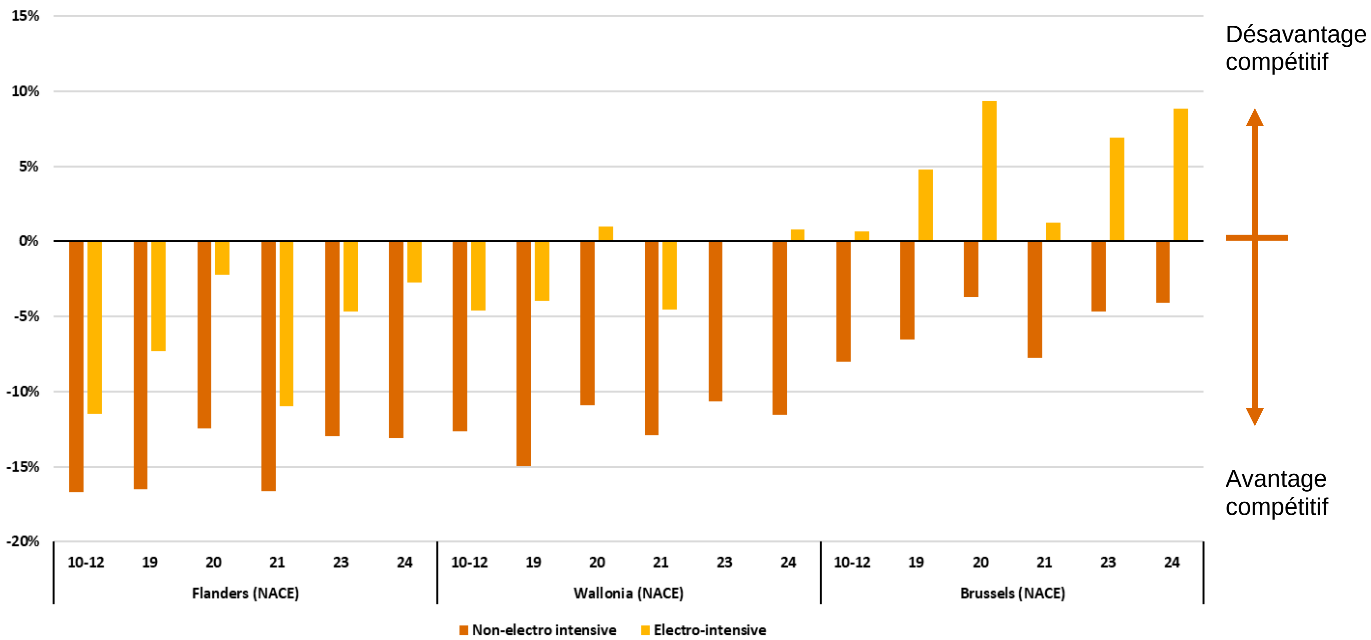
En incluant le Royaume-Uni dans la comparaison

En 2025, l'industrie belge maintient une position relativement compétitive en termes de coûts énergétiques pondérés, en particulier pour les consommateurs non électro-intensifs. Pour ceux-ci; à travers la Flandre, la Wallonie et Bruxelles, tous les secteurs bénéficient d'un avantage concurrentiel par rapport aux coûts énergétiques pondérés en Allemagne, en France, aux Pays-Bas et au Royaume-Uni. Cet avantage est particulièrement marqué en Flandre, où des secteurs tels que l'alimentation et les boissons (NACE 10–12), les produits pétroliers raffinés (NACE 19) et les produits pharmaceutiques (NACE 21) profitent des coûts énergétiques pondérés les plus bas. Bien que les prix de l'électricité soient plus élevés en Wallonie et à Bruxelles, les prix bas du gaz naturel renforcent la compétitivité globale des industries non électro-intensives.

La situation est plus complexe pour les consommateurs électro-intensifs. La Flandre reste compétitive dans tous les secteurs, avec des coûts pondérés offrant un avantage de plus de 10 % pour l'industrie des aliments et boissons et l'industrie des produits pharmaceutiques. En Wallonie, la compétitivité est mitigée : bien que des secteurs tels que l'alimentation et les boissons (NACE 10–12), les produits pétroliers raffinés (NACE 19) et les produits pharmaceutiques (NACE 21) conservent un léger avantage, des industries telles que la chimie (NACE 20) et les métaux (NACE 24) accusent des désavantages concurrentiels modestes. En revanche, Bruxelles subit systématiquement un désavantage concurrentiel pour les consommateurs électro-intensifs, cet écart atteignant jusqu'à 10 % en raison des coûts élevés de l'électricité.

L'inclusion du Royaume-Uni détériore la position relative de la Belgique, notamment pour les profils électro-intensifs, car les mécanismes d'allègement fiscal du Royaume-Uni compriment la moyenne globale et l'impact des faibles prix en France sont dilués sur la moyenne des pays voisins. L'avantage significatif de la Belgique en matière de gaz naturel – avec des écarts de coûts dépassant 10 % dans tous les secteurs et régions, et jusqu'à plus de 25 % pour certains secteurs et régions – reste un atout stratégique majeur, notamment pour les processus de production intensifs en gaz.

Différences de coûts énergétiques pondérés (électricité et gaz naturel) entre les régions belges et les coûts moyens des pays voisins (y compris le Royaume-Uni) pour les consommateurs électro-intensifs et non électro-intensifs.

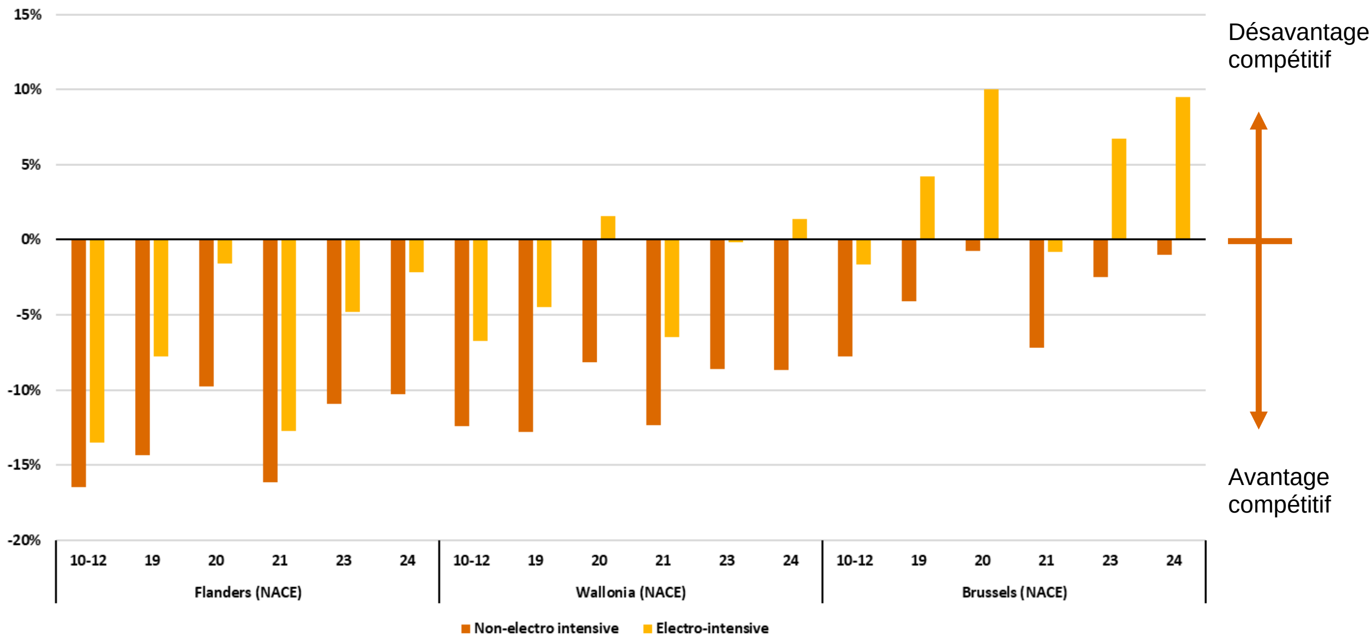


En excluant le Royaume-Uni de la comparaison

En excluant le Royaume-Uni de la comparaison, la compétitivité énergétique globale de la Belgique reste positive, bien que son avantage relatif diminue, en particulier pour les consommateurs électro-intensifs. La Flandre continue de bien performer dans tous les secteurs, tandis qu'en Wallonie, des industries telles que la chimie (NACE 20) et les métaux (NACE 24) subissent des désavantages accrus d'environ 1,5 points de pourcentage. Bien que ces écarts ne justifient pas encore une relocalisation, ils mettent en évidence une pression concurrentielle croissante sur les secteurs intensifs en électricité. Bruxelles continue de rencontrer des défis structurels pour les consommateurs électro-intensifs, mais elle gagne un léger avantage concurrentiel dans les secteurs industriels de l'alimentation et des boissons (NACE 10–12) et des produits pharmaceutiques (NACE 21) par rapport à la situation incluant le Royaume-Uni.

Pour les consommateurs non électro-intensifs, les trois régions belges conservent une position concurrentielle favorable dans tous les secteurs.

Différences de coûts énergétiques pondérés (électricité et gaz naturel) entre les régions belges et les coûts moyens des pays voisins (hors Royaume-Uni) pour les consommateurs électro-intensifs et non électro-intensifs.



Remarques finales

Même si cette analyse fournit une perspective macroéconomique précieuse sur la compétitivité de l'industrie belge fondée sur les coûts énergétiques pondérés, il est indispensable de la compléter par des études sectorielles et spécifiques aux entreprises. Bien que la Belgique démontre un avantage concurrentiel clair dans certains secteurs – notamment pour les consommateurs non électro-intensifs – des variations significatives de compétitivité réelle peuvent apparaître en fonction de l'importance relative du gaz naturel par rapport à l'électricité dans le mix énergétique d'une entreprise ou d'un secteur.

Les prix du gaz naturel restent très compétitifs dans toutes les régions belges, conformément aux tendances observées en 2024. Cependant, les prix de l'électricité présentent un schéma contrasté, avec certains désavantages concurrentiels évidents dans certaines régions et les secteurs pour les consommateurs électro-intensifs. Cela représente une détérioration par rapport à 2024, lorsque la Belgique conservait un avantage concurrentiel dans la plupart des secteurs grâce à une compétitivité plus forte basée sur l'électricité.

Pour obtenir une compréhension plus précise et détaillée de la position concurrentielle réelle de la Belgique, il est essentiel de mener des évaluations sectorielles plus approfondies qui différencient clairement les dépendances à l'électricité et au gaz naturel au niveau des entreprises. Cette approche sera cruciale pour orienter efficacement les politiques industrielles, réformer les coûts énergétiques et définir des stratégies d'investissement à long terme.

2. Introduction

2. Introduction

This report has been commissioned by the CREG, the Belgian federal regulator for electricity and natural gas, in collaboration with two of the three regional regulators: Brugel, who is responsible for the regulation in Brussels, and the VNR, who is responsible for the regulation in Flanders. As part of their broader mission to promote transparency and competition in the energy market, the regulators aim to ensure that market conditions serve the public interest and protect consumer rights. To support this initiative, PwC has been tasked with conducting a comprehensive study that compares energy prices for residential, small professional, and industrial consumers across Belgium and its neighbouring countries.

The purpose of this study is to compare the electricity and natural gas prices – both in aggregate and by individual components – charged to residential, small professional, and large industrial consumers across the three Belgian regions: Brussels, Flanders, and Wallonia. This analysis will also include comparisons with prices in Germany, France, the Netherlands, and the UK. The energy price data utilised in this study was collected in January 2025 for all consumer profiles.

Beyond the price comparison, this study aims to investigate the impact of energy price disparities on two specific consumer groups: vulnerable residential consumers and key industrial sectors in Belgium. For vulnerable consumers, the report will assess the efforts made by governmental bodies and other organisations to assist these individuals in managing their energy bills. In the case of industrial consumers, we will analyse the implications of energy costs on the overall Belgian industry. Additionally, the report will pay special attention to reduction schemes that benefit electro intensive industrial consumers who meet certain criteria.

This report is structured into four distinct sections.

The **first section** (comprising chapters 3 to 5) presents the comprehensive price comparison for all consumer categories considered. The methodology employed follows a bottom-up approach to construct the energy costs wherever feasible. Three primary components are examined: the commodity price, network costs, and all other costs, which include taxes, levies, and certificate schemes. For residential consumers, Value Added Tax (VAT) is also factored in. Chapter 3 begins by outlining the dataset utilised in this study, establishing the general assumptions made, defining the consumer profiles considered, and providing an overview of the various zones identified across the five countries under review. Although the Terms of Reference specify the consumption volume and annual peak power for each consumer profile, additional assumptions were made to enhance the characteristics of these profiles (e.g., contracted capacity, monthly peak, etc.), which are detailed in this section. Chapters 4 and 5 then offer an in-depth breakdown of the energy costs for electricity and natural gas, including a thorough examination of the relevant regulatory framework.

The **second section** of the report (covered in chapters 6 and 7) presents the findings for each consumer profile, adopting a dual approach: comparing total energy prices in Belgium with those in the other four countries, and analysing how the various components of the energy price relate to the observed results. Chapter 6 details the results for each consumer profile, while chapter 7 summarises the key conclusions and offers a preliminary overview of the competitiveness of Belgian residential, small professional, and industrial energy consumers.

The **third section** of this study (outlined in chapter 8) focuses on the initiatives undertaken by government bodies and other agencies to assist vulnerable consumers in meeting their energy bills. This section specifically identifies social measures implemented by national governments and other entities, quantifying these efforts to assess the financial impact of energy consumption relative to consumers' incomes. The aim is to illustrate the extent of governmental interventions designed to alleviate the burden of energy costs on vulnerable residential consumers.

The **last section** of this report (described in chapter 9) provides a detailed analysis of the competitiveness of the Belgian industry concerning energy costs across the three regions. Special attention is given to the total energy costs incurred by the industry at a macroeconomic level, where the aggregation of electricity and natural gas prices constitutes the overall energy expense. This analysis focuses on the six most significant industrial sectors in Belgium, which are identified through a preliminary exercise detailed in section 3, assessing their competitive advantages and disadvantages in comparison to industries in neighbouring countries, both at the national and regional levels. The report concludes with several general observations and recommendations based on the insights gathered.

3. Description of the dataset

3. Description of the dataset

General assumptions

Below, we outline the general assumptions that are essential for a complete understanding of the selected consumer profiles and the countries involved.

1. ***January 2025.*** This study gives an overview of the prices and tariffs of electricity and natural gas in January 2025 for Belgium, France, the Netherlands, Germany and the UK.

2. ***Economically rational actors.*** We assume the 13 selected profiles (8 for electricity and 5 for natural gas) are economically rational actors trying to optimise their energy cost when possible.

3. ***Exemptions and reductions.*** In various cases, we noticed the existence of – most of the time progressive – reductions or exemptions on taxes, levies, certificate schemes, or grid usage costs. Whenever economic criteria – such as exercising a well-defined industrial activity or paying a specific part of your company revenue as energy cost – are used to determine the eligibility for those exemptions and reductions, we do not present a single value but a range of possibilities as a result with a minimum and a maximum case. All the computation and graphs reflect the situation applicable in January 2025. Any change taking effect after this date is excluded.

4. ***Commodity prices (B-SME and industrial consumers).*** All commodity prices are provided by the CREG, except for the electricity industrial consumers commodity price in the UK, which was provided by PwC based on Bloomberg market indices.

5. ***Electricity/Natural gas sales margin (B-SME and industrial consumers).*** While using the formula provided by the CREG to compute commodity prices, we do not add any sales margin – both for electricity and natural gas – to ensure better objectivity when comparing these different countries and consumer types. However, such a margin is *de facto* included as we consider offers, products and tariffs available on the natural gas/electricity market.

6. ***Natural gas pressure level and caloric value.*** As later exhibited, (some) industrial natural gas consumers are directly connected to the transport grid but are not connected to the same natural gas pressure level in every country (e.g. the Netherlands). We consider the most plausible pressure level for each country and client profile. We also consider the caloric value of natural gas for each country.

7. ***Exchange rates.*** For the UK, unless explicitly stated otherwise[30], we systematically used the January 2025 average exchange rate to convert British Pounds to Euros, namely 0.8334 GBP/EUR (or 1.1999 EUR/GBP)[31]. Since 2023, the 5.8% increase in the exchange rate[32] enhanced the competitiveness of the British pound against the euro, making UK-manufactured goods more attractive than those produced in the EU due to the lower prices stemming from the stronger euro.

[30] This can for example be the case when we refer to converted amounts dating from previous years, as it is the case in the chapter covering the social measures for residential consumers

[31] (European Central Bank, 2025) The rate used is the average rate between 1st of January 2025 and 31st of January 2025.

[32] Exchanges rates in 2024 and 2023 respectively were 0.8587 GBP/EUR (1.1645 EUR/GBP) and 0.8821 GBP/EUR (1.1336 EUR/GBP).

9. ***Value Added Tax (VAT).*** We consider that VAT is deductible for professionals and is thus only considered for residential consumers (E-RES and G-RES). Besides, as the VAT is considered as a separate component for residential consumers, all prices reported in this document either exclude VAT or specifically mention its inclusion.

10. ***The UK.*** When mentioning the UK, we are referring to Great Britain, including England, Wales, and Scotland, leaving aside Northern Ireland.

11. ***Auto-production*.** In this study, we assume none of the selected profiles produces electricity on their own (on-site electricity production or domestic production). We therefore conclude that electricity consumption and invoicing correspond to one's electricity offtake.

12. ***Meter ownership.*** We assume that residential and small professional consumers do not own their specific meter. However, industrial consumers are considered to own their meter.

13. ***Unique contracts*.** We assume that residential consumers have a contract with a supplier, including all costs.

14. ***Payment method.*** When multiple payment methods exist, the most common option is to be considered for residentials.

15. ***Reductions.*** When it comes to residential consumers, we do not consider reductions such as promotional offers or temporary offers. For industrial consumers, we consider certain exemptions or reductions as specified in the law, for instance.

16. ***Exclusion of products.*** As a rule, each product considered to compute residential consumers' commodity products should be available to all types of residential consumers. For instance, products unavailable during the period of the price comparison, products that require the acquisition of a share, products that require pre-financing, products with a dynamic pricing, products that need to be combined with another contract (e.g. bundled electricity and gas contracts) or products that are only available on certain conditions (e.g. group purchases) are excluded from the price comparison resulting in the selection of another product.

17. ***Digital meter owners*.** If the bill is different for users with a traditional analogue meter compared to users with a digital meter, then only digital meter results are presented. This is for example applicable in Flanders for E-RES and E-SSME profiles.

18. ***Holders of a sectoral (energy efficiency) agreement.*** Some reductions are only applicable for holders of a sectoral agreement. Since we have already taken the assumption that our profiles are economically rational and would thus have a sectoral agreement if they qualify for the conditions (e.g. we presume British industrial consumers to be part of the climate change agreement, therefore leveraging energy efficiency and emission reduction to obtain tax reductions). As a reflection of each country's diversity of companies and of the sectoral agreements penetration rates, we explicitly specify which profiles are considered to qualify and therefore have a sectoral agreement.

Consumer profiles

In this study, we make the distinction between 3 main categories of consumers:

(1) Residential consumers;

(2) Small professional consumers;

(3) Large industrial consumers.

Those different types of consumers are spread into 13 different profiles. We refer to E-RES (electricity) and G-RES (natural gas) as residential consumers, to E-SSME, E-BSME (electricity) and G-PRO (natural gas) as small professional consumers or as small and medium-sized enterprises, and to E0, E1, E2, E3 and E4 (electricity) and G0, G1 & G2 as large industrial consumers.

Those profiles are in line with the categories of consumers referred to in article 22bis, §2, of the law of April 29, 1999, relating to the organization of the electricity market, and in article 15/25, §2, of the law of April 12, 1965 relating to the transport of gaseous and other products by pipelines[33]. Their respective characteristics are detailed in Table 1 on the next page.

Working assumptions:

(a) Figures regarding the contracted capacity, the annual peak and monthly peak were assessed based on hypotheses accepted by the steering committee of this study. While this study does not aim at stating these figures represent the exact values for all consumers, we assume they are plausible proxies necessary to compute prices across studied countries and regions. During future potential updates of this study in the years to follow, it is possible that these assumptions evolve to show a more accurate side of the market. Below mentioned figures are derived from values provided by the steering committee based on the following hypotheses:

- **The contracted capacity** is assumed to equal 80% of the connection capacity with a 100% cos φ (up to E1) or 90% cos φ (from E2 to E4);
- **The annual peak** is assumed to equal 80% of contracted capacity for consumers connected to the distribution grid (E-RES to E1);
- **The annual peak** is assumed to equal 100% of contracted capacity for consumers connected to the transmission grid (E2 to E4) as the larger the consumption profile, the more stable ("baseload") the consumption is assumed. These consumers are more likely to precisely know their peak consumption and, therefore, sign for an identical contracted capacity;
- **The monthly peak** is assumed to equal 90% of annual peak for all countries/regions in scope of this study except for the E-RES and E-SSME profiles. For these profiles, the monthly peak is based on empirical data provided by the VNR[34]. Since 2023, the network costs in Flanders for network users connected to the low voltage grid are based on the monthly peak. In other regions, the monthly (and annual) peaks do not impact the network costs for these consumer profiles.

(b) Whenever possible a distinction is made between day and night tariffs for profiles E-RES and E-SSME. This study assumes a day/night split of 1.6/1.9 MWh for E-RES and a 18/12 MWh split for E-SSME. For E-BSME profile the day/night split is 96/64 MWh, while 1,250/750 MWh for E0 and 6,250/3,750 MWh for E1 profiles.

[33] The last update of these profiles took effect with the publication of the Belgian royal decree dated from September 27, 2023

[34] From 1 January 2025, the 'Vlaamse Regulator van de Elektriciteits en Gasmarkt' (VREG) will continue under a new name: 'Vlaamse Nutsregulator' (VNR) (VNR, 2025).

Table 1: Consumer profiles for electricity[35]

Characteristic	Unit	E-RES (Electricity Residential)	E-SSME (Electricity Small SME)	E-BSME (Electricity Big SME)	E0 (Electricity 0)	E1 (Electricity 1)	E2 (Electricity 2)	E3 (Electricity 3)	E4 (Electricity 4)
Period in scope	-	January 2025	January 2025	January 2025	January 2025	January 2025	January 2025	January 2025	January 2025
Annual demand	MWh	3.5	30	160	2,000	10,000	25,000	100,000	500,000
Consumption profile	-		-	-	Baseload (working days only)	Baseload (working days only)	Baseload (working days only)	Baseload (including weekends)	Baseload (including weekends)
Consumption hours eq.[36]	h/year	-	-	1,684	2,759	2,326	5,000	7,692	8,000
Grid operator	-	DSO (LS)	DSO (LS)	DSO (1 – 26 kV)	DSO (1 – 26 kV)	DSO (26 – 36 kV)	LTSO	TSO	TSO
Connection capacity	kVA	9.2	46.9	156	938	5,500	6,944	18,056	86,806
Contracted capacity	kW	7.4	37.5	105	750	4,400	5,000	13,000	62,500
Annual peak	kW	5	18	95	725	4,300	5,000	13,000	62,500
Monthly peak	kW	4.3	15	70	600	3,800	4,500	11,700	56,250
Metering	-	YMR	YMR	AMR	AMR	AMR	AMR	AMR	AMR

Information provided by the project steering committee

[35] The information provided by the project steering committee has been updated for this year's report. It has retroactively been updated for 2024 and the later results display the updated view.

[36] These are the theoretical number of hours of electricity consumption of each consumer, obtained by dividing the annual demand by the annual peak.

Table 2: Detailed view of the connection level of consumer profiles for electricity per country

Profile	Wallonia	Flanders	Brussels	Netherlands	France	Germany	The UK
E-RES	BT sans facturation du terme capacitaire (<1kV)	LS piekmeting (<1 kV)	BT (sans mesure de pointe) (<1 kV)	Fase 1: 1 x 10 t/m 3 x 25 Ampere	BT ≤ 36 kVA	Niederspannung (<1 kV)	NHH Demand tariff – Domestic two rate (< 6 kV)
E-SSME	BT Sans facturation du terme capacitaire (<1kV)	LS piekmeting (<1 kV)	BT (sans mesure de pointe) (<1 kV)	3 x 80 Ampere	BT ≥ 36 kVA	Niederspannung (<1 kV)	NHH Demand tariff – Small non-domestic customer with two rate (<6 kV)
E-BSME	MT avec facturation du terme capacitaire (26-36 kV)	> 1 – 26 kV Net	MT Alim. Principale (26-36 kV)	Afnemers MS (1-20 kV)	HTA_1 (1 - 40 kV)	Mittelspannung (1 kV - 50 kV)	HH Demand tariff-HV HH Metered (6 - 22 kV)
E0	MT avec facturation du terme capacitaire (26-36 kV)	> 1 – 26 kV Net	MT Alim. Principale (26-36 kV)	Afnemers MS (1-20 kV)	HTA_1 (1 - 40 kV)	Mittelspannung (1 kV - 50 kV)	HH Demand tariff-HV HH Metered (6 - 22 kV)
E1	T-MT avec facturation du terme capacitaire (26-36 kV)	> 1 – 26 kV Post	MT Alim. Principale (26-36 kV)	Afnemers Trafo HS+TS/MS (25-50 kV)	HTA_1 (1 - 40 kV)	Mittelspannung (1 kV - 50 kV)	HH Demand tariff-HV HH Metered (6 - 22 kV)
E2	LTSO (30-70 kV)	LTSO (30-70 kV)	LTSO (30-70 kV)	Afnemers TS (25-50 kV)	HTB_1 (50 - 130 kV)	Umspannung Hoch-/Mittelspannung (50 -110 kV)	EHV EDCM (22 - 132 kV)
E3	TSO (> 150 kV)	TSO (> 150 kV)	TSO (> 150 kV)	TSO (> 150 kV)	HTB_2 (130 - 150 kV)	Hochspannung (220 - 350 kV)	EHV TNUoS (150 kV)
E4	TSO (> 150 kV)	TSO (> 150 kV)	TSO (> 150 kV)	TSO (> 150 kV)	HTB_2 (130 - 150 kV)	Hochspannung (220 - 350 kV)	EHV TNUoS (150 kV)

Table 3: Consumer profiles for natural gas

Characteristic	Unit	G-Res (Natural gas Residentials)	G-Pro (Natural gas Professionals)	G0 (Natural gas 0)	G1 (Natural gas 1)	G2 (Natural gas 2)
Period in scope	-	January 2025	January 2025	January 2025	January 2025	January 2025
Annual demand	MWh	17	300	1,250	100,000	2,500,000
Consumption profile	-	-	-	Baseload (working days only)	Baseload (including weekends)	Baseload (including weekends)
Consumption hours eq.[37]	h/year	-	-	3,000	5,000	8,000
Contracted capacity	kW	-	-	-	20,000	312,500
Metering	-	YMR	YMR	MMR	AMR	AMR

Table 4: Detailed view of the connection level of consumer profiles for natural gas per country

Profile	Wallonia	Flanders	Brussels	Netherlands	France	Germany	The UK
G-RES	T2	T2	T2	G4: 0 t/m 10m^3(n)/h	T2	G4	Consumption band < 73,200 kWh
G-PRO	T3	T3	T3	G25: 25 t/m 40m^3(n)/h	T2	G40	73,200 < Consumption band < 732,000 kWh
G0	T4	T4	T4	G100: 40 t/m 65 m^3(n)/h	T3	G100	Consumption band ≥ 732,000 kWh
G1	T6	T6	T5	TSO	T4	G1000	Consumption band ≥ 732,000 kWh
G2	TSO	TSO	TSO	TSO	TSO	TSO	TSO

[37] These are the theoretical number of hours of natural gas consumption of each consumer, obtained by dividing the annual demand by the contracted capacity.

Identification of industrial sectors

The macro-economic analysis carried out in this study intends to depict the industrial structure of the Belgian economy as a whole and, more specifically, the economy of the Belgian regions: Brussels, Flanders, and Wallonia. Through this analysis, a certain number of relevant industrial sectors are determined that will be subjected to the natural gas and electricity price comparison.

There are two crucial objectives that justify the selection of sectors for which the price comparison is particularly relevant. First, it is to ensure consistency between the selected industrial profiles and the active industrial sectors. Second, it is to use this macro-economic analysis when assessing the impact of the described results for natural gas and electricity prices on the Belgian economy and its regions.

Throughout this study, we use a variety of macro-economic data relating to the manufacturing industry. This industry can be identified over numerous sectors as defined in the Statistical Classification of Economic Activities in the European Community, commonly referred to as NACE[38].

The industrial structure of a country can generally be grouped into two different parts:

1. The ***manufacturing industry***, including basic industries and all other industrial activities
   (a) Basic industries:

Table 5: Economic activities related to basic manufacturing industries with NACE classification

NACE code	Sector – Economic activity
13 – 15	Manufacture of textiles, wearing apparel, leather, and related products
16	Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
17	Manufacture of paper and paper products
18	Printing and reproduction of recorded media
19	Manufacture of coke and refined petroleum products
20	Manufacture of chemicals and chemical products
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
22	Manufacture of rubber and plastic products
23	Manufacture of other non-metallic mineral products
24	Manufacture of basic metals

   (b) Other sectors of the manufacturing industries:

Table 6: Economic activities related to other sectors of the manufacturing industry with NACE classification

NACE code	Sector – Economic activity
10 – 12	Manufacture of food products; beverages and tobacco products
25	Manufacture of fabricated metal products, except machinery and equipment
26	Manufacture of computer, electronic and optical products
27	Manufacture of electrical equipment
28	Manufacture of machinery and equipment n.e.c.
29	Manufacture of motor vehicles, trailers and semi-trailers
30	Manufacture of other transport equipment
31 – 32	Manufacture of furniture; other manufacturing
33	Repair and installation of machinery and equipment

2. The ***extractive industry***, including industries extracting minerals from solid forms (e.g. coal and mineral ores), liquid forms (e.g. oil) or gaseous forms (e.g. natural gas).

Throughout this investigation, we decided to solely focus on the manufacturing industry, considering the limited importance (in Belgium) and specific energy consumption profiles of extractive industries.

[38] NACE : Nomenclature des Activités économiques dans la Communauté Européenne

A four-step approach drives this exercise:

(1) First, we portray the Belgian national and regional industrial structures, focusing on employment, value added and specialisation criteria.

(2) Second, the energy intensity of these previously mentioned sectors is analysed to have a better insight into the energy cost role in the total cost structure among these sectors.

(3) Third, export intensity indicating the exposition level of certain industrial activities regarding international competition and potential relocation risk is exhibited.

(4) Fourth, we present the potential consumption reduction.

Main industrial sectors for the Belgian national and regional economy

In this part, we depict the relative significance of each sub-sector of the national manufacturing industry regarding value added and employment. This inquiry also considers the Belgian economy specialisation level at a national and regional scale in comparison with neighbouring countries. The manufacturing sectors belonging to NACE classification 10 to 33, in Belgium solely, but in Wallonia, Flanders and Brussels as well are under study. While on all sectors mentioned Table 5 and Table 6 are under review, only a few, based on the highest relevant values, are displayed in charts to make it visually understandable.

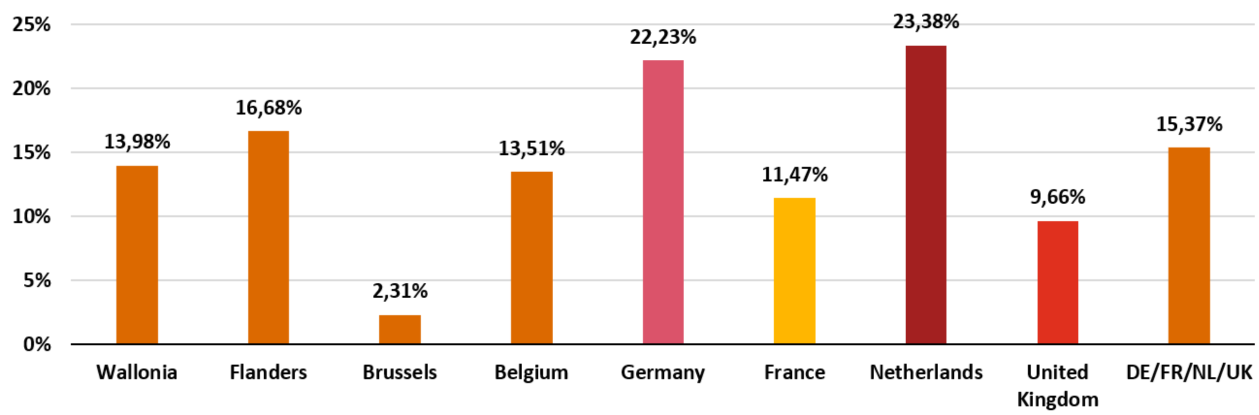
National accounts aggregated per industry coming from Eurostat dataset and the National Belgian Bank (NBB) serve as the basis for the analysis. The datasets used in this study are from 2021.

The importance of the manufacturing industry based on value added

The first investigation intents to determine the relative significance of the Belgian manufacturing industry (NACE 10 – 33) regarding value added. Therefore, we compare the value added of this sector with the total GDP of the regional and national economy. This analysis is benchmarked with the relative importance of the manufacturing industry in each of the neighbouring countries (Germany, France, the Netherlands, and the UK) and their weighted average[39].

Figure 1: Value added of the industry in total GDP displays higher relative importance of the previously mentioned manufacturing industry in the Netherlands than in any other regions, followed by Germany. Noteworthy, Flanders has the third-highest share of value added of the industry in the total GDP amongst all countries and regions from our study panel. At a regional level, only the manufacturing industry in Flanders has a higher "value-added/GDP ratio" than the average for neighbouring countries. Nevertheless, the manufacturing industry is less important in terms of value-added for the Belgian economy than for the average of neighbouring countries - partially due to the weight of the Dutch and German economy.

Figure 1: Value added of the industry in total GDP



Source: Eurostat (2021 data), NBB (2021 data)

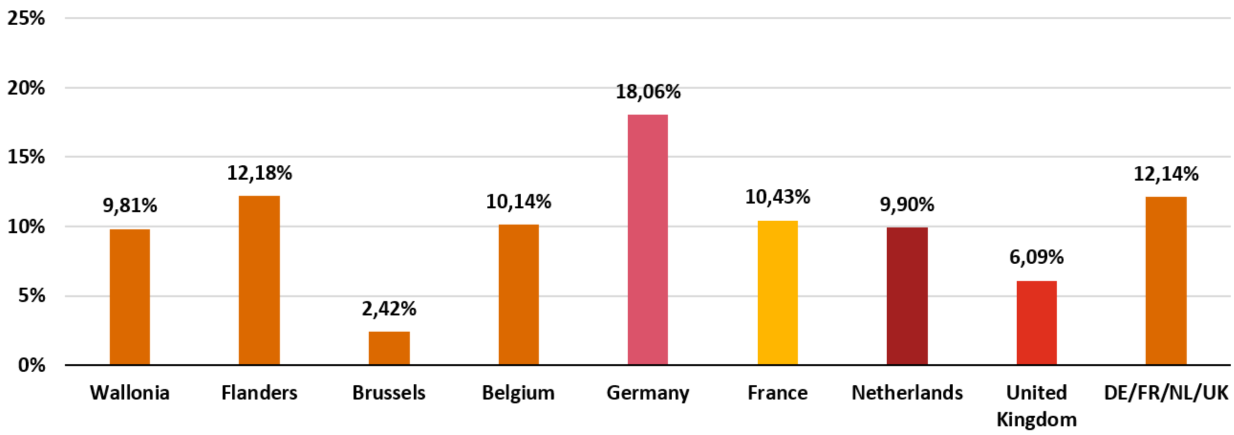
[39] The average is weighed depending on the size of the different economies.

The importance of the manufacturing industry based on employment

The second analysis of this section intends to determine the relative importance of the manufacturing industry in Belgium with regards to employment. We, therefore, compare the employment generated by the previously mentioned manufacturing industry, i.e. NACE 10 to 33 with the employment of the Belgian economy, nationally or regionally.

When examining the relative weight of industrial employment between zones, similar results are obtained as in the previous analysis of the relative importance of manufacturing industry in terms of value-added. The only difference is that, when considering manufacturing industry, Flanders is slightly above the Belgian average in terms of relative employment (Wallonia is very similar to the Belgian average added).

Figure 2: Importance of industry employment on total employment



Source: Eurostat (2021 data), NBB (2021 data)

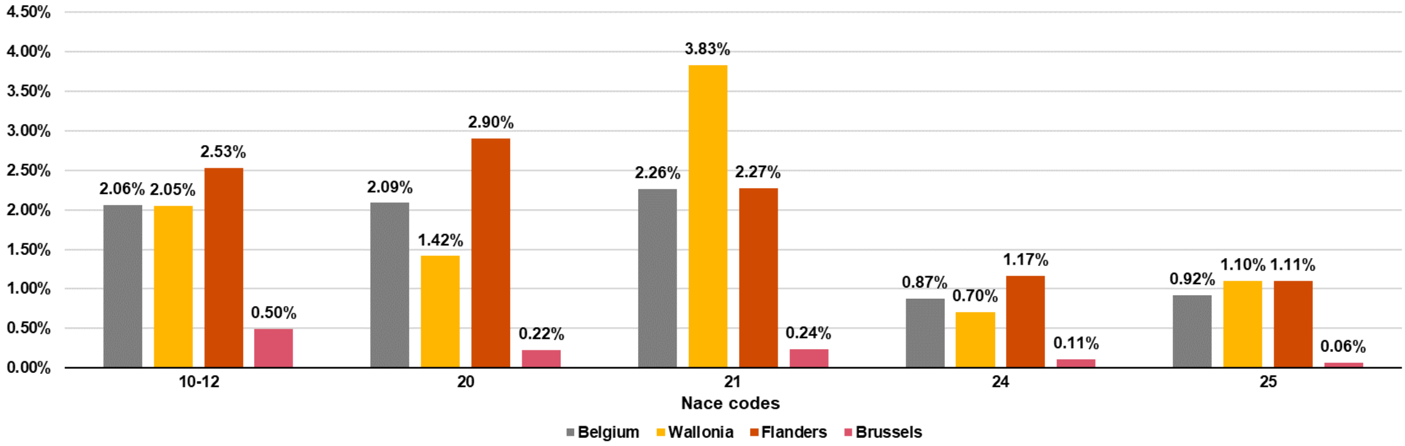
The identification of the most important manufacturing sectors based on value added

The following analysis aims to define the most important industrial sectors in terms of relative value added. Thus, for each sub-sector (within NACE codes 10-33), we compare the creation of value added to the total GDP of the economy (national or regional). The following figure presents the five main sectors of the manufacturing industry (NACE 10-33) in terms of their relative contribution to national or regional GDP. The sector NACE 19 (Manufacture of coke and refined petroleum products) is also considered due to its important weight for Brussels compared to other sectors for this region.

For the Belgian economy, these are the food and drink (NACE 10-12), the chemical (NACE 20)[40], the pharmaceutical (NACE 21), the metalworking (NACE 24) and fabric of metal products except machinery and equipment (NACE 25) sectors. It is interesting to note that the top four sectors for Belgium are also the top four in Flanders and Wallonia. Nevertheless, this analysis highlights important regional differences. Firstly, the chemical sector is important for Flanders in terms of value added (2.9% of total Flanders GDP). Second, the pharmaceutical industry is important for Wallonia and Flanders (3.83% of the total GDP of Wallonia and 2.27M in Flanders). It is also important to note that the petroleum products sector is almost non-existent in Wallonia. Thirdly, Wallonia and Flanders both focuses on the food and drinks sector (2.05% of total Walloon GDP and 2.53% of Flemish GDP).

[40] One must be aware that the line between the petrol and chemical sectors might be thin. Therefore, we suggest the following definitions: sector 19 “includes the transformation of crude petroleum and coal into usable products. The dominant process is petroleum refining, which involves the separation of crude petroleum into component products through such techniques as cracking and distillation. This division includes the manufacture of gases such as ethane, propane and butane as products of petroleum refineries” (European Commission, n.d.); sector 20 “includes the transformation of organic and inorganic raw materials by a chemical process and the formation of products. It distinguishes the production of basic chemicals that constitute the first industry group from the production of intermediate and end products produced by further processing of basic chemicals that make up the remaining industry classes” (European Commission, n.d.).

Figure 3: Value added of most important sectors in terms of GDP

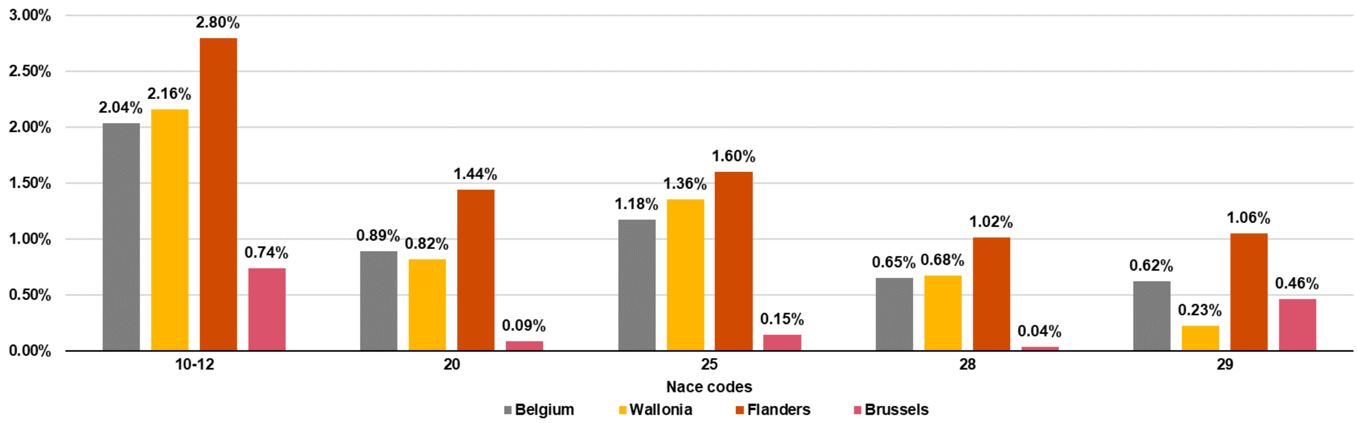


Source: Eurostat (2021 data), NBB (2021 data)

The identification of the most important manufacturing sectors based on employment

The fourth analysis under this heading aims at identifying the most important industrial sectors in terms of relative employment. Thus, for each sub-segment (within NACE codes 10-33), we compare the level of employment with total employment in the Belgian economy. The regional level analysis is subject to the same computations. As depicted by Figure 4, the food sector (NACE 10-12) is the largest in terms of relative employment, followed by the metalworking sector (NACE 25), at both the national and regional level. It is also interesting to note that the refining sector and the pharmaceutical sector are low labour-intensive, whereas the food and metal industries are high labour-intensive. The lower predominance of the chemical sector in Flanders and the pharmaceuticals sector in Wallonia compared to the previous analysis is also noticeable.

Figure 4: Share of employment in total employment for the main sectors (Nace 10 - 33)



Source: Eurostat (2021 data), NBB (2021 data)

The relative specialisation of Belgian manufacturing sectors compared to other countries

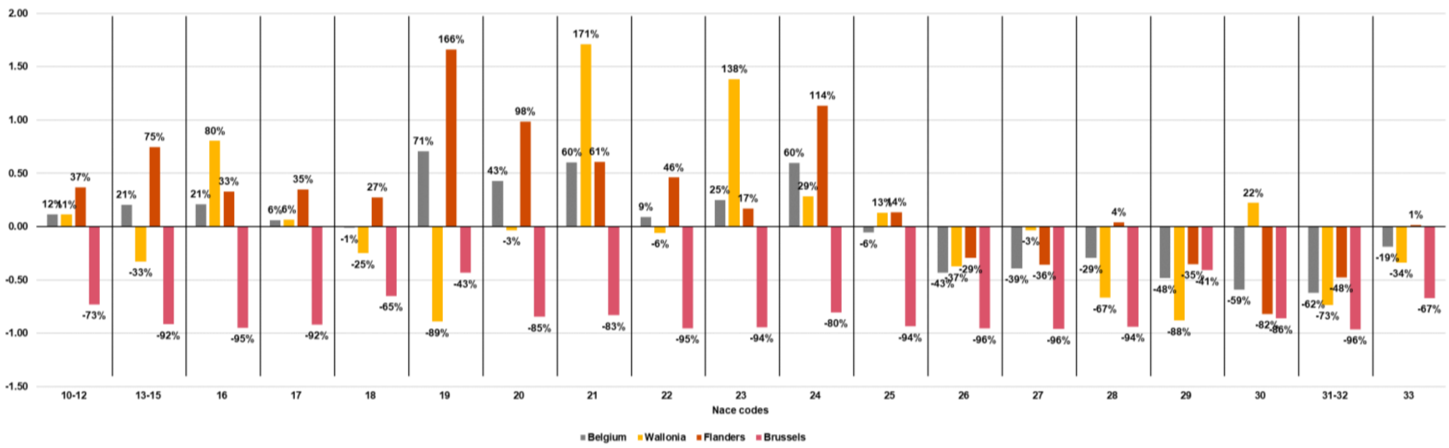
The final analysis in this section focuses on the specialisation indicator for the different sub-sectors of the manufacturing industry (NACE 10-33). The specialisation indicator results from the relative value added[41] comparison of each sector with that of the average of neighbouring economies[42]. When positive, the indicator highlights that the value added created by a specific sector in Belgium (or in one of its regions) is greater than the average value added created in neighbouring countries. Conversely, when a value for a specific sector is negative, the value added created by that sector in Belgium (or in one of its regions) is below the average for neighbouring countries. The specialisation indicator is calculated according to the following formula:

$$Specialisation\ indicator\ for\ Sector_i\ in\ Region_j$$

$$= \left(\frac{Relative\ added - value\ of\ Sector_i\ in\ Region_j}{European\ average\ of\ the\ relative\ added - value\ of\ Sector_i} - 1\right)$$

Figure 5 shows that the pharmaceutical sector (NACE 21) and chemicals (NACE 20) are the two most essential specialisations of the Belgian economy (specialisation indicator of 2.26 and 2.09 respectively). Of the top five sectors in terms of relative value added, only one is not specialised. This is the NACE 25 which is the fabricated metals products (except machinery and equipment). It is interesting to note that the Belgian economy is more specialised in basic metals than in fabricated metal products, even though the latter is the more important sector in terms of GDP. At a regional level, Wallonia is (besides the pharmaceutical industry) highly specialised in manufacture of other non-metallic mineral products (NACE 23). At the same time, Flanders is (besides the chemical sector) highly specialised in the manufacture of basic metals (NACE 24).

Figure 5: Specialisation indicator compared to the average of neighbouring countries



Source: Eurostat (2021 data), NBB (2021 data), PwC computations

Sectors with the highest energy costs in comparison with total costs and energy intensity

This section seeks to pinpoint the sectors of the manufacturing industry (NACE 10-33) with the highest energy costs. The first analysis is a cost approach which aims to identify the cost of energy (natural gas-electricity-steam) as part of the total value added. The second approach is product-based: we look at the consumption of natural gas and electricity and compare it with the creation of value added.

The first analysis compares the cost of energy (natural gas-electricity-steam) of each sector with the sector's value added. The analysis is based on the input-output tables of the Federal Planning Bureau with figures from 2020.[43] For this purpose, we identify the value of intermediate energy consumption (NACE 35) for each sector of the Manufacturing industry (NACE 10-33). We then divide this figure by the sector's value added.

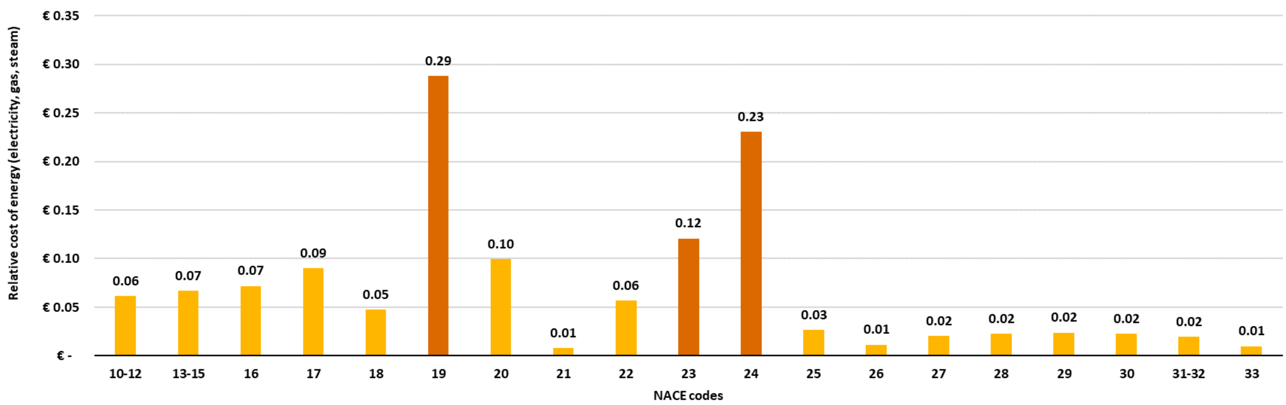
[41] The relative value added is the absolute value added of a specific NACE sector over the absolute value added of all NACE sectors. The data is retrieved from NBB and Eurostat (2021 data).

[42] The European average throughout this section refers to the average of the neighbouring countries under scope in this report: Germany, France, the Netherlands and the United Kingdom.

[43] Theses input-output tables are published every 5 years.

The following figure (Figure 6) shows the sectors whose energy costs (natural gas-electricity-steam) account for more than 5% of their total value added. For several of the most critical sectors in terms of GDP, the cost of energy (natural gas-electricity-steam) is relatively low. Therefore, these sectors are not represented in the figure below. This is the case for the NACE 21, NACE 25 and until NACE 33. Three sectors stand out as sectors where the cost of energy accounts for a considerable share of total value added. These are the coke and refined petroleum products (NACE 19), other non-metallic mineral products (NACE 23) and basic metals (NACE 24) industries.

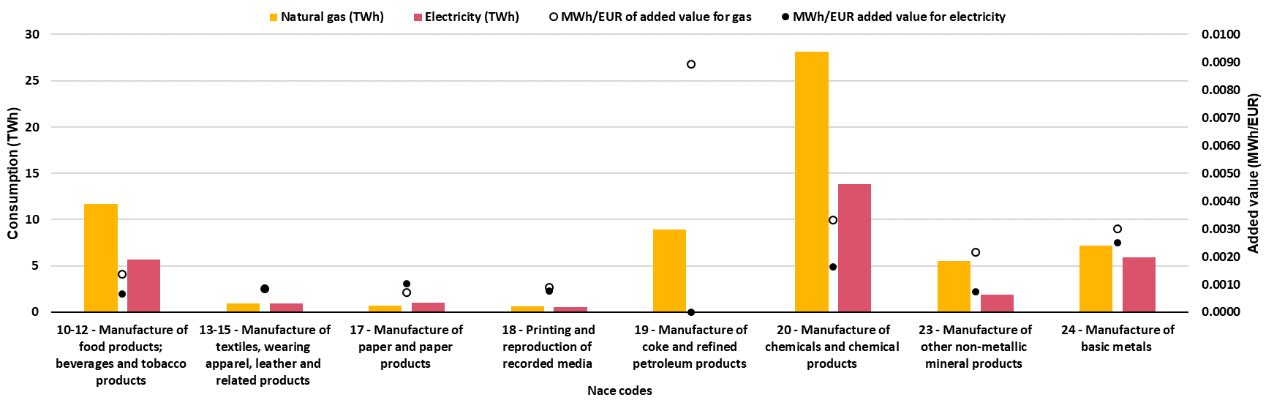
Figure 6: Cost of energy (electricity/natural gas/steam) as part of the total value added



The second analysis consists of identifying the most energy-intensive sectors of the Belgian economy, based on a product approach. Energy intensity is the result of dividing the energy consumption (in MWh) of each sector by its value added (in EUR). The data on the value added of each sector come from Eurostat, while the energy consumption accounts come from the Federal Planning Bureau.

In Figure 7, the Belgian chemicals sector (NACE 20) appears to be, by far, the highest energy consumer (natural gas and electricity) per value added followed by the food and beverages industry (NACE 10-12) and the basic metals sector (NACE 24). The highest natural gas consumer per value added are the same, except for the 3rd position which is taken by manufacture of coke and refined petroleum products industry (the NACE 19). For electricity, the same trend as the general one is observed.

Figure 7: Electricity and natural gas consumption compared with value added creation



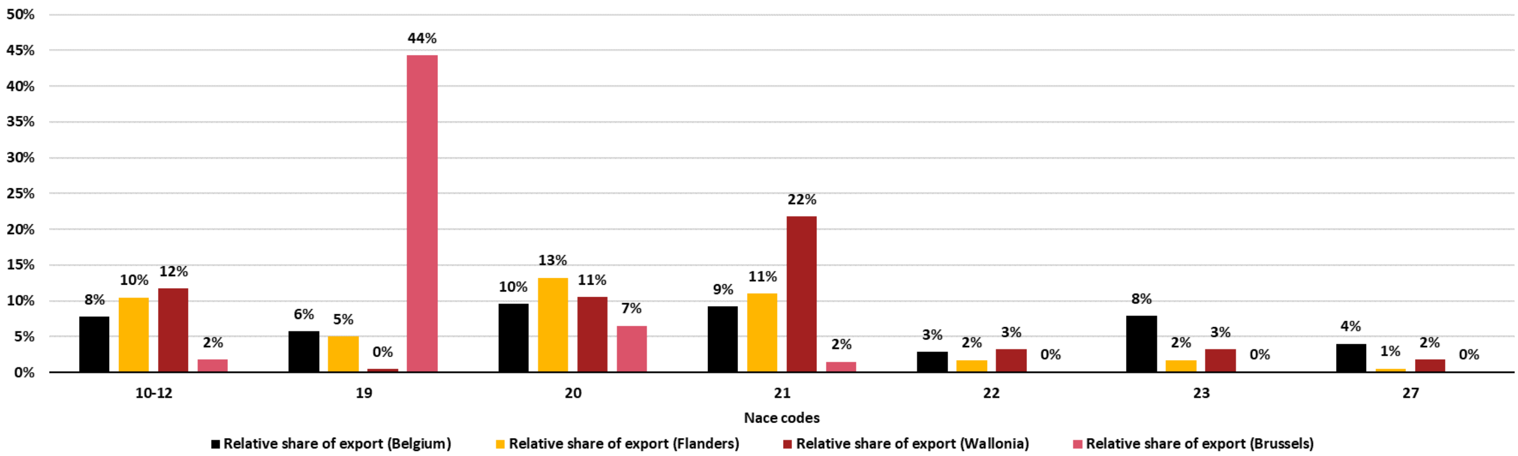
The textile manufacture (NACE 13-15), the paper manufacture (NACE 17) and the printing manufacture (NACE 18) have low energy consumption levels, and average consumption per value added. While the food and beverages industry (NACE 10-12) have relatively low average consumptions per valued added, similar to the NACE 18, NACE 13-15 and NACE 23. The NACE 19 displays the lowest average consumption per value added for electricity. Most industrial sectors have a higher natural gas intensity than electricity intensity. The only exceptions to this observation are the textiles (NACE 13-15) and paper (NACE 17), which have a higher electricity intensity than natural gas.

Sectors most exposed to international competition (including the relocation risk)

In this chapter, we look at the exposure of sectors to international competition, through analysing the relative share of exports to total exports for each industrial sector. Based on data published by the National Bank of Belgium in 2021, we determine the value of exports in each sector and its relative importance in the total exports of an economy (regional or national).

The first 7 manufacturing industry sectors with the highest relative share of exports in the total exports of the Belgian economy are, in descending order, the chemical (NACE 20), the pharmaceuticals (NACE 21), the other non-metallic products (NACE 23), the food and beverages (NACE 10-12), the coke and petrol products (NACE 19), electrical equipment (NACE 27) and rubber and plastic products (NACE 22) sectors. These sectors are, therefore, the most exposed to international competition.

Figure 8: Relative share of exports compared to total exports



The three regions fall under the analysis of these 7 most important sectors in terms of relative exports. The top 3 sectors (each with a relative share of exports >5% of the region's total exports) in Flanders and Wallonia are also among the top 7 sectors in terms of the relative share of exports in Belgium. In Flanders, the chemical sector has the largest relative share of exports (13% of the region's total exports). As far as Wallonia is concerned, the pharmaceuticals (NACE 21) sector stands out as the sector with the largest relative share of exports (22% of total regional exports) followed by the manufacture of food and drinks (NACE 10-12) with 12%. In Brussels, the coke and petrol products sector (NACE 19) is by far the sector with the largest relative share of exports (44% of the region's total exports)[44].

However, this should be considered with caution. Assuming two sectors (A and B) whose exports represent an identical fraction of their sectoral production, if sector A is more substantial than sector B, then the implemented indicator (export of sector I over total exports) logically gives a result more significant for sector A as for sector B while being exposed to a similar relocation risk.

Following, the next figure (Figure 9) seeks to identify for which sectors of the Belgian economy there is a significant risk of relocation. To do so, we compare the value of exports of each sector with the value of the sector's gross output[45]. The more an economic activity depends on exports, the more it is exposed to a risk of relocation (regardless of other physical or geographical criteria). The production data for each sector come from the input-output tables of the Federal Planning Bureau. The data used in this study are from 2020.

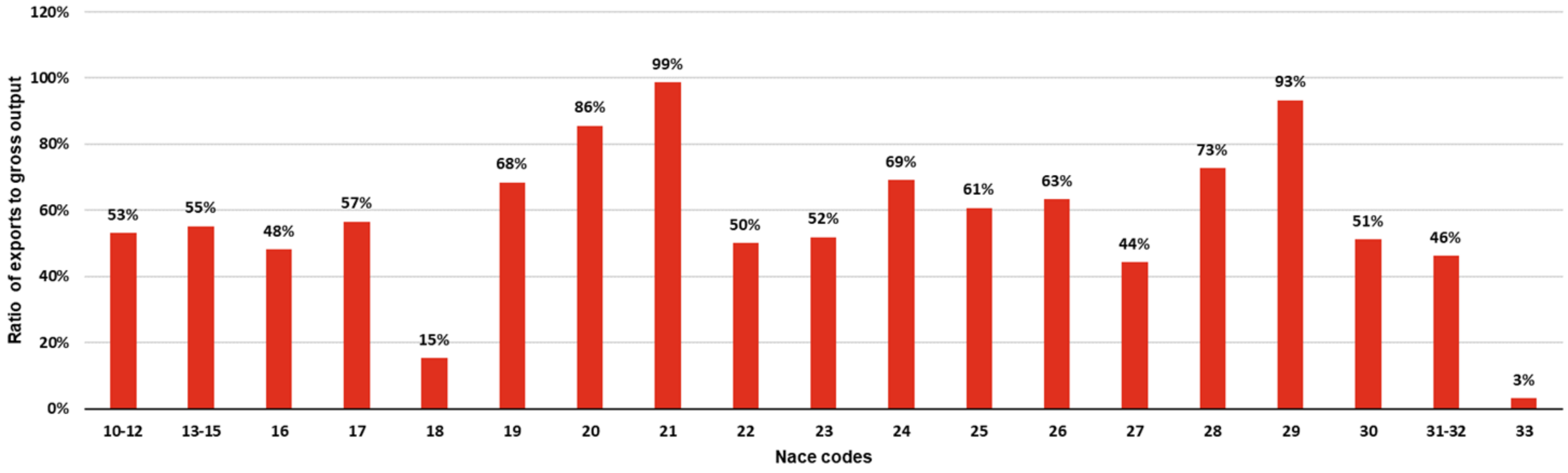
[44] This high share of oil exports certainly comes because of important imports realised in the first place. Petroleum products are the second most important goods imported via the port of Brussels (Brussels studies, 2017).

[45] According to the Federal Planning Bureau, gross output is a measure of an industry's sales or receipts, which can include sales to final users in the economy (GDP) or sales to other industries (intermediate inputs). Gross output can therefore be measured as the sum of an industry's value added and intermediate inputs.

The chart below shows that the sectors of Belgian manufacturing industry with the highest "exports to gross output" ratios are the NACE 21, the NACE 29, the NACE 20, and the NACE 28. The sectors all have a ratio of exports to gross output of more than 70 %, meaning that these sectors are more likely to be at risk to relocate. Recent trends in the world economy, and more specifically on the European level, suggest providing more strategic autonomy in certain manufacturing sectors in order to avoid the relocations to unstable or politically hostile parts of the world[46].

Among others, NACE 33, NACE 18 and NACE 27 are relatively less exposed to the risk of relocation. They each have a ratio of exports to gross output of less than 45%.

Figure 9: Exports compared with gross output



[46] (European Union External Action Service, 2020)

Sectors with the lowest potential in relation to consumption reduction (energy efficiency)

This section aims to identify the sectors of the Belgian economy, which may or may not have the possibility of significantly improving their energy efficiency in the short term. To that end, we compared the energy intensity of each sector of the Belgian manufacturing industry (based on the categorisation of industrial sectors in NACE 2008) with that of the same sectors in neighbouring countries (Germany, the Netherlands and France). The energy consumption (in MWh) per EUR of value added created for each sector measures the energy intensity. The data on the value added of each sector comes from Eurostat (2021 data), while the energy consumption accounts come from the national statistical offices on the same year[47]. Noteworthy, not enough detailed data on energy consumption in the UK were available[48]. This analysis was carried out separately for electricity and natural gas.

Energy efficiency analysis

Sector 'i' of the Belgian economy (b) can be deemed to have the potential for improvement in terms of energy efficiency, compared to sector 'i' in another country (p), if it consumes more energy to produce the same unit of output.

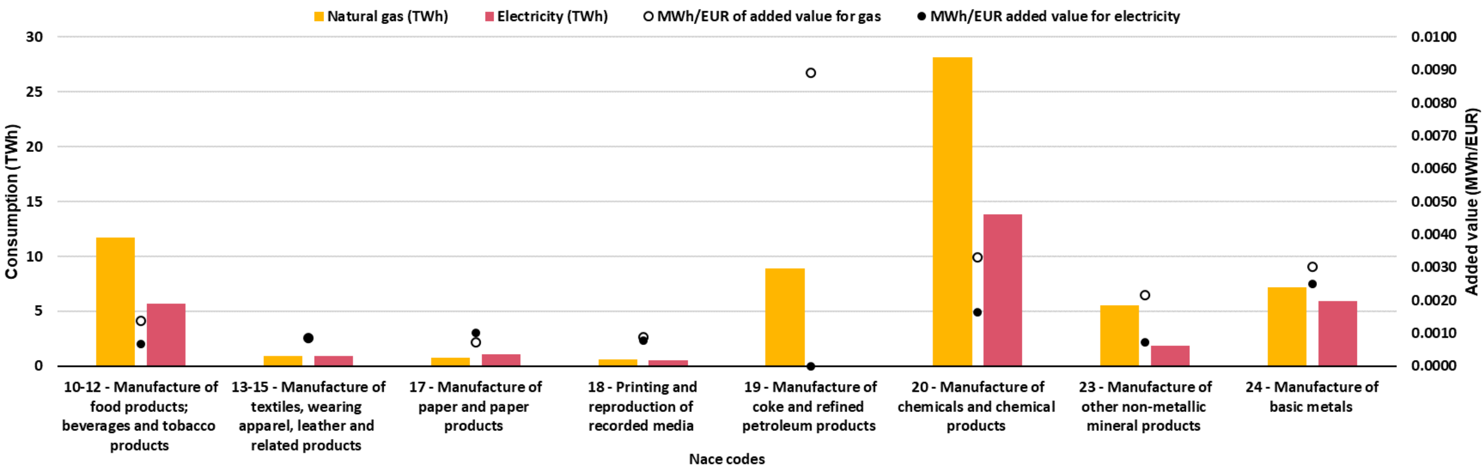
Energy intensity of sector 'i' of the Belgian economy > Energy intensity of sector 'i' of country 'p'

$$\frac{Energy\ consumption_b^i}{Added - value_b^i} > \frac{Energy\ consumption_p^i}{Added - value_p^i}$$

It is worth noting two caveats from a methodological point of view. First, macroeconomic data on a vast scale drives the analysis. It is therefore not possible to draw precise conclusions on a microeconomic basis that relate to a specific economic process. Secondly, we cannot establish a direct link between differences in energy efficiency at the macroeconomic level on the one hand and the capacity to improve energy efficiency on the other. Once again, we must take account of the fact that within sectors and countries, there are significant differences in terms of infrastructure, industrial processes and production that can explain these differences.

As a reminder Figure 10, also presented in section 2, shows that the two main energy-intensive Belgian sectors are the food and beverage industry (NACE 10-12) the base pharmaceuticals industry (NACE 20) - this is particularly the case for the energy intensity of natural gas. The Belgian wood industry is the least energy-intensive sector, as this figure shows when considering both electricity and natural gas.

Figure 10: Electricity and natural gas compared with the value-added creation



[47] Federal Plan Bureau for Belgium, CBS Statline for the Netherlands, De Statis for Germany, and Insee for France.
[48] The energy intensity split between electricity and natural gas is not available.

Figure 11 and Figure 12 show that most Belgian sectors have the potential for improvement in terms of energy efficiency (electricity and natural gas) when compared with the weighted average of neighbouring countries (Germany, the Netherlands and France). This is the case for the food and drink (NACE 10-12), mining (NACE 13 – 15) and the manufacture of wood (NACE 20) industries, both for natural gas and electricity consumption. These sectors could, therefore, potentially adapt to uncompetitive electricity and natural gas prices with increased energy efficiency.

However, some Belgian sectors do not have the possibility of significantly improving their energy efficiency. This is the case of the NACE 16 and 25 sectors, which respectively represent the wood, the paper, the chemical, and the fabricated metal manufactures. As Figure 11 shows, the energy efficiency gap is particularly large in electricity for printing (NACE 22), in natural gas for textiles manufacture (NACE 17). The higher electricity intensity experienced by France in many sectors greatly influences the high average for electricity in the neighbouring countries.

Notably, data is missing for the coke and refining sector (NACE 19) and basic metals manufacturing (NACE 24).

Figure 11: Electricity consumption compared to the value-added creation

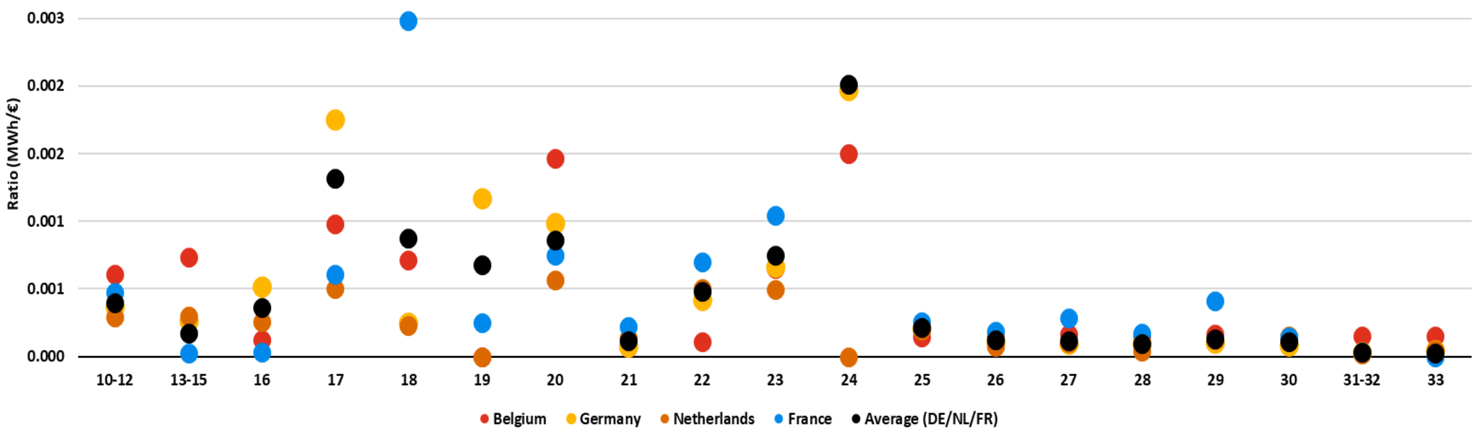
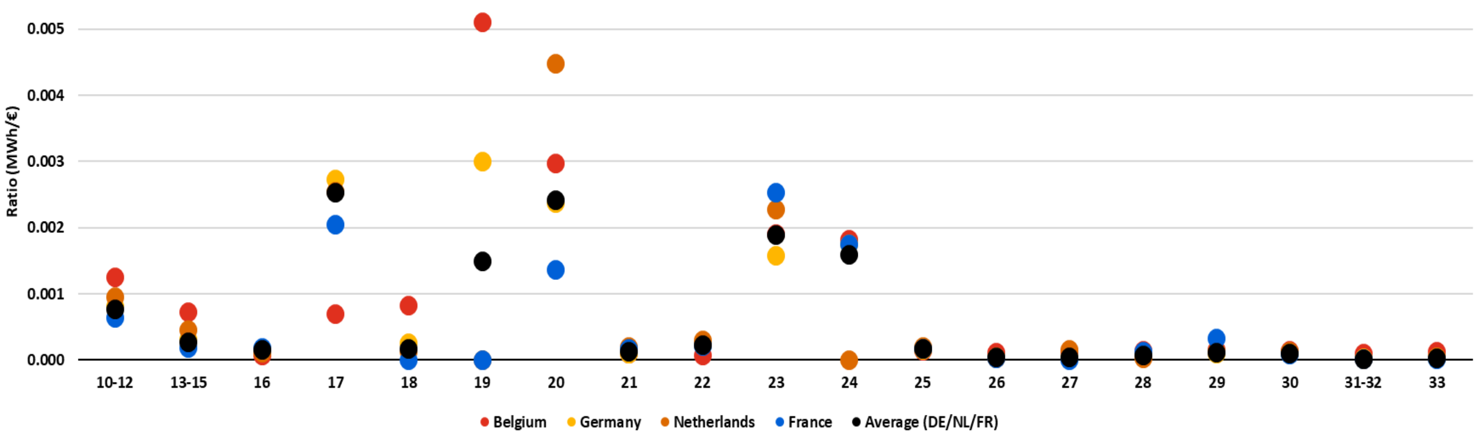


Figure 12: Natural gas consumption compared to the value-added creation



Selection of the most important sectors for our analysis

This section concludes our economic analysis by presenting a selection of the most important sectors related to electricity and natural gas prices and competitiveness.

The methodology we use to select the most important sectors is as follows:

First, we rank sectors from the highest to the lowest results with regards to the analysis: value added, employment, specialisation, cost of energy/value added, electricity consumption (absolute), natural gas consumption (absolute), electricity consumption per unit value added, natural gas consumption per unit value added, exports. In Table 7, the smaller the number is, the higher it is ranked for the sector analysis. Next, we calculate the ranking score for each sector across all analyses, leading to a final ranking of each sector.

To illustrate this, we show a few examples. The second column illustrates the analysis we present in the section “The importance of the manufacturing industry based on value added”, which concerns the value added of each sector in relation to the total GDP of the economy. We see that the most important sector in terms of relative value added is the chemical sector (NACE 20), which receives a score of 1 in Table 7, followed by the food and beverage industry (NACE 10-12), which receives a score of 2.

For some analyses, rankings for certain sectors are not available. This is mainly the case for analyses that depend on data based on the Belgian energy consumption accounts of the Federal Planning Bureau.

For some analyses, some sectors benefit from the ranking position of another sector. This is notably the case for the pharmaceutical industry (NACE 21), which is often associated with the chemical industry (NACE 20); since for some analyses only combined data for NACE 20-21 codes are available. It also applies for the base and fabricated metal industries (NACE 24-25), which are sometimes analysed together due to the lack of available data.

Only analyses related to national data have been considered. In other words, all sectoral classifications based on regional approaches have been excluded from this matrix.

Finally, the calculation of the average score of all analyses is based on a simple average. No weight was given to any particular analysis, as all analyses were considered important in determining the most important sectors.

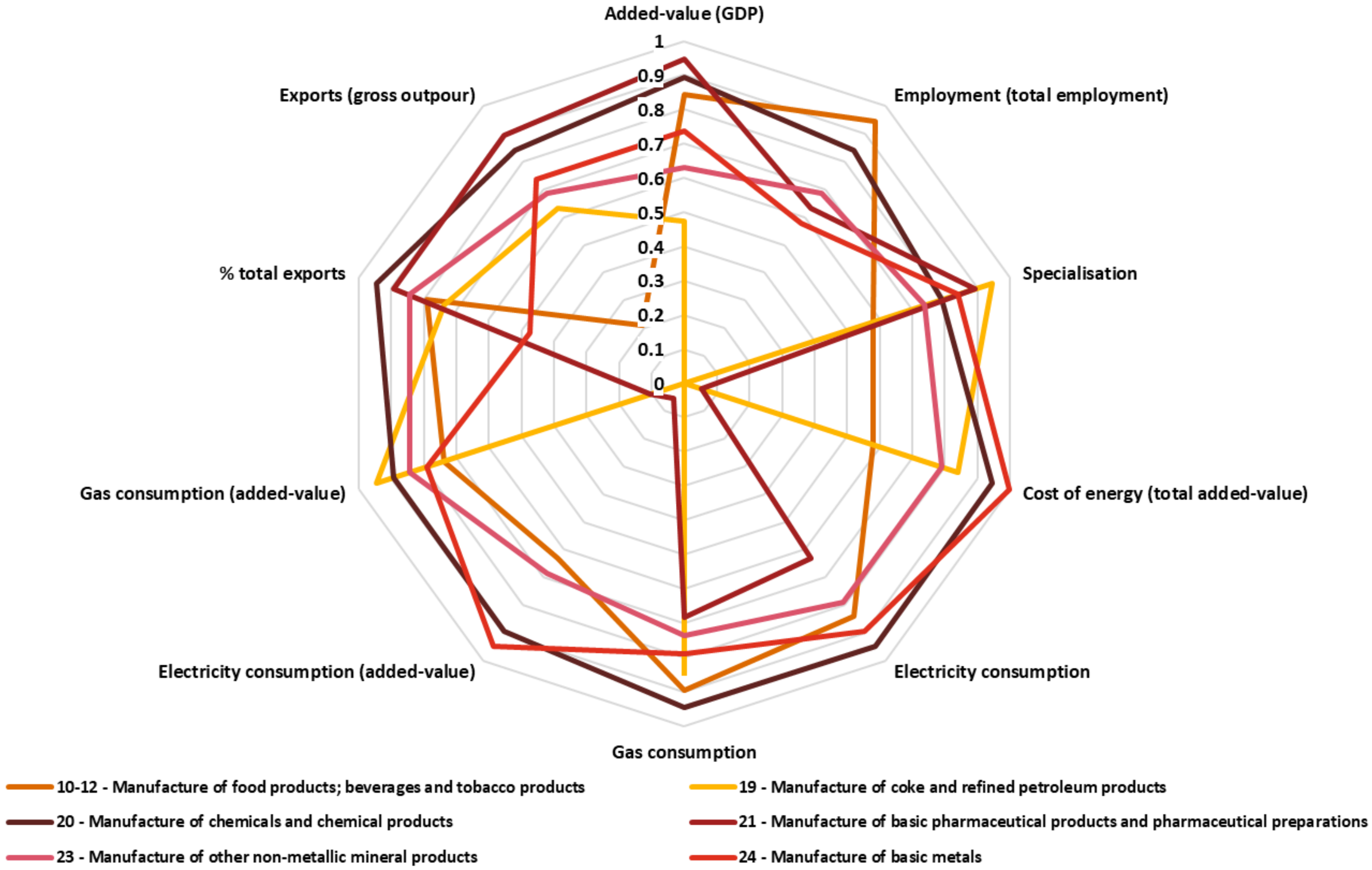
Table 7: Sectors ranking

NACE Code	Final sector ranking	Value added (GDP)	Employment (total employment)	Specialisation	Cost of energy (total value added)	Electricity consumption	Natural gas consumption	Electricity consumption (value added)	Natural gas consumption (value added)	% of total exports	Exports / gross output	Average score
NACE 20	1	2	3	4	18	1	1	2	2	1	3	3.7
NACE 10 – 12	2	3	1	8	11	3	2	7	5	4	15	5.9
NACE 23	3	7	6	5	15	4	5	6	3	3	6	6.0
NACE 24	4	5	8	3	19	2	4	1	4	10	5	6.1
NACE 21	5	1	7	2	1	7	6	18	17	2	2	6.3
NACE 28	6	6	4	14	4	9	11	10	10	16	1	8.5
NACE 13 - 15	7	14	10	7	13	6	7	4	7	9	13	9.0
NACE 25	8	4	2	12	6	8	10	13	12	15	10	9.2
NACE 19	9	10	19	1	16	19	3	19	1	5	7	10.0
NACE 29	10	9	5	17	9	11	12	9	9	12	9	10.2
NACE 17	11	17	17	10	17	5	8	3	8	11	11	10.7
NACE 22	12	8	9	9	10	12	14	17	19	7	8	11.3
NACE 18	13	18	13	11	12	10	9	5	6	18	12	11.4
NACE 33	14	11	12	13	2	13	13	11	13	17	18	12.3
NACE 26	15	13	16	16	3	15	15	14	15	8	16	13.1
NACE 27	16	16	15	15	7	16	16	8	14	6	19	13.2
NACE 31 – 32	17	12	11	19	8	14	17	12	16	13	14	13.6
NACE 30	18	19	18	18	5	18	19	15	11	19	4	14.6
NACE 16	19	15	14	6	14	17	18	16	18	14	17	14.9

With these four criteria in mind, we can conclude that the 5 most important sectors for our analysis are – ranked by importance–: the manufacture of chemicals and chemical products (NACE 20), the food and beverage industry (NACE 10-12), the manufacture of other non-metallic mineral products (NACE 23), the manufacture of basic metals (NACE 24), and the manufacture of basic pharmaceutical products and pharmaceuticals (NACE 21). To these 5 sectors, we also add the manufacture of coke and refined petroleum products (NACE 19), as it is a foreseen in the scope of this study to include it. The next figure depicts the six sectors. The larger the area covered by the sector, the higher the sector ranks in each of the analyses in this chapter.

The radar chart depicts the ranking of the top six sectors, which will later be subjected to a more in-depth analysis. The higher the value on the chart (from 0 to 1), the higher the sectors rank based on the criteria. Those scores matter as they are critical to depict the importance of the manufacturing sectors to the Belgian economy. Our analysis indicates they are possibly profoundly impacted by electricity and natural gas prices differences with the neighbouring countries.

Figure 13: Radar chart of the top six most important sectors



Electricity

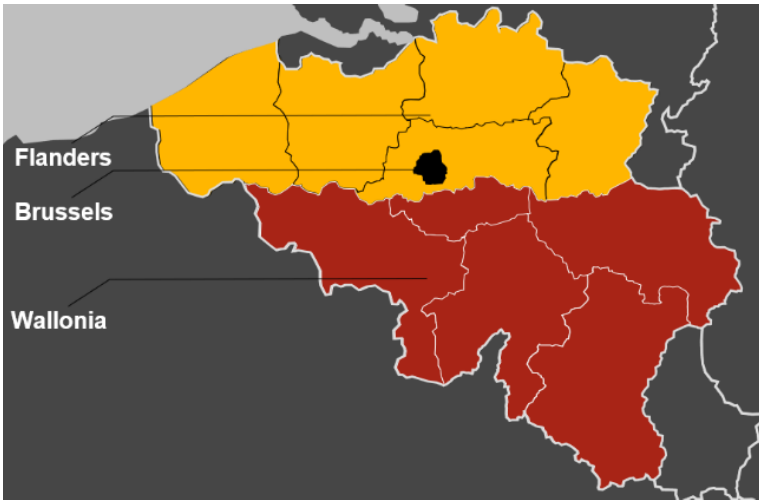
Electricity: countries/zone(s)

In this chapter, we aim at determining how a country or a region is organised as a territory. As such, we identify the transmission system operators (TSO) and distribution system operators (DSO) for each country and region. Furthermore, given that variations in prices may be due to local considerations, we specify whether a country is divided into zones for which results are presented individually rather than at national level.

Belgium

Belgium is divided into three regions, Flanders, Wallonia, and Brussels as mapped below.

Figure 14: Belgium national electricity market



Belgium's transmission grid is run by a single operator, Elia Transmission Belgium (ETB)[49], which therefore covers the entire territory. While most charges imposed by ETB as TSO are homogenised across the country, differences appear at regional levels. Consequently, the three regions are individually evaluated as some of their characteristics vary from one another due to the existence of differing (i) distribution charges (regarding E-RES to E1) (ii) transmission charges (regarding E-RES to E1) and (iii) taxes, levies, and certificate schemes (regarding all profiles). Besides, while it is deemed that commodity cost for industrial consumers is interchangeable across Belgium, it is not the case when it comes to residential and small professional consumers.

Brussels

The DSO for electricity in Brussels is unique: Sibelga and is therefore accounting for 100% of the market shares in the region. In end of 2024, Sibelga supplied 691,374 EAN connection points with electricity (latest data available).[50]

[49] Elia Transmission Belgium is part of the Elia Group.

[50] (Brugel, 2025)

Flanders

Distribution grids are the responsibility of each Belgian region. The table below displays a review of all DSOs in Flanders that operate on the regional distribution grid and their relative market share. Since the 1st of January 2025, Flanders counts 8 DSO instead of 10 the prior year. The 8 entities use one working company for its operations in Flanders, Fluvius System Operator cv. The company divides its operations among 8 zones presented below.

Table 8: Electricity distributed and market share for each Flemish DSO (electricity)[51]

DSO	Number of EAN connections (2025)[52]	Market share
Fluvius Kempen	254,382	6.97%
Fluvius Halle-Vilvoorde	290,528	7.96%
Fluvius Antwerpen	589,959	16.17%
Fluvius Imewo	701,164	19.22%
Fluvius Limburg	464,433	12.73%
Fluvius Midden-Vlaanderen	325,211	8.91%
Fluvius West	576,141	15.79%
Fluvius Zenne-Dijle	446,464	12.24%
Total	**3,648,282**	**100.00%**

As distribution tariffs vary from one DSO to another, we make use of a weighted average value for all 8 DSOs.

Wallonia

When it comes to Wallonia, there are 5 DSOs, mostly operated by ORES and RESA as they account for more than 95% of the market[53]. The distribution tariffs differ between DSOs, and a weighted average is being computed for profiles from E-RES to E1. Even if ORES and RESA represent the DSOs with the broadest coverage, all DSOs in Wallonia are considered in this study. TRANS MT[54] is the highest voltage level in Wallonia. As in Flanders, the number of EAN connections for each DSO represents the backbone for the market shares computations. Results obtained this year for Wallonia are based on the latest quarterly data shared by the CWaPE. The amount of EAN connections reaches 1,947,258 in the last quarter of 2024. The numbers shown in the table below represent the latest statistics computed.

Table 9: Market share for each DSO in Wallonia (electricity)

DSO	Number of EAN connections (2025)	Market share[55]
AIEG	26,900	1.38%
AIESH	26,310	1.35%
RESA	462,556	23.75%
ORES	1,412,610	72.55%
REW	18,882	0.97%
Total	**1,947,258**	**100.00%**

[51] Data provided by VNR, situation on the 1st of January 2025.

[52] The numbers provided in the table are the estimations of the EAN amount split for each region operated by Fluvius, provided by the VNR with the latest data possible.

[53] Data received from the CWaPE, situation on the 1st of January 2025 (CWaPE, 2024).

[54] See Glossary, p.12

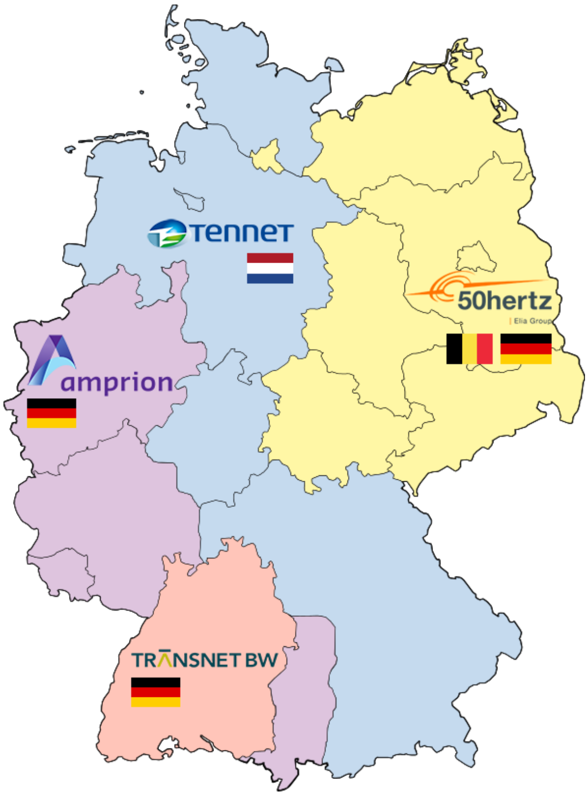
[55] Data received from the CWaPE, situation on the 1st of January 2025.

Germany

Regarding Germany, consumers can participate in a single electricity market. We, therefore, assumed the commodity price is the same in the whole territory for consumers E-BSME to E4 who are highly likely to negotiate their electricity contracts with suppliers. With regards to profiles E-RES and E-SSME, the standard contract ("Grundversorgung") and its supplier depends on the region. Consequently, the commodity cost is determined per DSO region because the standard contract supplier is different.

In Germany, four different TSOs are currently active; the following figure shows their geographical spread.

Figure 15: Map of the German transmission system operators



West Region

Nordrhein-Westfalen, Rheinland-Pfalz and Saarland where Amprion is running the transmission grid.

South-West Region

Baden-Württemberg where Transnet BW is the TSO.

Central Region

Niedersachsen, Hessen, Bayern, Schleswig-Holstein where TenneT operates the transmission grid.

East Region

Former East-Germany and Hamburg where 50Hertz is the local operator.

Regarding the geographical and economic eminence of these four areas (e.g. the smallest region has a similar population size than Belgium as a country), these zones are logically considered the same way we considered the three Belgian areas. We thus separately evaluate them.

The profiles E-RES to E2, similarly to other countries, also pay a distribution cost, which is further discussed in the section "Component 2 – network costs" for the residential profiles and "Component 2 – network costs" for the industrial profiles in Chapter 4 and 5 respectively. These four transmission zones appear to be the most accurate analysis regarding Germany as the country counts around 866 distribution system operators[56]. Considering the high number of DSOs in Germany, this increases complexity in clearing out the picture on German prices. Therefore, for the profiles E-RES to E2 under review (i.e. connected to the distribution grid), we only take the prices from two predominant DSOs (one rural; one urban) for each of the transmission zones. An average distribution price is then derived from the two DSOs' existing prices and is used as a unique price for the transmission zone in question. The table below, summarises studied DSOs and their respective market shares (2019, latest data available).

[56] (Statista, 2023)

Table 10: German natural gas DSOs [57] (selection)

TSO	DSO
TenneT	Bayernwerk
	SWM
50 Hertz	E-Dis
	Stromnetz Berlin
Amprion	Westnetz
	RNG-Netz 2 – Köln
Transnet BW	Netze BW
	Stuttgart Netze

Contrary to other countries/regions the market shares of the DSOs are not used as weights because they are only a selection of the hundreds of German DSOs. The distribution tariffs of every DSO have thus the same weight. As regards taxes, levies and certificate schemes, neither do we observe regional differences for electricity consumers, nor do we for local taxes[58].

[57] According to the latest available data from 2019, not publicly available since then.

[58] The Konzessionsabgabe is a local tax that applies to all electricity consumers connected to the distribution grid, but it is fixed on a national level and capped at one single rate for industrial consumers (*Konzessionsabgabenverordnung, § 1-2*). As that tax varies depending on the contract type or the city size, we consider the average paid concession fee.

France

Concerning the electricity market, France is considered here as a single area. Concretely, the same commodity, distribution, transmission and taxes and levies prices apply to the whole territory. With regards to transmission, the RTE ("Réseau de Transport d'Electricité") is the Transmission System Operator (TSO) who oversees the transmission network. In contrast, Enedis constitutes the largest French DSO with an approximate market share of 95%[59] (mainland), while the remaining 5% are shared across local players. We thus consider this sole DSO for all consumer profiles connected to the distribution grid (E-RES to E1).

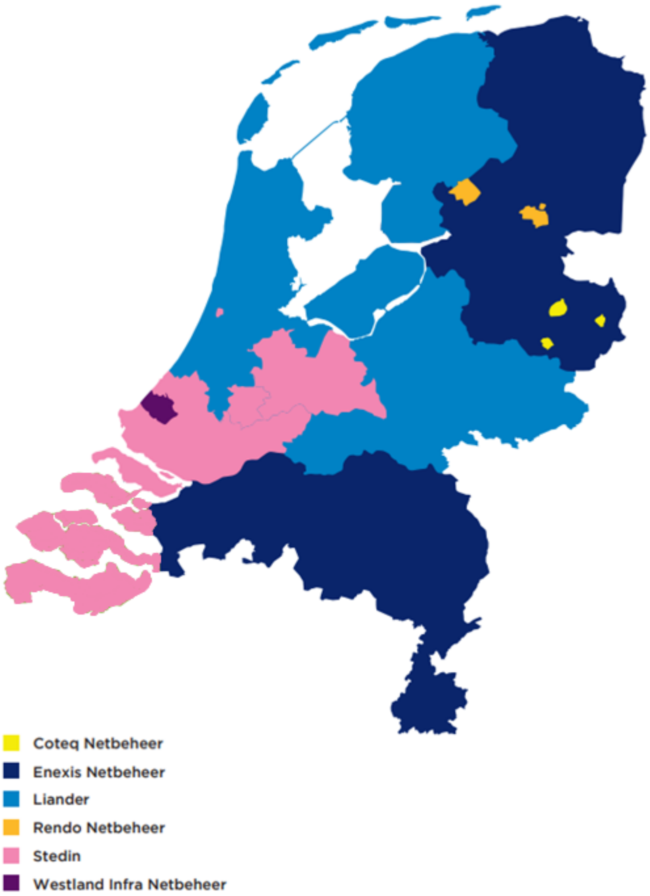
The Netherlands

Like France, the Netherlands is examined as a single zone. No regional differences appear when it comes to commodity costs, taxes, levies, and certificate schemes: it is a single electricity market, and energy is imposed on a national level.

The Netherlands counts only one TSO – TenneT. For this reason, the same pricing methodology is applied throughout the national transmission grid. The network cost for the two largest consumer profiles – E3 and E4 – encompasses the transmission tariffs appointed by TenneT. The Dutch profiles E-RES to E2 are connected to the national distribution grid that provides the entire network below the 110 kV voltage standard. Consequently, the network cost for profiles E-RES to E2 profiles dwell in the distribution tariff imposed by the DSOs.

The Netherlands' distribution network comprises six DSOs with different sizes and prominence, as the map below exhibits. Each DSO applies different and separate tariffs. In this case, distribution costs and transmission costs are aggregated in a cumulated fee.

Figure 16: Map of the Netherlands electricity distribution system operators



59 (Médiateur national de l'énergie, n.d.)

These six DSOs differ by the size, number, and type of clients. We thus expose a weighted average of distribution tariffs based on a proxy to evaluate their respective market shares. This proxy consists of the revenues for volumes of electricity sold as indicated by the Authority for Consumers and Markets (ACM), the Dutch Authority for consumers and markets and ensures fair competition between businesses and protects consumer interests [60]. This proxy is then used to approximate the market shares related to each DSO. The table below demonstrates an overview of the DSOs and their market share.

Table 11: Market shares for each Dutch DSO (electricity)

DSO	Market share
Liander	38.44%
Enexis	33.42%
Stedin	25.73%
Westland	1.45%
Coteq	0.60%
Rendo	0.36%
Total	**100.00%**

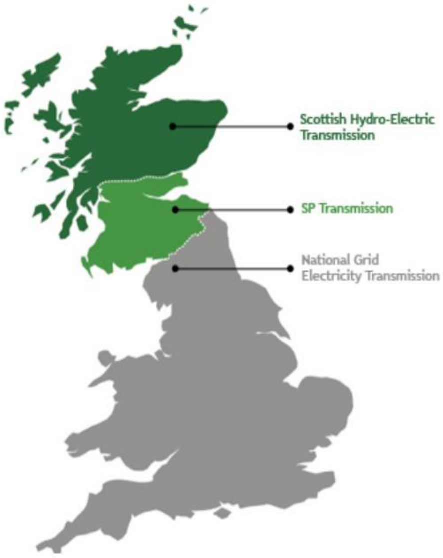
When combining Liander, Enexis, and Stedin, these companies represent more than 95% of the market shares. Their prices subsequently have a higher impact on the weighted average distribution tariffs.

[60] (ACM, 2025)

The UK

Similarly to France and the Netherlands, the UK is analysed as a single area. Again, commodity costs, taxes, levies and certificate schemes observe no regional variation as there is one single electricity market and taxes on a national level. The UK has three different transmission system operators: National Grid (for England and Wales), Scottish Hydro Electric Transmission (SHET), and Scottish Power Transmission (SPT).

Figure 17: The UK electricity transmission networks



In addition to these TSOs, six distribution system operators are currently functioning[61]. The TSOs and DSOs rate different tariffs in the fourteen zones that count the UK.

Figure 18: The UK electricity distribution networks

[61] In addition to these large DSOs, the UK also has some smaller Independent Network Operators (IDNO's). These are not considered in this study.

Table 12: TSOs and DSOs in the UK zones

TSO	DSO	Zones
3	**6**	**14**
Scottish Hydro Electricity Transmission (SHE)	Scottish and Southern Energy Power Distribution	Northern Ireland
		Scotland
Scottish Power Transmission (SPT)	SP Energy Networks	Southern Scotland
		North Wales, Cheshire, and Merseyside
National Grid Electricity Transmission (NGET)	Electricity Northwest	Northwest
	Northern PowerGrid	Northeast
		Yorkshire
	UK Power Networks	Eastern
		London
		South East
	Western Power Distribution	East Midlands
		West Midlands
		South Wales
		South West

Concerning network costs – transmission and distribution tariffs for the E-RES to E2 profiles–, we present, once again, a weighted average amount for the fourteen zones.

Table 13: Market shares of the UK electricity DSOs

DSO	Number of connections[62]	Market share
Eastern Power Networks	3,664,189	12.18%
Southern Electric Power Distribution	3,110,203	10.34%
Western Power Distribution East Midlands	2,674,911	8.89%
Western Power Distribution West Midlands	2,505,140	8.32%
Electricity North West Limited	2,405,770	7.99%
London Power Networks	2,375,701	7.89%
Northern Powergrid Yorkshire	2,318,718	7.71%
South Eastern Power Networks	2,319,494	7.71%
SP Distribution	2,010,896	6.68%
Northern Powergrid Northeast	1,614,053	5.36%
Western Power Distribution South West	1,636,981	5.44%
SP Manweb	1,523,255	5.06%
Western Power Distribution South Wales	1,147,345	3.81%
Scottish Hydro Electric Power Distribution	785,183	2.61%
Total	**30,091,839**	**100.00%**

[62] Retrieved from each UK DSO annual report, after which the number of connections has not been consistently expressed in the reports (2021). No accurate and updated data has been made available since then.

Natural gas

Natural gas: countries/zone(s)

In this chapter, we aim at determining how a country or a region is organised as a territory. As such, we identify the transmission system operators (TSO) and distribution system operators (DSO) for each country and region. Besides, given that variations in prices may be due to local considerations, we specify whether a country is divided into zones for which results are presented individually rather than at national level.

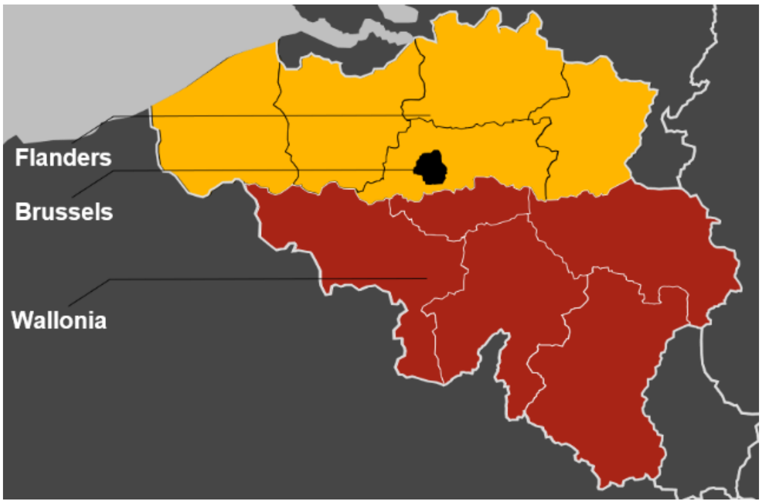
Belgium

No regional variations are observed in Belgium regarding transport and industrial commodity costs. There is a single Transmission System Operator, Fluxys Belgium, resulting in an equivalent transport price across the country.

The transport system provided over 144 industrial clients (representing 184 sites) in 2024, according to the latest available information[63], and we consider G2 as part of these direct connections[64].

In a similar fashion as for electricity, a distinct analysis is conducted for the three Belgian regions that are mapped out in Figure 19.

Figure 19: Belgium national natural gas market



Brussels

As for Brussels, there is a single DSO – Sibelga – in this region. Inevitably, it represents 100% of the region's market shares. In December 2024, Sibelga supplied 433,873 connection points with natural gas.[65]

[63] Data provided by CREG and Fluxys Belgium in the beginning of 2025, concerning the situation in 2024.
[64] None of these clients directly connected to the transport grid is located in Brussels.
[65] (Brugel, 2024)

Flanders

As exhibited in the consumer profiles, we consider that profiles G-RES (considered as T2) to G1 (considered as T6) are connected to the distribution grid. Flanders counts 8 DSOs for natural gas distribution, operated by their working company Fluvius System Operator cv[66]. Again, in this case, the distribution tariffs from the DSOs are assigned a weight based on the number of EAN connections for natural gas in the region.

Table 14: Market shares of Flemish natural gas DSOs[67]

DSO	Number of EAN connections (2025)	Market share
Fluvius Imewo	462,446	19.50%
Fluvius Antwerpen	428,043	18.05%
Fluvius West	363,357	15.32%
Fluvius Zenne-Dijle	269,045	11.35%
Fluvius Limburg	268,476	11.32%
Fluvius Midden-Vlaanderen	216,573	9.13%
Fluvius Halle-Vilvoorde	195,195	8.23%
Fluvius Kempen	168,061	7.09%
Total	**2,360,386**	**100.00%**

Wallonia

Wallonia counts 6 DSOs which are operated by ORES and RESA. However, as of 01/01/2024, the distribution tariffs of all 5 DSOs operated by ORES are harmonised and referenced as ORES ASSETS[68]. The distribution tariffs are thus presented through an average value based on the number of EAN connections. The amount of EAN connections reaches 791,043 in January of 2025[69].

Table 15: Market shares of DSOs in Wallonia for natural gas

DSO	Number of EAN connections (2025)[70]	Market share
ORES ASSETS	536,839	67.87%
RESA	254,203	32.13%
Total	**791,043**	**100.00%**

[66] Enexis is a Dutch distribution system operator, active in the Belgian enclave of Baarle-Hertog (7,41 km²), but is not considered in the study, since its market share is not substantial.

[67] Data provided by VNR, situation on the 1st of January 2025.

[68] (CWAPE, 2025)

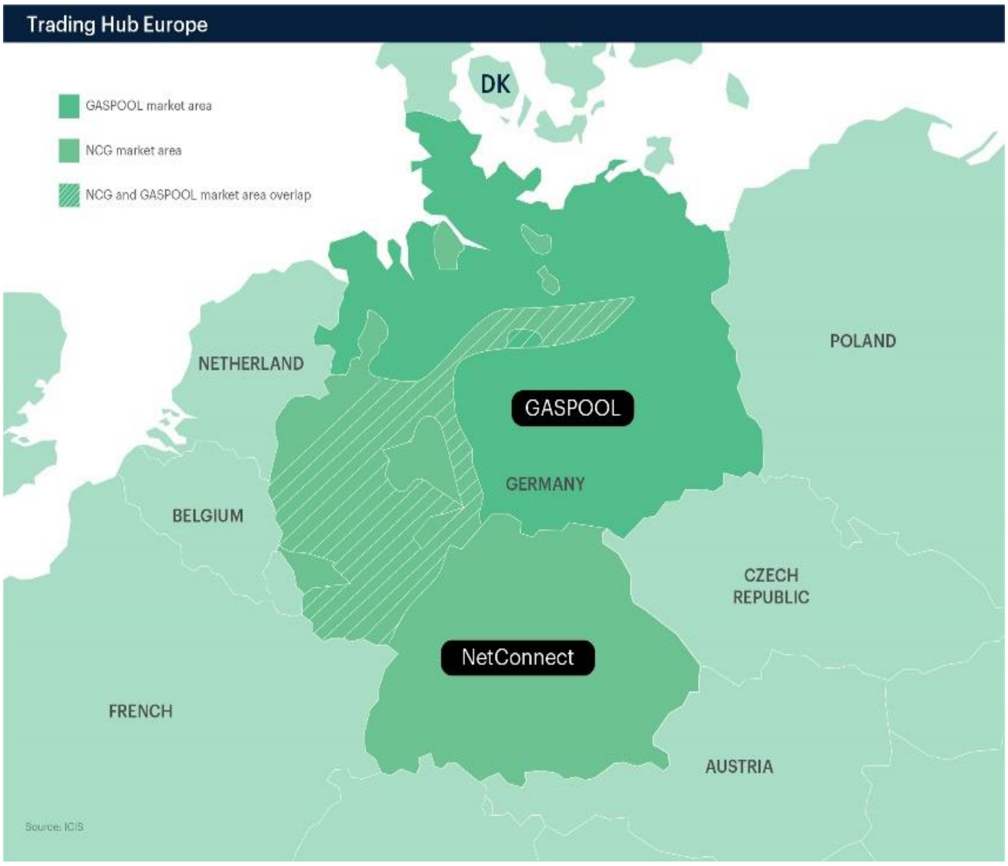
[69] Data received from the CWaPE in March 2025, situation on the 1st of January 2025.

[70] Data received from the CWaPE in March 2025, situation on the 1st of January 2025.

Germany

Regarding commodity costs, we consider one market area in Germany, the Trading Hub Europe (THE), which is the result of the merger[71] between *Gaspool* and *Netconnect Germany (NCG)* since 1st October 2021. This area is composed of eleven different transmission system operators.

Figure 20: German national natural gas market



The eleven TSOs are the following: Gascade Gastranport, GTG Nord, ONTRAS Gastransport, Nowega, Gasunie Deutschland Transport Services, Bayernets, Fluxys TENP, Natran Deutschland (formerly GRTgaz Deutschland), Terranets BW, Thyssengas and Open Grid Europe (OGE).

As of the merger of the two market areas (*Gaspool* and *NetConnect*), we consider a single result for the German natural gas analysis.

Regarding commodity costs, we demonstrate a single value for profiles G-PRO to G2 and compute a product portfolio for residential consumers G-RES that are determined by the DSOs selection we address further in this section.

As for the network costs, transport prices are computed as the average exit tariffs of the eleven TSOs providing directly connected industrial consumers as a bedrock to evaluate the G2 profile tariffs. Other profiles are considered to pay for the distribution, which already integrates transport costs in Germany. The basic contract or "*Grundversorgung*" for natural gas consumers depends on the regional DSO.

With over 700 DSOs[72] within the country, we once again use an average of the distribution tariffs of a large rural and a large urban DSO from each of the four previously defined market areas.

[71] (ICIS, 2021)
[72] (Statista, 2023)

Table 16: German natural gas DSOs[73] (selection)

DSO
Energienetze Bayern
SWM
E-Dis
NBB
Westnetz
RheinNetz GmbH
Netze BW
Karlsruhe Netz

At the opposite of the methodology used in other countries/regions, the market shares of the DSOs are not used as weight as they only are a selection of the hundreds of German DSOs. The distribution tariffs of every DSO thus have the same weight. Considering the natural gas price applied to the selected profiles, the sole component that does not produce regional variation is the taxes and levies components.

[73] These DSOs that were selected are slightly different from the DSOs that were selected for electricity. This is because geographical coverage of the distribution of electricity and natural gas are not identical within a certain area. So has Stromnetz Berlin been replaced by Netzgesellschaft Berlin-Brandenburg and Stuttgart Netze by Karlsruhe Netz.

France

France displays a single market area for natural gas, Trading Region France (TRF), since the merger of former market areas PEG Nord and TRS in 2018. Consequently, the French results are presented as a unique price zone. The country has two distinct transport operators, as depicted in Figure 21, which are:

i. Natran (formerly GRTgaz) is operating in the North, the South-East and the central region.

ii. TEREGA[74] is focusing on the South-West region.

Network costs displayed by both TSOs are weighted based on their annual offtakes to come up with a single price. As for distribution costs, given that GRDF (Gaz Réseau Distribution France) supplies 95%[75] of the country's natural gas, it is considered as the unique DSO whose prices only are used in this study.

As it is the case in some other studied countries, French natural gas transport and distribution costs are integrated – except for consumers directly connected to the grid.

Figure 21: French national gas market

Source: Selectra, 2025

Residential and small professional natural gas contracts appear to be on six different price zones in France, established according to the distance between the nearest natural gas storage centre and the place of consumption, to pass on the difference in transport costs between cities[76].

The lack of information regarding the number of EAN connections per zone led us to select one area – the largest in terms of the number of cities covered (i.e. price zone 1)[77].

Concerning commodity prices, North and South regions are weighted based on their annual volume consumption. As no regional differences in taxes were noticed, France is considered as a single zone.

[74] TIGF became TEREGA in April 2018.
[75] (IEA, 2022)
[76] (Selectra, 2023)
[77] Ibid

The Netherlands

In the Netherlands, we consider the commodity component to be the same within the country since the cease of gas extraction in Groningen in October 2023[78]. Previously, suppliers could apply a regional surcharge depending on the distance of the region from Groningen for commodity costs, with ten different areas.

There is a single natural gas market (TTF) in the Netherlands, monitoring and managing all-natural gas entering the Dutch transport system. The TTF was established in 2003 to concentrate natural gas trading in a sole marketplace and offers a single Transmission System Operator – Gasunie Transport Services. The natural gas transport grid directly provides more than 300 industrial clients, assuming that profiles G1 and G2 are among these clients[79]. Hence, we display the Netherlands as a harmonised zone.

Dutch natural gas distribution is ensured by six DSOs whose tariffs are weighted based on their respective revenues stemming from transport services for 2023. These revenues are captured by the *Autoriteit Consument & Markt* (ACM), which is the Dutch Authority for consumers and markets and ensures fair competition between businesses and protects consumer interests.[80]

Figure 22: Map of the Netherlands natural gas distribution system operators

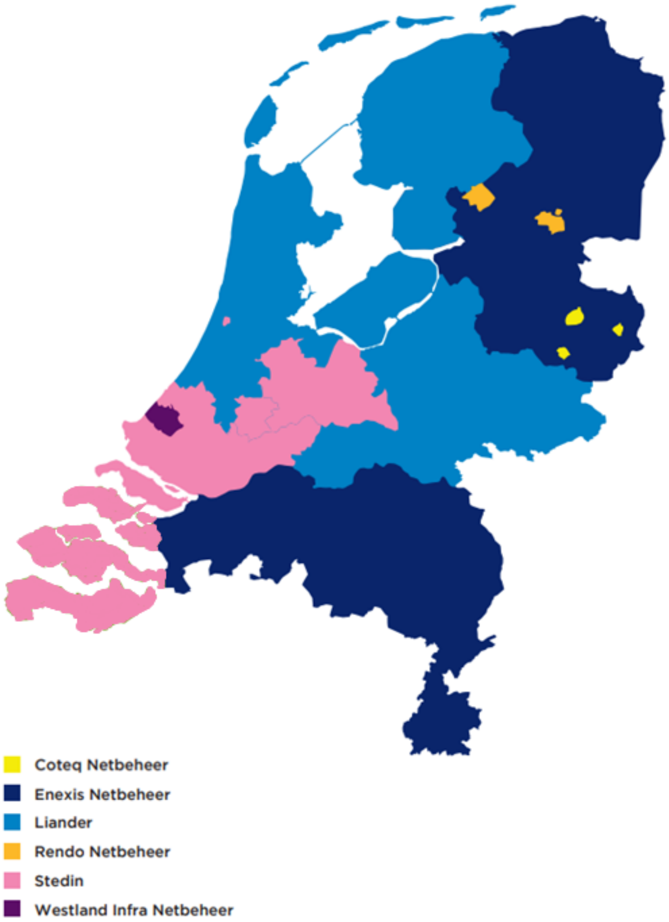


Table 17: Market shares of Dutch natural gas DSOs

DSOs	Market share[81]
Enexis	33.12%
Liander	32.55%
Stedin	29.36%
Coteq	1.89%
Westland	1.62%
Rendo	1.46%
Total	**100.00%**

[78] (Rijksoverheid, n.d.)

[79] Gasunie Transport Services is obliged by the Gas Act (Article 10, paragraph 6b) to provide a direct connection point when the applicant has a flow rate greater than 40 m³(n) per hour (equal to 350.400 m³/year). Considering a 9,77 kWh/m³ as disclosed by Gasunie Transport Services, we estimate that profile G1 has a flow rate of 2.047m³/h (= (2.500.000.000 kWh/9,77)/5000) and G2 of 31.986 m³/h (= (100.000.000 kWh/9,77)/8000). While our profile G0 could have been directly connected to the TSO based on minimum flow rate level (43 m³/h), we decided to assume this consumer remains connected to the distribution grid's highest-pressure category to further represent prices variations across consumer profiles.

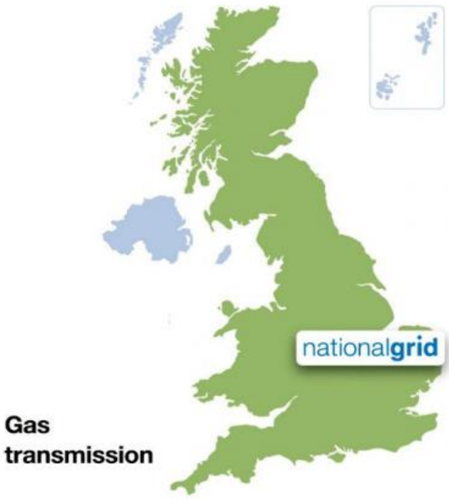
[80] (ACM, 2025)

[81] (ACM, 2025)

The UK

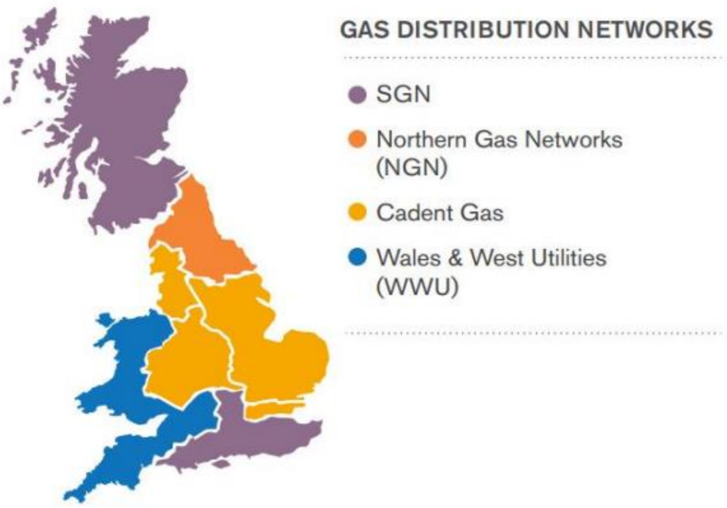
As in some other studied countries, a single zone is determined for the UK regarding natural gas, leaving out Northern Ireland given that there is a single natural gas market (NBP: National Balancing Point) in the UK. Besides, there is a unique natural gas transmission operator, known as *National Grid Gas plc*.

Figure 23: The UK national natural gas market



In addition to this unique TSO, one can find nine regional natural gas distribution networks, owned and managed by the four different operators.

Figure 24: The UK natural gas distribution networks



Additionally, Independent Gas Transporters owns and manages several smaller networks, which are not considered in this analysis.

Table 18 exhibits the market shares of the four British operators serving the nine major distribution networks zones. The specific market shares for these nine geographical zones could not be retrieved. Nevertheless, prices displayed by Cadent Gas and Wales & West Utilities are identical for all their zones, which is why we only use the market share at their global level. Due to the lack of accurate information for each natural gas distribution operator or their connection points, we used a rough estimate of the revenues stemming from their gas transport services in 2024 to calculate the respective market shares. The revenue numbers can be found in their respective annual reports. For SGN different tariffs apply for Scotland and Southern England, therefore only for this operator the market share is split up between the two different zones. Identically to the calculation method for the four British operators, the market share of Scotland Gas Network and Southern England Gas Network is calculated based on their respective revenues. Consequently, 4 DSOs with 5 different price zones and within 9 geographical zones are detailed in the table below.

British prices used in this study are weighted averages of prices found by each DSO.

Table 18: TSOs, DSOs and market shares in the UK zones for natural gas

<table>
<tr><th>TSO</th><th>DSO</th><th>Zones</th><th>Market share</th></tr>
<tr><td>1</td><td>4</td><td>9</td><td>-</td></tr>
<tr><td rowspan="9">National Grid Gas</td><td rowspan="2">Wales & West Utilities</td><td>Wales</td><td rowspan="2">11.86%</td></tr>
<tr><td>Western England</td></tr>
<tr><td>Northern Gas Networks</td><td>Northeast England</td><td>11.32%</td></tr>
<tr><td rowspan="2">Scotland Gas Networks</td><td>Scotland</td><td>8.92%</td></tr>
<tr><td>South England</td><td>20.01%</td></tr>
<tr><td rowspan="4">Cadent Gas</td><td>North London</td><td rowspan="4">47.89%</td></tr>
<tr><td>East England</td></tr>
<tr><td>Northwest England</td></tr>
<tr><td>West Midlands</td></tr>
<tr><td colspan="3">Total</td><td>100%</td></tr>
</table>

Summary table on the number of zones per country

Table 19: Summary table on the number of zones per country

Country	Number of zones	
	Electricity	Natural Gas
Belgium	3	3
Germany	4	1
France	1	1
The Netherlands	1	1
The UK	1	1
Total	**10**	**7**

4. Residential and small professional consumers

4. Residential and small professional consumers

This chapter aims at providing an extensive introduction to the prices, price components and the assumptions taken for each country and region. It mainly focuses on residential (E-RES and G-RES) and small professional (E-SSME, E-BSME and G-PRO) consumers of electricity and natural gas. Before delving into the description of regional and national prices, we present the standard methodology used to assess the cost of the commodity.

Methodology

The following section gives more details regarding the implemented method for data collection to construct the European comparison of electricity and natural gas prices for residential and small professional consumers. This methodology only applies for profiles E-RES, E-SSME and G-RES as for other profiles it is deemed that:

- Larger consumers are more inclined to negotiate their contracts with suppliers directly, thereby being offered more tailor-made contracts.
- Comparison websites used for this methodology do not all accept values associated with our consumer profiles, which limits the consistency of the analysis across countries.

Defining the number of products

The market concentration of the retail market (HHI-index) determines the number of selected products for each of the studied areas. According to the HHI-index, the more concentrated a market is (large combined market share of few suppliers), the fewer products are considered. The less concentrated a market is (several suppliers with rather low market shares), the more products are deemed to reflect the market dynamics.

The following table illustrates the number of products selected based on HHI-index:

Table 20: Number of products according to the HHI-index

HHI-index	Description	Number of products
HHI ≤ 1,000	Little concentrated market	5
1,000 < HHI ≥ 2,000	Concentrated market	4
HHI > 2,000	Highly concentrated market	3

The HHI-index for each country and each utility was either fetched from the 2024 Retail Markets Monitoring Report from the CEER (Council of European Energy Regulators), and this needs to be updated with each report release[82]. The countries for which the HHI index is not available in the report, is manually calculated with the following HHI index formula below.

$$HHI = \sum_{i=1}^{n} Market\ Share_{Supplier\ i}^{2}$$

While this methodology provides a balanced perspective of the market prices, one must be aware that it does not entirely depict the market situation given that this exercise limits the number of chosen products. Nonetheless, the consistent methodology used does meet the objective of this study, as it compares the different countries energy prices retrieved according to the same rules.

[82] (CEER, 2024)

Selection of products portfolio

Again, based on the country-specific HHI-index for each utility, we determine several products to be selected. Before elaborating the following methodology, it is essential to define the term: standard product. The latter is considered, in this study, as either the product to which one is subscribed by default (i.e. when no specific action was taken to opt for a particular supplier product) and that secures the continuity of energy supply or the most common product from the market incumbent.[83] As introduced, several products – in addition to the standard product - are picked to constitute the portfolio.

The products were not chosen arbitrarily, but according to a specific following methodology:

- The **first product** to find is the standard product[84] of the market incumbent (historical most prominent supplier);
- The **second product** to consider is the cheapest product on the market, without considering any lump-sum reduction. A price comparison tool[85] is used to fetch the most affordable product in each region[86]. When such tool presents a restrictive picture of the market, the 10 most important suppliers' (in market share) offers are analysed and compared against each other;
- The **third product** to consider is the cheapest product of the market incumbent through the price comparison tool of each respective region. In some instances, these comparison websites may be not up to date and are presenting prices of contracts from a previous month[87];
- The **fourth/fifth product** to consider is/are one/two of the cheapest products of the second-largest supplier that has/have not been considered yet. If no products meeting these criteria are available for this supplier on the market, the same methodology is applied for the third-largest supplier, etc.

[83] In Germany, the term *Grundversorgung* is used, and this product can be defined similarly as in Belgium. In France, the "Tarif bleu", which is regulated by the French government, was used. In the Netherlands, the *Modelcontracten*, which must be approved by the ACM and is thus also regulated, is the Dutch standard product. We took the "Model contract" from Essent, which is the most significant player on the Dutch market (as part of Innogy). In the UK, the standard product of the market incumbent from British Gas, was selected.

[84] The term "standard product" is not used in all the countries under examination so what we took as the standard product of all countries under the scope of this study might have some differences. Since this study starts from the Belgian perspective the Belgian terminology 'standard product' was taken. So as to know, from the Brugel and CWaPe price comparators, the standard product is defined as the "*product applicable to customers who have not signed a supply contract (case of substitute supply or default supply)*".

[85] Price comparison tools employed are specific to each country, except for Belgium where each regional comparison tool is used. The ones used are reported in the respective sections assessing the cost of commodity.

[86] A limitation of this method exists as it is possible that in some cases, suppliers take the new network charges into consideration in their products, which has an impact on the ranking of price comparison tools.

[87] It is possible that in some instances (i.e. in the beginning of the month), price comparison tools do not display the most recent information available at that moment in time. In those cases, prices of contracts from previous months could be considered.

Weight of each product within the product portfolio

The selected products are weighted as follows:

- The switching rate[88] or SR (in %) for each utility in its respective country is the weight associated with the cheapest product. Depending on the country, a distinction is made between the switching rates for household and non-household consumers but without further specifying rates for different profiles of non-household consumers.
- The remaining share (100% - SR) is then used to weight the other products as follows:
  - If the remaining products are two products of the market incumbent, their weights are the remaining share (100% - SR) divided by two[89].
  - If other products from other market players are considered, the normalised market shares of the implicated market players are extrapolated to the remaining percentage (100% - SR)[90] .
  - In the case where more than one product from a specific supplier is selected, we attribute them the same weights (hence has the previously determined weight of the supplier divided by two)[91,92].
- Switching rates were fetched on the 2024 Retail Markets Monitoring Report by the Council of European Energy Regulators and make the distinction between residential and small professional consumers.

[88] The switching rate is the rate at which consumers will switch from their current energy contract with a specific supplier for another supplier. As we assume that consumers always look for the cheapest products, this switching rate represents the percentage of consumers opting for the cheapest offer on the market (here, defined as the Product 2).

[89] Example: if the switching rate amounts to 20%, the remaining 80% are used to weigh the two remaining products of the market incumbent, which each account for 40%.

[90] Example: if the switching rate amounts to 20%, the remaining 80% are used to weigh the remaining products. If the market share of the incumbent is 40% and that of the next largest supplier is 20%, in a first step, their market shares are 'normalised' (respectively 40%/60% = 66.67% and 20%/60% = 33.33%). These market shares are then extrapolated to the remaining 80% (respectively 66.67*80% = 53.33% and 33.33*80%= 26.67%.)

[91] Example: In case the switching rate amounts to 20%, and the market incumbent of the previous example has two products selected in the mix, each of its products have a weight of 53.33%/2 = 26.66%

[92] An exception is made for the electricity profiles in France, as most clients still have a regulated product. Therefore, the market share of the regulated product is maintained, and the third product is 100% - the switching rate – the market share of the regulated product.

Electricity

Electricity: Detailed description of the prices, price components and assumptions

For all countries under review, this section details:

1. **Commodity costs** for profiles E-RES, E-SSME and E-BSME;
2. **Network costs** for profiles E-RES, E-SSME and E-BSME;
3. **All other costs** for profiles E-RES, E-SSME and E-BSME;
4. **VAT** for profile E-RES.

Profile	Consumption (kWh)	Connection capacity (kVA)[93]
E-RES	3,500	9.20
E-SSME	30,000	46.90
E-BSME	160,000	156.00

Belgium

Contrary to what is observed in other countries, the Belgian electricity suppliers have quite transparent price sheets. Most of the current price sheets can be found online on each providers website. The price sheets also give a good overview of all charged components.

Component 1 – commodity price

In 2023[94], the HHI of the retail market in Belgium was 2,761 and according to the methodology, this entails that we consider only three products: the standard product, the cheapest product of the market incumbent, and the cheapest offer on the market. The switching rate in Belgium is 17.6% for households. As no distinctions were made in the CEER report about households and non-households, the same switching rate is assumed for small professionals (E-SSME)[95]. The products of the market incumbent for E-RES and E-SSME thus each weigh (100%-17.6%)/2 or 41.2%.

Table 21: Profile weights depending on the Belgian product

Product	Weight E-RES	Weight E-SSME
Standard product of market incumbent	41.2%	41.2%
Cheapest product on the market	17.6%	17.6%
Cheapest product of the market incumbent	41.7%	41.2%
Total	**100.00%**	**100.00%**

In the instance of the cheapest product on the market being the cheapest product of the market incumbent, the weights are allocated differently. The standard product of the market incumbent receives the market share of this incumbent, the cheapest product on the market is allocated the switching rate, and the cheapest product of the second largest player on the market is allocated with the remaining part of the market.

[93] Methodology to assess connection capacity of each profile can be found in section 3.2. Consumer profiles.
[94] (CEER, 2024)
[95] (CEER, 2024)

The table below gives an overview of the selected products, based on the consumption and characteristics of the profile, per region and their annual cost. To choose these products, price comparison websites of the respective regional regulators were used: https://vtest.vreg.be/ for Flanders, www.compacwape.be for Wallonia and www.brusim.be for Brussels. These were used to rank the products according to the methodology defined above. Actual prices reported are VAT excluded and reflect the prices for fixed or variable price contracts observed in January 2025 (see *3. Description of the dataset*). In the case of variable contracts, it is important to note that the presented prices are merely estimates of the annual price as the price comparison tools do not know what the exact price will be for the coming year.

It is important to note the presentation of prices in Belgium present figures using historical indexation parameters similarly to the year 2024. However, the year 2023 displays prices gathered using forward-looking parameters.[96]

Table 22: Annual cost of selected products for profile E-RES in Belgium

Region	Supplier – Product	Contract type (fixed/variable)	Fixed component (EUR/year)	Price for peak consumption (EUR/year)	Price for off-peak consumption (EUR/year)
Brussels	ENGIE – Electrabel Easy	Variable	61.32	260.15	261.00
	ENGIE – Electrabel Basic	Variable	18.87	239.49	228.82
	TotalEnergies – Pixie	Variable	23.58	266.22	282.66
Wallonia	ENGIE – Electrabel Easy	Variable	61.32	260.15	261.00
	Luminus – Basic Flex	Variable	23.58	210.95	238.58
	ENGIE – Electrabel Basic	Variable	18.87	239.49	228.82
Flanders	ENGIE – Electrabel Easy	Variable	61.32	260.15	261.00
	Energy Knights – Elektriciteit Variabel	Variable	23.58	197.68	234.74
	Engie – Electrabel Basic	Variable	18.87	239.49	228.82

Table 23: Annual cost of selected products for profile E-SSME in Belgium

Region	Supplier – Product	Contract type (fixed/variable)	Fixed component (EUR/year)	Price for peak consumption (EUR/year)	Price for off-peak consumption (EUR/year)
Brussels	ENGIE – Electrabel Easy Pro	Variable	62.00	3,143.90	1,736.81
	TotalEnergies – Pixie Pro	Variable	25.00	2,517.21	1,469.30
	ENGIE – Electrabel Direct Pro	Variable	30.00	2,856.39	1,591.88
Wallonia	ENGIE – Electrabel Easy Pro	Variable	62.00	3,143.90	1,736.81
	Luminus – Basic Flex Pro	Variable	25.00	2,370.74	1,534.32
	ENGIE – Electrabel Direct Pro	Variable	30.00	2,856.39	1,591.88
Flanders	ENGIE – Electrabel Easy Pro	Variable	62.00	3,143.90	1,736.81
	Energie.be – Elektriciteit Professioneel	Variable	60.00	2,210.33	1,473.55
	ENGIE – Electrabel Direct Pro	Variable	30.00	2,856.39	1,591.88

[96] This remark is also relevant for natural gas.

While this methodology provides an objective view of the market situation in Belgium, one must be aware that it does not provide a full overview of market prices. In fact, only three products were considered to depict the Belgian commodity prices, whereas the formulas used by the energy providers to calculate the indexed products might differ among the countries under review[97].

The commodity price for the E-BSME profile was not extracted from a comparison website but calculated by the CREG according to the following formula.[98] Commodity prices computation rests on market prices and describes the cost of electricity for industrial consumers as of January 2025. CREG used the ICE Endex CAL and the Belpex DAM as national indexes for the computation. For the E-BSME profile, CREG did not include weekend hours of Belpex DAM.

$$\textit{Commodity price}$$
$$= 36.5\%\ CAL\ Y_{-1} + 27.4\%\ CAL\ Y_{-2} + 21.4\%\ CAL\ Y_{-3} + 8.2\%\ Qi_{-1} + 4.2\%\ Mi_{-1} + 2.3\%\ Belpex\ DAM$$

Where:

	Explanation
CAL Y_{-1}	Average year ahead forward price in 2024
CAL Y_{-2}	Average two years ahead forward price in 2023
CAL Y_{-3}	Average three years ahead forward price in 2022
Qi_{-1}	Average quarter ahead forward price in the fourth quarter of 2024
Mi_{-1}	Average month ahead forward price in December 2024

Component 2 – network costs

Transmission cost

All residential profiles reviewed in this study are subject to transmission tariffs. In Belgium, the transmission tariffs are billed by the Belgian TSO, Elia Transmission Belgium (ETB), to the local DSOs. These tariff components are then billed by the DSO to the end-consumer. As there exist grid network losses and production connected to the distribution grids, the tariffs billed to the end-customer are not exactly similar to the one billed to the DSOs by ETB. The table below synthesises the components per region:

Table 24: Network cost components per Belgian region

Brussels	Wallonia
1. Transmission costs	**1.** Tariffs for the management and the development of the grid infrastructure
2. Tariffs for network losses (E-BSME to E4 only)[99]	**2.** Tariffs for network losses (E-BSME to E4 only)

[97] Depending on the country, indexed products might be calculated with forward or with backward looking prices. For example. in Belgium the variable product by Engie is indexed monthly with an indexation parameter based on the arithmetic mean of the daily ICE Endex quotations during the month preceding the month of supply.

[98] The equations are based on an analysis performed by the Belgian federal regulator of the electricity supply contracts of Belgian consumers with a yearly consumption higher than 10 GWh. For 2021, ratios used in the formula were determined as being the average coefficients over three years (2016 to 2018). For the sake of consistency, the coefficients have stayed the same.

[99] We consider that such tariff only applies to E-BSME as commodity is not computed based on a supplier's product, which would cover network losses through its costs. Network losses on the federal transmission grid (380/220/150 kV) are a separate and additional component to the transmission tariffs but are not considered as transmission tariffs as such. Suppliers usually bill these costs as a percentage (fixed every year by the TSO) of the commodity cost. While the costs associated with network losses is not a transmission tariff as such, it is deemed to be a part of the 2nd component in this study.

As from the 1st of January 2025, Flanders shows a different picture as the transmission costs are integrated in several distribution network tariffs. All regional PSOs, taxes and levies that are passed on from the transmission system operator to the distribution system operators are divided into 3 tariff components, integrated in either the “tariffs for grid usage”, “tariffs related to regional PSOs” and “tariffs related to surcharges “. Shares of these tariffs attributed to the transmission are different for each DSO and for each of these 3 tariffs. The allocation differs for each of the 8 zones (each one representing a different territorial entity DSO of Fluvius), and for the different consumption profiles, with different distribution/transmission ratios. As such, a weighted average (by DSO market share and share of transmission in the tariff) is calculated and used. In Flanders, there are no more explicit transmission tariffs for distribution network users. They are integrated in the budget for the calculation of the distribution tariffs.

As of the 1st of January 2025, Brussels DSO's tariffs have been revised for the 2025 – 2029 period. For practical reasons, the “Transmission Tariff” tariff component, which until now was presented in a separate sheet, has been integrated into the distribution network tariff sheet. The aim of this change is to make it easier to understand the costs borne by end-users. This is not the introduction of a new tariff per se, but rather a new presentation of existing costs associated with the use of the electricity transmission network, mainly managed by Elia.

Table 25: Adoption date of new tariffs by regional DSOs in Belgium (residential and small prof. consumers)

Name of the regulator	Effective date
BRUGEL	1st of January 2025
VNR	1st of January 2025
CWaPE	1st of January 2025[100]

Distribution costs

When consumers are also connected to the distribution grid, which is the case for all our residential and small professional profiles, distribution tariffs must be added to the transmission tariffs mentioned above. Like transmission costs charged by regional DSOs, each DSO publishes their tariff sheets from which fees were selected based on the voltage level. As our profiles have different voltage levels, we assume that each profile can be characterised as following:

Table 26: Voltage categories of small consumers electricity profiles

Profiles	Brussels	Flanders	Wallonia
E-RES	BT	LS Piekmeting	BT Sans facturation du terme capacitaire
E-SSME	BT	LS Piekmeting	BT Sans facturation du terme capacitaire
E-BSME	MT Alimentation Principale	> 1 – 26 kV Net	MT Avec facturation du terme capacitaire

There is a relatively similar component in the distribution sheets of all the DSOs of all regions, namely “Tariff for the use of the distribution grid”. This component is composed of three terms:

Table 27: Distribution cost composition in Belgium for E-RES and E-SSME

Brussels	Flanders	Wallonia
-	Capacity term (EUR/kW, and EUR/kVA for E-BSME)	-
Fixed term (EUR/Year)	-	Fixed term (EUR/Year)
Proportional term (EUR/kWh)	Proportional term (EUR/kWh)	Proportional term (EUR/kWh)

[100] In 2025, the transmission tariffs were first adopted in January 2025. Later in March 2025, they were modified. However, as the study observes the situation on the 1st of January 2025, January transport tariffs were included.

In Flanders and for all users, the distinction between day and night tariffs disappeared. For users connected to the low voltage grid (E-RES and E-SSME), a capacity tariff, including a minimum contribution equivalent to 2.5 kW, is in place. There are several reasons for adopting this tariff such as encouraging consumers to spread their demand during the day in order to ensure an affordable electricity grid in the future, correctly reflecting the costs of the grid maintenance, development, and ensuring that the network costs are shared between network users in a fair manner.

The manner of charging is done differently depending on the consumer's metering system. For network users with a digital meter, the capacity tariff is based on the monthly peaks, i.e., the highest 15 minutes power measured by the digital meter within each month. For consumers with a traditional analogue meter, the capacity tariff is represented by a fixed term, which is applicable in Wallonia and Brussels. In this report, the results are presented only for network users with a digital meter in Flanders ("piekmeting"). The beneficiaries of the social tariff are not directly exposed to the capacity tariff. Next to the capacity term, a proportional term (EUR/kWh) remains for all low voltage network users.

For users connected to the medium voltage grid in Flanders (E-BSME), the capacity term, which was based on the annual peak until 2022, is partly based on the monthly peak and the contracted capacity which can be set by each network user. Penalties apply if the network user exceeds his contracted capacity. There is no more fixed nor proportional term in the tariff for the use of the distribution grid.

Brussels[101] assesses its capacity term based on consumers' annual peak, while Wallonia considers both the yearly and monthly peaks. The yearly peak is considered as the peak over the last 11 months before invoicing month and makes up for 75% of the component. Monthly peak, the remaining 25%, is determined as the peak of the invoicing month. It is to be noted that the capacity term only applies from consumer E-BSME and in Wallonia there is also a tariff for the regulatory balance since the 1st of March 2019.

Furthermore, Wallonia and Brussels regions differentiate these distribution charges according to the time of the day, which is not the case in Flanders after the introduction of the capacity tariff. As such, different prices prevail whether electricity is consumed during daytime hours (from 7 am to 10 pm during weekdays) or night-time (from 10 pm to 7 am during weekdays and all hours during weekends)[102]. Besides, an exclusive night-time tariff exists (same hours as night-time schedule) for consumers equipped with meters only functioning overnight.

Besides, the following components are part of distribution tariffs:

Table 28: Other distribution cost components in Belgium

Brussels	Flanders	Wallonia[103]
Metering costs	Tariff of data management[104]	Regulatory balances

Considering tariffs are region- and DSO-dependent, we compute the weighted average for each component. The weights of elements are attributed based on the number of market shares[105] per DSO. All operating DSOs are considered, representing 100% of the EAN connections[106].

[101] In Brussels, the capacity term for "BT sans mesure de pointe" customers is based on the connection point capacity in EUR/kVA.

[102] There are some exceptions in Wallonia for residential customers in a limited number of areas, for which off-peak hours during the week are from 9 pm to 6 am. Based on professional judgement, we believe those exceptions would not impact the results and, therefore, are not considered for the analysis.

[103] Charges for metering activities in Wallonia are built in tariffs for the use of the distribution grid.

[104] In 2019, the Flemish government conferred Fluvius System operator cv the role of data manager with a view to the roll-out of the digital meter, among other things. The activities to be performed by the data manager concern data recorded by all types of meter, digital and analogue. As from 2025, there is no longer a distinction between the SMR1 and SMR3 regime in the tariff of data management in Flanders.

[105] EAN (European Article Numbering) is a unique code attributed to meters and which indicates a supply point for electricity or natural gas.

[106] The number of EAN connections for Flanders and Wallonia at their 2025 level.

Component 3 – all other costs

In Belgium, several additional fees apply to electricity. Because of the existence of three regions, these costs often have different rates that are only applicable to a specific region. To summarise the above, two aspects must be considered when looking at the other costs. Firstly, there are costs on the federal level and the three regional levels. Secondly, there are PSOs (Public Services Obligations) on one side and taxes, levies, and surcharges on another side. These costs are summarised below with a distinction between average costs to all three Belgian regions and the one's specific per region. All federal charges are directly invoiced by the energy suppliers to the end-consumer. The proceeds are paid to the Federal Public Service of Finance (FPS). The FPS Finance pays the necessary amounts to the Belgian TSO ETB on the one hand, and to the CREG on the other hand. Some regional charges are levied by regional DSOs, others are levied by ETB.

The table below exhibits the first impact caused by regional service obligations because of the grid connection levels. The regions can enforce public service obligations on grid operators running below or equal to 70 kV on their territory (repercussions on profiles E-RES to E2).

Table 29: Overview of voltage distribution to Belgian system operators

Voltage level	Operator in charge	Operator in Belgium
x < 30 kV	Distribution System Operator (DSO)	Several
30 kV < x < 70 kV	Local Transmission System operator (LTSO)	Elia Transmission Belgium in the 3 regions
x > 70 kV	Transmission System Operator (TSO)	Elia Transmission Belgium (federal)

Certificate schemes represent the second regional impact within Belgium that results from the local competence regarding renewable energy obligations matter on their territory. Flanders, Wallonia, and Brussels institute their specific green certificate scheme on all electricity consumers within the affected region (all profiles under review). In addition to assessing Belgium over the three regions, we consider different hypotheses: the consumer profiles E1 to E4 take part in an energy efficiency agreement, and all industrial profiles are affiliated with the sectoral NACE-BEL classification codes 5-33 (all industries).

Tariff rates (excluding VAT) are mentioned when they do not vary depending on the consumer profile and/or the DSO; otherwise, units in which they are expressed are detailed:

Table 30: Other costs for residential and small professional electricity consumers applying in all Belgian regions

All regions	Profiles
Regional Public Service Obligations (Regional PSOs)	
Regional PSOs on distribution[107]	
A general tariff for regional PSOs (expressed in EUR/MWh)	E-RES; E-SSME; E-BSME
Taxes and levies on the federal level	
Energy contribution[108] (**1.9261** EUR/MWh)	E-RES; E-SSME
Special excise duty (EUR/MWh)	E-RES; E-SSME; E-BSME

[107] For each region of Belgium, we compute the tariff through a weighted average of each component across all DSO active in the region (weights are given in terms of number of EAN connection per DSO).
[108] Not applicable on E-BSME profile because it has a connection level > 1kV.

As of 1st of January 2022 the federal contribution, offshore contribution, Green Power Certificate contributions and Strategic Reserve contributions have been replaced by the special federal excise duty, still configured this way in January 2025. This means that only the degressive amount of the special excise duty is applicable for this report.

The table below shows the tax rates applied as of the 1st of January 2025 at the Federal level in Belgium for both residential and commercial profiles regarding the special excise duty.[109]

Table 31: Special excise duty rates in Belgium for residential and commercial electricity consumers

Yearly consumption band	Tax for E-RES (EUR/MWh)	Tax for E-SSME and E-BSME (EUR/MWh)
Consumption up to 20 MWh	**47.48**	**14.21**
Consumption between 20 – 50 MWh	**45.46**	**12.09**
Consumption between 50 – 1,000 MWh	**44.78**	**11.39**
Consumption between 1,000 – 25,000 MWh	**44.11**	**10.69**
Consumption between 25,000 – 100,000 MWh	**44.11**	**2.73**
Consumption above 100,000 MWh	**36.28**	**0.50**

In addition to these taxes and levies mentioned below, the three Belgian regions also set **certificate schemes** which represent another indirect cost. Although the regional mechanisms are similar, there are differences for each region. Every year, suppliers must reach a certain quota of green certificates, which vary across regions, or they risk being fined. Suppliers charge these additional costs to their customers. We consider the extra “Green Certificate costs” surcharge are calculated based on (1) the 2025 quotum[110] for the offtake of electricity, and (2) the average price of certificates[111] for the previous year (2024 in this exercise), in each of the regions. In Wallonia, there is a reduction on the green certificate scheme for holders of a climate change or sector agreement, which we consider applies to profile E1 and above and is therefore not considered for residential and small professional consumers[112]. Additionally, Flanders grants reductions on the green certificate and combined heat/power certificate schemes based on (1) the NACE-code and total consumption, and (2) the risk of relocation. We consider that these reductions apply to profile E1 and above. They are therefore not considered for residential and small professional consumers.

[109] In Section 5 it is further detailed the exemption that is applied to Industrial consumers for this excise duty.

[110] (Digitaal Vlaanderen, 2009) (Digitaal Vlaanderen, 2009)

[111] (VNR, 2025)

[112] See General assumptions.

Table 32: Regional other costs for residential and small professional electricity consumers (EUR/MWh)[113]

Brussels	Flanders	Wallonia	Profiles
Regional Public Service Obligations (Regional PSOs)			
Regional PSOs on transmission			
NA	Share of transmission costs in the tariffs related to the regional PSOs (**0.63**)[114]	Funding of support measures for renewable energy[115] (**4.81**)	E-RES E-SSME
	Share of distribution costs in the tariffs related to the regional PSOs (**31.86**)	Levy for the use of the public domain (**0.32**)	
Taxes and levies on the regional level			
Regional taxes and levies on distribution			
Charges of pensions (**0.84**)	Share of distribution costs in the tariffs related to grid usage (**65.19**)	Levy for occupying road network (**2.76 – 3.38**)	E-RES E-SSME
Levy for occupying road network (**8.57**)	Share of distribution costs in the tariffs related to the surcharges[116] (**0.89**)	Corporate income tax (**4.32 – 8.76**)	
Corporate income tax and other taxes (**5.07**)	NA	Other local, provincial, regional, and federal taxes, charges, surcharges, fees and contributions (**0 – 0.35**)	
Tariff related to the regional PSOs (**19.8EUR – 98.76 EUR – 1.15** EUR/KVa)	NA	Tarif for regulatory balances (**0 – 3.22**)	
NA	Contribution for the energy fund (**9.88** EUR/month)	NA	E-SSME E-BSME
Regional taxes and levies on transmission			
NA	Share of transmission costs in the tariffs related to surcharges (**0.91**)	Connection fee (0.075 EUR for the first 0.1MWh; 0.00075 EUR/kWh above 0.1 MWh)	E-RES E-SSME
	Share of transmission costs related to the tariffs for grid usage (**24.83**)		

Component 4 – VAT

Electricity used for residential and domestic purposes is subject to 6% in Belgium.

This VAT is not due on the contribution for the energy fund in Flanders and on the connection fee in Wallonia.

[113] The tariffs represented in this table vary depending on the DSO and we have thus chosen to only present the minimum and maximum range of the tariff from the largest (or only) DSO of the region. Sibelga for Brussels, Fluvius Imewo for Flanders and ORES Hainaut for Wallonia.

[114] All regional PSOs, taxes and levies that are passed on from the transmission system operator to the distribution system operators are divided into 3 tariff components, integrated in either the “tariffs for grid usage”, “tariffs related to regional PSOs” and “tariffs related to surcharges“ in Flanders since the 1st of January 2025.

[115] In Wallonia a partial exemption of 85% applies for holders of a sectoral energy efficiency agreement, meaning that the E-BSME profile can benefit from this reduction.

[116] The distribution tariff sheets from the DSOs do not include more levels of details regarding the surcharges.

Germany

Component 1 – commodity price

Germany has a computed HHI-index of 1,910 for the retail market in 2023. The calculations were done using the formula described in *section 3. Description of the dataset.* We thus consider four products for both profiles E-RES and E-SSME. However, Germany presents peculiarities leading to separately identifying each mentioned product for each region:

1. As detailed in the methodology section of Germany, different areas are considered because of the existence of price divergences, and all have different standard products called *Grundversorgung*. Product 1 is always the standard product for each of the regions.
2. Products and prices for German E-RES and E-SSME profiles were retrieved from the stromanbietervergleich.net comparator, as well as check24.de. The use of equal split for the weight of products (25%) is assigned to all products in all regions since the market shares of the different providers are not always available.

In previous countries, we have set out which weights are attributed to the chosen products. The table below illustrates the products' weights assigned for German products in 2025 because of the inconsistency of data with the methodology used for the other regions.

Table 33: Profile weights depending on the German product

Product	Weight E-RES	Weight E-SSME
Standard product of the market incumbent	25.00%	25.00%
Cheapest product on the market	25.00%	25.00%
Cheapest product of the market incumbent	25.00%	25.00%
Cheapest product of the second biggest supplier	25.00%	25.00%
Total	**100.00%**	**100.00%**

The prices presented in the following table still integrate taxes (except VAT) and network costs because German suppliers use “all-in tariffs”. The following products and prices were retrieved using the comparison website stromanbietervergleich.net and check24.de.

Table 34: Annual cost of selected products for profile E-RES in Germany

Region	Supplier - product	Grundpreis (EUR/year)[117]	Arbeitspreis[118] with dual tariff - peak (EUR/year)	Arbeitspreis with dual tariff – off-peak (EUR/year)	Arbeitspreis without dual tariff (EUR/year)
Bayernwerk	E.ON – Grundversorgung Strom HH Doppeltarif	109.24	554.24	601.16	-
	Klick Energie – KlickStrom24 Plus	155.36	-	-	794.15
	Vattenfall – ÖkoStrom12 Standard	170.42	-	-	905.10
	Stadtwerk Am See – Spar Strom	180.96	-	-	877.45
SWM Infrastruktur	Stadtwerke München – Grund- und Ersatzversorgung HH NT Lastschrift	128.48	549.60	507.87	-
	Klick Energie – KlickStrom24 Plus	98.99	-	-	899.15
	Stadtwerke Duisburg – R(H)EINPOWER MeinStrom 12	124.18	-	-	994.70
	Vattenfall – Profi ÖkoStrom12	100.84	-	-	1,028.65
E-DIS	E.ON – E.ON Grundversorgung Strom HH Doppeltarif	137.13	576.00	669.94	-
	Klick Energie – KlickStrom24 Plus	192.69	-	-	895.65
	Vattenfall – Profi ÖkoStrom24	140.17	-	-	973.70
	Vattenfall – Profi ÖkoStrom12	140.17	-	-	979.30
Stromnetz Berlin	Vattenfall – Berlin Basis Privatstrom	102.89	-	-	1,218.00
	123 Energie – 123Strom	149.19	-	-	979.30
	Stadwerk Schwern – meckpommSTROM 12	94.19	-	-	1,000.30
	Stadwerk Schwern – meckpommSTROM natur 12	94.19	-	-	1,014.30

[117] Basic price (fixed)
[118] Labour price (variable)

Westnetz	EW Aach – EW Aach H2O Naturstrom GV HH NT	147.12	-	-	1,085.35
	123 Energie – 123Strom	223.38	-	-	933.45
	Vattenfall – ÖkoStrom24	170.42	-	-	1,011.85
	Vattenfall – ÖkoStrom12	170.42	-	-	1,017.80
RNG-Netz 2- Köln	RheinEnergie – FairRegio Strom basis	233.05	-	-	1,056.65
	123 Energie – 123Strom	273.69	-	-	832.30
	Vattenfall – ÖkoStrom24	220.84	-	-	914.55
	Vattenfall – ÖkoStrom12	220.84	-	-	917.70
Netze BW	EnBW – Komfort HH	175.68	-	-	1,226.75
	123 Energie – 123Strom	223.38	-	-	933.45
	Vattenfall – ÖkoStrom24	170.42	-	-	1,011.85
	Vattenfall – ÖkoStrom12	170.42	-	-	1,017.80
Stuttgart Netze	EnBW – Komfort HH	175.68	-	-	1,226.75
	Klick Energie – KlickStrom24 Plus	111.81	-	-	959.35
	Vattenfall – ÖkoStrom12 Standard	125.04	-	-	1,075.55
	Vattenfall – ÖkoStrom24	120.00	-	-	1,091.30

Table 35: Annual cost of selected products for profile E-SSME in Germany

Region	Supplier - product	Grundpreis (EUR/year)[119]	Arbeitspreis[120] with dual tariff - peak (EUR/year)	Arbeitspreis with dual tariff – off-peak (EUR/year)	Arbeitspreis without dual tariff (EUR/year)
Bayernwerk	E.ON – UnternehmerStrom Öko 12	175.98	-	-	7,911.00
	KlickEnergie – KlickStrom24 Plus	155.36	-	-	7,347.00
	Vattenfall – Profi ÖkoStrom24	202.79	-	-	7,599.00
	Vattenfall – Profi ÖkoStrom12	202.79	-	-	7,809.00
SWM Infrastruktur	Stadtwerke München – M-Ökostrom Regional DT	116.65	5,920.20	3,332.40	-
	KlickEnergie – KlickStrom24 Plus	98.99	-	-	8,247.00
	Vattenfall – Profi ÖkoStrom24	142.79	-	-	8,526.00
	Vattenfall – Profi ÖkoStrom12	142.79	-	-	8,709.00
E-DIS	E.ON – UnternehmerStrom Öko 12	154.23	-	-	8,310.00
	Entega – Ökostrom für Gewerbekunden	215.69	-	-	8,088.00
	Vattenfall – Profi ÖkoStrom24	178.79	-	-	8,016.00
	Vattenfall – Profi ÖkoStrom12	178.79	-	-	8,199.00
Stromnetz Berlin	Vattenfall – Profi ÖkoStrom12 Standard	130.80	-	-	8,604.00
	Entega – Ökostrom für Gewerbekunden	172.19	-	-	8,805.00
	KlickEnergie – KlickStrom	90.17	-	-	8,454.00
	KlickEnergie – KlickStrom	100.17	-	-	8,670.00
Westnetz	EW Aach – EW Aach H2O Naturstrom G	177.24	-	-	9,123.00
	Entega – Ökostrom für Gewerbekunden	246.38	-	-	8,412.00
	Vattenfall – Profi ÖkoStrom24	202.79	-	-	8,346.00
	Vattenfall – Profi ÖkoStrom12	202.79	-	-	8,526.00

[119] Basic price (fixed)
[120] Labour price (variable)

RNG-Netz 2- Köln	RheinEnergie – TradeRegio Strom basis	233.05	-	-	9,057.00
	Entega – Ökostrom für Gewerbekunden	296.69	-	-	7,545.00
	Vattenfall – ÖkoStrom24	250.79	-	-	7,476.00
	Vattenfall – ÖkoStrom12	250.79	-	-	7,686.00
Netze BW	Albstadtwerke – Albstrom® regio NT	160.00	5,461.20	3,222.00	-
	KlickEnergie – KlickStrom24 Plus	164.77	-	-	8,061.00
	Vattenfall – ÖkoStrom24	202.79	-	-	8,346.00
	Vattenfall – ÖkoStrom12	202.79	-	-	8,526.00
Stuttgart Netze	PBNZE – Business	143.62	-	-	10,647.00
	KlickEnergie – KlickStrom24 Plus	111.81	-	-	8,763.00
	Vattenfall – ÖkoStrom24	154.79	-	-	9,039.00
	Vattenfall – ÖkoStrom12	154.79	-	-	9,246.00

The commodity price could not be extracted through the comparing site for the E-BSME profile, and we have thus used the data that was provided to us by the CREG[121]. The EEX Futures and EPEX DAM prices are the national indexes employed in the computation. CREG did not take the weekend hours of the EPEX SPOT DE DAM into account for the E-BSME profile.

$$\textit{Commodity price}$$
$$= 36.5\%\,CAL\,Y_{-1} + 27.4\%\,CAL\,Y_{-2} + 21.4\%\,CAL\,Y_{-3} + 8.2\%\,Qi_{-1} + 4.2\%\,Mi_{-1} + 2.3\%\,EPEX\ Spot\ DE$$

Where:

	Explanation
CAL Y_{-1}	Average year ahead forward price in 2024
CAL Y_{-2}	Average two years ahead forward price in 2023
CAL Y_{-3}	Average three years ahead forward price in 2022
Qi_{-1}	Average quarter ahead forward price in the fourth quarter of 2024
Mi_{-1}	Average month ahead forward price in December 2024

Component 2 – network costs

The German electricity market is quite different from the Belgian one. The four TSOs exclusively operate on the (extra-) high voltage grid whereas all lower voltage levels are managed by DSOs (often up to 110 kV).

Furthermore, the German price-setting offers less transparency because they use “all-in tariffs”, meaning that the consumer is only presented one tariff without a clear distinction of its components. As described in the dataset, we offer results for four TSO, but since Germany counts more than 800 DSOs[122], a weighted average of 2 DSOs (one rural and one urban) is being presented. This is the case for the E-RES and E-SSME profile. Since the commodity price of E-BSME is computed with a formula, network costs must be added separately. A more detailed description is provided in *Section 5. Component 2 – network costs* E-BSME is subject to the same network costs as the E0 and E1 profiles.

When it comes to the transmission and distribution tariff methodology, German DSOs and TSOs offer a similar structure even though terms are labelled differently. Although every DSO imposes different rates for different ranges of both maximum capacity contracted and electricity consumer, it always involves the same 3 components which are synthesised in the table underneath:

Table 36: Components of the German network costs

Network costs		
Component	**German label**	**Explanation**
Fixed term	Grundpreis	The basic fee expressed in EUR/year.
Proportional term	Arbeitspreis	It depends upon the volume of energy consumed in kWh/year, expressed in cEUR/kWh/year.
Metering	Messstellenbetrieb	The charges are related to the cost of metering and invoicing, fixed prices expressed in EUR/year.

[121] The equations are based on an analysis performed by the Belgian federal regulator of the electricity supply contracts of Belgian consumers with a yearly consumption higher than 10 GWh.
[122] (Prettico, 2019)

Component 3 – all other costs

Regarding German taxes and levies, 5 surcharges apply on electricity price:

(1) The “*KWKG-Umlage*” – Kraft-Wärme-Kopplungsgesetz or Combined Heat and Power Act – is a tax contributing to CHP-plant subsidies. The calculation is based on the present forecast data of DSOs and the Federal office for Economic Affairs and Export Control (BAFA). This cost (**2.77** EUR/MWh) applies to E-RES, E-SSME and E-BSME[123]. It increased by **0.02** EUR/MWh compared to 2024.

(2) The “*StromNEV*” or Electricity Network Charges Ordinance, based on the regulation of charges for access to electricity networks § 19, is a digressive levy to compensate for §19 transmission tariff reductions. This cost (**15.58** EUR/MWh) applies to E-RES, E-SSME and E-BSME[124]. It increased by **9.15** EUR/MWh compared to 2024.

(3) The “*Offshore-Netzumlage*” or Offshore Network Levy, is a digressive levy. Several rates apply depending on the consumption level and discounts can be granted from above 1 GWh, which does not concern the profiles under review in this section. We thus use the basic rate (**8.16** EUR/MWh) for all profiles[125]. It increased by **1.60** EUR/MWh compared to 2024.

(4) The "Stromsteuer" [126] or electricity tax, is a tax on electricity that had a standard rate of **20.50** EUR/MWh, unchanged since 2003. However, following a formulation approved by the federal cabinet on July 17, 2024, the relief rate in § 9b Abs. 2 Satz 1 of the StromStG has been permanently set at **20.00** EUR/MWh, and the previous time limitation has been removed. Consequently, the tax burden on electricity is now permanently reduced to the minimum tax rate of **0.50** EUR/MWh as per the Energy Tax Directive.

(5) The “*Konzessionsabgabe*” or Concession Fee Ordinance, is a tax (**18.23** EUR/MWh) imposed on all users to fund local governments for the use of public roads and paths to lay electricity lines. The municipality size (in number of inhabitants), as well as the contract type of the consumer[127], constitute the criteria regarding the applied rate. Reductions may be granted from a 30 MWh annual offtake.

Component 4 – VAT

Electricity used for residential and domestic purposes is subject to 19% in Germany[128].

[123] (Vattenfall, 2024)
[124] (Vattenfall, 2024)
[125] (Vattenfall, 2024)
[126] (WTS, 2024)
[127] We distinguish the basic contract, or “*Grundversorgung*”, and the other types of contracts.

France

Component 1 – commodity price

The HHI of the retail market in France was 4,860 in 2023[129], meaning that only three products are considered: the standard product, the cheapest offer on the market and the most affordable product of the market incumbent. For E-RES profile, as the cheapest offer on the market this year is also the cheapest product of the market incumbent, we had to choose the second cheapest product on the market. In 2023, the switching rate for household products in France was 8.30%, and the same switching-rate is applied for non-household consumers.[130] The methodology for assigning weights to the products is different for France because most consumers contract the regulated product. The market share for the regulated product is taken as its weight, and the third product has the rest of the weights.

Table 37: French product weights depending on the profile

Product	Weight E-RES	Weight E-SSME
Standard product of the market incumbent	78.12%	78.12%
Cheapest product on the market = cheapest of the market incumbent)	8.30%	8.30%
Cheapest product of the second-largest supplier	13.58%	13.58%
Total	**100%**	**100%**

In France, consumers are presented with “all-in tariffs” which toughens the extraction of the commodity component. Using the price comparison website that the CRE[131] puts forward, http://comparateur-offres.energie-info.fr, the all-in tariffs were extracted. The commodity cost presented below still includes network and all other costs, but the VAT has already been deducted.

Table 38: Annual cost of selected products for profile E-RES in France

Region	Supplier – Product	Fixed component (EUR/year)	Price for peak consumption (EUR/year)	Price for off-peak consumption (EUR/year)
France	EDF - Tarif bleu - réglementé (particuliers)	157.04	432.00	392.92
	EDF – Tempo	156.40	320.22	253.61
	Engie – Elec Référence Verte 1 an	162.26	351.84	288.61

Table 39: Annual cost of selected products for profile E-SSME in France

Region	Supplier – Product	Fixed component (EUR/year)	Price for peak consumption (EUR/year)	Price for off-peak consumption (EUR/year)	Price for consumption without dual tariff (EUR/year)
France	EDF - Tarif Bleu - réglementé (professionnels)	549.32	3,817.80	2,109.60	-
	EDF – Contrat Flexible 4 prix	636.07	-	-	4,211.28
	ENGIE - Electricité Activert 1 an	740.60	-	-	4,504.14

[129] (CEER, 2024)
[130] (CEER, 2024)
[131] The *Commission de régulation de l'énergie* (CRE) or French Energy Regulatory Commission (under its official English title) is an independent body that regulates the French electricity and gas markets.

The French standard product « Tarif réglementé » is revised twice a year by the CRE and the government and published each 1st of February and 1st of August. Exceptionally in 2024, and only for the regulated products, the TURPE 6 adaptation (for distribution and transport tariffs) has not been updated for households and very small companies (E-RES only). As a consequence, regulated products selected for the E-RES profile partly fall under this category (EDF – Tarif Bleu; EDF – Tempo). However, the remaining product (Engie – Elec Référence Verte 1 an) is subject to the updated TURPE tariffs. These TURPE tariffs last updated in November 2024 are used for all other profiles.

All consumers in France can benefit from governmental intervention on the commodity costs through a specific mechanism called ARENH[132]. This mechanism, described in detail in *Chapter 5*, enables alternative electricity suppliers (i.e. suppliers different from EDF, the historical electricity supplier in France) to obtain part of the nuclear electricity production from EDF under specific conditions set by the French public authorities.

Component 2 – network costs

As in Germany, the transmission and distribution costs are also integrated as one tariff in France. While this might help consumers to better understand their final bill to pay, it also makes it less transparent by not disaggregating the costs components. There are several DSOs in France, but Enedis has a market share of >95% for continental France.[133] Because of this, it is the only DSO that is considered in France in the present study. Distribution prices in France are known as the ‘Tarif d’Utilisation du Réseau Public d’Electricité’ (TURPE). Since 1st August 2021 TURPE 6 is in force until the 1st of February 2025. A yearly update of the new price list, approved by the CRE, comes into force on a yearly basis to take into account inflation and other factors. However, the network costs structure remains exactly the same until the end of TURPE 6. The approved tariffs are applicable from 1st August 2024 to 31st July 2025.[134] The French distribution cost consists of 3 components.

Table 40: Distribution costs in France

<table>
<tr><th colspan="3">Network costs</th></tr>
<tr><th>Component</th><th colspan="2">Explanation</th></tr>
<tr><td>Management component[135][136]</td><td colspan="2">The management component depends on whether a consumer has a single contract per energy component or not. We assume profiles E-RES and E-SSME opted for exclusive contracts, either electricity only, or natural gas only.</td></tr>
<tr><td rowspan="7">Component for taking off electricity[137]</td><td colspan="2">Multiple prices options exist varying depending on a utilisation length and temporal differentiators capacity and consumption components. The prices options are:</td></tr>
<tr><td>Consumers < 36 kVA (E-RES)</td><td>Consumers ≥ 36 kVA (E-SSME)</td></tr>
<tr><td>1. Short use (CU)</td><td>1. Short use (CU)</td></tr>
<tr><td>2. Short use with 4 temporal classes (CU4)</td><td>2. Long use (LU)</td></tr>
<tr><td>3. Medium use with a temporal differentiation between peak and off-peak hours (MU)</td><td></td></tr>
<tr><td>4. Medium use with 4 temporal classes (MU4)</td><td></td></tr>
<tr><td>5. Long use (LU)</td><td></td></tr>
<tr><td>Metering tariff[138]</td><td colspan="2">The metering tariff depends on whether the meter is owned by the consumer or not. The assumption is taken that all three profiles (E-RES, E-SSME and E-BSME) do not own their meters.</td></tr>
</table>

[132] ARENH stands for *Accès Régulé à l’Electricité Nucléaire Historique*, or *Regulated Access to Historic Nuclear Electricity*
[133] (Enedis, 2025)
[134] (Rte, 2023)
[135] Since 2018, the level of this component also considers the financial compensation paid to suppliers in connection with the management of single-contract customers.
[136] French labelling: Composante annuelle de gestion
[137] French labelling: Composante annuelle de soutirage
[138] French labelling: Composante annuelle de comptage

Consumers E-RES and E-SSME face different prices options as depicted in the table above. Concerning E-RES, only two price options out of five presented are considered: CU4 and MU4. The reason behind this lies in the heavy usage of 'Linky' smart meters. As we assume residential consumers to be equipped with 'Linky' smart meters from 2020 onwards, CU4 and MU4 are the only price options available. As for E-SSME, it can either opt for CU or LU prices options. In both cases, both price options were calculated. As we cannot anticipate which option our potential consumers will prefer, all options are computed and are presented as a price range.

MU4 and CU both rely on 4 temporal classes: peak hours high season (HPH), off-peak hours high season (HCH), peak hours low season (HPB) and off-peak hours low season (HCB). SLP S21 (E-RES) and SLP S11 (E-SSME) for 2020 were used and resulted in the following allocation to determine the proportion of electricity consumed during each temporal class.

Table 41: Allocation of consumption per temporal class in France

Distribution of consumption per temporal class		
Temporal class	**E-RES**	**E-SSME**
HPH	35%	34%
HCH	11%	12%
HPB	38%	40%
HCB	16%	14%

With regards to profile E-BSME, it falls under the category HTA1 for which 4 prices options are available:

(1) Short use with fixed peak (CU fixed peak);

(2) Short use with mobile peak (CU mobile peak);

(3) Long use with fixed peak (LU fixed peak);

(4) Long use with mobile peak (LU mobile peak);

In a similar fashion to the first two profiles, we computed each price option that is presented as a price range. Given that these price options also depend on temporal classes, allocation of hours was also estimated. However, we used RTE's timeframe (see below) to determine hours allocation, considering that E-BSME does not operate during weekends.

Table 42: Hours per temporal classes in France

Hours per temporal classes		
Temporal class	**Weekdays**	**Weekends**
Peak ("Heures Pointe")	4h/day for three months (December to February)	/
HPH ("Heures Pleines Saison Haute")	12h/day for three months (December to March) + 16h/day for 2 months (March and November)	/
HCH ("Heures Creuses Saison Haute")	8h/day for five months (November to March)	24h/day for five months (November to March)
HPB ("Heures Pleines Saison Basse")	16h/day for seven months (April to October)	/
HCB ("Heures Creuses Saison Basse")	8h/day for seven months (April to October)	24h/day for seven months (April to October)

Component 3 – all other costs

In France, two additional surcharges must be considered for residential and small professional consumers:

Table 43: Other costs in France (E-RES, E-SSME, E-BSME)

Title	Definition	Amount
Contribution Tarifaire d'Acheminement (CTA)	The CTA finances part of the pensions of staff in the energy sector for Electricity and Natural gas Industries. It is only being applied to the subscription part of the tariff (HT)	The CTA rate is of **21.93**% for residential and small professional consumers that are connected to the distribution grid. This is due on the fixed and power component of the network tariffs (E-RES to E-BSME profiles).[139] The CTA is **10.11**% for consumers connected to the public transport network or distribution grid ≥ 50kV (E0 to E4 profiles). *Note: as network tariffs may vary according to the selected price option, the CTA amount may therefore also vary.*
Accise sur l'électricité (TICFE) *It replaces the old CSPE and includes local taxes*[140]	This excise is a tax that applies to all deliveries of electricity to an end user. Its amount is calculated according to the consumption.[141]	The excise duty on electricity is **21** EUR/MWh for E-RES and **20.5** EUR/MWh for professionals on the 1st of January 2025.

Component 4 – VAT

Two different VAT rates apply to electricity tariffs, 5.5% and 20%.[142]

For consumers < 36 kVA (E-RES): the reduced 5.5% rate is imposed on the subscription and the CTA, while the standard 20% rate is applied on the consumers' actual consumption[143].

For Consumers ≥ 36 kVA (E-SSME): the standard 20% rate applies to the actual consumption as well as to the Excise on Electricity.

[139] (Selectra, 2025)

[140] Local taxes (« *Taxe Départementale sur la Consommation Finale d'Électricité* » (TDCFE) and « *Taxes Communales sur la Consommation Finale d'Électricité* » (TCCFE) no longer exist. The CSPE/TICFE includes the TDCFE since January 1st, 2021. The TCCFE was later included on January 1st, 2023.

[141] More detail about the TICFE is provided in Chapter 5

[142] Discussions to harmonise the VAT on the subscription and consumption components are ongoing and could occur in 2025. This change has not been passed yet, but if passed the rate of 20% could be applied on both the fixed subscription and the variable and capacity components of the tariff. (Selectra, 2025).

[143] (Engie, 2024) (Engie, 2024)

The Netherlands

Component 1 – commodity price

In the Netherlands, the HHI-index was 2,032 in 2023[144]. Therefore, we consider three products. These are the standard product, the cheapest product on the market and the most competitive product of the second-largest supplier. The switching rate provided by the CEER is 12% for the Netherlands in 2023 and it is the weight attributed to the cheapest product for both profiles E-RES and E-SSME[145].

Weights are allocated according to the following calculations regarding normalised market shares. The weight of the cheapest product equals the annual switching-rate (17%). The table below presents the applied weights of profiles E-RES and E-SSME.

Table 44: Profile weights depending on the Dutch product

Product	Weight
Standard product of the market incumbent	38.50%
Cheapest product on the market	12.00%
Cheapest product of the second largest player	49.50%
Total	**100.00%**

As no price comparison tool was giving a complete overall picture of the prices and products on the market in the Netherlands, similarly as in the UK, we scouted the 10 largest energy providers and analysed their most competitive offers. The result is the Table 45 for E-RES and Table 46 for E-SSME below.

Table 45: Annual cost of selected products for profile E-RES in the Netherlands

Region	Supplier – Product	Fixed component (EUR/year)	Price for peak consumption (EUR/year)	Price for off-peak consumption (EUR/year)
Netherlands	Essent - Groene Stroom 1 jaar	108.96	204.01	238.46
	Green Choice – NL Windstroom 3 jaar	92.43	129.79	169.82
	Vattenfall – Variabel	65.45	539.11	50.35

Table 46: Annual cost of selected products for profile E-SSME in the Netherlands

Region	Supplier – Product	Fixed component (EUR/year)	Price for peak consumption (EUR/year)	Price for off-peak consumption (EUR/year)
Netherlands	Essent - Groene Stroom 1 jaar	125.88	2,773.80	1,825.20
	Green Choice – NL Windstroom 3 jaar	111.84	1,766.70	1,297.80
	Vattenfall – 1 Jaar vast	89.16	2,196.00	1,464.00

As already mentioned, the previous methodology applied for our profiles E-RES and E-SSME, whereas CREG used a formula to compute the commodity costs for E-BSME and provided PwC with the data already computed. The computation rests on market prices and describes the cost of electricity for industrial consumers as of January 2025. CREG used the ICE Index CAL and the APX NL DAM as national indexes for the computation.

[144] (CEER, 2024)

[145] No distinction between household and non-household switching rates. Consequently, we use a unique switching rate for both profiles E-RES and E-SSME.

The underneath commodity formula is used for each profile. For E-BSME, CREG did not include weekend hours of APX NL DAM. The CREG provided the data and the formula used for commodities pricing in this investigation.[146]

$$\textit{Commodity price} = 36.5\%\,CAL\,Y_{-1} + 27.4\%\,CAL\,Y_{-2} + 21.4\%\,CAL\,Y_{-3} + 8.2\%\,Qi_{-1} + 4.2\%\,Mi_{-1} + 2.3\%\,APX\,NL\,DAM$$

Where:

	Explanation
CAL Y_{-1}	Average year ahead forward price in 2024
CAL Y_{-2}	Average two years ahead forward price in 2023
CAL Y_{-3}	Average three years ahead forward price in 2022
Qi_{-1}	Average quarter ahead forward price in the fourth quarter of 2024
Mi_{-1}	Average month ahead forward price in December 2024

Component 2 – network costs

Network prices in the Netherlands are integrated as one tariff and are built on the four components presented in the table below[147]. We take the weighted average of all six distribution zones' prices.

Table 47: Network cost for electricity in the Netherlands (E-RES, E-SSME, E-BSME)

Network costs		
Component	**Dutch labelling**	**Explanation**
Fixed charge	Vastrecht	Fixed basic fee (expressed in EUR/year).
Capacity charge	Capaciteitstarieven	The fixed fee is covering the costs associated with the transmission of electricity. Its height depends on the capacity of the connection (expressed in EUR/year).
Periodical connection tariff	Periodieke aansluitvergoeding	The fixed fee is covering the costs for managing the connection (expressed in EUR/year).
Metering charge	Meettarief	The fixed charges are covering the use and management of energy meters (expressed in EUR/year).

The capacity charge is composed differently for the E-BSME profile:

- Fixed charge depending on the contracted capacity, expressed in EUR/year;
- Variable charge depending on the monthly peak expressed in EUR/kW/month;
- Variable charge depending on the consumption level, expressed in EUR/kWh.

[146] The equations are based on an analysis performed by the Belgian federal regulator of the electricity supply contracts of Belgian consumers with a yearly consumption higher than 10 GWh.
[147] (Autoriteit Consument & Markt, 2024)

Component 3 – all other costs

Unlike previous years, only one surcharge remains in the Netherlands for the profiles discussed in this part of the study, namely the Energy Tax ("Regulerende Energie Belasting", or REB). In the 2024 Tax Plan, the Dutch government has indeed proposed to simplify the energy tax system by abolishing the surcharge for sustainable energy and climate transition ("Opslag Duurzame Energie", or ODE) through its integration in the energy tax (already started in 2023).[148]

The Energy Tax (REB) varies, in a degressive trend, according to the amount of consumed electricity as shown in the table below:

Table 48: Electricity Energy Tax and ODE bands (Netherlands, 2025)[149]

Band	Consumption (in MWh)	Energy Tax (EUR/MWh – VAT excl.)
1	Up to 10	**101.54**
2	10 - 50	**69.37**
3	50 - 10,000	**38.68**
4	> 10,000 (non-professional)	**3.88**
4bis	> 10,000 (professional)	**3.21**

Given the consumption level of our profiles under study, they fall into the first three bands. Band 1 for E-RES, bands 1 & 2 for E-SSME and bands 1, 2 & 3 for E-BSME. At the same time, all households will receive a fixed refund on the energy tax, fixed at 524.95EUR excl. VAT in 2025.[150]

Component 4 – VAT

Electricity used for residential and domestic purposes is subject to 21% in the Netherlands[151] .

[148] (Belastingdienst, 2025)
[149] ibid
[150] ibid

The UK

Component 1 – commodity price

In the UK suppliers often combine electricity and natural gas in one product, the so-called dual tariff, which is supposed to result in lower prices. Since this is not the case in all the other countries and to have a consistent methodology across the study, we only consider products where electricity is offered by itself. Furthermore, suppliers in the UK generally present all-in tariffs that are not entirely transparent. These tariffs consist of:

- The Standing Charge (fixed element), which is expressed in p/day and covers the fixed costs of the DSO; and
- Unit Rate Charge (variable element), which is expressed in p/kWh and varies according to the energy consumption.

Since we only want the commodity price in this section, network charges, taxes and VAT from these 'all-in tariffs' were extracted. Commodity prices of a supplier are not very different between regions, and for the sake of simplicity, we only look at the commodity price in one region, which is then used for all 14 DSO regions. An Ofgem study from 2015[152] analysed the prices throughout the different regions, and out of this study, Yorkshire appeared to be the median zone in terms of commodity price. For this reason, the selected products come from the Yorkshire region. As no similar additional study has been performed by the OFGEM since, the standing and daily unit charge The network cost, VAT and taxes are deducted from the all-in prices of the Yorkshire region. Like other countries in review, the weighted average of network tariffs for all DSOs are used to determine the network cost.

The products and prices were fetched on the 10 largest energy providers in the UK, as well as the uswitch.com comparison website, both for E-RES and E-SSME profiles. Since we assume that it correctly represents the energy market for both residential profiles, the weights calculation follows the methodology logic. As a result, products 3 and 4 were selected as being the most competitive products of the second and third largest suppliers.

The switching rate in the UK is of 6.3% in 2023 for E-RES profiles, which is three times higher than 2022, and 15.90% for E-SSME profiles. This might be due to more products being supplied by providers, after a couple of years with low differentiated offers. Moreover, the capped price of the bills to a certain amount (for the standing charge, and the unit charge for variable contracts), adapted every 3 months, weighs in the balance for the consumer's informed choice. During the years affected by the price cap (from 2019 onwards) coupled with the increase in energy prices, end consumers have had low incentives to switch providers as the products differed less, most of the offers reaching the price cap ceiling. This seems to have evolved as exemplified by the higher switching rate.

The switching rate is the weight taken by the cheapest product on the market. We then compute the normalised market shares of the providers which products were selected, and apply the same formula, for example for the standard product of the market incumbent (100%-6.3%)*46.96/2, or 22.00%. The same is done for the cheapest of the second largest player and the cheapest of the third largest player.

Table 49: Profile weights depending on the products in the UK

Product	Weight E-RES	Weight E-SSME
Standard product of the market incumbent	22.00%	22.00%
Cheapest product on the market	6.30%	6.30%
Cheapest product of the market incumbent	22.00%	22.00%
Cheapest product of the second largest player	49.70%	49.70%

152 (Ofgem, 2015)

The prices displayed in the tables below are VAT exclusive but still encompasses the network costs and taxes. It is important to mention that the standard products in the UK are governed by two mechanisms put in place. The energy price cap, introduced in 2019 with the objective of reducing the impact of an increase of energy costs on final consumers, and the energy price guarantee.

On the one hand, the energy price cap (came into effect in 2020) sets a maximum price cap that providers of energy can charge consumers for each kWh used and this cap considers all costs components (commodity costs; network costs; policy costs; supplier operating costs and VAT)[153]. This price cap only applies to standard variable energy tariffs. Hence, only the Standard Variable of British Gas.

On the other hand, the energy price guarantee which came into effect in October 2022 and that was a measure guaranteeing that a typical household would pay on average 1,738 GBP (2024 data) on their energy bill. This measure has been discontinued since the 31st of March 2024.

Table 50: Annual cost of selected products for profile E-RES in the UK

Region	Supplier – Product	Fixed component (GBP/year)	Price for variable (GBP/year)
UK	British Gas – Standard Variable	263.13	822.91
	Outfox The Market – Fix'd Elec 12m Jan25 v1.0	263.17	742.76
	British Gas – Fixed Tariff v2.1	258.42	767.45
	Octopus Energy – Octopus 14M Fixed	255.68	791.70

Table 51: Annual cost of selected products for profile E-SSME in the UK

Region	Supplier – Product	Fixed component (GBP/year)	Price for variable (GBP/year)
UK	British Gas – 1 Year Direct	153.30	7,519.05
	British Gas – Fixed Tariff v2.1	271.34	6,907.07
	Octopus Energy – Green Octopus Business 24m Fixed	208.79	7,254.45
	E.ON – Next Fixed 18m v16	255.65	6,255.00

The commodity price of the E-BSME profile could not be extracted from the comparison website and is therefore computed on the market prices and describes the cost of electricity for industrial consumers as of January 2025. We used the APX UK DAM as the national index for the calculation. The CREG provided us with the formula used for commodity pricing and is based on an analysis carried by the Belgian federal regulator of electricity supply contracts of all Belgian consumers with consumption higher than 10 GWh[154]. We do not use the weekend hours of APX UK DAM for the E-BSME profile.

$$Commodity\ price$$
$$= 36.5\%\ CAL\ Y_{-1} + 27.4\%\ CAL\ Y_{-2} + 21.4\%\ CAL\ Y_{-3} + 8.2\%\ Qi_{-1} + 4.2\%\ Mi_{-1} + 2.3\%\ APX\ UK\ DAM$$

Where:

Variable	Explanation
CAL Y_{-1}	Average year ahead forward price in 2024
CAL Y_{-2}	Average two years ahead forward price in 2023
CAL Y_{-3}	Average three years ahead forward price in 2022
Qi_{-1}	Average quarter ahead forward price in the fourth quarter of 2024
Mi_{-1}	Average month ahead forward price in December 2024

[153] (Ofgem, 2024)

[154] Based on the data available to us from Bloomberg, we used the following indices ELU0YR1, ELU0YR2 and ELU0YR3 to calculate respectively the CAL Y-1, CAL Y-2 and CAL Y-3.

Component 2 – network costs

Transmission costs

The transmission costs in the UK are covered by the Transmission Network Use of System (TNUoS) charges and have two possible options: Non-Half-Hourly (NHH) and Half-Hourly (HH). The E-RES and E-SSME profiles are subject to NHH and E-BSME to the HH rate.

Since the 1st of April 2023 and the introduction of CMP343 by the OFGEM[155], a new component to the transmission costs is to be considered: the non-locational band charges. To lower the impact of a consumer's location on its tariffs, the OFGEM (through the 14 DSOs) decided to substantially lower (or even remove) the NHH and HH charges for all regions. This decrease is compensated by the introduction of these banded charges, to which consumers are assigned depending on their connection capacity (kVA).

Table 52: Transmission costs in the UK

Transmission costs		
Tariff option	**Explanation**	**Profile**
Not Half-Hourly (NHH)	Monthly metered customers are paying a demand rate in function of their electricity consumption, expressed in p/kWh.	E-RES and E-SSME
Half-Hourly (HH)	Metering system, which utilises AMR (automatic meter reading) technology to provide electricity consumption reading. The system sends updated meter reads to the energy supplier every half hour. Customers pay a capacity tariff depending on their connection capacity, expressed in p/kVA/day.	E-BSME
Non-locational banded charges	Daily standing charge customers are paying per site depending on the band they are assigned to. The band is assigned based on the customer's connection capacity (kVA).	E-RES, E-SSME and E-BSME

The NHH tariff is zonal, meaning that the rates differ between all fourteen zones of the UK. We use a weighted average value of these fourteen zonal tariffs as transmission cost for our E-RES and E-SSME profiles.

Distribution costs

Our residential and small professional profiles are subject to these costs but follow a different methodology because it depends on the connection voltage. The distribution costs, called Distribution Use of System (DUoS) tariffs, follow two possible charging methods. Since all of our residential and small professional profiles are connected to the LV-grid, the "Common Distribution Charging Methodology" (CDCM) is applicable.[156] This methodology encompasses the following components:

Table 53: Distribution costs in the UK

Distribution costs	
Component	**Explanation**
Total consumption	A unit charge in p/kWh
Fixed charge	Fixed charge per offtake points in p/MPAN[157]/day
Metering costs[158]	Cost for use and management of your energy meter in p/day or GBP/year

To estimate the UK prices, we took the weighted average (based on the number of connections of DSOs) of the fourteen zonal tariffs to calculate the distribution costs.

[155] (OFGEM, 2022)

[156] (Energy networks association, 2020)

[157] Meter Point Administration Number

[158] Electricity metering charges in the UK are not easily accessible. A proxy was used to account for these charges based on a methodology disclosed by National Grid, the British TSO delivering electricity and natural gas. As electricity and natural gas are frequently offered as one product with a dual tariff, natural gas metering methodology was used as a proxy. Charges are billed as a fixed yearly charge for installation costs recovered via a rental given that we assume our profiles do not own the meters.

Component 3 – all other costs

Four additional costs are applicable on electricity in the UK:

1. Energy suppliers need to account for the cost of the **Energy Company Obligation (ECO)** scheme, which helps to reduce carbon emissions and tackle energy poverty. This ECO scheme has seen 4 iterations, ECO, ECO1, ECO2, ECO3 and ECO4 […]. The ECO4 Order came into force in July 2022. ECO4 applies to measures installed from 1 April 2022 and cover a four-year period until 31 March 2026.[159] The cost of the ECO scheme represents around 16% of the electricity invoice[160].

2. The **Climate Change Levy** (CCL)[161] is applicable to the consumption of electricity and natural gas for businesses in the industrial, public services, commercial and agricultural sectors. This levy is "an environmental tax charged on the energy that businesses use. It's designed to encourage businesses to be more energy efficient in how they operate, as well as helping to reduce their overall emissions."[162]
   The following table gives an overview of the rates that are charged to professional consumers regardless of their profile (residential consumers are exempted from it[163]):

   Table 54: Climate Change Levy rates on electricity[164]

Time period	Electricity rate (GBP/MWh)
1st April 2024 to 31st March 2025	**7.75**
1st April 2023 to 31st March 2024	**7.75**

3. The **Renewables Obligation (RO)** is the cost placed on electricity suppliers in the UK for the large-scale renewable subsidy scheme. Like the Climate Change Levy, the quota and buyout price are determined for a year starting in April. From 1st April 2024 to 31st March 2025, the buyout price per RO Certificate is 31.78 GBP.[165]

4. The **Assistance for Areas with High electricity distribution Costs (AAHEDC)** levy compensates for high distribution costs in the zone of Northern Scotland (1 of the 14 zones), amounting 0.4214 GBP/MWh for the period ranging from 1st April 2024 to 31st March 2025.[166]

Component 4 – VAT

Electricity used for residential and domestic purposes is subject to a 5% VAT in Great Britain.[167]

159 (Ofgem, 2024)
160 (NESTA, 2024)
161 (UK Government, s.d.)
162 (SEFE, 2024)
163 (GOV.UK, 2022)
164 ibid
165 (OFGEM, 2024)
166 (National Grid ESO, 2024)
167 (UK Government, 2025)

Natural gas

Natural gas: Detailed description of the prices, price components and assumptions

For all countries under review, this section details:

1. **Commodity costs** for profiles G-RES and G-PRO.
2. **Network costs** for profiles G-RES and G-PRO.
3. **All other costs** for profiles G-RES and G-PRO.
4. **VAT** for profile G-RES.

Profile	Consumption (kWh)
G-RES	17,000
G-PRO	300,000

Belgium

Contrary to what is observed in other countries, the Belgian natural gas suppliers have quite transparent price sheets. Commonly the current price sheets can be found online on each providers website. The price sheets also give a good overview of all charged components.

Component 1 – commodity price

In 2023, which is the latest available data for Belgium in the 2024 Retail Markets Monitoring Report[168], the HHI of the retail market in Belgium was 2,632. According to the methodology, this entails that only three products are considered: the standard product of the market incumbent, the cheapest offer on the market, and the cheapest product of the market incumbent. The switching rate for households in Belgium is 22.4%[169]. The products of the market incumbent for G-RES thus each have a weight of (100%-22.4%)/2 or 38.8%[170].

Table 55: Profile weights depending on the products in Belgium

Product	Weight G-RES
Standard product of the market incumbent	38.80%
Cheapest product on the market	22.40%
Cheapest product of the market incumbent	38.80%
Total	**100.00%**

The table below gives an overview of the selected products per region and their annual cost, which is based on the profile's characteristics. To choose these products, price comparison websites of the respective regional regulators were used[171]. All prices reported are VAT excluded.

Table 56: Annual cost of selected products for profile G-RES in Belgium

Region	Supplier – Product	Contract type (fixed/variable)	Fixed component (EUR/year)	Variable component (EUR/year)
Brussels	ENGIE – Easy ENGIE – Basic TotalEnergies – Pixie	Variable Variable Variable	44.34 25.47 23.58	1,072.34 924.75 1,010.63
Wallonia	ENGIE – Easy Luminus – BasicFlex ENGIE – Basic	Variable Variable Variable	44.34 18.87 18.87	1,072.34 849.18 848.08
Flanders	ENGIE – Easy Energie.be – Gas ENGIE – Basic	Variable Variable Variable	44.34 33.02 18.87	1,072.34 810.03 848.08

[168] The 2024 Retail Markets Monitoring Report (CEER, 2024)

[169] Since the 2024 update of the Retail Markets Monitoring Report did not provide an update anymore on the switching rates for natural gas, those of the 2023 report were carried over.

[170] This example is applicable for the region Flanders and Wallonia. The set of selected products for Brussels slightly differs since for this region the standard product of the market incumbent, the cheapest product on the market and *one of the cheapest products of the second-largest supplier* is selected, due to the fact that the cheapest product on the market and the cheapest product of the market incumbent are the same for the Brussels region. The respective rates of the selected products are 63.66%, 22.40%, and 13.94%.

[171] Flanders : vtest.vreg.be; Brussels : www.brusim.be; Wallonia : www.compacwape.be

While this methodology provides an objective view of the market situation in Belgium, one must be aware that it does not provide a full overview of market prices as only three products were considered to depict the Belgian commodity prices. In addition, due to the limitations of the web comparison tools and the continued uncertainties observed on the energy market, there might be inconsistencies between the regions/countries under review regarding the type of products selected. For example, depending on the country indexed products can be calculated with forward or with backward looking prices. However, we do not believe these differences would impact the overall conclusions of this report.

The commodity component for the G-PRO profile was not extracted from a comparison site but is based on the prices observed in January 2025 and they are provided by the CREG for the 2025 update. The formula that was used to compute the commodity cost for this profile is the same as the large industrial profiles and is set out in the corresponding segment.[172], which represents their most significant component of natural gas bills.[173] The CREG provided all necessary commodity data and already calculated the commodity cost for G-PRO and all other industrial gas profiles.

Component 2 – network costs

Transport costs

As discussed in the consumer profiles, we assume that G-RES profile is connected on the T2 level and G-Pro on the T3 level. The transport costs disclosed by Fluxys in 2025 is mentioned hereunder[174].

Table 57: Transmission cost of Belgian TSO

TSO	Transport cost (EUR/kWh)
Fluxys	0.00156

The transport cost for residential and small professional consumers takes the entry and exit tariffs into account and since September 2024 only high (H) caloric natural gas has been used in Belgium[175].

Distribution costs

Since both G-RES and G-PRO profiles are connected to the distribution grid, distribution tariffs must be considered and therefore added to the transport costs. Like the transport tariffs, the T2 and T3 levels were chosen for respectively G-RES (T2) and G-PRO (T3). Typically, each Belgian region splits distribution tariffs into a different number of components but has at least one common component: *tariff for the use of the network*, which is always composed of*:*

a. Fixed term (expressed in EUR/Year).

b. Proportional term (expressed in EUR/kWh).

Besides, other components are part of the distribution costs, although they vary depending on the region. Brussels includes a tariff for the measuring activities and Flanders includes a tariff of data management and the system management. In contrast, Wallonia only adds a tariff for regulatory balances.

Since tariffs vary between regions and DSOs, a weighted average is computed across all DSOs that are active in the region. The weight is distributed according to the number of EAN connections the DSO owns in the region. In Flanders, all DSOs, which use Fluvius System Operator cv as a common working company, were considered. For Wallonia, ORES and RESA, the two operating DSOs were considered. Both regions' market shares can be found in chapter 3. In Brussels, Sibelga is the unique DSO to be running and therefore selected.

[172] Belgian industrial consumers' contracts are mostly ZTP and TTF indexed (CREG, 2022).

[173] This method tackles down the non-intuitive results that were obtained with the previous methodology as a commodity price can undergo heavy variations month to month and therefore lessen significant differences regarding commodity prices between countries considering their distinct situation within a period.

[174] (Fluxys, 2025))

[175] (Economie, 2024)

Component 3 – all other costs

There are additional costs in Belgium that can be charged to our natural gas consumers under review. While two additional costs are at the federal level and apply to all profiles, regional costs exist in Brussels and Wallonia. These costs are summarised below with a distinction between common costs to all three Belgian regions and the ones specific per region. It is to be noted that federal charges are levied by suppliers and regional charges are levied by regional DSOs (and invoiced to the suppliers which invoice final customers). Tariff rates are mentioned when they do not vary depending on the consumer profile and/or the DSO; otherwise, units in which they are expressed are detailed:

Table 58 : Other costs for residential and small professional natural gas consumers applying to all Belgian regions.

All regions	Profiles
Regional Public Service Obligations (Regional PSOs) on distribution	
General tariff for regional PSOs (expressed in EUR/MWh)	G-RES G-PRO
Taxes and levies on the federal level	
Federal taxes and levies	
Energy contribution (**0.9978** EUR/MWh) Energy contribution (**0.54**[176] **– 0.9978** EUR/MWh)	G-RES G-PRO
Special excise duty (EUR/MWh)	G-RES G-PRO

The table below shows the Federal special excise duty rates, applied as of the 1st of January 2025 for G-RES and G-PRO profiles[177]. Due to the "counter-cliquet" mechanism, the duty rates are adjusted based on TTF101 index fluctuations. For example, Q1 2025 excise duty rates varied based on TTF101 values of Q3 2024. There is a 2-quarter gap between the index fluctuation and the excise duty rate change. When the TTF101 index exceeds 100 €/MWh, the special excise duty rate applied to the initial consumption tranche of G-RES, covering usage up to 12 MWh, decreases. Conversely, if the TTF101 falls below 45 €/MWh, the rate for consumption beyond 12 MWh increases[178]. The lower and upper bound values are indexed based on the inflation rate[179]. Since the TTF101 fell below lower bound in Q3 2024, the special excise duty increased further for the consumption above 12 MWh.

Table 59 : Special excise duty rates in Belgium for natural gas consumers

Yearly consumption	Tax for G-RES (EUR/MWh)
Consumption up to 12 MWh	**8.2300**
Consumption above 12 MWh	**8.9393**
Yearly consumption	**Tax for G-PRO (EUR/MWh)**
Consumption up to 20,000 MWh	**0.66**
Consumption between 20,000- 50,000 MWh	**0.56**
Consumption between 50,000- 250,000 MWh	**0.54**
Consumption between 250,000 – 1,000,000 MWh	**0.42**
Consumption between 1,000,000 – 2,500,000 MWh	**0.22**
Consumption above 2,500,000 MWh	**0.15**

[176] The tariff is reduced to 0,54 €MWh for holders of an EBO or sector agreement.
[177] Programme law of December 27th 2004, as modified by the Programme law of December 26th 2022 and by the Lax of March 19th 2023 reforming taxation on the energy bill.
[178] (Service Public Federal Finances, 2023)
[179] For 2025, the inflation adjusted lower and upper bound are €48.62/MWh and €108.05/MWh respectively.

Table 60: Other regional costs for residential and small professional natural gas consumers (EUR/MWh)[180]

Brussels	Flanders	Wallonia	Profiles
Regional Public Service Obligations (Regional PSOs) on transport			
Brussels regional public service obligation[181] (**0.97** or **5.80** EUR/month)	-	-	G-RES G-PRO
Taxes and levies on the regional level			
Regional taxes and levies on distribution			
Charges of pensions (**0.182**)	Charges of pensions (**0.1721**)	Levy for occupying road network (**1.511 – 2.057**)	G-RES G-PRO
Levy for occupying road network (**1.542**)	Other local, provincial, regional, and federal taxes, Charges, Surcharges, Fees, and contributions (**0.0619**)	Corporate income tax (**0.732 – 2.115**)	
Corporate income tax and other taxes[182] (**0.879**)	Tariff for public service obligations (**0.6275**)	Other local, provincial, regional, and federal taxes, Charges, Surcharges, Fees, and contributions (**0 – 0.0103**)	
Tariff for public service obligations (**0.705**)	NA	Tariff for public service obligations (**3.712 - 4.197**)	
Regional taxes and levies on transport			
NA	NA	Connection fee **0.075** EUR/kWh for the first 1 MWh; then • if yearly consumption < 1 GWh: 0.075 EUR/MWh • if yearly consumption < 10 GWh: 0.06 EUR/MWh • if yearly consumption >= 10 GWh: 0.03 EUR/MWh	G-RES G-PRO

Component 4 – VAT

The VAT on natural gas has been definitively fixed to 6% since the 1st of April 2023 for residential consumers.

[180] The tariffs represented in this table vary depending on the DSO and we have thus chosen to only present the minimum and maximum range of the tariff from the largest (or only) DSO of the region. Sibelga for Brussels, Fluvius IMEWO for Flanders and ORES Hainaut for Wallonia.

[181] Depends on the calibre of the meter being installed.

[182] Brussels groups the last two regional taxes as one labelled “Financing of Corporate income tax & other taxes”.

Germany

German natural gas suppliers generally present only two tariffs on their tariff sheets, a fixed tariff per month (in EUR/month), the "Grundpreis", and a variable price named "Arbeitspreis" per kWh of natural gas consumed (in cEUR/kWh). Since Germany uses "all-in tariffs", which are less transparent, we deducted the network costs, taxes, and VAT to retrieve the commodity component.

Component 1 – commodity price

The CEER does not set out the German HHI for natural gas suppliers[183], therefore we assume the same distribution of market concentration as for electricity. This would result in the selection of four products: the standard product of the market incumbent, the cheapest offer on the market, the most affordable product of the market incumbent and one of the cheapest products of the second-largest supplier that has not been considered yet. While this approach might pose a limitation, we expect it to have a limited impact on representativeness, given the robustness offered by the regional approach, as four products are selected for every DSO region under study (8 times 4 products). The standard product ("*Grundversorgung*") is offered by a standard supplier, which varies in every DSO region. For the 2025 update, PwC retrieved the necessary information regarding commodity prices for G-RES through the price comparison tool: stromanbietervergleich.net. Regarding the weights, the same approach as the one used for the electricity profiles is used for this study (same weight is assigned to all the products – 25.00).

Table 61: Profile weights depending on the products in Germany

Product	Weight G-RES
Standard product of the market incumbent	25.00
Cheapest product on the market	25.00
Cheapest product of the market incumbent or the 2nd largest supplier	25.00
One of the cheapest products of the 2nd largest supplier	25.00

Table 62: Annual cost of selected products for profile G-RES in Germany

DSO	Supplier - product	Grundpreis[184] (EUR/year)	Arbeitspreis[185] (EUR/year)
Energienetze Bayern	E.ON Energie – E.ON Grundversorgung Erdgas	212.62	1,727.14
	Vattenfall – Easy12 Gas Standard	140.17	1,490.00
	E.ON – Erdgas Extra 12	181.26	1,625.71
	Vattenfall – Easy12 Gas	200.67	1,544.29
SWM Infrastruktur	Stadtwerke München – Grundversorgung	118.90	1,797.14
	Goldgas – Natürlich 12 Basis Gas	87.12	1,462.86
	E.ON – E.ON Erdgas Extra 12	150.78	1,544.29
	Vattenfall – Easy12 Gas Standard	99.83	1,464.29
E-DIS	EWE Vertrieb – EWE Erdgas comfort	212.93	1,680.00
	Leuendorff – Erdgas Basis 12	194.91	1,338.57
	E.ON – E.ON Erdgas Extra 12	271.91	1,424.29
	Vattenfall – Easy12 Gas Standard	220.84	1,324.29
	GASAG – GASAG ERDGAS Komfort	156.00	1,644.29

[183] Germany is one of the few European countries that does not monitor this indicator. The other ones are Norway, Finland, Sweden, Estonia, Latvia and Bulgaria. (CEER, 2024)

[184] Basic price (fixed)

[185] Labour price (variable)

Netzgesellschaft Berlin-Brandenburg (NBB)	Yippie – Happy Yippie Gas	72.03	1,445.71
	E.ON – E.ON Erdgas Extra 12	148.90	1,537.14
	Vattenfall – Easy12 Gas Standard	99.83	1,435.71
Westnetz	Thüga Energie – ClassicGas	142.02	1,848.57
	Yippie – Happy Yippie Gas	89.64	1,452.86
	E.ON – E.ON Erdgas Extra 12	153.42	1,574.29
	Vattenfall – Easy12 Gas Standard	120.00	1,441.43
RheinNetz	RheinEnergie – Erdgas Basis	145.00	1,915.71
	Yippie – Happy Yippie Gas	113.35	1,445.71
	E.ON – E.ON Erdgas Extra 12	180.86	1,580.00
	Vattenfall – Easy12 Gas Standard	140.17	1,438.57
Netze BW	ENRW Energieversorgung Rottweil – Grund- un Ersatzversorgung	119.88	1,864.29
	Yippie – Happy Yippie Gas	77.19	1,560.00
	E.ON – E.ON Erdgas Extra 12	145.70	1,647.14
	Vattenfall – Easy12 Gas Standard	99.83	1,558.57
Karlsruhe Netze	EnBW Energie – ErdgasPlus	91.08	2,050.00
	Yippie – Happy Yippie Gas	61.21	1,514.29
	E.ON – E.ON Erdgas Extra 12	156.79	1,618.57
	Vattenfall – Easy12 Gas Standard	79.66	1,518.57

The CREG has provided the values for the G-PRO profile in Germany.

Component 2 – network costs

As for the methodology employed for electricity, four rural (1/zone) and four urban DSOs (1/zone), for a grand total of eight DSOs, are selected. As both of our profiles, G-RES and G-PRO are connected to the distribution network; they are thus subject to transport and distribution costs, which are integrated into one single tariff. Besides, we assume these profiles to fall under the category "*Netzentgelte für Entnahmestellen ohne Leistungsmessung*" (or network charges for offtake points without power metering) as their consumption is yearly metered.

The annual charge is comprised of four components as listed below, even if DSOs might use different bands or rates:

Table 63: Distribution costs in Germany

Network costs		
Component	**German label**	**Explanation**
Basic charge	Grundpreis	A fixed basic fee expressed in EUR/year.
Consumption charge	Arbeitspreis	A variable element which depends upon the volume of energy consumed in cEUR/kWh.
Metering costs	Messung	Fixed charges related to the cost of metering and invoicing, for which we assume our residential and small professional consumers to have been metered annually.
Metering point operation per counting point charges	Messstellenbetrieb	

German annual charge for natural gas is computed as follows:

$$Annual\ charge =$$

$$Arbeitspreis * (Annual\ Consumption - \ Durch\ Grundpreis\ abgegoltene\ Arbeit) + Grundpreis$$

Where, "*Durch Grundpreis abgegoltene Arbeit*" is the price band bottom level, expressed in kWh.

Depending on the consumers' consumption volumes, they fall under certain categories (the number of categories depends on the local DSO). These categories determine the amount of consumption volume that must be set at a standard rate, while the rest fall under the network cost fares as determined by local DSOs. These volumes are said to be compensated to limit network costs and ultimately, DSOs' remuneration.

Component 3 – all other costs

We flagged three supplementary costs for natural gas consumers in Germany: the "*Energiesteuer*" or Gas tax, the "*Konzessionsabgabe*" or Concession fee and the *"CO2 Steuer"* or Carbon tax:

The "*Energiesteuer*" or Natural gas tax, is an energy tax that applies at several rates depending on the consumer. This price of **5.50** EUR/MWh is the standard rate when using natural gas for heating purposes[186], which is applied for our G-RES profile. Regarding our small professional profile, G-PRO, a reduced rate is ranging from **4.12** EUR/MWh to **2.07** EUR/MWh as companies fall under other regimes specified by the law when not using natural gas for heating purposes[187].

1) The "*Konzessionsabgabe*, or Concession fee, exists for electricity and natural gas depending on the municipality size and the contract type of the consumer. As it is impossible to compute a weighted average of the fee, we calculated a non-weighted mean for the four categories of municipalities. Since the natural gas usage has different associated prices, we computed two rates respectively for our two studied profiles:
    - Natural gas only for cooking and for hot water in municipalities **(7.05** EUR/MWh): we attribute this usage to strictly residential consumers (G-RES)[188].
    - Natural gas for other purposes (**3.05** EUR/MWh): we attribute this usage to SME consumers (G-PRO)[189]. Companies, including small and medium-sized enterprises (SMEs), receive reduced rates as specified by law.
2) The "CO2 Steuer" or Carbon tax is an energy tax that is applied to the gas used for heating and transport and it is applicable to all consumers profiles under review. The rate amounts to **9.98** EUR/MWh of gas consumed.

The "*SpeicherUmlage*", or Gas Storage Levy, is a charge implemented in Germany to fund the filling and maintenance of gas storage facilities, ensuring supply security and mitigating price fluctuations. The levy has been introduced in 2022, following the major price rises in natural gas due to Russia's invasion of Ukraine, and is applied to all gas consumers within Germany[190]. As of January 2025, the rate amounts to **2.99** EUR/MWh[191].

Component 4 – VAT

The VAT rate on natural gas in Germany is 19%. This rate was temporarily reduced to 7% from 1st October 2022 until 31 March 2024[192] as a measure to combat inflation.

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186 (Bundesamt für Justiz, 2024)
187 § 54 and § 55 Energiesteuergesetz
188 (Bundesamt für Justiz, 2024)
189 (Bundesamt für Justiz, 2024)
190 (Reuters, 2022) https://www.reuters.com/business/energy/germanys-new-gas-storage-law-how-will-it-work-2022-04-22/
191 (TradingHubEurope, 2025) https://www.tradinghub.eu/en-gb/About-us/Newsroom/News/Details-en-GB/ArtMID/1412/ArticleID/224/Press-Release?utm_source=chatgpt.com
192 (VAT Calc, 2023)

France

Component 1 – commodity price

Only three products are considered for the French market since the HHI of the retail market was 3,562 in 2023, which is the latest available data for France in the 2024 Retail Markets Monitoring Report[193]. These products are the standard product of the market incumbent, the cheapest product on the market and the most affordable product of the market incumbent. As defined by the methodology, the weight of the most inexpensive option equals the annual switching rate and is 15.6%[194] for household consumers.[195] The weights of the products for the G-RES profile are set out in the table below.

Table 64: Profile G-RES weight for each product

Product	Weight G-RES
Standard product of the market incumbent	42.20
Cheapest product on the market	15.60
Cheapest product of the market incumbent	42.20

To extract the commodity price, we have used the price comparison website that the CRE puts forward, http://comparateur-offres.energie-info.fr. In France, consumers are presented with two “all-in tariffs”, one including all taxes (TTC) and one excluding all taxes (HT)[196], which toughens the extraction of the commodity component. Therefore, we present the total cost without all taxes (HT) but with network costs.

Table 65: Annual cost of selected products for profile G-RES in France

Region	Supplier – Product	Fixed component (EUR/year)	Variable price based on consumption (EUR/year)
France	ENGIE - Gaz Adapt 1 AN	252.20	1,327.70
	OHM énergie – Gaz Ultra Eco	219.48	1,150.90
	ENGIE – Gaz Référence 2 Ans	252.22	1,258.00

As mentioned before, six price zones exist in France. However, given that our consumers’ profiles could be randomly dispersed on the territory, the price zone with the most significant number of cities, reflecting, therefore, the majority prices, was used.

Component 2 – network costs

Transport costs

Transmission tariffs have the following components:

1. Transport costs (expressed in EUR/MWh).
2. Storage costs (expressed in EUR/MWh) are charged on final residential consumers to finance the cost of storing natural gas to smoothen the seasonal demand effect.

[193] The 2024 Retail Markets Monitoring Report (CEER, 2024)

[194] Since the 2024 update of the Retail Markets Monitoring Report did not provide an update anymore on the switching rates for natural gas, those of the 2023 report were carried over.

[196] Two types of tariffs are presented: HT (hors taxes), which excludes taxes such as VAT, CTA, and TICGN, and TTC (toutes taxes comprises), which includes all applicable taxes.

Distribution costs

As stated before, 95% of all distributed natural gas in France is delivered by GRDF (Gaz Réseau Distribution France)[197], which is why GRDF is considered as the sole DSO for this study. Given their annual consumption levels, both G-RES and G-PRO are subject to the tariffs T2. The fare has three components:

1. Subscription (expressed in EUR/year).
2. A daily capacity charge (expressed in EUR/MWh/day).
3. A proportional component (expressed in EUR/MWh).

Component 3 – all other costs

In France, two additional surcharges must be considered for residential and small professional consumers:

Table 66: Other costs in France (G-RES, G-PRO)

All other costs		
Name	**Definition**	**Amount in 2025**
Contribution Tarifaire d'Acheminement: **CTA**	The CTA finances part of the pensions of staff in the energy sector for Electricity and Natural gas Industries.	**20.8**% for residential and small professional consumers that are connected to the distribution grid and are due on the fixed component of the network tariffs[198]. _Note:_ *as network tariffs may vary according to the selected price option, the CTA amount may therefore also var.*
Taxe Intérieure de Consommation sur le Gaz Naturel : **TICGN**	The TICGN is a tax that applies to all deliveries of natural gas sent to an end user. Its amount is calculated according to consumption.	The rate of **17.16** EUR/MWh has increased by 5% compared to 2024 (when it doubled compared to 2023)[199].

Component 4 – VAT

A reduced VAT rate of 5.5% applies to the amount of the subscription as well as on the CTA.

The standard 20% VAT rate applies to the amount of consumption as well as on the TICGN.

[197] (Comission de régulation de l'énergie, 2024)
[198] (Le médiateur national de l'énergie, 2024)
[199] (Le médiateur national de l'énergie, 2024)

The Netherlands

Component 1 – commodity price

The HHI-index of the retail market in the Netherlands was 2,031 in 2023, which is the latest available data for The Netherlands in the 2024 Retail Markets Monitoring Report.[200] Therefore, three products are considered: the standard product of the market incumbent, which was the cheapest product of the market incumbent as well, the cheapest offer on the market and one of the cheapest products of the second-largest supplier that has not been considered yet.

The switching rate[201] for households in the Netherlands is 17.20%[202] (G-RES). Furthermore, the normalised market shares of the incumbent and second-largest supplier are 56.25% and 43.75% respectively. This results in the following weights, as shown in Table 67, for each product.

Table 67: Profile weights for each product in the Netherlands

Product	Weight G-RES
Standard product of the market incumbent	46.57%
Cheapest product on the market	17.20%
One of the cheapest product of the second-largest supplier	36.23%
Total	**100.00%**

The products were obtained by consulting a Dutch price comparison website https://www.energieleveranciers.nl/ and energy providers' websites. The products selected for profiles G-RES and their prices are stated in the next tables. These prices include charges and taxes which need to be subtracted to obtain the commodity cost.

Table 68: Annual cost of selected products for profile G-RES in the Netherlands

Region	Supplier – Product	Fixed component (EUR/year)	Variable price based on consumption (EUR/year)
The Netherlands	Vattenfall – 1 Jaar Vast Frank energie Essent – 1 Jaar Vast	79.20 69.42 69.36	1,929.40 1,789.35 1,926.63

The Dutch network is primarily supplied with the low calorific gas (L-gas) in contrast to most of Western Europe (H-gas). As prices in the Netherlands are reported by m³ instead of by kWh, a conversion factor is used. The latter is of 9.77kWh/m³ as all residential and small users, use low caloric natural gas[203].

The commodity price for the G-PRO profile is the January 2025 observed prices for TTF, and the CREG provided all commodity prices data.

[200] The 2024 Retail Markets Monitoring Report (CEER, 2024)

[201] Since the 2024 update of the Retail Markets Monitoring Report did not provide an update anymore on the switching rates for natural gas, those of the 2023 report were carried over.

[202] Since the 2024 update of the Retail Markets Monitoring Report did not provide an update anymore on the switching rates for natural gas, those of the 2023 report were carried over.

[203] (Gasunie Transport Services, 2024), 1 m³ under normal conditions (zero degrees Celsius, 1 atm) is considered to have a calorific value of 35.17 MJ (Groningen-gas equivalent) with a conversion factor of 1 MJ= 0.278 kWh.

Component 2 – network costs

As it is the case for electricity, the Netherlands use a combined tariff including four components:

Table 69: Components of network costs in the Netherlands

Network costs		
Component	**Dutch labelling**	**Explanation**
Standing charge	Vastrecht	Fixed basic fee (expressed in EUR/year).
Capacity charge	Capaciteitstarieven	Fixed fee covering the costs associated with the transport of natural gas. Its height depends on the capacity of the connection (expressed in EUR/Year/m³/h).
Periodical connection tariff	Periodieke aansluitvergoeding	Fixed fee covering the costs for managing the connection (expressed in EUR/year).
Metering charge	Meettarief	Fixed charges are covering the use and management of energy meters (expressed in EUR/year).

As the Dutch distribution tariffs are notably dependent on a capacity charge, which is based on the m³ volume consumption, the same conversion factor, as mentioned above, is used.

Component 3 – all other costs

Only one surcharge remains in the Netherlands for the profiles discussed in this part of the study, namely the Energy Tax ("Regulerende Energie Belasting", or REB).

To keep energy costs affordable, the Dutch government has lowered the energy tax by €0.00485/m³ for the first consumption band starting the 1st of January 2025. This new rate applies to the first 170,000 m³ of natural gas consumed annually[204] The rate for higher consumption bands, however, has increased in 2025 compared to 2024.

The Energy Tax (REB) varies, in a degressive trend, according to the amount of consumed gas as shown in the table below:

Table 70: Gas Energy Tax and ODE bands (Netherlands, 2024)[205]

Band	Consumption (in m³)	Energy Tax (EUR/m³ – VAT excl.)
1	Up to 170,000	**0.57816**
2	170,001 – 1,000,000	**0.31573**
3	1,000,001 - 10,000,000	**0.20347**
4	> 10,000,000 (professional)	**0.05385**

As the Energy Tax is fixed in EUR per volume units (EUR/m³) and not in EUR per energy unit, the calorific value of the used natural gas has an impact on the total amount paid. As stated under "Component 1 – commodity price" of the Netherlands, low caloric natural gas is used, except in around 80 industrial companies, the assumption is made that the profiles G-RES and G-PRO use low caloric natural gas. To determine our profiles' tax categories, we use the same conversion factor of 9.77kWh/m³ mentioned previously.

Given the consumption level of our profiles understudy, G-RES profile falls into band 1 and G-PRO profile can be spread across band 1 and band 2.

Component 4 – VAT

VAT on the consumption of natural gas in the Netherlands amounts to 21% for residential consumers.

[204] https://ondernemersplein.kvk.nl/energiebelasting-op-aardgas-in-2025-omlaag/

[205] ibid

The UK

Component 1 – commodity price

In the UK gas suppliers generally present all-in prices that are not transparent. These prices consist of:

- The Standing Charge (fixed element), which is expressed in p/day and that covers the fixed costs of the energy supplier and;
- Unit Rate Charge (variable element), which is expressed in p/kWh and that varies according to the energy consumption.

Since we only want the commodity price in this section, we had to deduct network charges, taxes and VAT from these 'all-in prices'. Commodity prices of a supplier are not very different between regions, and for the sake of simplicity, the commodity price of only one region is used for all 9 DSO regions. An Ofgem study from 2015[206] analysed the costs throughout the different areas, and out of this study, Yorkshire appeared to be the median zone in terms of commodity price. For this reason, the selected products come from the Yorkshire region. The network cost, VAT and taxes are deducted from the all-in prices of the Yorkshire region. Like other countries in review, the weighted average of network prices for all DSOs are used to determine the network cost.

The HHI-index of the retail market in the UK was 1,739 in 2023, which is the latest available data for The UK in the 2024 Retail Markets Monitoring Report.[207]. This means that four products should be considered: the standard product of the market incumbent, the cheapest product on the market, the cheapest product of the market incumbent and the cheapest product of the second-largest supplier. The energy providers' websites were directly consulted to retrieve the necessary information. Since the first three products, the standard product of market incumbent, cheapest product on the market, and cheapest product of the market incumbent resulted in the same product, we retrieved two additional products. These two products are one of the cheapest products of the market incumbent and one of the cheapest products of the second-largest supplier.

The switching rate for households in the UK is 2.39%[208]. Furthermore, the normalised market share of the incumbent and second-largest supplier on the market amount for 55.47% and 45.53%, respectively.

Table 71: Weight for each product in the UK

Product	Weight G-RES
Standard product of the market incumbent	26.59%
Cheapest product of the second-largest supplier	2.39%
One of the cheapest product of the market incumbent	26.59%
One of the cheapest product of the second-largest supplier	44.44%

An overview of the products and their respective pricing elements are presented in the table below.

Table 72: Annual cost of selected products for profile G-RES in the UK

Region	Supplier – Product	Fixed component (GBP/year)	Variable component (GBP/year)
The UK	British Gas – Standard Fixed Tariff	110.12	981.08
	Octopus Energy – Octopus 14M Fixed	103.17	995.71
	Octopus Energy – FlexibleOctopus	103.17	1,023.24
	British Gas – Long Fix v18	96.97	1,004.88

The commodity price of the G-PRO profile was provided by the CREG while the national commodity price is the result of January 2025 prices.

[206] (Ofgem, 2015)
[207] The 2024 Retail Markets Monitoring Report (CEER, 2024)
[208] Since the 2024 update of the Retail Markets Monitoring Report did not provide an update anymore on the switching rates for natural gas, those of the 2023 report were carried over.

Component 2 – network costs

Transport costs

Only one TSO, excluding the Northern Islands, operates in the UK: National Grid Gas. The Gas Transmission Transportation Charges are comprised of the following components:

Table 73: Transport costs components in the UK

Network costs (transport)	
Component	**Explanation**
Entry Commodity Charge	A charge per unit of natural gas transported payable for flow entering the system in p/kWh/day
Exit Commodity Charge	A charge per unit of natural gas transported payable for flow exiting the system in p/kWh/day
Commodity charge	A charge per unit of natural gas transported payable for flows entering and exiting the system in p/kWh
Compression Charge	A charge per unit of natural gas transported payable because of the need for additional compression in p/kWh.

National Grid Gas provides a weighted average of the entry and exit capacity tariffs in their Statement of Gas Transmission Transportation Charges[209].

Distribution costs

Both of our residential and small professional profiles (G-RES and G-PRO) must pay distribution tariffs since they are connected to the distribution grid. There are nine natural gas DSOs in the UK, out of which 4 are run by Cadent Gas. The distribution tariff for natural gas is composed of the following components:

Table 74: Distribution costs for residential users and small professionals in the UK

Network costs (distribution)		
Component	**Explanation**	**Profile(s)**
LDZ System Capacity Charge	With charge band for consumption up to 73,200 kWh, calculated using the supply point End User Category (EUC) and the appropriate load factor in p/kWh.	G-RES
	With charge band between 73,200 and 732,000 kWh, calculated using the supply point End User Category (EUC) and the appropriate load factor in p/kWh.	G-PRO
LDZ System Commodity Charge	With charge band for consumption up to 73,200 kWh, calculated using the supply point End User Category (EUC) and the appropriate load factor in p/kWh.	G-RES
	With charge band between 73,200 and 732,000 kWh, calculated using the supply point End User Category (EUC) and the appropriate load factor in p/kWh.	G-PRO
LDZ Customer Capacity Charge	With charge band for consumption up to 73,200 kWh, it is a capacity charge in p/Peak day kWh/day.	G-RES
	With charge band between 73,200 and 732,000 kWh, a fixed charge which depends on the frequency of meter reading, plus a capacity charge based on the registered SOQ.	G-PRO
LDZ Customer Fixed Charges	Only due for supply points with annual consumption between 73,200 and 732,000 kWh/year	G-PRO
Exit Capacity Charges	Capacity charge applied to the supply point like LDZ System Capacity Charge. These charges are applied per exit zone on an administered on peak day basis in GBP/year.	G-RES; G-PRO
Metering charges	Cost for use and management of your energy meter in GBP/year.	G-RES; G-PRO

[209] We have used the weighted averages published in the Gas Transmission Transportation Charges of the NGG valid as from the 1st of October 2024, (National Gas Transmission, 2024)

The capacity terms are based on the estimated maximum daily offtake. This is calculated by dividing the total consumption in a year by the number of days of consumption multiplied by the load factor. This load factor is related to the EUC (End User Category) bands. Each local distribution zone has 33 individual EUC bands that define 9 different consumption profiles based on annual consumption.

The load factors differ depending on the annual consumption of a profile and the local distribution zone. Each DSO has its own load factor percentages, but only Northern Gas Networks discloses its load factors, which we used as a proxy for all other DSOs. The table below depicts the load factors used for profiles G-RES and G-PRO:

Table 75: Load factors for profiles G-RES and G-PRO

Profile	Bands	Threshold (kWh)	Average load factor
G-RES	1	1 – 73,200	33.50%
G-PRO	2	293,001 – 732,000	37.00%

Based on this, the capacity term is computed as follows:

$$annual\ charge = (SOQ * 365\ days) * unit\ rate$$

Where,

$$SOQ = annual\ consumption/(365\ days * Load\ Factor)$$

We considered a weighted average of these components across four active DSOs for natural gas in the UK.

Component 3 – all other costs

One additional cost is applicable on natural gas in the UK:

- Energy suppliers need to account for the cost of the Energy Company Obligation (ECO) scheme, which helps to reduce carbon emissions and tackle energy poverty. This ECO scheme has seen 4 iterations, ECO, ECO1, ECO2, ECO3 and ECO4 […]. The ECO4 Order came into force in July 2022. ECO4 applies to measures installed from 1 April 2022 and will cover a four-year period until 31 March 2026. The cost of the ECO scheme represents around **4.08**% of the natural gas invoice based on data from November 2024[210].

- The **Climate Change Levy** (CCL) is applicable to the consumption of electricity and natural gas for businesses in the industrial, public services, commercial and agricultural sectors. This levy is "an environmental tax charged on the energy that businesses use. It's designed to encourage businesses to be more energy efficient in how they operate, as well as helping to reduce their overall emissions"[211]

The following table gives an overview of the rates that are charged to professional consumers regardless of their profile (Residential consumers are exempted from it[212]):

Table 76: Climate Change Levy rates on natural gas[213]

Time period	Natural gas rate (GBP/MWh)
1st April 2024 to 31st March 2025	**7.75**
1st April 2023 to 31st March 2024	**6.72**

[210] (Nesta, 2024) https://www.nesta.org.uk/report/whats-in-an-energy-bill/policy-costs/#content
[211] (SEFE, 2024)
[212] (GOV.UK, 2022)
[213] ibid

*Note: An energy price cap is in place in the UK, which set a maximum price cap that energy providers can charge consumers for each kWh used. This cap considers all costs components (commodity costs, network costs, policy costs, supplier operating costs and VAT). The per unit level for a gas consumer in January 2024 was 0.0742 GBP/kWh with a standing charge of 0.296 GBP/day, assuming Direct Debit as payment method[214]. In January 2025, the per unit level accounts for **0.0634** GBP/kWh) with a standing charge of **0.3165** GBP/day[215], .*

Component 4 – VAT

VAT on the consumption of natural gas in Great Britain amounts to 5% for residential consumers.

[214] This is the most common payment method in the UK (Campion, 2024)
[215] (OFGEM, 2024)

5. Large industrial consumers

5. Large industrial consumers

This chapter aims at providing an extensive introduction to the prices, price components and the assumptions taken for each country and region with a particular focus on industrial consumers of electricity (E0 to E4) and natural gas (G0 to G2).

Electricity

Electricity: Detailed description of the prices, price components and assumptions

For all countries under review, this section details:

Commodity costs for profiles E0, E1, E2, E3 and E4

Network costs for profiles E0, E1, E2, E3 and E4

All other costs for profiles E0, E1, E2, E3 and E4

Profile	Consumption (MWh)	Connection capacity (kVA)
E0	2,000	938
E1	10,000	5,500
E2	25,000	6,944
E3	100,000	18,056
E4	500,000	86,806

Belgium

Component 1 – commodity price

Commodity prices computation rests on market prices and reflect the cost of electricity for industrial consumers as of January 2025. The equations are based on an analysis performed by the Belgian federal regulator of the electricity supply contracts of Belgian consumers with a yearly consumption higher than 10 GWh. For E0, E1 and E2, CREG did not include weekend hours of Belpex DAM, while for E3 and E4 CREG included weekdays and weekend hours.

$$\textit{Commodity price} = 36.5\%\, CAL\,Y_{-1} + 27.4\%\, CAL\,Y_{-2} + 21.4\%\, CAL\,Y_{-3} + 8.2\%\, Qi_{-1} + 4.2\%\, Mi_{-1} + 2.3\%\, Belpex\ DAM$$

Where:

	Explanation
CAL Y_{-1}	Average year ahead forward price in 2024
CAL Y_{-2}	Average two years ahead forward price in 2023
CAL Y_{-3}	Average three years ahead forward price in 2022
Qi_{-1}	Average quarter ahead forward price in the fourth quarter of 2024
Mi_{-1}	Average month ahead forward price in December 2024

Component 2 – network costs

Transmission cost

Whether connected to the transmission grid 30-70 kV (Local Transmission System) – profile E2 - or to the transmission network itself – profiles E3 and E4 -, the same transmission tariff structure applies to all our industrial profiles under review in this study. However, in the function of the voltage connection, different rates apply.

The transmission costs in Belgium are fixed by Elia Transmission Belgium and consists of five components:

Connection tariffs: charges to operate and maintain the user connection for consumers directly connected to Elia's grid (from E2).[216]

(1) **Tariffs for the operation and the development of the grid infrastructure**: including (i) the tariff for the monthly peak for the offtake, (ii) the tariff for the yearly peak for the offtake and (iii) the power put at disposal.

(2) **Tariffs for the operation of the electric system**: including (i) the tariff for the management of the electric system and (ii) tariffs for the offtake of additional reactive energy (not considered).

(3) **Tariffs for the compensation of imbalances**: including (i) the tariff for the power reserves and black-start and (ii) the tariff for the maintenance and restoring of the residual balance of the individual access responsible parties. The latter includes (a) imbalance tariffs, which are not considered as they are (generally) not explicitly billed by the TSO or by suppliers to end consumers and (b) network losses. Network losses on the federal transmission grid (380/220/150 kV) are a separate and additional component of transmission tariffs. Suppliers usually bill these costs as a percentage (fixed every year by the TSO) of the commodity cost. While the costs associated with network losses is not a transmission tariff as such, it is deemed a part of the transmission cost in this study. This rate dropped from 1.95% to 1.75% between 2024 and 2025 on the federal electricity network operated by the TSO in Belgium.

(4) **Tariffs for market integration**: Elia Transmission Belgium provides services such as development and integration of an effective and efficient electricity market, operation of interconnections, coordination with neighbouring countries and the European authorities and publication of data as required by transparency obligations. The costs that come from these services are covered by the market integration tariff.

Between 2024 and 2025, the transport tariffs approved by the CREG have almost doubled, depending on the type of connection[217].

It has to be noted that as from the 1st of January 2025, Flanders shows a different picture with the transmission costs being integrated in several distribution network tariffs. All regional PSOs, taxes and levies that are passed on from the transmission system operator to the distribution system operators are divided into 3 tariff components, integrated in either the "tariffs for grid usage", "tariffs related to regional PSOs" and "tariffs related to surcharges". Shares of these tariffs attributed to the transmission are different for each DSO and for each of these 3 tariffs. The allocation differs for each of the 8 zones (each one representing a different territorial entity or DSO), and for the different consumption profiles, with different distribution/transmission ratios. As such, a weighted average (by DSO market share and share of transmission in the tariff) is calculated and used. In Flanders, there are no more explicit transmission tariffs for distribution network users. They are integrated in the budget for the calculation of the distribution tariffs.

As of the 1st of January 2025, Brussels DSO's tariffs have been revised for the 2025 – 2029 period. For practical reasons, the "Transmission Tariff" tariff component, which until now was presented in a separate sheet, has been integrated into the distribution network tariff sheet. The aim of this change is to make it easier to understand the costs borne by end-users. This is not the introduction of a new tariff per se, but rather a new presentation of existing costs associated with the use of the electricity transmission network, mainly managed by Elia.

[216] This cost depends on the distance between the connection bay and the consumer. We have taken the assumption that this is 500 meters.

[217] (Elia, 2023)

Table 77: Adoption date of new tariffs by regional DSOs in Belgium (large indus. consumers)

Name of the regulator	Effective date
BRUGEL	1st of January 2025
VNR	1st of January 2025
CWaPE	1st of January 2025

Distribution costs

For industrial consumers, 2 profiles (namely E0 and E1) are connected to the distribution grid. Consequently, they are also subject to distribution tariffs, which must be added to the transmission tariffs. Voltage level networks have been determined to both industrial profiles connected to the distribution grid as illustrated below:

Table 78: Voltage level for industrial profiles in Belgium

Profiles	Brussels	Flanders	Wallonia
E0	1 – 26 kV	1 – 26 kV net	MT avec mesure de pointe
E1	Trans MT	26 – 36 kV post	T-MT avec mesure de pointe

Distribution tariffs from all regions have one similar component: tariff for the use of the distribution grid. For both E0 and E1, such component is decomposed as follows:

Table 79: Tariff for the usage of the distribution grid in Belgium

Brussels	Flanders	Wallonia
Capacity term (EUR/kW)	Capacity term (EUR/kW and EUR/kVA)	Capacity term (EUR/kW)
Proportional term (EUR/kWh)	-	Proportional term (EUR/kWh)
Fixed term (EUR/Year)	-	Fixed term (EUR/Year)

Brussels assesses its capacity term based on consumers' annual peak, Wallonia considers the annual and monthly peaks. The former is considered as the peak over the last 11 months before the invoicing month and make up for 75% of the component while monthly peak, the remaining 25%, is determined as the peak of the invoicing month.

As from the 1st of January 2025, Flanders shows a different picture as the transmission costs are integrated in several distribution network tariffs. All regional PSOs, taxes and levies that are passed on from the transmission system operator to the distribution system operators are divided into 3 tariff components, integrated in either the "tariffs for grid usage", "tariffs related to regional PSOs" and "tariffs related to surcharges ". Shares of these tariffs attributed to the transmission are different for each DSO and for each of these 3 tariffs. The allocation differs for each of the 8 zones (each one representing a different territorial entity or DSO), and for the different consumption profiles, with different distribution/transmission ratios. As such, a weighted average (by DSO market share and share of transmission in the tariff) is calculated and used. In Flanders, there are no more explicit transmission tariffs for distribution network users. They are integrated in the budget for the calculation of the distribution tariffs.

Additional components are part of distribution tariffs, as described in the following table:

Table 80: Additional components for Belgian industrial consumers

Brussels	Flanders	Wallonia[218]
Metering costs	Tariff of data management[219]	Regulatory balances

As tariffs differ from region to region and from DSO to DSO, a weighted average is computed. Each DSO's weights are determined according to the number of EAN connections220 owned by each DSO. While we consider all DSOs using Fluvius System Operator cv for their operations in Flanders, accounting to 100% of EAN connections, we also consider all DSOs from Wallonia (100% of EAN connections).

Component 3 – all other costs

In Belgium, three different kinds of extra costs apply to electricity: (1) tariffs for Public Service Obligations (PSO), (2) taxes and levies, (3) certificate schemes and other indirect costs. These costs are summarised below with a distinction between common costs to all three Belgian regions and the one's specific per region. It is to be noted that federal charges are levied by the suppliers, and regional charges are levied by regional DSOs (except for certificate schemes and the contribution to the energy fund which are regional but carried by the access holders).

The table below exhibits the first impact caused by regional service obligations because of the grid connection levels. The regions can enforce public service obligations on grid operators running below or equal to 70 kV on their territory (repercussions on profiles E-RES to E2).

Table 81: Overview of voltage distribution to Belgian system operators

Voltage level	Operator in charge	Operator in Belgium
x < 30 kV	Distribution System Operator (DSO)	Several
30 kV < x < 70 kV	Local Transmission System operator (LTSO)	Elia Transmission Belgium in the 3 regions
x > 70 kV	Transmission System Operator (TSO)	Elia Transmission Belgium (federal)

Certificate schemes represent the second regional impact within Belgium that results from the local competence regarding renewable energy obligations matter on their territory. Flanders, Wallonia, and Brussels institute their specific green certificate scheme on all electricity consumers within the affected region (all profiles under review). In addition to assessing Belgium over the three regions, we consider different hypotheses: the consumer profiles E1 to E4 take part in an energy efficiency agreement, and all industrial profiles are affiliated with the sectoral NACE-BEL classification codes 5-33 (all industries).

[218] Charges for metering activities in Wallonia are built in tariffs for the use of the distribution grid.

[219] In 2019, the Flemish regulator conferred Fluvius System Operator cv the role of data manager with a view to the roll-out of the digital meter, among other things. The activities to be performed by the data manager concern data recorded by all types of meters, digital meters and analogue meters. As from 2025, there is no longer a distinction between the SMR1 and SMR3 regime in the tariff of data management in Flanders.

[220] EAN (European Article Numbering) is a unique code attributed to meters and which indicates a supply point for electricity or natural gas.

Tariff rates are mentioned when they do not vary depending on the consumer profile and/or the DSO; otherwise, units in which they are expressed are detailed:

Table 82: Other costs for industrial electricity consumers applying in all three Belgian regions

All regions	Profiles
Regional Public Service Obligations (Regional PSOs)	
Regional PSOs on distribution[221]	
A general tariff for regional PSOs (expressed in EUR/MWh)	E0 E1
Taxes and levies on the federal level	
Special excise duty (EUR/MWh)	All

The table below shows the tax rates applied as of 2023 at the Federal level in Belgium for all commercial profiles. As from April 2023, structural measures of VAT reduction (as explained in the previous chapter) and adapted excise duty apply.

Table 83: Special excise duty in Belgium for Electrical commercial consumers – standard rate

Yearly consumption	Tax for professional profiles (EUR/MWh)
Consumption up to 20 MWh	**14.21**
Consumption between 20 – 50 MWh	**12.09**
Consumption between 50 – 1,000 MWh	**11.39**
Consumption between 1,000 – 25,000 MWh	**10.69**
Consumption between 25,000 – 100,000 MWh	**2.73**
Consumption above 100,000 MWh	**0.50**

[221] For each region of Belgium, we compute the tariff through a weighted average of each component across all DSO active in the region (weights are given in terms of number of EAN connection per DSO).

Table 84: Regional other costs for industrial electricity consumers (EUR/MWh)[222]

Brussels	Flanders	Wallonia	Profiles
Regional Public Service Obligations (Regional PSOs)			
Regional PSOs on transmission			
NA	Share of distribution costs in the tariffs related to the regional PSOs (**4.63**)	NA	E0 E1
	Share of transmission costs in the tariffs related to the regional PSOs (**0.09**)		
	Financing of support measures for renewable energy and cogeneration[223] (**0.3452**)	Funding of support measures for renewable energy[224] (**3.4476**)	E0 E1 E2
	Financing measures for the promotion of rational energy use[225] (**0.0121**)	NA	
Taxes and levies at regional level			
Regional taxes and levies on distribution			
Charges of pensions (**0.274**)	Share of distribution costs in the tariffs related to grid usage (**15.17**)	Levy for occupying road network (**2.71 – 3.38**)	E0 E1
Corporate income tax and other taxes (**1.217**)	Share of distribution costs in the tariffs related to surcharges[226] (**0.14**)	Corporate income tax (**1.14 – 2.82**)	
Levy for occupying road network (**4.284**)	NA	Other local, provincial, regional, and federal taxes, charges, surcharges, fees, and contributions (**0.00 – 0.55**)	
Tariff related to the regional PSOs (**1.15** EUR/KVa)		NA	
NA	Contribution for the energy fund[227] (**188.35 – 1,098.73** EUR/month)	NA	All
Regional taxes and levies on transmission			
NA	Share of transmission costs in the tariffs related to surcharges (**0.14**)	NA	E0 E1
	Share of transmission costs related to the tariffs for grid usage (**18.24**)[228]		
Levy for occupying road network (**4.2636**)	Levy for taxes on pylons and trenches (**0.4669**)[229]	NA	E2 E3 E4
NA	NA	Levy for the use of the public domain (**0.3414**)	E0 E1 E2
NA	NA	Connection fee (**0.075** EUR for the first 0.1MWh; **0.75** EUR/MWh above 0.1 MWh)	All

[222] The tariffs represented in this table vary depending on the DSO and we have thus chosen to only present the minimum and maximum range of the tariff from the largest (or only) DSO of the region. Sibelga for Brussels, Imewo for Flanders and ORES Hainaut for Wallonia.

[223] For E0 and E1, this component is integrated in the share of the 3 tariffs components of the distribution tariffs.

[224] In Wallonia a partial exemption of 85% applies for holders of a sectoral energy efficiency agreement, meaning that the E-BSME, E0 and E1 profiles can profit from this reduction.

[225] For E0 and E1, this component is integrated in the share of the 3 tariffs components of the distribution tariffs.

[226] The distribution tariff sheets from the DSOs do not include more levels of details regarding the surcharges.

[227] (Vlaamse Overheid, 2025)

[228] All regional PSOs, taxes and levies that are passed on from the transmission system operator to the distribution system operators are divided into 3 tariff components, integrated in either the “tariffs for grid usage”, “tariffs related to regional PSOs” and “tariffs related to surcharges“ in Flanders since the 1st of January 2025.

[229] (Elia, 2025). Only for E2, E3 and E4. For E0 and E1, this component is integrated in the share of the 3 tariffs components of the distribution tariffs.

According to Art. 429§ 1er of the law from 27th December 2004[230] an exemption is foreseen when electricity and gas are not used only for heating and transport, but also for metallurgic or chemical industrial procedures. For the sake of this report, we assumed that profiles E1 to E4 could potentially benefit from this exemption, if they fall within the conditions specified by the law.

Because of the regional quota for green certificates (all regions) and combined heat/power-certificates (only Flanders), there are some indirect costs that are added on the commodity price. The average market price of the certificates over the last 12 months, which means for 2025 from 1st of January 2024 until 31st of December 2024, is considered to estimate the cost of this mechanism. The average values for each region considered are presented in the table below and are based on figures retrieved from the respective regional regulators. To estimate the cost of this mechanism, we also consider the quotas and some associated reductions.

[230] (Chancellerie du Premier Ministre, n.d.)

Table 85: Certificate schemes in each Belgian region

Region		Price & Description
Average price of certificate schemes		
Flanders		**96.89** EUR/Green Certificate[231]
Wallonia		**66.97** EUR/ Green Certificate [232]
Brussels		**83.08** EUR/ Green Certificate [233]
Flanders		**24.94** EUR/Combined Heat and Power Certificate[234]
Certificate schemes		
Brussels	Green certificates	The quota increases every year. As opposed to Flanders and Wallonia, no reduction applies for large industrial consumers in Brussels.
Flanders [235]	Green certificates	Since the introduction of the green certificates, the quota has increased yearly (except in 2018). Between 2019 and 2023, there was no quota change. There was a first reduction of the quota in 2024. In 2025 it is followed by a larger reduction, after which it will remain constant until 2028. Thereafter, it will decrease yearly until 2031[236]. Flanders also applies progressive quota reductions for large consumers. Part of these reductions are only applicable to large consumers active in certain electro intensive sectors. Starting from 2023, Flanders applies quota reductions for stand-alone battery systems.
	Combined heat/power certificates	Flanders is the only region that also has these certificates. As seen with the green certificates, the quota also increased every year from introduction to 2016 but remained steady until 2024, after which the quota increased to a fixed level until 2031[237]. Similar to the GC there are also progressive quota reductions for large consumers, partly limited to large consumers active in certain electro intensive sectors[238]. Starting from 2023, Flanders also applies quota reductions for stand-alone battery systems.
	Cap on GC and CHPC	As of 2019 two caps on green certificates were introduced for certain industrial consumers. Since 2021 these have been replaced by a cap combining GC and CHPC. The following rules apply since the 1st of December 2023 [239] i. The amount due for the costs related to the financing of renewable energy and qualitative combined heat and power is capped at 0.5% of gross value added (average last 3 years) where the company is part of a sector at significant risk of delocalisation (list of NACE codes in “Deel 1” of Annex IV/1 of the Energiebesluit); ii. The amount due for costs related to the financing of renewable energy and qualitative combined heat and power is capped at 1% of gross value added (average last 3 years) where the company is part of a sector at significant risk of delocalisation (list of NACE codes in “Deel 1” of Annex IV/1 of the Energiebesluit). iii. The amount of the contribution must never be less than an amount corresponding to a levy of 0.5 EUR/MWh in respect of the costs arising from financial support for renewable energy and cogeneration that would be payable by the company concerned at company or establishment level.
Wallonia	Green certificates	The quota has increased every year. Progressive quota reductions apply to large consumers, reinforced by the new regional decree that entered into force on July 1st, 2014. These reductions apply for consumers that have contracted a sectoral agreement, and we consider that these reductions only apply from consumer profile BSME.
Computation		
The cost of the GC and CHPC scheme is easily computed by multiplying the average yearly consumption by the average market price of the certificates weighted by the quota. The quota and GC (and CHPC) cost depend on the region. Wallonia and Flanders also have a reduction on quota that must be considered for GC (and CHPC).		

[231] (VNR, 2025)
[232] (SPW Aménagement du Territoire, 2025)
[233] (Brugel, 2025)
[234] (VNR, 2025)
[235] The years indicated are the years in which the certificates have to be handed in. The obligations are based on the electricity offtake in the previous year.
[236] (VNR, 2024) (Vlaanderen, 2009)
[237] Art. 7.1.11 § 2 Energiedecreet
[238] (Elia, 2018)
[239] Art. 7.1.11/1 Energiedecreet; The companies listed in Annexe 3 and 5 of EEAG correspond to the companies listed in the Energiedecreet except for Nace 3832 (Recycling of waste) which is listed in Annexe 3 EEAG but not in the Energiedecreet.

Germany

Component 1 – commodity price

Commodity prices computation rests on market prices and describes the cost of electricity for industrial consumers as of January 2025. The equations are based on an analysis performed by the Belgian federal regulator of the electricity supply contracts of Belgian consumers with a yearly consumption higher than 10 GWh. The EEX Futures and EPEX DAM prices are the national indexes employed in the computation. For profiles E0, E1 and E2, we use all hours apart from weekends of EPEX SPOT DE DAM, while for profile E3 and E4, we utilise all hours of EPEX SPOT DE DAM.

Commodity price

$$= 36.5\%\, CAL\ Y_{-1} + 27.4\%\, CAL\ Y_{-2} + 21.4\%\, CAL\ Y_{-3} + 8.2\%\, Qi_{-1} + 4.2\%\, Mi_{-1} + 2.3\%\, EPEX\ Spot\ DE$$

Where:

	Explanation
CAL Y_{-1}	Average year ahead forward price in 2024
CAL Y_{-2}	Average two year ahead forward price in 2023
CAL Y_{-3}	Average three year ahead forward price in 2022
Qi_{-1}	Average quarter ahead forward price in the fourth quarter of 2024
Mi_{-1}	Average month ahead forward price in December 2024

Component 2 – network costs

The four German TSOs exclusively operate on the (extra-) high voltage grid and all lower voltage levels are operated by DSOs (often up to 110 kV).

Our profiles are connected to different voltage levels, and different tariffs thus apply. The profiles are associated with the appropriate voltage level in the following table:

Table 86: Connection voltage for each consumer profile

<table>
<tr><th>Connection voltage (U_n)</th><th>Voltage profile</th><th>Consumer profile</th><th>Grid operator</th></tr>
<tr><td rowspan="3">1 kV ≤ Un ≤ 50 kV</td><td rowspan="3">Medium voltage</td><td>E0</td><td rowspan="5">DSO</td></tr>
<tr><td>E1</td></tr>
<tr><td rowspan="2">E2</td></tr>
<tr><td rowspan="2">Un = 110 kV</td><td rowspan="2">High voltage</td></tr>
<tr><td rowspan="2">E3</td></tr>
<tr><td rowspan="2">220 kV < Un ≤ 350 kV</td><td rowspan="2">Extra-High voltage</td><td rowspan="2">TSO</td></tr>
<tr><td>E4</td></tr>
</table>

German prices are disclosed as integrated tariffs both for transmission and distribution, thereby offering less view on the bill components. As described in the dataset, all four transmission zones are represented, but since Germany counts more than 800 DSOs[240], a weighted average of two DSOs (one rural and one urban) per zone is presented.

240 (Statista, 2023)

Transmission cost

Like Belgium, the German integrated transmission fees involve three main components:

Table 87: Components of German transmission costs

Transmission costs		
Component	**German label**	**Explanation**
Capacity charge	Leistungspreis	Depends upon the maximum capacity in kW contracted, expressed in EUR/year.
Proportional charge	Arbeitspreis	Depends upon the volume of energy consumed in kWh per year, expressed in cEUR/kWh/year.
Metering costs	Messstellenbetrieb	Charges related to the cost of metering and invoicing; fixed prices expressed in EUR/year.

Since it is assumed that load profiles do not exceed their contracted capacity, no other fees such as capacity excess fees are considered.

In 2024, the transmission tariffs have steeply increased in Germany due to the Government's planned subsidies for the grid fees not being approved by the Federal Constitutional Court: as a result the transmission tariffs have more than doubled between 2023 and 2024[241]. In 2025, transport tariffs have decreased slightly for consumers connected to the transmission grid (E3 and E4) by 6.2% and 5.8% respectively. It has relatively stabilised for the other industrial profiles.

When annual consumption exceeds 10 GWh, important transmission network costs reductions can apply on large industrial consumers. Users with a very abnormal load profile (case by case)[242] get a reduction of max. 90%. Moreover, users who exceed 7,000 consumption hours[243] a year, benefit from reductions, as shown in the table below:

Table 88: Grid fee reduction conditions

Annual consumption	Annual offtake hours	Grid fee reduction
> 10 GWh	≥ 7,000 hours	- 80%
> 10 GWh	≥ 7,500 hours	- 85%
> 10 GWh	≥ 8,000 hours	- 90%

These reductions apply to profiles E3 and E4. We assumed that Profile E3 has a profile of 7,692 hours and pays consequently, only 15% of the grid fee, while this is only 10% for profile E4 (8,000 consumption hours). The costs can be allocated pro-rata to final consumers as a surcharge on network charges. Other profiles do not qualify for the following reasons:

- Profile E-BSME and E0 do not consume 10 GWh in addition to reaching fewer offtake hours, respectively 1,600 hours and 4,000 hours.
- Profile E1 and E2 do consume 10 GWh or more, but their offtake hours are lower (5,000 hours).

Distribution costs

Distribution costs follow an identical pricing methodology as for the transmission grid with similar terminology. Tariffs are also composed of three elements: capacity charge (i.e. "Leistungspreis"), consumption charge (i.e. "Arbeitspreis") and the metering costs ("Messstellenbetrieb"). The tariffs may differ on price or range of maximum capacity contracted and electricity consumed.

[241] (Netztransparenz, s.d.)
[242] (Bundesamt für Justiz, 2024)
[243] See definition in section 0. Consumer profiles.

Component 3 – all other costs

When it comes to German taxes and levies, the case is somewhat more complicated with many exemptions, progressive reductions, and various rates. As stated in the section "3.1 General assumptions", we expect the consumer to behave in an economically rational manner aiming at the lowest tax rate. Whenever the application of reductions or exemptions depends on economic criteria, not under the full control of the user (energy cost/turnover, energy cost/gross value added, pension payments etc.), we present a range of possible options.

We counted six taxes or surcharges that apply on electricity in Germany:

1. The "*KWKG-Umlage*" – Kraft-Wärme-Kopplungsgesetz or Combined Heat and Power Act – is a tax contributing to CHP-plant subsidies. The present forecast data of DSOs and the Federal office for Economic Affairs and Export - Bundesamt für Wirtschaft und Ausfuhrkontrolle shorten by BAFA – represent the backbone of the computations. There is a specific rate for consumers under certain conditions, below detailed. This applies to all profiles from E0 to E4.

Table 89: KWKG-Umlage tax in Germany[244]

Category	Consumer group	Rates (EUR/MWh)
Category A	All other consumers	**2.77**[245]
Category B	If consumption > 1 GWh / year and electricity cost is: • For an extensive list of industrial sectors (annexe 3 of EEAG)[246]: >17% of gross value added [247]	**0,4155** (85% reduction) capped[248] at 0.5% of gross value added (average last three years) for all consumers with electricity cost >20% of gross value added
	If consumption > 1 GWh / year and electricity cost is: • For a less extensive list of industrial sectors (annexe 5 of EEAG): >20% of gross value added	**0,4155** (85% reduction) but capped at 4.0% of gross value added (average last three years) for all consumers with electricity cost
Category C	If consumption > 1 GWh / year and electricity cost is: • For an extensive list of industrial sectors (annexe 3 of EEAG)[249]: between 14 and 17% of gross value added (avg. last three years)	**0.554** (80% reduction) capped[250] at 0.5% of gross value added (average last three years) for all consumers with electricity cost >20% of gross value added
		0.554 (80% reduction) capped[251] at 4.0% of gross value added (average last three years) for all consumers with electricity cost

A **bottom rate of 0.30 EUR/MWh** exists that can benefit some consumers from category B and C. The KWKG bottom rate applied for taxes does not vary depending on the activity sector of the consumer. Regarding our reviewed profiles (E0 to E4), we display a range from the bottom rate to the category C rate for electro intensive consumers. As for non-electro intensive consumers, we consider a maximum price based on category A rates.

[244] (Bundesnetzagentur, 2025)

[245] (Netztransparenz, 2025)

[246] (European Commission, 2014)(European Commission, 2014)

[247] The notion of gross value added is defined in Annexe 4 of the Environmental and Energy State Aide Guidelines, Communication C200/50 of the European Commission. (European Commission, 2014)

[248] However, these caps are only applicable if the consumer is part of an energy efficiency system improvement program.

[249] (European Commission, 2014)(European Commission, 2014)

[250] However, these caps are only applicable if the consumer is part of an energy efficiency system improvement program.

[251] However, these caps are only applicable if the consumer is part of an energy efficiency system improvement program.

2. The "StromNEV", or Electricity Network Charges Ordinance, based on the regulation of charges for access to electricity networks § 19, is a digressive levy to compensate for §19 transmission tariff reductions. Again, different rates apply to the respective following categories:

Table 90: StromNEV tax in Germany[252]

Band	Electricity offtake	Rates (EUR/MWh)
Band A	Offtake ≤ 1 GWh/year	**15.58**
Band B	Offtake > 1 GWh /year	**0.50**
Band C	Offtake > 1 GWh/year and manufacturing industry with electricity cost > 4% of turnover	**0.25**

For all profiles understudy, we display two possibilities: the consumer can benefit from the Band C rate for his offtake above 1 GWh with the bottom range. Or, he does not qualify for the given conditions in which case Band B rate applies for his offtake above 1 GWh and Band A applied for offtakes up to 1 GWh.

3. The "Offshore-Netzumlage", or Offshore Network Levy, is a levy to pay for offshore wind power generation units. Several rates apply depending on the band they fall into which depends on the total electricity offtake in a similar way we have seen for the KWKG/CHP surcharge.

Table 91: Offshore-Netzumlage tax in Germany[253]

Category	Consumer group	Rates
Category A	All consumers that do not belong to category B or C	**8.16 EUR/MWh**
Category B	If consumption > 1 GWh / year and electricity cost is: • For an extensive list of industrial sectors (annexe 3 of EEAG)[254]: >17% of gross value added [255]	**1.224 EUR/MWh** (85% reduction) but capped[256] **at 0.5% of gross value added** (average last three years) for all consumers with electricity cost > 20% of gross value added
	If consumption > 1 GWh / year and electricity cost is: • For a less extensive list of industrial sectors (annexe 5 of EEAG): >20% of gross value added	**1.224 EUR/MWh** (85% reduction) but capped[257] **at 4.0% of gross value added** (average last three years) for all consumers with electricity cost < 20% of gross value added
Category C	If consumption > 1 GWh / year and electricity cost is: • For an extensive list of industrial sectors (annexe 3 of EEAG) [258]: between 14 and 17% of gross value added (avg. last three years)	**1.632 EUR/MWh** (80% reduction) but capped[259] at 0.5% of gross value added (average last three years) for all consumers with electricity cost > 20% of gross value added
		1.632 EUR/MWh (80% reduction) but capped[260] at 4.0% of gross value added (average last three years) for all consumers with electricity cost < 20% of gross value added

[252] (Netztransparenz, 2025)
[253] (Offshore Netzumlage 2025, 2025)
[254] (European Commission, 2014)(European Commission, 2014)
[255] The notion of gross value added is defined in Annexe 4 of the Environmental and Energy State Aide Guidelines, Communication C200/50 of the European Commission. (European Commission, 2014)
[256] However, these caps are only applicable if the consumer is part of an energy efficiency system improvement program.
[257] However, these caps are only applicable if the consumer is part of an energy efficiency system improvement program.
[258] (European Commission, 2014)(European Commission, 2014)
[259] However, these caps are only applicable if the consumer is part of an energy efficiency system improvement program.
[260] However, these caps are only applicable if the consumer is part of an energy efficiency system improvement program.

A bottom rate of **0.30 EUR/MWh** exists that can benefit some consumers of the EEG for the Offshore-Netzumlage (Offshore Network Levy).

Regarding our reviewed profiles (E0 to E4), we display a scope from the bottom rate to the category C rate for electro intensive consumers. As for non-electro intensive consumers, we consider a maximum price based on category A rates.

4. The “Stromsteuer”, or Electricity tax, as its translation shows, is a tax on electricity. The standard rate is **20.50** EUR/MWh, remaining unchanged since 2003. All applying industrial consumers from the manufacturing industry benefit from a **0.5** EUR/MWh rate, as from January 2025[261]. Initially implemented to fund employees’ pensions, companies may be granted important reductions whether they do not contribute much because of a low number of employees. This becomes the new maximum reduced rate that could be obtained. This relief of **20** EUR/MWh has been set for an indefinite period of time and no limitation to the measure do exist anymore.[262]

   For all profiles, we exhibit a scope from **0.5** EUR/MWh (exemptions) to **20.50** EUR/MWh.

5. The “Konzessionsabgabe”, or Concession fee, is a tax imposed on all users to fund local governments. The basic rate for industrial consumers is **1.10** EUR/MWh[263]. Yet, consumers whose final electricity price (all taxes and grid fees included) remains below a fixed threshold (in 2018: **139.20** EUR/MWh, published in December 2019[264]), are exempted from the concession fee. This remained unchanged compared to previous years.

[261] (Gesetze, 2024) (Gesetze, 2024)
[262] (WTS, 2024)
[263] (Acteno, n.d.)(Acteno, n.d.)
[264] (RGC Manager, 2019)(RGC Manager, 2019)

France

Component 1 – commodity price

In France, there is a specific mechanism called ARENH[265] that enables alternative electricity suppliers (i.e. suppliers different from EDF, the historical electricity supplier in France) to get access to the nuclear electricity production from EDF under specific conditions set by the French public authorities. This allows to promote competition in the electricity market, electricity from nuclear energy being historically cheaper to produce.

The maximum aggregated amount made available to suppliers other than EDF under this special scheme is set at 100 TWh/year, with a price of 42 EUR/MWh[266]. That means that if the aggregated requests from suppliers under that scheme exceed the overall volume that can be provided (i.e. 100 TWh/year), then the volume of ARENH transferred by EDF is subject to an adjustment process set by the French Regulatory Commission of Energy (CRE).

It has to be noted that with the exception of the distribution of an additional volume of 20TWh in 2022, nor the mechanism itself nor the parameters used (maximum of 100 TWh/year at 42 EUR/MWh) have changed since January 1, 2012 for the ARENH. In other words, the drop in nuclear production observed in France in 2022 and 2023 did not impact ARENH's distribution parameters.

This mechanism is composed of two different elements: (1) a loopback coefficient ("coefficient the bouclage" in French) and (2) a capping rate ("taux d'écrêtement" in French). The ARENH mechanism implies that the commodity price for a given profile is a combination of the market price and the regulated price, with a capping mechanism in place when the electricity quantity ordered exceeds the threshold of 100 TWh for a given year.

The loopback coefficient

The loopback coefficient defines the share of ARENH right to which each consumer (applicable for E-BSME to E4 profiles) can benefit according to their consumption profile.

Fixed since 2015 at 0.964, the loopback coefficient has decreased to 0.844 (a drop of around 12%) for delivery periods starting January 1st, 2024 and remains at this level for 2025. This is justified by the drop in nuclear production in the country due to various factors such as unavailable reactors, maintenance needs, etc., leading to a drop in the quantity of nuclear electricity produced.[267]

The capping rate

The capping rate vary from year to year based on the request of electricity made under the ARENH mechanism. The subscribed quantities are based on forecasts made by electricity suppliers on the consumption of their customers residing in France for the following year.[268] If the requested quantities exceed the maximum quantity of electricity available under the ARENH scheme (100 TWh), then a capping rate is applied to take this excess into account and adjust the mechanism accordingly.

[265] ARENH stands for *Accès Régulé à l'Electricité Nucléaire Historique*, or *Regulated Access to Historic Nuclear Electricity*
[266] (EDF, n.d.)
[267] (Omnegy, 2023)
[268] (Omnegy, 2023)

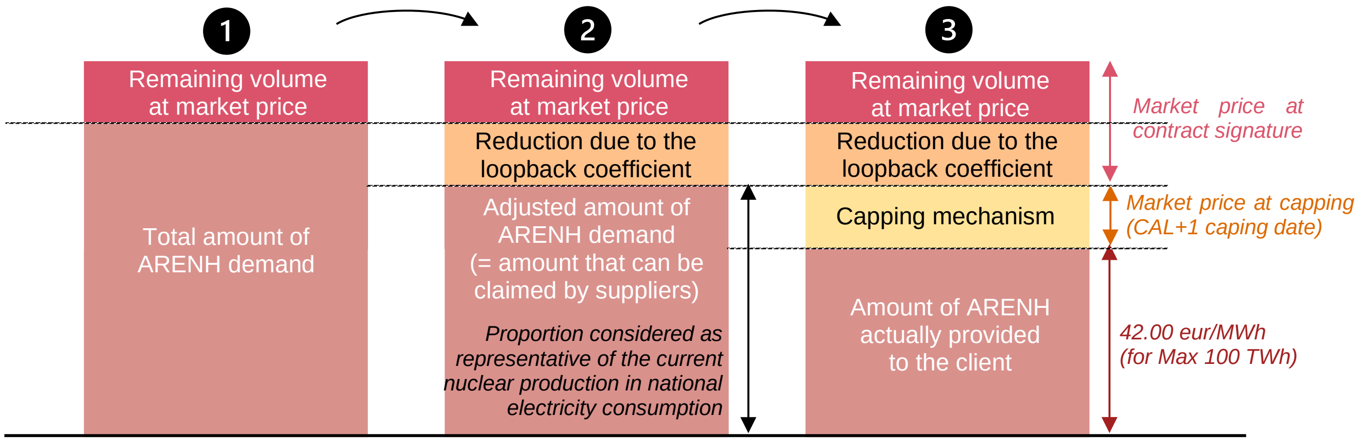
For 2025, the requests reached 134.93TWh[269] after the adjustment made to the loopback coefficient:

Table 92: ARENH capping overview across last years[270]

Delivery year	**Capping date**	**ARENH Demand (TWh)** before reduction of loopback coefficient	**Loopback coefficient** (coefficient de bouclage)	**ARENH Demand (TWh)** after reduction of loopback coefficient	**Capping rate**	**Market price at capping (EUR/MWh)** (CAL+1 capping date)
2023	01/12/2022	153.84	0.964	148.30	32.57%	445.16
2024	01/12/2023	154.51	0.844	130.41	23.32%	106.55
2025	**29/11/2024**	**159.87**	**0.844**	**134.93**	**25.89%**	**76.30**

The fact that alternative suppliers cannot obtain the entire volume of electricity requested under ARENH mechanism forces them to obtain the remaining volume from the wholesale electricity market, under less advantageous conditions due to the high price increase observed over the past few years. This is explained in the figure below:

Figure 25: ARENH mechanism applicable in France for electricity under specific circumstances



It is also important to understand that the so called "ARENH price" is only applicable for the hours considered as "ARENH hours", which only represent a fraction of the total consumption of any given profile. An overview of the "ARENH hours" is displayed in the table below:

Table 93: Reference period for the ARENH

		Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Weekdays only	1 am < x < 7 am												
	All hours												
Weekends and bank holidays	All hours												

[269] (EDF, n.d.)

[270] Data retrieved by PwC from Omnegy website

Consequently, all the volumes consumed by any given profile outside those hours cannot pretend to the ARENH reduced price. To obtain the most accurate data possible to compute the volume consumed under the ARENH scheme, it is first necessary to assess the total amount of hours eligible for this mechanism to be applied.

To obtain precise results, we include the average amount of bank holidays during the different period to obtain the number of hours under the ARENH scheme for 2025[271]:

	Start date	End date	#days	Corr. Bank holidays	#hours
Weekday (april, may, june, sept, oct, from 1am to 7am)	01/04/2025	31/10/2025	110	105	630
Weekday (july, aug, all hours)	01/07/2025	31/08/2025	44	42	1,008
Weekend & bank holidays (april to oct, all hours)	01/04/2025	31/10/2025	60	67	1,608
			214	214	3,246

With those parameters, we come up to the following table:

Table 94: Percentage of ARENH hours compared to their overall consumption hours

Profile	Week days	Weekends and Public holidays	% of total consumption hours under ARENH after loopback coefficient adjustment (capping excl.)	% of total consumption hours under ARENH (capping incl.)
Profile E-BSME	✓	✕	14.53%	10.77%
Profile E0	✓	✕	23.80%	17.64%
Profile E1	✓	✕	20.06%	14.87%
Profile E2	✓	✕	43.13%	31.96%
Profile E3	✓	✓	88.30%	65.44%
Profile E4	✓	✓	91.83%	68.06%

If we take the example of a profile E4, that means that if 91.83% of the electricity consumption could theoretically be claimed at the ARENH price (42 EUR/MWh), only 68.06%[272] of the total consumption will ultimately be made available at this price due to the capping. In the context of a significant increase of market prices, the capping therefore induces a significant commodity price increase for each profile.

Taking the example of a profile E4, the commodity price (component 1) of the invoice for this profile can then be computed as following:

*91.83% * (1-25.89%) * ARENH price*

*+ 91.83% * (25.89%) * electricity market price at the time of capping*

*+ (1-91.83%) * electricity market price at contract signature*

For the supply part not covered by regulated prices (ARENH), the electricity market price is based on an analysis of the electricity supply contracts performed by the Belgian federal regulator with a yearly consumption higher than 10 GWh. For E0, E1 and E2 profiles, CREG did not include weekend hours of EPEX SPOT, while for E3 and E4 profiles CREG included weekdays and weekend hours.

It has to be noted that due to the methodology used, we cannot retrieve the electricity market price at contract signature. As a workaround, we therefore use here as a proxy the electricity market price provided by CREG for January 2025. Considering that the prices applicable in January 2025 can be considered close to those applied

[271] Bank holidays in France occurring during that period are: Easter Monday ; May 1; May 8; Ascent; Whit Monday ; August 15 (Assumption of Mary). National Day (July 14 falls on a Sunday in 2024).

[272] 91.83% * (1-25.89%), 25.89% being the capping rate applicable for 2025

at the time of contract signature for the residual quantity, this hypothesis is considered sufficiently robust to obtain a value close to reality.

Still taking the example of a profile E4, the commodity price is then simplified in the following way:

*91.83% * (1-25.89%) * ARENH price*

*+ 91.83% * (25.89%) * electricity market price on 30th November 2024 (CAL+1 capping date)*

*+ (1-91.83%) * electricity market price provided by CREG for January 2025*

The same reasoning applies for all the different profiles in scope of the ARENH mechanism (E-BSME, E0, E1, E2, E3 and E4).

Component 2 – network costs

Integrated transmission and distribution costs

The RTE ("Réseau de Transport d'Electricité") is the Transmission System Operator (TSO) who oversees the transmission network. The French high voltage network starts at 1 kV, as shown in the table below and RTE operates the HTB (> 50 kV) networks.

Table 95: Voltage connection level and voltage domain in France

Voltage connection level (Un)	Voltage domain	
$U_n \leq 1$ kV	BT	Low Voltage domain
1 kV < $U_n \leq 40$ kV	HTA1 (E0, E1)	High Voltage domain
40 kV < $U_n \leq 50$ kV	HTA2	High Voltage domain
50 kV < $U_n \leq 130$ kV	HTB1 (E2)	High Voltage domain
130 kV < $U_n \leq 150$ kV	HTB2 (E3, E4)	High Voltage domain
350 kV < $U_n \leq 500$ kV	HTB3	High Voltage domain

The French transmission tariffs are composed of 3 components which are presented in this table:

Table 96: French transmission tariffs

Network costs			
Component	**French label**	**Explanation**	
Management component[273]	Composante annuelle de gestion	The management component depends on whether a consumer has a unique contract or not. We assume profile E-BSME opted for individual contracts.	
Component for taking off electricity	Composante annuelle de soutirage	Multiple prices options exist varying depending on utilisation length and temporal differentiators with both capacity and consumption components. The prices options are:	
		HTA	**HTB**
		1. Short use (CU) with a fixed peak	1. Short use (CU)
		2. Short use (CU) with a mobile peak	2. Medium use (MU)
		3. Long use (LU) with a fixed peak	1. Long use (LU)
		4. Long use (LU) with a mobile peak	
Metering tariff	Composante annuelle de comptage	The metering tariff depends on whether the meter is owned by the consumer or not. The assumption is taken that concerned industrial profiles (E0 and E1) own their own meters.	

[273] Since 2018, the level of this component also considers the financial compensation paid to suppliers in connection with the management of single-contract customers.

For the consumers that fall under the HTA1 (E0 and E1), there is a similar offering, namely four contract options (see Table 96) based on the offtake in 5 different time slots. The number of hours per time slot was determined based on RTE's timeframe (see Table 97), considering that all these profiles do not operate during weekends. Again, all options were computed and are presented as a price range given that we cannot anticipate what option is preferred by our potential consumers.

Table 97: Hours per temporal classes in France

Hours per temporal classes – RTE Timeframe		
Temporal class	**Weekdays**	**Weekends**
Peak	4h/day for three months (December to February)	n/a
HPH	12h/day for three months (December to March) + 16h/day for two months (March and November)	n/a
HCH	8h/day for five months (November to March)	24h/day for five months (November to March)
HPB	16h/day for seven months (April to October)	n/a
HCB	8h/day for seven months (April to October)	24h/day for seven months (April to October)

The offtake tariffs are a bit more complicated than the other components for profiles falling under HTB (HTB1 for E2 and HTB2 for E3/E4) tariffs. There are additional fees that could have been considered, but we chose not to in this study. Firstly, there are fees for planned and unplanned exceeding of power capacity, a cost for the regrouping of connection, a complimentary fee and emergency power supplies, a fee for reactive energy and a transformation fee. Secondly, there are injection fees, which need to be paid for the injection in the grid. As we assume that the load capacity is constant throughout the year and do not exceed their contracted capacity, the latter components are not taken into consideration.

Since February 2016, a new and relatively complex transmission tariff reduction was introduced to replace the more straightforward transmission tariff reductions that were in place between mid-2014 and late 2015. An update to this reduction was published in April 2021, redefining the eligibility criteria and transmission reduction rates associated. An increase in transmission tariffs finances those reductions billed to the network users who are not eligible for those reductions. Discounts are granted to baseload, "anti-cyclical", very large consumers and power storage sites connected to the grid according to the principles laid out in the table below.

This reduction is based on the calculation of the network components that are needed when theoretically drawing a physical line between the consumers and the closest suitable generation plant by following the existing transmission network. In other words, the farthest a company is from a generation plant, the lower the reduction will be. The closer it is, the higher the reductions, due to the low costs of the network components needed. Hence, this value of 81% is a maximal reduction, while some companies will not receive any reduction, based on their distance with the closest generation plant. As such, a range is presented for this component and large E3 and E4 profiles.

Table 98: Transmission reductions eligibility criteria and rates

Profiles	Maximum transmission reduction rate	Yearly duration of grid usage	Off-peak grid utilisation	Annual power consumption
Stable profile	81%	7,000h	-	>10 GWh
Anticyclical profile	74%	-	≥44%	>20 GWh
Large consumers	76%	-	≥40% and ≤44%	>500 GWh

Given this framework, we can make the following assumptions for the four consumer profiles under review:

- Profile E0, E1 and E2 are **not eligible** for any reduction, as it does not meet the criteria for stable, anti-cyclical or large consumers.
- Profile E3 **is eligible** for a reduction, as a stable consumer profile. With 7,692 consumption hours per year, the discount can go from 0% up to 81% maximum.
- Profile E4 **is eligible** for a reduction, as a stable consumer profile. With 8,000 consumption hours per year, the discount can go from 0% up to 81% maximum.

Component 3 – all other costs

As for residential and small professional consumers, there are two surcharges that must be considered for electricity in France:

Table 99: Other costs in France (E0, E1, E2, E3 and E4)

Title	Definition	Amount
Contribution Tarifaire d'Acheminement - **CTA**	The CTA finances part of the pensions of staff in the energy sector for Electricity and Natural gas Industries. It is only being applied to the subscription part of the tariff (HT)	There are two tariffs of the CTA depending on the grid to which the user is connected[274]: • **10.11**% for consumers directly connected to the transmission grid (profiles E2, E3 and E4 in France) • **21.93**% for all other professional consumers that are directly connected to the distribution grid (profile E0 and E1 in France). _Note:_ *as network tariffs may vary according to the selected price option, the CTA amount may therefore also vary*
Accise sur l'électricité *It is also named TICFE (which is the ex-CSPE)* *It includes local taxes (TCFE)*[275]	The excise is a tax that applies to all deliveries of electricity sent to an end user. Its amount is calculated according to consumption.	The normal rate of the excise on the 1st of January 2025 for professionals is of **20.5** EUR/MWh .
		"Tariff shield" – Last year of normal reduced rates As from the 1st of February 2024 and until the 31st of January 2025, the tariff shield has been set to **20.5** EUR/MWh for professional consumers >250 kVA (E0, E1, E2, E3, E4). This measure is set to be discontinued as from the 1st of February 2025.
		The following reductions and exemptions are applicable since the 1st of February 2024. _Reduction_[276] 1) For electro intensive professionals with a minimum of 0.5% of electro-intensity (EI < 1.5kWh/€ of added value), the reduced rate is **7.5 EUR/MWh.** _Exemption_[277] 1) Professionals are exempt from this excise, hence fall on the minimum European level of **0.5 EUR/MWh**, when the electricity is used for the following purpose: • Metallurgical processes, chemical reduction and electrolysis. • Companies for which electricity accounts for more than half of the cost of a product. • Manufacturing of non-metallic mineral products. • Production of energy products and electricity production. • Compensation for losses on the public electricity transmission and distribution network.

[274] (Selectra, 2025)

[275] Local taxes encompass the TDCFE (« *Taxe Départementale sur la Consommation Finale d'Électricité* » and the TCCFE (« *Taxes Communales sur la Consommation Finale d'Électricité* »), which no longer exist as they are included in the CSPE/TICFE since January 1st, 2021. The TCCFE was later included in the TICFE on January 1st, 2023.

[276] (Ministère de la Transition Écologique et de la Cohésion des Territoires, 2024)(Ministère de la Transition Écologique et de la Cohésion des Territoires, 2024)

[277] (EDF, n.d.)(EDF, n.d.)

The Netherlands

Component 1 – commodity price

Commodity prices computation rests on market prices and describes the cost of electricity for industrial consumers as of January 2025. CREG used the ICE Endex CAL and the APX NL DAM as national indexes for the computation. The underneath commodity formula is used for each profile and is based on an analysis performed by the CREG of all Belgian consumers contracts with a yearly consumption higher than 10 GWh. For E-BSME to E4, CREG did not include weekend hours of APX NL DAM, while for E3 and E4 CREG included weekdays and weekend hours of APX NL DAM. The CREG provided the formulas and the computation of the commodity price. The equations are based on an analysis of all Belgian consumers with a yearly usage higher than 10 GWh, performed by the Belgian regulator of the electricity supply.

$$\textit{Commodity price}$$
$$= 36.5\%\, CAL\, Y_{-1} + 27.4\%\, CAL\, Y_{-2} + 21.4\%\, CAL\, Y_{-3} + 8.2\%\, Qi_{-1} + 4.2\%\, Mi_{-1} + 2.3\%\, APX\ NL\ DAM$$

Where:

	Explanation
CAL Y_{-1}	Average year ahead forward price in 2024
CAL Y_{-2}	Average two year ahead forward price in 2023
CAL Y_{-3}	Average three year ahead forward price in 2022
Qi_{-1}	Average quarter ahead forward price in the fourth quarter of 2024
Mi_{-1}	Average month ahead forward price in December 2024

Component 2 – network costs

Integrated transmission and distribution costs

In the Netherlands, the network costs integrate both transmission and distribution costs. As Dutch TSO, TenneT operates the transmission grid and is responsible for the infrastructure above 110 kV. Hence, profiles E3 and E4 are assumed to be directly connected to the transmission grid, respectively to the high voltage (110-150 kV) and the extra high voltage grid (220-380 kV). Consequently, they are subject to TenneT's tariffs. Concerning the other industrial profiles (E0, E1 and E2) and E-BSME, connected to lower voltages and thus to the distribution grid, they are subject to DSOs 'prices. Similar to the residential profiles in the Netherlands, we use a weighted average of the seven distribution zones because the Netherlands uses an integrated tariff[278].

For all profiles above-mentioned, they involve the same four main components[279]:

Table 100: Network cost component in the Netherlands

Network costs		
Component	**Dutch labelling**	**Explanation**
Fixed charge	Vastrecht	Fixed basic fee (expressed in EUR/year).
Capacity charge	Capaciteitstarieven	Fees are covering the costs associated with the transmission of electricity. They are subdivided into three terms: – Fixed charge depending on the contracted capacity (expressed in EUR/year); – Variable charge depending on the monthly peak (expressed in EUR/kW/month).
Periodical connection tariff	Periodieke aansluitvergoeding	Fixed fee is covering the costs for managing the connection (expressed in EUR/year).
Metering charge	Meettarief	Fixed charges are covering for the use and management of energy meters (expressed in EUR/year).

As from the 1st of January 2025 onwards, the variable charge that depends on the monthly peak (from the Capacity Charge network component) of the national TSO customers is corrected based on the time of use. The capacity used off peak is multiplied by a factor going as low as 0.6 while the capacity used in peak hours is multiplied by 1.0. The variable charge depends on the monthly peak of capacity used multiplied by the multiplication factor. In this study, due to the use of baseload profiles, a weighted average of the rates based on the profiles characteristics has been used. The resulting average multiplication factor reaches 0.76, which is multiplied by the annual peak of the profiles E3 and E4 which are subject to it[280].

[278] All industrial profiles are not served by all DSOs. COTEQ and RENDO do not serve consumers similar to our E1 and E2 profiles (from HS voltage level) while Westland does not provide profiles similar to E2 (from TS)

[279] (TenneT, 2020)

[280] (Dutch Government, 2025)

Component 3 – all other costs

Unlike previous years, and as it is the case for residential and small professional consumers, only one surcharge remains in the Netherlands, namely the Energy Tax ("Regulerende Energie Belasting", or REB). The Energy Tax (REB) varies, in a degressive trend, according to the amount of consumed electricity as shown in the table below:

Table 101: Electricity Energy Tax[281]

Band	Consumption (in kWh)	Energy Tax (EUR/MWh – VAT excl.)
1	Up to 10,000	**101.54**
2	10,001 - 50,000	**69.37**
3	50,001 - 10,000,000	**38.68**
4	> 10,000,000 (non-professional)	**3.88**
4bis	> 10,000,000 (professional)	**3.21**

Given the consumption level of our profiles under study, they fall into the following bands: band 3 for E0 and E1, and band 4 for E2, E3 and E4 profiles.

1. Industrial consumers are exempted if they use electricity for chemical reduction or electrolytic and metallurgical processes.
2. Tax discounts are also possible for cooperatives. However, the profiles under study are assumed not to fall under this category.
3. Finally, a tax refund scheme ("teruggaafregeling") is applicable to public and religious institutions such as clinics, schools, sports centres, churches, etc. We assume that our profiles are not part of these specific categories and thus do not take this specific scheme into account.

Several of the criteria that give access to these tax refunds are based upon economic and accounting data, which are not defined for the industrial profiles of this study. Therefore, we present a range of results with an outlier option (maximum rate only applies if the industrial consumer is not energy-intensive and cannot qualify for the full exemption) and a range spanning from the minimal option (totally exempted) to the refund rate (**0.50** EUR/MWh).

281 (Belastingdienst, 2025)

The UK

Component 1 – commodity price

Commodity prices computation rests on market prices and describes the cost of electricity for industrial consumers as of January 2025. We used the APX UK DAM as the national index for the calculation. The equations are based on an analysis performed by the Belgian federal regulator of the electricity supply contracts of Belgian consumers with a yearly consumption higher than 10 GWh.

The commodity formula applies to each profile. For profiles E0, E1 and E2, we use all hours apart from weekends of APX UK DAM, while for profile E3 and E4, we use all hours of APX UK DAM[282].

Commodity price

$$= 36.5\% \, CAL\,Y_{-1} + 27.4\% \, CAL\,Y_{-2} + 21.4\% \, CAL\,Y_{-3} + 8.2\% \, Qi_{-1} + 4.2\% \, Mi_{-1} + 2.3\% \, APX\,UK\,DAM$$

Where:

	Explanation
CAL Y_{-1}	Average year ahead forward price in 2024
CAL Y_{-2}	Average two year ahead forward price in 2023
CAL Y_{-3}	Average three year ahead forward price in 2022
Qi_{-1}	Average quarter ahead forward price in the fourth quarter of 2024
Mi_{-1}	Average month ahead forward price in December 2024

We computed the commodity price based on the formula mentioned above, in British Pounds, and then converted the amount to Euros using the January 2025 monthly average exchange rate[283] (also see section "General assumptions"). The values were taken from historical data in Bloomberg, using the APX UK DAM index.

Component 2 – network costs

Transmission cost

As we have described above, the UK's network structure is divided between three TSOs, six DSOs and fourteen identified tariff zones. On a technical level, the grid is organised as follows:

Table 102: Tariff scheme regarding transmission cost in the UK

Transmission costs		
Connection voltage (U_n)	**Operator**	**Tariff scheme**
U_n < 22 kV	**DSO**	Common Distribution charging methodology (CDCM) + Transmission charges (TNUoS)
22 kV =< U_n =< 132 kV		Extra high voltage distribution charging methodology (EDCM) + TNUoS
275 kV =< U_n =< 400 kV	**TSO**	Transmission charges (TNUoS)

[282] The year ahead, two years ahead and three years ahead forward prices are gathered by looking at respectively the ELU 0YR1 BCFV Index (between the 1st of January and 31st of December 2024), the ELU 0YR2 BCFV Index (between the 1st of January and 31st of December 2023) and the ELU 0YR3 BCFV Index (between the 1st of January and 31st of December 2022). Once all values are gathered, the average of these forward prices is done based on Bloomberg's data, in the local currency (GBP). This average entails takes up all values gathered on the index during the period observed.

[283] Exchange rate of 1,1999 EUR/GBP, the average conversion factor over the month of January 2025, according to the European Central Bank is considered.

The voltage of the transmission grid is particularly high, which is why we assume that E-BSME, E0, E1 and E2 are still connected to the distribution grid, but the bigger industrial profiles (E3 and E4) are directly connected to the transmission grid. In the UK transmission charges are known as the Transmission Network Use of System (TNUoS) charges and have two different rates: Half-Hourly (HH) and Non-Half-Hourly (NHH). As only the former applies to our industrial profiles, we only detail this one below.

Since the 1st of April 2023 and the introduction of CMP343 by the OFGEM[284], a new component to the transmission costs is to be considered: the non-locational band charges. To lower the impact of a consumer's location on its tariffs, the OFGEM (through the 14 DSOs) decided to substantially lower (or even remove) the NHH and HH charges for all regions. This decrease is compensated by the introduction of these banded charges, to which consumers are assigned depending on their connection capacity (kVA).

The bands to which consumers are assigned can have different impact on their total electricity bill. If they are located on the lower end of a band, they are paying a daily fee that is higher than what they could pay if they were on the upper end of the inferior band, by reflecting on their electricity consumption. At the contrary, should they be on the upper end of their band, they would pay a daily fee that is advantageous. Hence, as the profiles of this study are fixed, we do not assume that they will change their connection capacity to accommodate, resulting in higher or lower fees paid compared to empirical consumer examples.

Table 103: Half-hourly (HH) tariff option in the UK

Transmission costs		
Tariff option	**Explanation**	**Profile**
Half-Hourly (HH)	Metering system, which utilises AMR (automatic meter reading) technology to provide electricity consumption reading. The system sends updated meter reads to the energy supplier every half hour. Customers pay a capacity tariff depending on their connection capacity, expressed in p/kVA/day.	E0 to E4
Non-locational banded charges	Daily standing charge customers are paying per site depending on the band they are assigned to. The band is assigned based on the customer's connection capacity (kVA).	E0 to E4

Since the HH tariffs differ between all fourteen zones of the UK, a weighted average of the transmission costs is presented for all our industrial profiles.

There are also rates applied to cover for network losses, and the UK uses a system similar to the Belgian one (but more dynamic) to apply these costs. The Balancing and Settlement Code Administrator, each half-hour, defines the Transmission losses multiplier (TLM) applicable for offtake and delivery. This cost is added to the bill as a percentage of the commodity cost for offtake and should thus not be part of this component. Yet, even though it is not part of the tariff structure as such, we include it as a network component.

Distribution costs

Distribution costs, which are due for profiles E0, E1 and E2, have a more complex methodology.

Profiles E0 and E1 pay according to the Common Distribution Charging Methodology (CDCM). They are billed for total offtake across all demand time periods and with important differences between peak and off-peak offtake. This methodology encompasses the following components:

[284] (OFGEM, 2022)

Table 104: Distribution costs (CDCM) in the UK

Distribution costs	
Component	**Explanation**
Proportional charge	A unit charge in p/kWh
Fixed charge	Fixed charge per offtake point in p/MPAN[285]/day
Metering costs[286]	Cost for use and management of your energy meter in p/day or GBP/year

As for profile E2, it is charged through the EHV Distribution Charging Methodology (EDCM), which are largely based on capacity with a small element for offtake in the high demand time-period in addition to a fixed charge. The EDCM provides for individual tariffs for each customer depending upon location, demand, generation (type) and capacity. The individual EDCM-rates are made public, which is why we calculated the average individualized EDCM-rates compared to CDCM-tariffs in each of the fourteen zones.

We present the average EDCM-rates on CDCM-tariffs in the fourteen zones as the distribution cost value for profile E2. The following components compose EDCM charges:

Table 105: Distribution costs (EDCM) in the UK

UK	
Component	**Explanation**
Proportional charge	A unit charge for high demand periods, expressed in p/kWh.
Fixed charge	Fixed charge per offtake point in p/day
Capacity charge	Daily Fixed charge function of the contracted capacity, expressed in p/kVA/day
Metering costs[287]	Cost for use and management of your energy meter in p/day or GBP/year

Component 3 – all other costs

Three additional costs are applicable on electricity in the UK:

(1) The **Climate Change Levy** (CCL) is applicable to the consumption of electricity and natural gas for businesses in the industrial, public services, commercial and agricultural sectors. This study considers that industrial consumers analysed, are all embodied in the Climate Change Agreement. This levy is “an environmental tax charged on the energy that businesses use. It’s designed to encourage businesses to be more energy efficient in how they operate, as well as helping to reduce their overall emissions.”[288]

The following table gives an overview of the rates that are charged to professional consumers regardless of their profile (residential consumers are exempted from it[289]):

[285] Meter Point Administration Number

[286] Electricity metering charges in the UK are not easily accessible. A proxy was used to account for these charges based on a methodology disclosed by National Grid, British TSO delivering electricity and natural gas. As electricity and natural gas are frequently offered as one product with a dual tariff, natural gas metering methodology was used as a proxy. Charges are billed as a fixed yearly charge for installation costs recovered via a rental given that we assume our profiles do not own the meters.

[287] Electricity metering charges in the UK are not easily accessible. A proxy was used to account for these charges based on a methodology disclosed by National Grid, British TSO delivering electricity and natural gas. As electricity and natural gas are frequently offered as one product with a dual tariff, natural gas metering methodology was used as a proxy. Charges are billed as a fixed yearly charge for installation costs recovered via a rental given that we assume our profiles do not own the meters.

[288] (SEFE, 2024) Meter Point Administration Number

[289] (UK Government, 2024)

Table 106: Climate Change Levy rates on electricity[290]

Time period	Electricity rate (GBP/MWh)
1st April 2024 to 31st March 2025	**7.75**
1st April 2023 to 31st March 2024	7.75

There is a possible reduction of 93% if the energy-intensive consumer has a Climate Change Agreement (CCA). We assume that all industrial profiles (E0 to E4) under this study concluded a CCA.

Given that 7,814 facilities were covered by a CCA in 2017[291] for about 7,700 large businesses (>250 employees)[292], we consider that all industrial profiles from this study are part of a sectoral agreement. Besides, a large spectrum of industrial processes[293] is accepted to be eligible to apply for a CCA, which widens the number of companies that can be considered.

On top of that, there are multiple exemptions regarding the CCL, among others when electricity is a supply[294]:

- for domestic use or used by a charity for its non-business activities.
- used in some forms of transmission.
- to combined heat and power stations.
- for small generating stations (other than combined heat and power) used to generate any electricity that's not self-supplied.
- not used as fuel.

(2) The **Renewables Obligation (RO)** is the cost placed on electricity suppliers in the UK for the large-scale renewable subsidy scheme. Like the Climate Change Levy, the quota and buyout price are determined for a year starting in April. From 1st April 2024 to 31st March 2025, the buyout price per RO Certificate is **31.78** GBP/MWh. Until 2024, energy intensive companies in the UK had an exemption of up to 85% of the indirect cost of the Renewable Obligations. Effective since the 1st of April 2024, the exemption for electro intensive companies in the UK has been increased to 100%[295], while non-electro intensive companies have, similarly to previous years, no possible exemptions from this scheme.

(3) The **Assistance for Areas with High electricity distribution Costs (AAHEDC)** levy compensates for high distribution costs in the zone of Northern Scotland (1 of the 14 zones), amounting **0.4214** GBP/MWh for the period ranging from 1st April 2024 to 31st March 2025.[296]

An additional cost identified in the UK is the one that relates to the capacity market. However, it was decided not to take this cost into consideration for this study. First, because it is paid by the suppliers, who integrate it in their offers and do not disclose the exact amount of the costs. Secondly, because the UK is an outlier in most electricity profiles under review (E1 to E4). The prices in this study can therefore be seen as a slight underestimation of the real electricity cost in the UK, but it does not impact any of the conclusions.

[290] ibid
[291] (Adelphi, Ecofys, 2018) (Adelphi, Ecofys, 2018)
[292] (GOV.UK, 2020) (GOV.UK, 2020)
[293] Defined in the Appendix A of the Climate Change Agreements Operations Manual.
[294] (GOV.UK, 2022) (GOV.UK, 2022)
[295] (UK Government, 2024)
[296] (National Grid ESO, 2024)

Natural gas

Natural gas: Detailed description of the prices, price components and assumptions

For all countries under review, this section details:

1. **Commodity costs** for profiles G0, G1 and G2
2. **Network costs** for profiles G0, G1 and G2
3. **All other costs** for profiles G0, G1 and G2

Profile	Consumption (in MWh)
G0	1,250
G1	100,000
G2	2,500,000

Belgium

Component 1 – commodity price

Commodity prices, in this document, rest on market prices and reflect the cost of natural gas for industrial consumers as of January 2025 as provided by the CREG. The given prices for profiles G0 to G2, are the result of prices observed in January 2025 at the Zeebrugge Trading Point (ZTP)[297].

$$\textit{Commodity price} = 50\%\ DA\ (day\ ahead) + 50\%\ MA\ (month\ ahead)$$

Component 2 – network costs

Transport costs

According to the consumer profiles, G0 and G1 are connected to the distribution grid. We assume that they are respectively connected at T4 and T6 levels. Consumer profile G2 is connected to the transport grid. All (industrial) consumers in Belgium are connected at high-pressure level since the 1st of September 2024.

Natural gas transport costs have 4 main components for clients directly connected to the transport grid:[298]

(1) Entry capacity fee (border point entry fee);
(2) Exit capacity fee (HP-service fee);
(3) Commodity fee ("energy in cash").
(4) Pressure Service Fee[299]

The optional odorization tariff is not considered in the scope of this study. The reasoning is that most industrial consumers in Belgium on the TSO-grid do not need odorization services from Fluxys.

Furthermore, this study acknowledges the natural gas consumption tariffs invoiced to industrial consumers based on the consumer profiles defined in the hypotheses. It is therefore important to clarify that potential disparities occurring between network tariffs invoiced to industrial consumers (i.e., G1 and G2 profiles) in this study and the tariffs they empirically pay, when exceeding their contractual capacity, might differ. The details of this variation are outlined in the 2023 study by CREG[300].

The transport tariffs for natural gas in Belgium are largely capacity-based and expressed in EUR/kWh/year.

Finally, the commodity fee depends on the annual consumption of the end-user (in MWh/year). It accounts for 0.08% of a theoretical commodity cost per year, based on the Gas Price Reference[301], which is the ZTP average of day-ahead commodity prices, as published by EEX.

Distribution costs

As previously stated, profile G0 and G1 are connected to the distribution grid. Users of the distribution grid are also subject to additional tariffs. The T4 category was selected for our G0 profile and T6 for G1. Since the highest category on the Brussels' distribution grid is T5, this one was selected for the G1 profile.[302] The distribution tariffs are typically divided over 3 components:

Fixed component[303];
(1) Proportional component;
Capacity component (only Flanders[304] and Wallonia).

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[297] However, it is known that the majority of Belgian industrial consumers' contracts are indexed on TTF (CREG, 2022), which represents their largest component of natural gas bills

[298] Since 2020, the "fix/flex" tariff option does no longer exist and therefore cannot be chosen by directly connected consumers (CREG, 2020).

[299] Pressure Service (PS) fee is part of the non-transmission services. This fee pertains to the management of gas pressure at domestic exit points, ensuring that the gas delivered meets the required pressure specifications for end-users.

[300] (CREG, 2023) Link to study: https://www.creg.be/fr/publications/etude-f2933

[301] For more information on the Gas Price Reference, please see https://www.fluxys.com/en/natural-gas-and-biomethane/empowering-you/tariffs/tariff_fluxys-belgium-tra-2023

[302] T5 (and not T6) is the highest category for Sibelga network active in Brussels which we use in the scope of this study.

[303] In Flanders, the fixed component applies only to the T4 category, G0, and does not apply for T5 & T6 (G1).

[304] In Flanders, the capacity component is only applicable for the T5 & T6 category (G1).

Besides, other components are part of the distribution costs, although they vary depending on the region. As such Brussels includes a tariff for the measuring activities and Flanders a tariff of data management, whereas Wallonia adds a tariff for regulatory balances.

The weighted average of each component across all DSOs active in the region is considered since the tariffs differ across regions and DSOs. The weights are based on the number of EAN connections of each DSO. For Flanders, all DSOs, which use Fluvius System Operator cv for their operations, were considered (100% of EAN connections) and in Wallonia all the DSOs under ORES and RESA (100% of EAN connections). With only one DSO, Sibelga is the DSO used for Brussels.

Component 3 – all other costs

In Belgium, two extra costs are charged to natural gas consumers directly connected to the transport grid; three regional taxes also apply to all profiles studied whereas local taxes and levies can be charged to profiles G0 and G1 given their connection to the distribution grid. These costs can be grouped into two categories, as presented below, where federal charges are levied by the suppliers and regional charges are levied by regional DSOs (and invoiced to the suppliers which invoice final customers): Tariff rates are mentioned when they do not vary depending on the consumer profile and/or the DSO; otherwise, units in which they are expressed are detailed.

Table 107: Other costs for industrial natural gas consumers applying to all Belgian regions

All regions	Profiles
Regional Public Service Obligations (Regional PSOs) on distribution	
General tariff for regional PSOs (expressed in EUR/MWh)	G0 G1
Taxes and levies on the federal level	
Federal taxes and levies	
Energy contribution[305] (0.54EUR/MWh).	G0 G1 G2
Special excise duty (EUR/MWh)	G0 G1 G2

The table below shows the new Federal special excise duty rates, applicable from the 1st of January 2025 (Loi-Programme 29/12/2023) to G0-G2 profiles.

Table 108: Special excise duty rates in Belgium for Gas commercial consumers

Yearly consumption	Tax for G0, G1 and G2 (EUR/MWh)
Consumption up to 20,000 MWh	**0.66**
Consumption between 20,000- 50,000 MWh	**0.56**
Consumption between 50,000- 250,000 MWh	**0.54**
Consumption between 250,000 – 1,000,000 MWh	**0.42**
Consumption between 1,000,000- 2,500,000 MWh	**0.22**
Consumption above 2,500,000 MWh	**0.15**

According to Art. 429.§ 1er of the law from 27th December 2004[306] an exemption is foreseen when electricity and gas are not used only for heating and transport, but also for metallurgic or chemical industrial processes. For the

[305] The tariff is reduced to 0,54 €MWh for holders of an EBO or sector agreement. We assume that the reduction applies starting G0.

[306] (Chancellerie du Premier Ministre, n.d.)

sake of this report, we assumed that profiles G1 and G2 could potentially benefit from this exemption, if they fall within the conditions specified by the law.

Table 109: Other regional costs for industrial natural gas consumers (EUR/MWh)[307]

<table>
<tr><th>Brussels</th><th>Flanders</th><th>Wallonia</th><th>Profiles</th></tr>
<tr><td colspan="4">Regional Public Service Obligations (Regional PSOs) on transport</td></tr>
<tr><td>Brussels regional public service obligation[308] (29.00 – 74.85 EUR/Month)</td><td></td><td></td><td>G0
G1</td></tr>
<tr><td colspan="4">Taxes and levies on the regional level</td></tr>
<tr><td colspan="4">Regional taxes and levies on distribution</td></tr>
<tr><td>Charges of pensions (0.004 – 0.045)</td><td>Charges of pensions (0.0063 – 0.031)</td><td>Levy for occupying road network (0.136 – 0.635)</td><td rowspan="3">G0
G1</td></tr>
<tr><td>Levy for occupying road network (1.542)</td><td>Other local, provincial, regional, and federal taxes, Charges, Surcharges, Fees, and contributions (0.0023 – 0.0112)</td><td>Corporate income tax (0.0336 – 0.395)</td></tr>
<tr><td>Corporate income tax and other taxes (0.022 – 0.219)</td><td></td><td>Other local, provincial, regional, and federal taxes, Charges, Surcharges, Fees, and contributions (0 – 0.007)</td></tr>
<tr><td colspan="4">Regional taxes and levies on transport</td></tr>
<tr><td></td><td></td><td>Connection fee 0.075 EUR/kWh for the first 1 MWh; then
a. if yearly consumption < 1 GWh: 0.075 EUR/MWh
b. if yearly consumption < 10 GWh: 0.06 EUR/MWh
c. if yearly consumption >= 10 GWh: 0.03 EUR/MWh</td><td>G0
G1
G2</td></tr>
</table>

[307] The tariffs represented in this table vary depending on the DSO and we have thus chosen to only present the minimum and maximum range of the tariff from the largest (or only) DSO of the region. Sibelga for Brussels, Fluvius IMEWO for Flanders and ORES for Wallonia.

[308] Depends on the calibre of the meter being installed. For G-Pro, G0 and G1 we respectively chose the meters process between 16 – 25 m^3, 40 – 65 m^3 and > 160 m^3. Which respectively coincides with 69.60 EUR, 348.00 EUR and 898.20 EUR, on which VAT is due.

Germany

Component 1 – commodity price

In this study, natural gas commodity prices are estimated based on market prices. As previously mentioned, we consider one market area in Germany, the Trading Hub Europe (THE), which is the result of the merger between Gaspool and Netconnect Germany (NCG).

For all industrial profiles (G0 to G2), as well as G-PRO, the commodity price exhibited in this document is the average of prices collected in each market areas in January 2025. The CREG provided all commodity prices for Germany.

$$\textit{Commodity price}$$
$$= 50\%\ DA\ (day\ ahead) + 50\%\ MA\ (month\ ahead)$$

Component 2 – network costs

Transport costs

There are 11 TSOs for natural gas in Germany, which all have directly connected clients. While their tariff methodology might be similar, they use different rates. As we consider that profile G2 is directly connected to the transport grid, entry and exit capacity tariffs for all TSOs have been considered in addition to the costs related to metering and invoicing. The transport tariffs comprise in general, the same three components:

Table 110: Components of German transport costs

Transport costs	
Component	**Explanation**
Entry point capacity rate (Einspeisung)	Depends on the contracted entry point and the capacity contracted (in kW)
Exit point capacity rate (Ausspeisung)	Depends on the exit point chosen and the capacity contracted (in kW)
Metering costs (Messung)	Both charges related to the cost of metering, fixed prices (in EUR/year)
Metering point operation per counting point charges (Messstellenbetrieb)	

Distribution costs

Since two of our profiles (G0 and G1) are connected to the distribution grid, they are subject to distribution costs. Since these differ between DSOs, prices from 8 different DSOs (4 rural, 4 urban) are considered. However, the tariffs from the DSOs also integrate the transport tariffs. While we assume profile G0 falls under the category “Netzentgelte für Entnahmestellen ohne Leistungsmessung” (or Network charges for offtake points without power metering) as their consumption is yearly metered, G1 is considered as being in the category “Netzentgelte für Entnahmestellen mit Leistungsmessung” due to its daily metered consumption (or Network charges for offtake points with power metering). These distribution tariffs are generally composed of 5 components:

Table 111: Components of German distribution costs

Distribution costs	
Component	**Explanation**
Basic charge (Sockelbetrag Arbeit/Leistung)	Fixed basic fee, expressed in EUR/year.
Capacity charge (Leistungspreis)	Depends upon the maximum capacity in kW contracted, expressed in EUR/year.
Labour charge (Arbeitspreis)	Depends upon the volume of energy consumed in kWh per year, expressed in cEUR/kWh/year.
Metering costs (Messung)	Charges related to the cost of metering and invoicing, fixed prices (in EUR/year)
Metering point operation per counting point charges (Messstellenbetrieb)	

German annual charge for natural gas is computed as follows:

$$Annual\ charge = [Arbeitspreis * (Annual\ Consumption - \ Durch\ Sockelbetrag\ abgegoltene\ Arbeit) + Sockelbetrag\ Arbeit] + [Leistungspreis * \ (Annual\ Consumption - \ Durch\ Sockelbetrag\ abgegoltene\ Leistung) + Sockelbetrag\ Leistung]$$

Where, *Durch Sockelbetrag abgegoltene Arbeit/Leistung* is the price band bottom levels, expressed in €/kWh or in €/kW respectively.

Depending on the consumers' consumption volumes and capacity, they fall under certain categories (the number of categories depends on the local DSO). These categories determine the amount of consumption volume and capacity that must be set at a standard rate, while the rest fall under the network cost fares as determined by local DSOs. These volumes and capacity are said to be compensated to limit network costs and ultimately, DSOs' remuneration.

Component 3 – all other costs

Four further costs were found for industrial consumers in Germany: the "*Biogas-Umlage*" or Biogas levy, the "*Marktraumumstellungsumlage*" or Market Area Conversion Levy, the "*Energiesteuer*", or Gas tax, the "*Konzessionsabgabe*", or concession fee, and the "CO2 Steuer, or carbon tax, which are detailed in the table below.

Table 112: Other costs for large industrial natural gas consumers

Component	German label	Explanation	Profiles
Biogas levy	Biogas-Umlage	A Nationwide standard levy implemented in January 2014. This levy amounts to **1.0542** EUR/MWh in 2025.	All
Market Area Conversion Levy	Marktraumumstellungs-Umlage	A burden to balance the conversion costs from L-gas to H-gas, implemented in January 2015. The 2025 levy amounts to **0.6713** EUR/MWh.	All
Energy tax	Energiesteuer	This tax has various rates depending on the energy source (e.g. coal, biodiesel, natural gas, bioethanol…), valid since January 1989. For natural gas for industrial consumers, **the standard tax rate is 5.50 EUR/MWh**. A reduction of 1.38 EUR/MWh can apply, bringing the price down to **4.12 EUR/MWh** (= 5.50EUR/MWh – 1.38EUR/MWh)[309] As mentioned for the electricity in Germany, based on the amount of pension contributions paid by the company, more reductions can be granted. Initially implemented to fund employees' pensions, companies may be granted important reductions whether they do not contribute much because of a low number of employees. Another cut of 2.28 EUR/MWh can be used for natural gas, lowering the rate to 1.84 EUR/MWh (= 4.12EUR/MWh – 2.28EUR/MWh). However, it is an 'incompressible' rate. **The minimum tariff** is computed as follows: a 90% reduction on 2.28 EUR/MWh represents the maximum cut ((100%-90%) * 2.28 EUR/MWh = 0.228 EUR/MWh) to which we add the previous lowest rate (1.84 EUR/MWh) reaching **2.068 EUR/MWh** (=0.228 EUR/MWh + 1.84 EUR/MWh)[310][311]. These reductions apply depending on the sectorial affiliation of companies. No energy tax applies when the natural gas purpose is not fuel or heating, but as raw material, feedstock part of an industrial process[312]. As the pension payment reduction system is based on economic criteria that are not precise for profile G0 and G1, we exhibit a range from 2,068 EUR/MWh (minimum rate) to 4.12 EUR/MWh (standard reduction). As we assume that G2 might consume electricity as feedstock in its industrial processes, we display a scope from 0 EUR/MWh (exemption – only the biogas levy must be paid) to 4.12 EUR/MWh (standard reduction)	All

[309] This tax rate hasn't changed in the past years.

[310] Energiesteuergesetz § 54, Energiesteuergesetz § 55

[311] In very specific cases, further reductions are possible. We have not included these in our report.

[312] Energiesteuergesetz § 27

Concession fee	Konzessions-abgabe	A tax that also exists for electricity consumption. However, clients with a high-level use (higher than 5 GWh/year) benefit from a total exemption, meaning this tax is not relevant as we study profiles with greater use (i.e., not relevant for G1 and G2) except for G0.[313]	G-PRO G0
Carbon Tax	CO2 Steuer	An energy tax that is applied to the gas used for heating and transport and it is applicable to all consumers profiles under review. The rate amounts to **9.98** EUR/MWh of gas consumed.	All
Gas Storage Levy	Speicher Umlage	The Gas Storage Levy is a charge implemented in Germany to fund the filling and maintenance of gas storage facilities, ensuring supply security and mitigating price fluctuations. The levy has been introduced in 2022, following the major price rises in natural gas due to Russia's invasion of Ukraine, and is applied to all gas consumers within Germany[314]. As of January 2025, the rate amounts to **2.99** EUR/MWh[315].	All

[313] This tax rate hasn't changed in the past years.

[314] (Reuters, 2022) https://www.reuters.com/business/energy/germanys-new-gas-storage-law-how-will-it-work-2022-04-22/

[315] (TradingHubEurope, 2025) https://www.tradinghub.eu/en-gb/About-us/Newsroom/News/Details-en-GB/ArtMID/1412/ArticleID/224/Press-Release?utm_source=chatgpt.com

France

Component 1 – commodity price

France used to work with two market areas (PEG Nord and TRS) regarding natural gas. In 2018, the merger of these areas resulted in the creation of a single zone, TRF (PEG), which we present accordingly as a unique price zone[316]. The commodity prices exhibited in this document are the prices collected in January 2025 as provided by the CREG.

Unlike electricity supply for industrial consumers (ARENH), France does not provide a regulated tariff for natural gas supply[317].

$$\textit{Commodity price} = 50\%\ DA\ (day\ ahead) + 50\%\ MA\ (month\ ahead)$$

Component 2 – network costs

Transport costs

As previously stated, there are two Transmission System Operators (TSOs) in charge of the natural gas transport network: Natran (formerly GRTgaz) and Terega.

Table 113: TSOs natural gas offtake in France[318]

TSO	Percentage of annual consumption (%)
Natran (formerly GRTgaz)	84%
Terega	16%

Transport tariffs are built along with the same methodology, and made of three main components for end-users on the transport grid:

Table 114: Transport cost component in France

Transport cost		
Component	**French labelling**	**Explanation**
Fixed charge	Terme fixe de livraison	Applicable per year per delivery station (expressed in EUR/year)
Entry capacity fee	Terme de capacité d'entrée sur le réseau principal	Applicable to daily delivery capacity subscriptions (expressed in EUR/year/MWh/day)
Delivery charge	Terme de capacité de livraison	Applicable to daily delivery capacity subscriptions for industrial consumers (expressed in EUR/year/MWh/day)

[316] On 1 April 2015, a common market area in Southern France, "Trading Region South" (TRS), replaced the former PEG TIGF and PEG SUD. On 1 November 2018, TRS and PEG-Nord merged into a single market area (TRF) with a unique trading hub (PEG or Point d'échange de gaz).

[317] France used to provide regulated selling rates regarding natural gas based on categories for professionals (B2S, TEL S2S/STS) with a higher yearly consumption than 300 MWh. However, this disappeared in December 2015 for industrial consumers.

[318] (Selectra, 2023)

Distribution costs

Profiles G-Pro, G0, and G1 are located on the distribution grid, respectively subject to T3 and T4 tariff option (determined by their annual consumption level). Given that distribution costs integrate transport costs, only these tariffs apply to our G0 and G1 profiles. Only tariffs from GRDF (Gaz Réseau Distribution France) are considered as it delivers 96% of all distributed natural gas in France. The tariff has three components:

Table 115: Distribution cost components in France

Distribution costs		
Component	**French labelling**	**Explanation**
Fixed charge	Abonnement	Applicable per year per subscription (expressed in EUR/year)
Proportional component	Prix proportionnel	Variable component based on consumption (expressed in EUR/MWh)
Delivery charge	Terme de souscription capacitaire journalière	Applicable to daily delivery capacity subscriptions for industrial consumers with annual consumption from 5,000 MWh (expressed in EUR/MWh/day)

Component 3 – all other costs

In France, two surcharges apply on natural gas:

Table 116: Surcharges on natural gas in France

Name	Definition	Amount in 2025	Profile
Contribution Tarifaire d'Acheminement: **CTA**	The CTA finances part of the pensions of staff in the energy sector for Electricity and Natural gas Industries.	**20.80**% on the fixed part of distribution cost. **3.9%**[319] on the transport cost (tariff contribution for transport services).	G0 G1
		4.71% on the fixed part of the transport cost[320].	G2
Taxe Intérieure de Consommation sur le Gaz Naturel: **TICGN**	The TICGN is a tax that applies to all deliveries of natural gas sent to an end user. Its amount is calculated according to consumption.	**17.16** EUR/MWh[321].	All
		<u>Exemptions:</u>[322] Professionals are exempt from the TICGN when the natural gas is: ● Intended for use other than as fuel. ● Intended for dual use, i.e. when used both as fuel and for other purposes. ● Used as part of a process for manufacturing non-metallic mineral products. ● Used to generate electricity (gas power plants). ● Used to enable its extraction and production. ● Used within premises dedicated to the production of energy products, for the manufacturing of those energy products or the production of the energy necessary for their manufacturing. ● Used by biomass recovery companies under certain conditions.	

[319] An additional 3.9% needs to be added to customers on the distribution network for the transport component (4.71%) multiplied by a proportionality coefficient of 83.51%. This results in 20.8% + (4.71% * 83.51%) (CRE, 2023)

[320] (CRE, 2023)

[321] (Selectra, 2025)

[322] Ibid

The Netherlands

Component 1 – commodity price

For investigated profiles, the commodity prices in the Netherlands provided in this study are the January 2025 observed prices for TTF, provided by the CREG.

$$\textit{Commodity price} = 50\%\ DA\ (day\ ahead) + 50\%\ MA\ (month\ ahead)$$

Component 2 – network costs

Transport costs

The Dutch natural gas transport network is operated by the TSO Gasunie Transport Services and serves distribution networks and direct exit points. According to the Gas Act (Article 10, paragraph 6b), it is the duty of the Dutch TSO, Gasunie Transport Services to provide an applicant with a connection point if the connection has a flow rate greater than 40 m³ per hour. Consequently, we consider that profiles G0, G1 and G2 are directly connected to the transmission network.

Since 2020, transport tariffs have changed of structure. Following the principles of the 'Network code on harmonized transport tariff structures for gas' (NC-TAR), decided by the European Commission, the Netherlands has simplified its tariff structure. They are therefore only composed of 2 components, which can vary depending on the contracted capacity:

Table 117: Network cost component in the Netherlands

Transport costs	
Component	**Explanation**
Entry capacity fee	Fee depending on the entry point and function of the contracted capacity (expressed in EUR/kWh/year).
Exit capacity fee	Fee depending on the exit point and function of the contracted capacity (expressed in EUR/kWh/year).

The Dutch network is essentially supplied with lower calorific value (L-gas), compared with the natural gas used in most of Western Europe (H-gas). Yet, as the Dutch transport tariffs are fixed in terms of capacity and expressed in EUR/kWh/year, this evens out this calorific value effect. While Gasunie Transport Services used to offer individualised rates for the entry and exit capacity fees, it is no longer the case. One single exit capacity fee as well as one entry capacity fee is used for the directly connected industrial consumers.

Component 3 – all other costs

Similar as for residential and small professional consumers, only one surcharge remains in the Netherlands, namely the Energy Tax ("Regulerende Energie Belasting", or REB). The Energy Tax varies, in a degressive trend, according to the amount of consumed natural gas as shown in the table below[323]:

Table 118: Natural Gas Energy Tax[324]

Band	Consumption (in m³)	Energy Tax (EUR/m³ – VAT excl.)
1	Up to 170,000	**0.57816**
2	170,001 – 1,000,000	**0.31573**
3	1,000,001 - 10,000,000	**0.20347**
4	> 10,000,000 (professional)	**0.05385**

[323] A lowered tariff also exists for agricultural heating installations. We assume our profiles do not benefit from the lowered tariffs.

[324] (Belastingdienst, 2024)

Given the consumption level of our profiles under study, they fall into the following bands: band 1 for G0, band 1-2-3 for G1 and band 1-2-3-4 for G2 profiles.

As the Energy tax is fixed in euros per volume units (EUR/m³) and not in euros per energy units, the calorific value of the used natural gas has an impact on the total amount paid. We thus use a weighted average in function of the calorific value distribution of all-natural gas industrial users directly connected to the transport grid in the Netherlands. Out of the 328 industrial consumers[325] directly connected to the grid, the following table depicts the allocation of companies using which type of natural gas (H, G or G+)[326] :

Table 119: Companies directly connected to the transport grid in the Netherlands[327]

Natural gas type	Number of companies directly connected to the transport grid	Percentage of companies directly connected to the transport grid per gas type (%)
H-Gas	**100**	**30%**
G-Gas	**26**	**8%**
G+ Gas	**203**	**62%**

As it is the case for electricity, some exemptions and reductions exist for natural gas regarding large industrial consumers:

1. A Tax refund scheme ("teruggaafregeling") is applicable to public and religious institutions such as clinics, schools, sports centres, churches, etc. We assume that our profiles are not part of these specific categories and thus do not take this specific scheme into account.
2. Industrial consumers are exempted if they use naturas gas:
   - not as fuel nor as an additive or filler substance.
   - for metallurgical and mineralogical processes.
   - as fuel for commercial shipping.
   - in the case of Power-Heat Coupling installations ("*WKK* installaties") when gas is used to generate electricity in an installation with an electrical efficiency of at least 30%.

As we do not consider profiles G0 and G1 as consumers using natural gas as a fuel or natural gas that has been used as an additive or filler substance, we present the maximum option (no refund applicable) for both profiles. Considering that G2 can represent a large consumer using natural gas as a feedstock for its industrial processes, we assume that it can be granted an exemption of taxes and we, therefore, present a range between the minimal option (totally exempted from taxes) to the maximum option (no refund applicable) for this consumer profile.

The UK

Component 1 – commodity price

The National Balancing Point is the referent market index regarding the UK. For all investigated profiles, the national commodity price is the result of January 2025 prices for NBP. The CREG provided all commodity price data.

$$\textit{Commodity price} = 50\%\ DA\ (day\ ahead) + 50\%\ MA\ (month\ ahead)$$

[325] As we could not update the source of this information for this year update, the figures were carried over from the last editions of this report.

[326] G- and G+ Gases are both considered as L-Gas. In this study, they are considered as having the same calorific value and the same conversion factor to kWh, namely 9.77 kWh/m³.

[327] The most recent data available on the distribution among various gas types was from 2021; subsequent years did not have this information publicly disclosed. (Gasunie, 2025)

Component 2 – network costs

Transport costs

As already mentioned for our residential and small professional profiles, there is only one TSO in the UK (except for Northern Ireland): National Grid Gas. The Gas Transmission Transportation Charges are comprised of the following components:

Table 120: Transport costs components in the UK

Transport costs	
Component	**Explanation**
Entry Commodity Charge	A charge per unit of natural gas transported payable for flow entering the system, expressed in p/kWh/day.
Exit Commodity Charge	A charge per unit of natural gas transported payable for flow exiting the system, expressed in p/kWh/day.
Commodity charge	A charge per unit of natural gas transported payable for flows entering and exiting the system expressed in p/kWh.
Compression charge	Additional charge payable where natural gas is delivered into the National Grid NTS system at a lower pressure than that required, expressed in p/kWh.

National Grid Gas provides a weighted average of the entry and exit capacity tariffs in their Statement of Gas Transmission Transportation Charges.[328]

Distribution costs

Industrial consumers that are still connected to the distribution grid are also subjected to their tariffs, and this is the case for the G0 and G1 profiles. The UK has eight DSOs for natural gas, amongst which four are owned by Cadent Gas. The distribution tariff for natural gas is composed of four components:

Table 121: Distribution cost components in the UK

Distribution costs		
Component	**Explanation**	**Profile**
LDZ System Capacity Charge	With charge band with 732,000 kWh and above LDZ charges are based on functions, these functions use Supply Point Offtake Quantity (SOQ) in the determination of the charges. The LDZ System capacity charge is expressed in p/Peak day kWh/day and the LDZ System commodity charge in p/kWh.	G0 and G1
LDZ System commodity Charge		
LDZ Customer Capacity Charge	With charge band with 732,000 kWh and above customer, the capacity charge is based on a function related to the registered SOQ. Expressed in p/Peak day kWh/day.	
Exit Capacity Charges	A capacity charge applied to the supply point similar to LDZ System Capacity Charge. These charges are applied per exit zone on an administered peak day basis and are expressed in GBP/year.	
Metering charges	A cost for use and management of your energy meter, which is expressed in GBP/year.	

An average of these components is presented across all active DSOs for natural gas in the UK.

The capacity terms are based on the estimated maximum daily offtake. This is calculated by dividing the total consumption in a year by the number of days of consumption multiplied by the load factor. This load factor is related to the EUC (End User Category) bands. Each local distribution zone has 33 individual EUC bands that define 9 different consumption profiles based on annual consumption. The load factors, therefore, differ depending on the annual consumption of a profile and the local distribution zone[329].

[328] We have used the weighted averages published in the Gas Transmission Transportation Charges of the NGG valid as from the 1st of April 2023, (National Gas Transmission, 2024)

[329] Load factors for bands 3 to 9 (from 293 MWh to 58,600 MWh/year) are determined based on a Winter Annual Ratio (consumption between December to March over annual consumption).

Each DSO has its own load factor percentages, but only Northern Gas Networks discloses its load factors, which we used as a proxy for all other DSOs. The table below depicts load factors used for profiles G0, G1 and G2:

Table 122: Load factors for profiles G0, G1 and G2

Profile	Bands	Threshold (kWh)	Average load factor
G0	4	732,001 - 2,196,000	40.30
G1/G2	9	58,600,000 - 99,999,999,999	66.55

Based on this, the capacity term is computed as follows:

$$Annual\ charge = (SOQ * 365\ days) * unit\ rate$$

Where,

$$SOQ = annual\ consumption / (365\ days * Load\ Factor)$$

Component 3 – all other costs

The **Climate Change Levy** (CCL) is applicable to the consumption of natural gas for businesses in the industrial, public services, commercial and agricultural sectors. This levy is "an environmental tax charged on the energy that businesses use. It's designed to encourage businesses to be more energy efficient in how they operate, as well as helping to reduce their overall emissions."[330]

The following table gives an overview of the rates that are charged to professional consumers regardless of their profile:

Table 123: Climate Change Levy rates on natural gas[331]

Time period	Natural gas rate (GBP/MWh)
1st April 2024 to 31st March 2025	**7.75**
1st April 2023 to 31st March 2024	**6.72**
1st April 2022 to 31st March 2023	**5.68**

Industrial consumers with a climate change agreement can benefit from a reduced rate of **6.898** GBP/MWh for the period from 1st April 2024 to 31st March 2025. Additionally, the use of natural gas in metallurgical and mineralogical processes is exempt from the Climate Change Levy. We consider G2-profiles as large consumers that can use natural gas as a feedstock for its industrial processes, we assume therefore that it can be granted an exemption in the case of use in metallurgical and mineralogical processes.

330 (SEFE, 2024)
331 ibid

6. Presentation and interpretation of results

6. Presentation of results

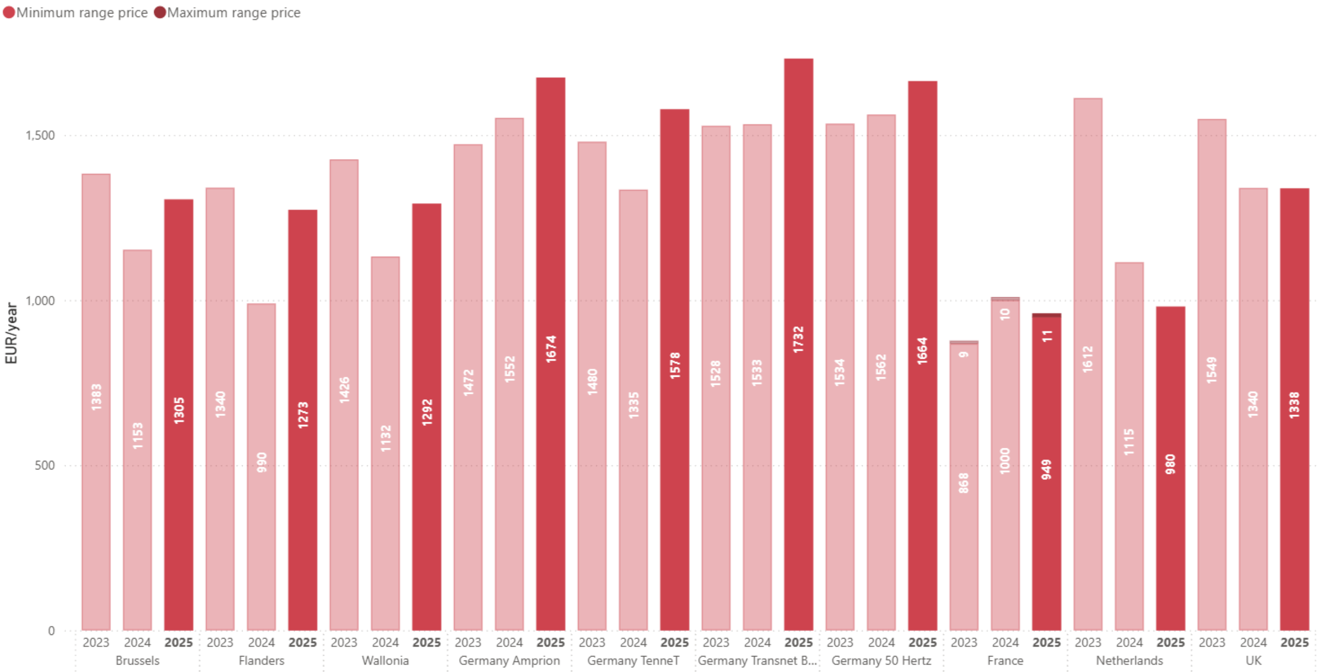
Presentation of figures (Electricity)

Profile E-RES (Electricity)

Total invoice analysis

The figure below provides a comparison of the total yearly invoice paid by a residential consumer (E-RES) in the different studied countries and regions. The results are expressed in EUR/year (including VAT).

Figure 26: Total yearly invoice in EUR/year for residential consumers (profile E-RES)



Similarly to last year, Belgium is split into three regions and Germany into four regions because of regional differences. The other countries under review – France, the Netherlands, and the UK – are represented as one single result. The reasoning behind the distinction between regions was already set out above with an additional explanation of how the countries organise themselves regarding energy regulation.

Belgium has become the third cheapest country for this profile, after France and the Netherlands. France has remained the most competitive over the last three years, while the Netherlands has become increasingly competitive over the years. Compared to 2024 the total invoice has increased for a majority of the regions (7/10) under review, except for the Netherlands and France (the UK being more stable). Even though this is the smallest electricity profile considered in this study, we do notice the price range in France. The price range (minimum and maximum) is the consequence of the possibility to opt for the CU4 or MU4 network cost option which also has an impact on the CTA. The figure below thus shows a range for the network and all other cost components.

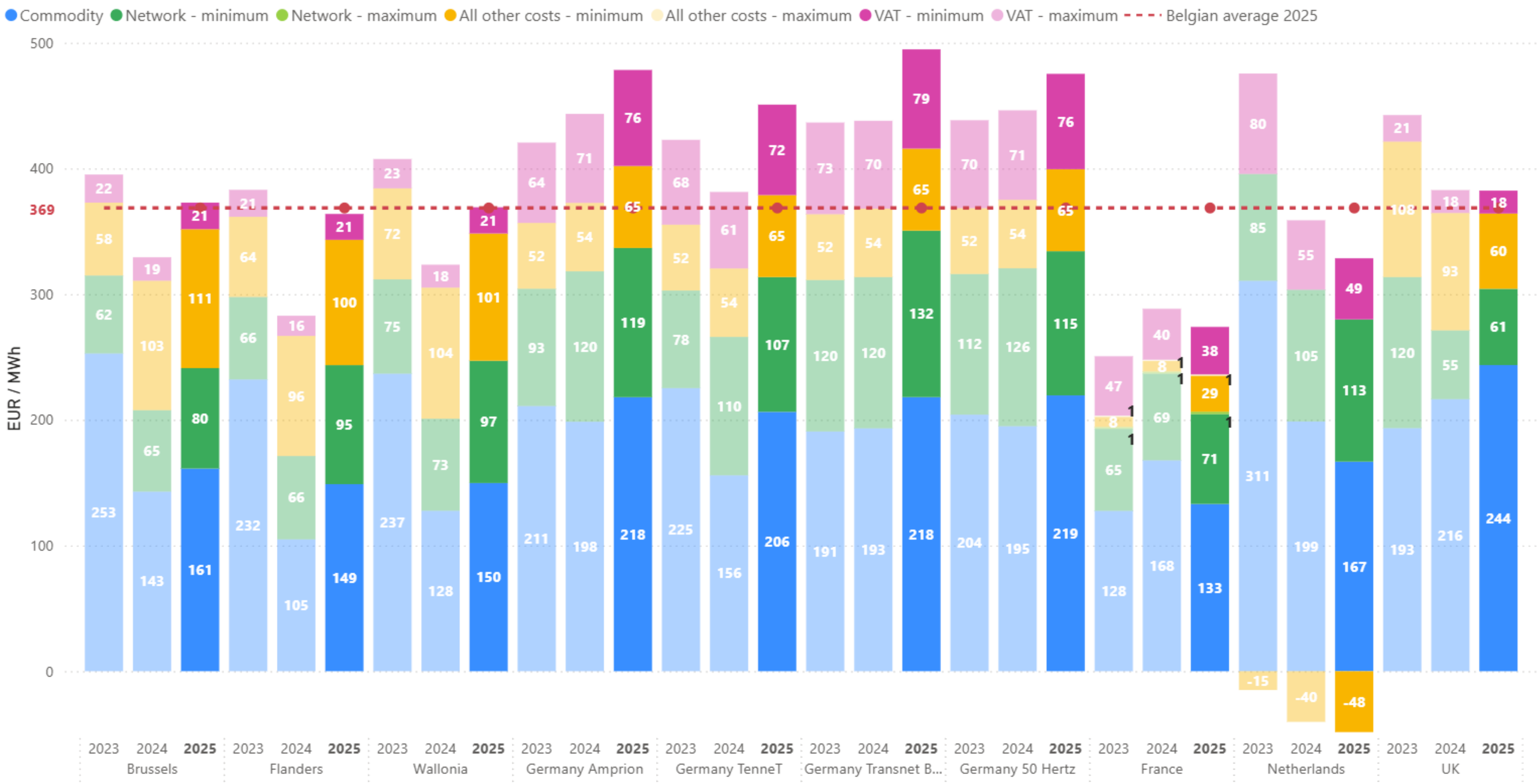
The subsequent section will provide a detailed analysis of each component, revealing that the overall rise in the total invoice is predominantly attributable to the increase in commodity and network costs.

Concerning the positioning of the Belgian regions, Flanders is (similarly to last year's study) the most competitive Belgian region, followed by Wallonia and Brussels.

Breakdown per component

The previous results are further detailed for profile E-RES by the figure underneath, which provides a closer look at the breakdown of the different price components.

Figure 27: Electricity price by component in EUR/MWh (profile E-RES)[332]



332 The legend is applicable to the data for 2025, while the other years use a lighter variant of these same colours to enhance readability.

The ***commodity component***[333] is the lowest in France (133 EUR/MWh) which is also the country under review seeing the largest decrease in this component between 2024 and 2025 (-35 EUR/MWh), followed by the Netherlands (-32 EUR/MWh). The largest increase is attributable to the German region operated by TenneT (+50 EUR/MWh). This year, we observe increases (Belgium, Germany, the UK) and decreases (France, the Netherlands) of the commodity price. The increases of the commodity price can be explained by the increase in electricity prices on the markets, which is then reflected in the consumers' bills. In the UK, the energy price cap measure introduced by the market regulator OFGEM, are supposed to absorb the increase in commodity cost for variable contracts (the energy price guarantee having been discontinued). The energy price cap sets the maximum level of prices per kWh of gas and electricity for the default tariff that each energy supplier offers to residential customers.[334] The cap is reviewed four times a year, with the last update in January 2025. The decrease observed in France is due to the standard product for residential consumers being regulated by the Government, thus not reflecting the market changes of the commodity price all over Europe. In the Netherlands, this component has decreased by 32 EUR/MWh compared to 2024, the second largest decrease after France. This decrease is mainly due to lower prices for power generation fuels, along with increased generation from renewable energy sources[335].

The ***network cost*** component shows to have increased in most regions/countries under review. While Germany presents a mixed trend, with the Transnet BW region network costs increasing by 12 EUR/MWh, other regions are stable such as the Amprion (-1 EUR/MWh), or the 50 Hertz with a decrease of 11 EUR/MWh. The most significative increases have been detected in the Netherlands (+8 EUR/MWh) and Belgium. The latter country's network costs have increased by 29 EUR/MWh in Flanders, 24 EUR/MWh in Wallonia and 15 EUR/MWh in Brussels. They are the highest in Wallonia (97 EUR/MWh), closely followed by Flanders (95 EUR/MWh), while Brussels offers the lowest network costs (80 EUR/MWh). One of the reasons for this surge lies in the increase of the transport costs billed by Elia, which have almost doubled between 2024 and 2025[336]. The position of each region in terms of network costs has remained relatively similar compared to 2024, though Brussels widens the gap with Wallonia and Flanders.

The ***all other costs component***[337] has increased for most of the regions/countries under review, except for the UK and the Netherlands, similarly to previous year. In the Netherlands, due to the refund (*Belastingvermindering*) consumers (E-RES and E-SSME) can obtain, a negative value for this component is observed. This fixed amount of 521.81 EUR/year in 2024 has increased to 524.95 EUR/year in 2025 and has been coupled with a decrease of the energy tax. Therefore, for the E-RES profile in the Netherlands, this negative tax allows for a gain in competitivity of the yearly electricity bill. This component is the highest in the three regions of Belgium compared to all other regions/countries under review (from 100 to 111 EUR/MWh), which is similar to last year. In Belgium a distinction is made between the regional and federal all other costs. We observe that both were balanced in 2025, accounting for an estimated 50% of the "all other costs" component for this profile. Notable changes happened in the Brussels and Wallonia region. In Brussels, an increase of 7 EUR/MWh is due to Public Service Obligations and green certificates scheme tariffs increases, while in Wallonia the decrease of 3 EUR/MWh is mainly due to the lower Public Service Obligations and measures supporting the financing of renewables energies.

Finally, we also must take the ***VAT*** into account since this is a residential profile. The VAT rate is different across two sets of countries. Belgium and the UK have respective rates of 6% and 5%, while the other countries VAT rates oscillate between 19% and 21%. France still displays in 2025 a mixed VAT rate, depending on the taxable base, with 5.5% on the subscription and CTA, and 20% on the consumption. The UK has the lowest VAT because of the low rate

[333] While this methodology to estimate commodity costs provide a fair view of the market situation in the respective countries and regions, one must be aware that it does not provide a full overview of the market prices as only three to five products were considered.

[334] (Ofgem, 2022)

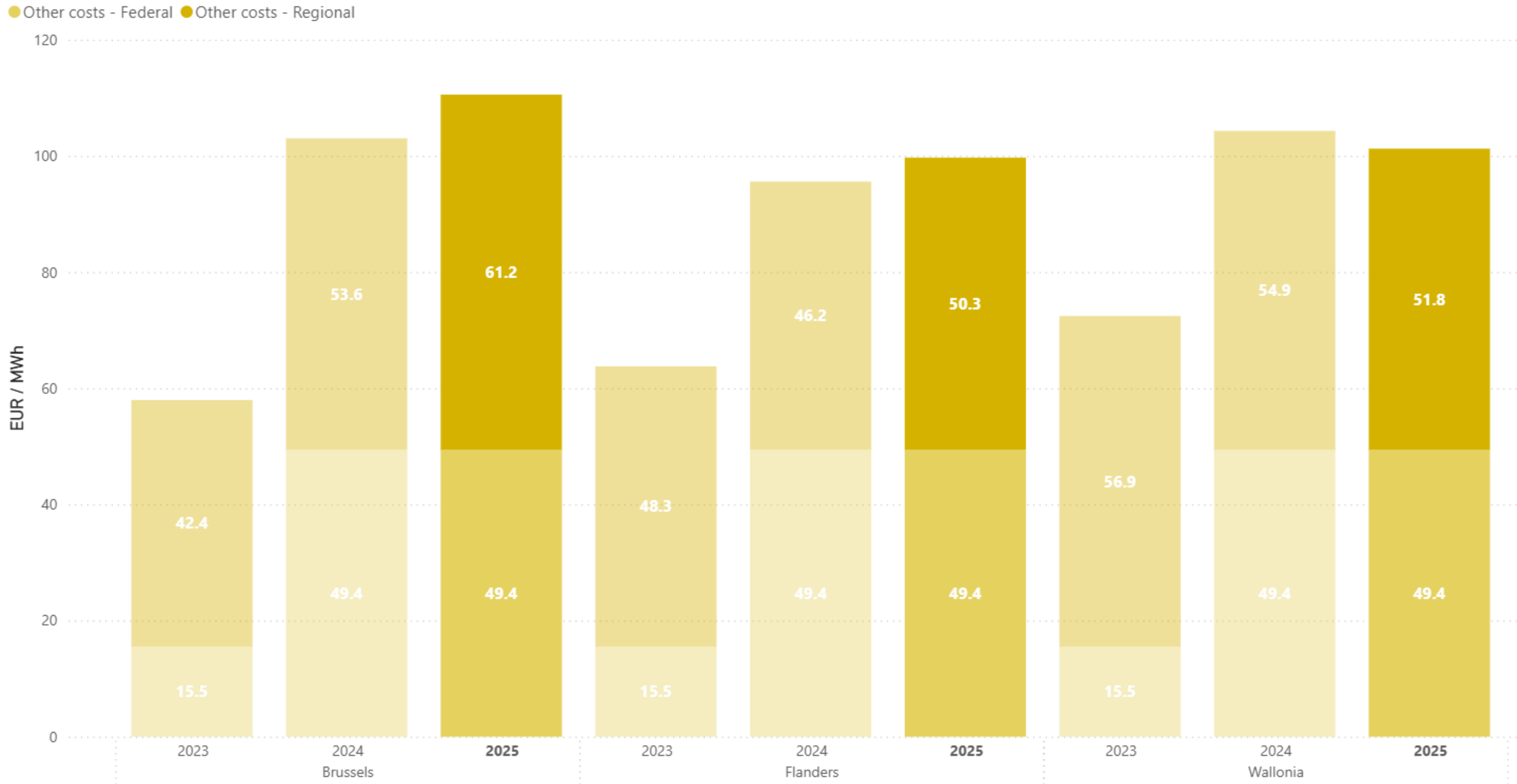
[335] (NL Times, 2025)

[336] (Elia, 2023)

[337] This cost includes taxes, levies and certificate schemes.

they apply on energy, followed by France that has the lowest total invoice. For the other countries, VAT mainly depends on the total invoice of the region/country.[338]

Figure 28: Regional and Federal all other costs in Belgium in EUR/MWh (profile E-RES)

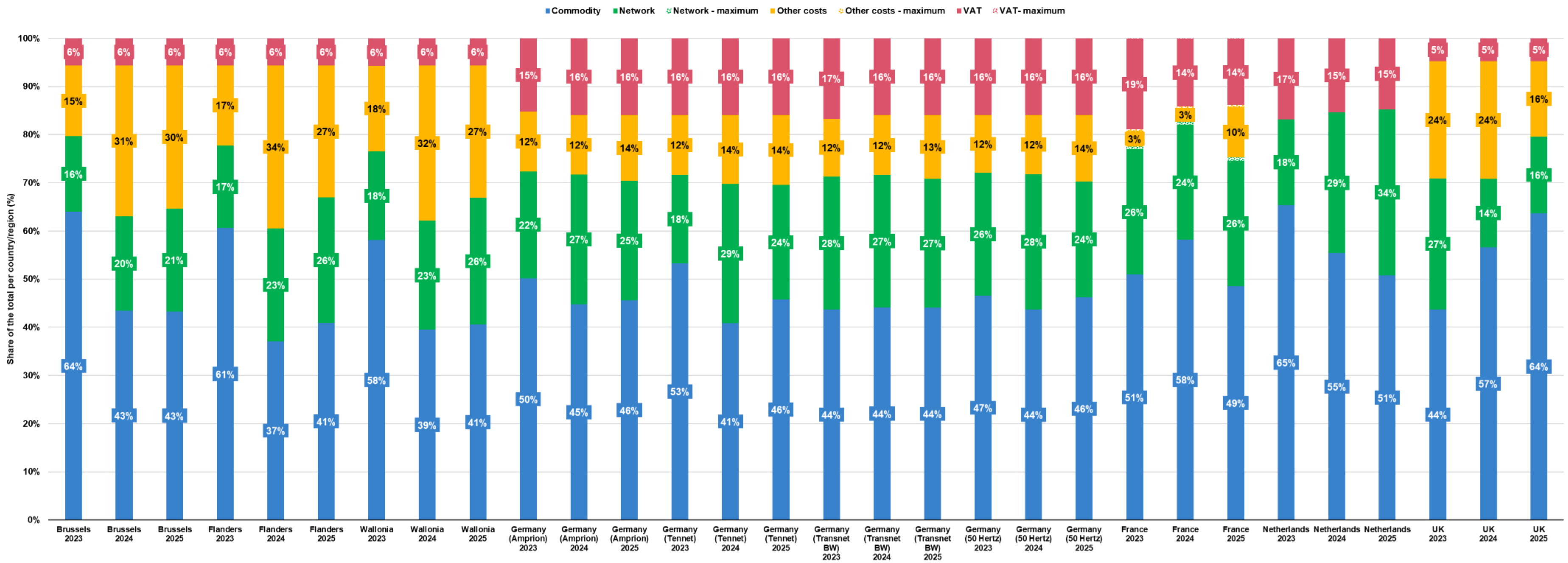


[338] The VAT rate is not always applied on the whole total invoice since some tariffs are exempted.

Proportional component analysis

The percentages of the costs for each component can be found in the figure below.

Figure 29: Proportional component analysis for electricity (profile E-RES)



The graph above represents the weights of each component in the total invoice. It is interesting to see how the countries/regions are similar or differ when not looking at the absolute values. In the Netherlands we show the weights of the commodity, network and VAT components before deducting the “all other costs” reduction, since in 2025 the other costs are below zero (- 48 EUR/MWh) and act as a “discount” of 17% over the total invoice (proportionally 3% more than previous years).

A few things stand out when observing the graph. Firstly, compared to previous years we observe that the share of ***commodity*** cost component increased in all countries, except for France and the Netherlands (respectively -9% and -4% of the total invoice). The region/country with the lowest share of the ***network*** costs are the UK and Brussels (respectively 16% and 21% of the total invoice), which stays similar to last year. As stated above, the Netherlands do not display the “all other costs” component on the figure since it is below zero, acting as a reduction on the total relative price (explaining the ***VAT*** rate differing from its actual rate). Lastly, when looking at France (i.e. the cheapest country for that profile when picking the lowest network costs), we see that there is a remarkable difference regarding the relative importance of the ***all other costs*** component (11%) over the total bill compared to the other regions/countries under review (on average 17% of the total bill when taking the Netherlands into account). The highest share of this component is in Belgium, with between 27% to 30% of the bill accounting for the all other costs.

Key findings

For the E-RES profile, the results demonstrate the ensuing key findings:

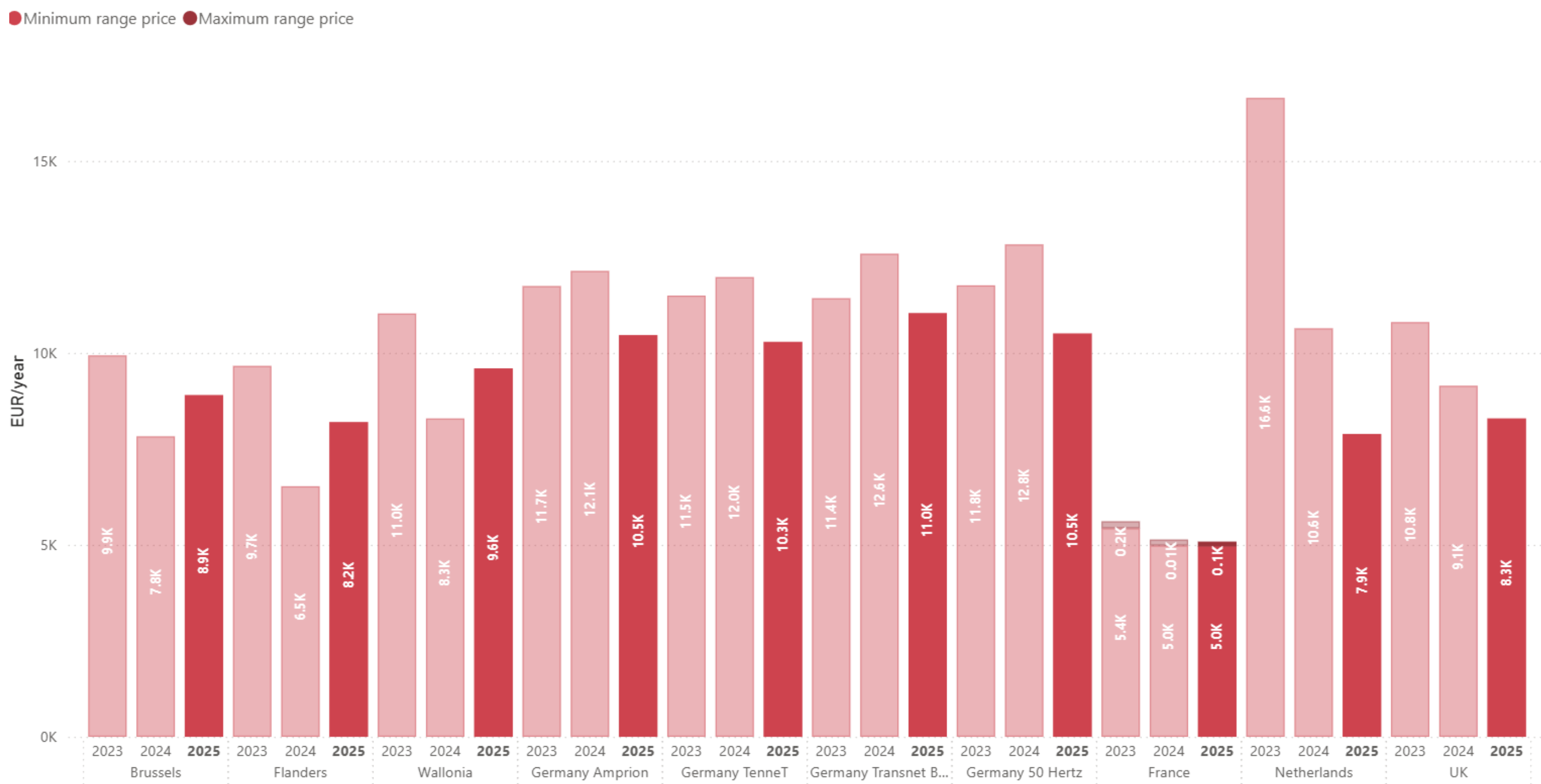
- The **total invoice has evolved differently from one regions/countries under review to the other.** The total invoice ranges from 949 EUR/year (France) to 1,732 EUR/year (Transnet BW, Germany). All German regions are the most expensive, followed by the UK, the Belgian regions and the Netherlands. France is the most competitive country for this profile.
- **In Belgium, Flanders is the most competitive region**, followed closely by Wallonia, with slightly costlier commodity, network and all other costs components. The Belgian regions have become less competitive than the other regions compared to 2024, as they were the second most competitive. The higher all other costs and consequent network costs are mainly responsible for their lack of competitiveness compared to their neighbours.
- The **commodity component**'s proportion in the bill has on average increased compared to 2024, accounting for around 47% of the total invoice on average in most regions/countries under review. However, the Netherlands and France observed an inversed trend. This commodity component variance has become smaller across countries, though it is higher in the UK for which it accounts for 64% of the total bill of this profile.
- The **network costs component** varies across the reviewed regions/countries and goes from 61 EUR/MWh (the UK) to 132 EUR/MWh (Germany, Transnet BW). France has the second lowest network costs (71 EUR/MWh), followed by Brussels which is the first Belgian region in terms of network costs competitiveness. It ranks better than the other two Belgian regions, though overall Belgium network costs rank third, followed by the Netherlands and Germany.
- The **all other costs component** and the reductions that can be applied are an important factor when determining the competitiveness of a region/country. The Netherlands competitive position completely changes due to its negative component (B*elastingvermindering*), allowing a -48 EUR/MWh.

Profile E-SSME (Electricity)

Total invoice analysis

The figure below provides a comparison of the total yearly invoice paid by a small professional consumer (E-SSME) in the different studied countries and regions. The results are expressed in EUR/year.

Figure 30: Total yearly invoice in EUR/year (profile E-SSME)



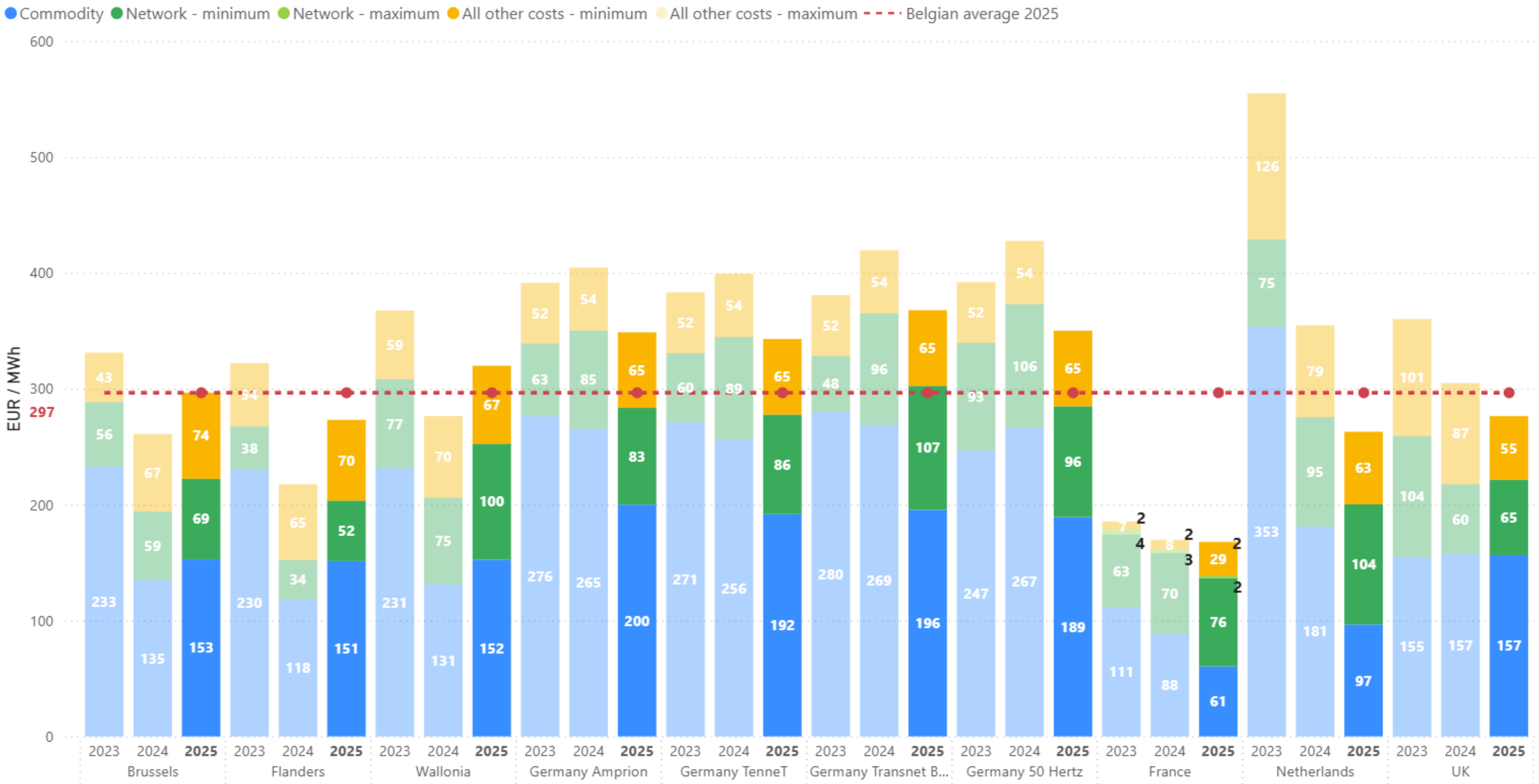
Similarly to the E-RES profile, Germany stays the most expensive country, due to high network costs and commodity, though the latter have been declining since 2024. France is again the cheapest country observed, while the Netherlands and the UK are the second and third least expensive ones. The largest decrease is observed in the Netherlands (-2.7 kEUR/year), which is mainly due to the decrease in commodity costs and partly in the decrease of the other costs components.

The total invoice has decreased in all countries compared to 2024, except for Belgium where all three regions see the yearly bill of their small companies increase, due to an increase in both the network and the commodity costs. Wallonia stays the most expensive region in Belgium with 9.6 kEUR/year, with Flanders coming up as the least expensive with a bill of 8.2 kEUR/year. The breakdown per component below will detail which components have the most influence on the total invoice.

Breakdown per component

The previous results are further detailed for profile E-SSME in the figure below, which provides a closer look at the breakdown of the different price components.

Figure 31: Electricity price by component in EUR/MWh (profile E-SSME)



Similarly to the E-RES profile, the **commodity component**[339] has increased in Belgium, while it still remains the country with the third lowest commodity costs. France and the Netherlands are the first and second countries in that ranking. However, the latter two have seen their commodity costs decrease, similarly to Germany. The UK, for which the energy price cap introduced by OFGEM holds the commodity price stable over the years, has stable commodity costs. The largest decrease occurred in the Netherlands (-84 EUR/MWh). When looking at Belgium, the commodity component is the highest in Brussels, by a small margin compared to Flanders and Brussels (154 EUR/MWh, 1-2 EUR/MWh more than the other Belgian regions). France can offer the cheapest price due to the regulated product “Tarif bleu”, for which the commodity is at 61 EUR/MWh. Germany stays the country (all regions included) with the highest commodity costs, varying between 189 to 200 EUR/MWh.

For the **network component** we observe an increase for most of the regions under review, except Germany where a mixed picture is shown, with increases (Transnet BW +11 EUR/MWh) and decreases (50 Hertz –10 EUR/MWh, others to a lesser extent) noticed. The largest network costs are observed in Germany (Transnet BW, 107 EUR/MWh), followed by the Netherlands with 104 EUR/MWh. The region with the lowest network costs is Flanders, similarly to the previous year, with 52 EUR/MWh. Overall, the observed regions keep the same order as in 2024 when analysing network costs. The total network costs increased by an average of 10% across the other countries, to the exception of Belgium, where a larger increase is noticed. In Belgium, Flanders stays the region with the lowest network costs, with Brussels (69 EUR/MWh) and Wallonia (100 EUR/MWh) bringing up the rear. The network cost per MWh is on average smaller than the cost of the E-RES profile. For Belgium, this average network costs represents 91 EUR/MWh for the E-RES profile, while it amounts to 74 EUR/MWh for the E-SSME profiles, a 32% year-on-year increase for the latter profile.

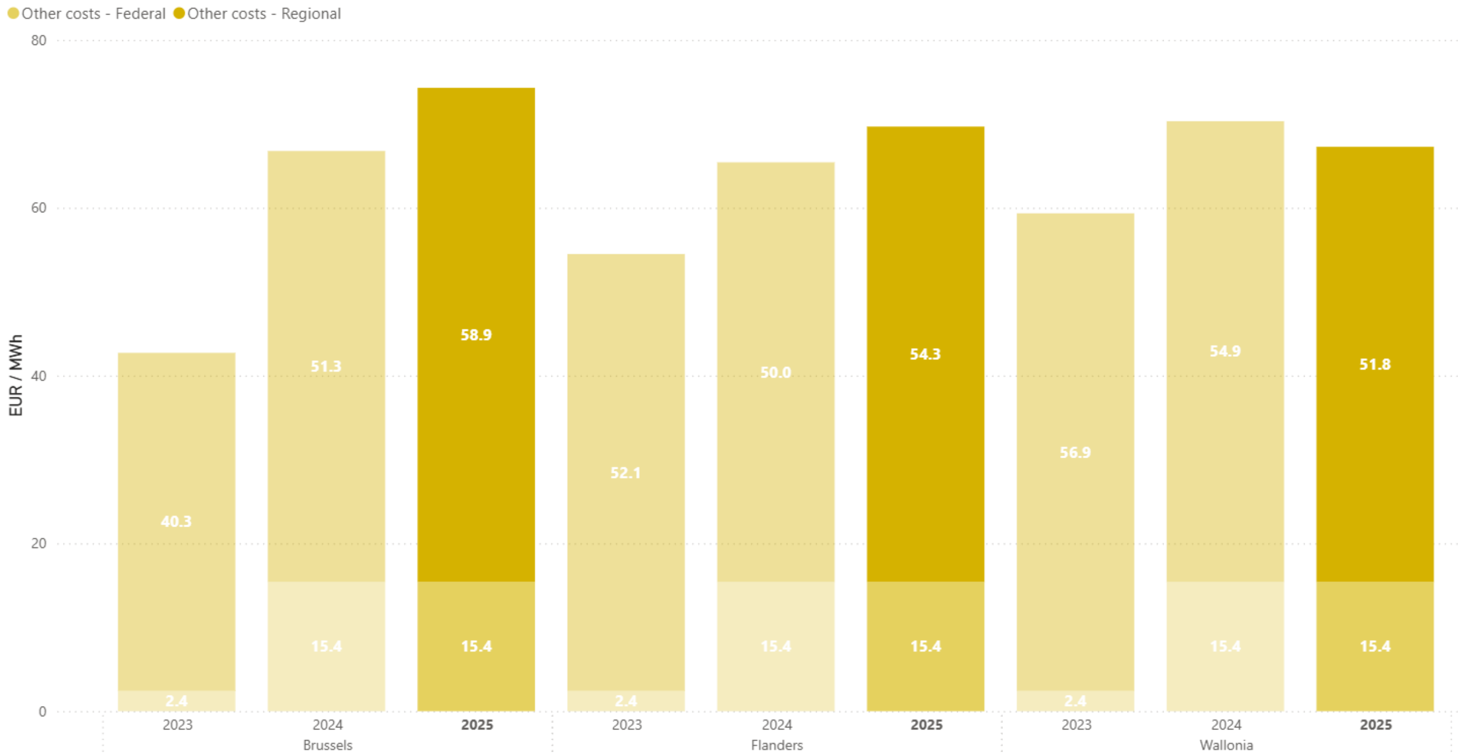
The **all other costs component**[340] is the lowest in France with 29 EUR/MWh and the highest in Brussels with 74 EUR/MWh. In Belgium, the situation is different in Wallonia, where this component decreased due to the lower regional Public Service Obligations and support measures for the financing of renewable energies. This component increased in the other regions of Belgium. We observe that this component, very similarly to the E-RES profile, increased in France due to the removal of the *bouclier tarifaire* previously limiting the excise duty on electricity, and increased in Germany mainly due to a surge of the StromNEV levy. The component increased in the Netherlands and is not negative anymore due to the lowest proportion of the *belastingvermindering* in the overall costs related to this component. Whether we consider the minimum or maximum range of France into account, we notice that France stays less expensive than Belgium’s three regions and especially Brussels, which is the region with the highest all other costs component (74 EUR/MWh). Flanders and Wallonia are respectively the second and third regions of Belgium with the highest costs for this component.

In Belgium we observe that the federal component of all other costs has remained stable at 15.4 EUR/MWh, while the regional all other costs components increased by 16% for Brussels, 8% in Flanders and decreased by 6% in Wallonia. The increase in Flanders and Brussels, are mainly due to the costs of the green certificates scheme, while the decrease in Wallonia is attributable to the lower Public Service Obligations tariffs, and the levy for the financing of measures to support renewable energies.

[339] While this methodology to estimate commodity costs provides a fair view of the market situation in the respective countries and regions, one must be aware that it does not provide a full overview of the market prices as only three to five products were considered.

[340] This cost includes taxes, levies and certificate schemes.

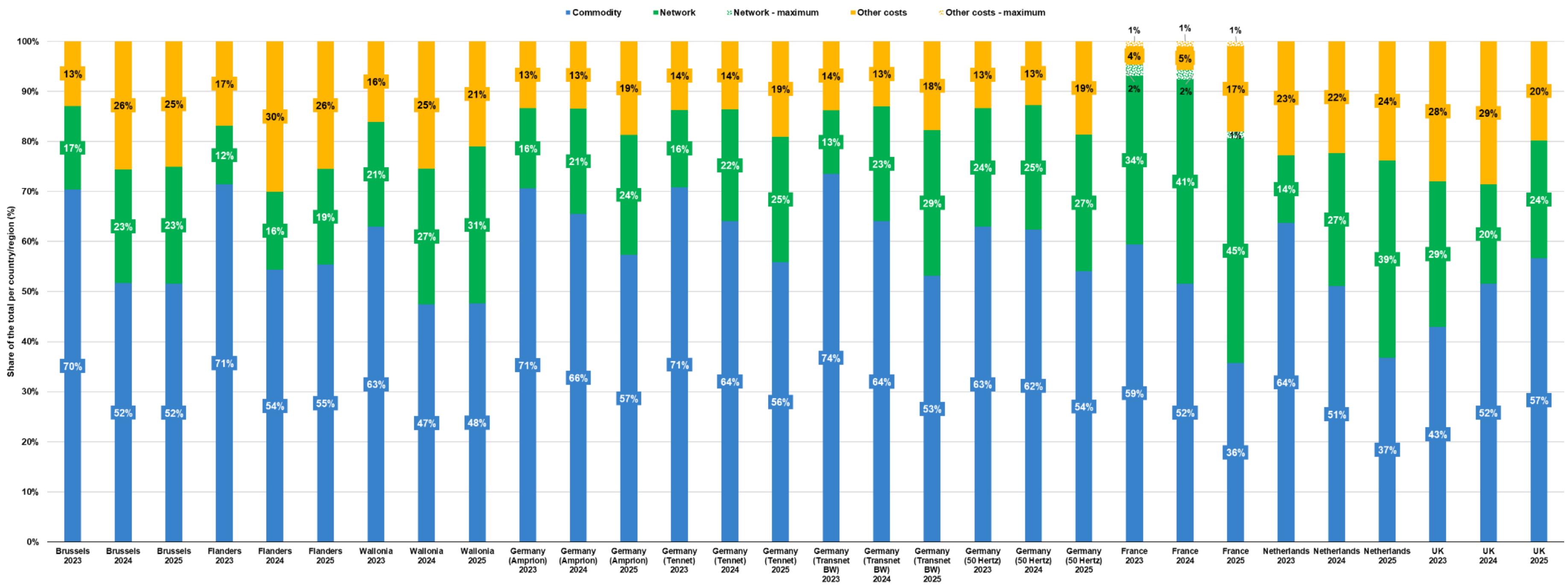
Figure 32: Regional and Federal all other costs in Belgium in EUR/MWh (profile E-SSME)



Proportional component analysis

The percentages of the costs for each component can be found in the underneath figure.

Figure 33: Proportional component analysis (profile E-SSME)



The relative importance of the commodity component has decreased for most of the regions under review (6/10 regions) though the most pronounced in France (from 51% to 37% of the yearly bill), while it has relatively increased the most in the UK (from 52% to 57% of the yearly bill). The Netherlands is the country where the proportion of the network cost has increased the most, by 12% year-on-year, reaching 39% of the yearly bill in 2025. This component represents the lowest share in the total bill in Flanders, with 19%, and the highest in France, with 45%. Overall, Belgium is the country where the proportion of the network costs in the yearly bill are one of the lowest (24% in 2025, similar to the UK). However, Wallonia skews this number upwards due to a larger share (31%) of this component in the yearly bill. Lastly, while France remains the country for which the “all other costs” share in the bill remains the lowest (17%), it still went under a proportional increase of 12% in one year. The highest share of this component is observed in Flanders (26%). This component accounts from 21% to 26% of the bill, while the other countries see increased shares of the other costs in the total bill (except in the UK). The percentual analysis shows a slow decrease of the weight of the all other costs in the total bill among the three Belgian regions, with the three regions having between 21% and 26% of their bill as being other costs, an overall reduction of 3% compared to 2024.

Key findings

As for the E-SSME profile, the results demonstrate the ensuing key findings:

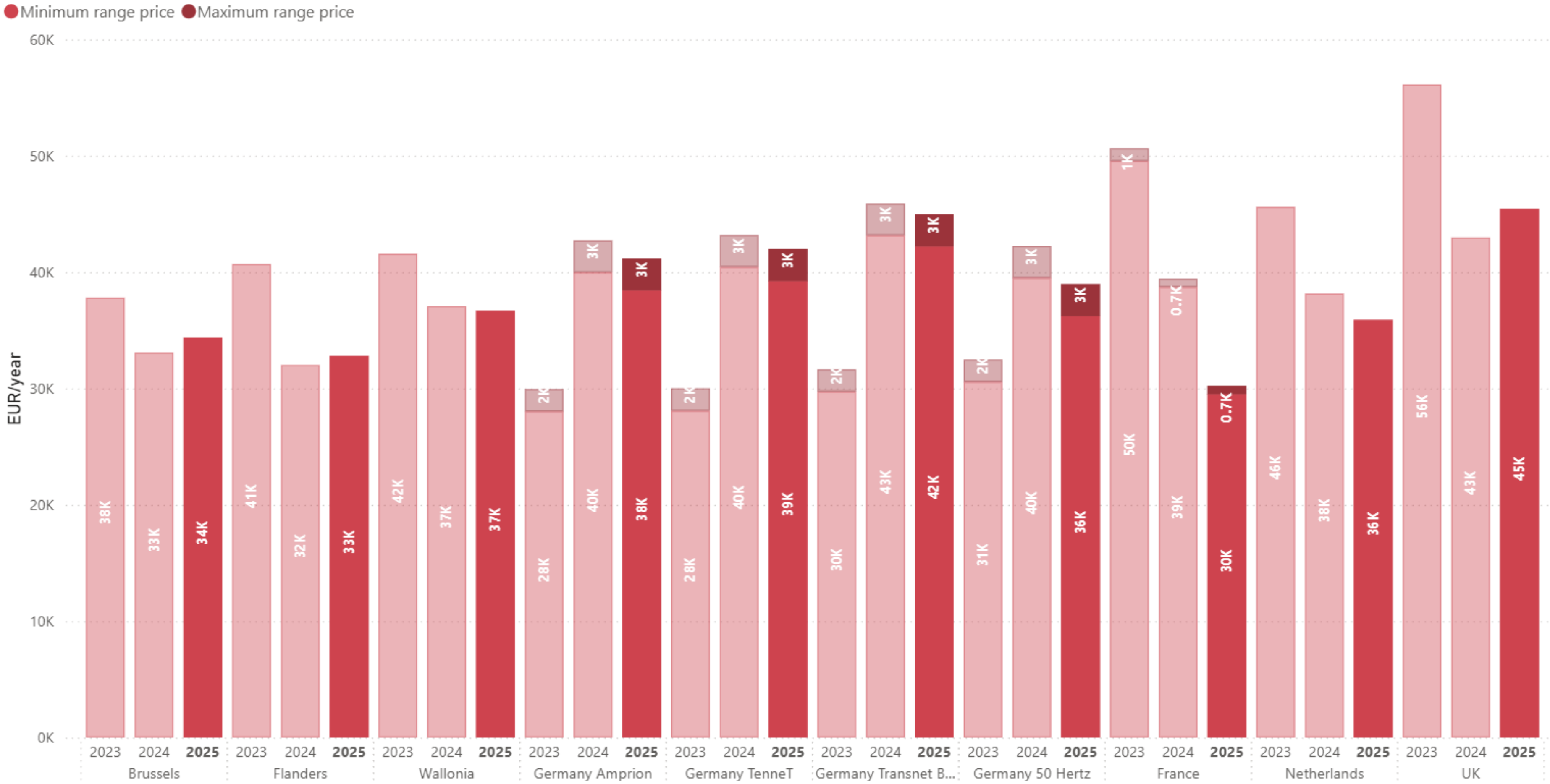
- The **total invoice has decreased in most of the regions/countries under review**, except in Belgium where higher commodity and network costs cause the total invoice to increase compared to other countries**.** The total invoice ranges from 5.0 kEUR/year (France) to 11.0 kEUR/year (Germany, Transnet BW). Within Germany, the lowest bill is observed in the region of TenneT, where the lower price of the "Grundversorgung" and minimal network costs drags down the weighted average among the products selected. All German regions are the most expensive, followed by Belgium (8.9 kEUR/year), the UK (8.3 kEUR/year) and the Netherlands (7.9 kEUR/year). The total invoice of France includes a small range that depends on the network option picked, making it go from 5.0 kEUR/year to 5.1 kEUR/year, but does not affect its competitiveness. From the Belgian regions, Flanders is the most competitive, followed by Brussels and then Wallonia.
- **In Belgium, Flanders is the least expensive region** with a 8.2 kEUR/year bill, ranking it third most competitive region for the E-SSME profile. It is followed by Brussels, where the higher all other costs are compensated by lower network costs compared to Wallonia. All the Belgian regions are in the "middle of the pack" compared to the other regions in 2025, and lose competitiveness compared to 2024 where they were the second most competitive regions. The increase in the network costs is mainly responsible for their lower competitiveness.
- Compared to last year, the **commodity component** still represents on average 50% the energy bill for all the zones under review, though less prominent than its proportion in 2024's bill, especially in France and the Netherlands where it takes 15% less weight. In France we observe the lowest relative weight, reaching 36% of the total energy bill. The German region of Amprion has the highest commodity cost in 2025, with 6 kEUR/year. The largest decrease is noticed in the Netherlands with -84 EUR/MWh for the commodity costs component between 2024 and 2025.
- We observe notable variation in the **network component** across countries. Network tariffs range from a minimum of 52 EUR/MWh in Flanders to a maximum of 107 EUR/MWh in Germany's Transnet BW region. In most of the regions under review, the relative weight of the network component in the total electricity bill has increased — primarily due to a decrease in the commodity cost share and an increase of the network cost component. In Belgium, regional differences are apparent: network costs range from 52 EUR/MWh in Flanders to 100 EUR/MWh in Wallonia, with Brussels positioned closer to Flanders. In Flanders, the distribution tariff structure introduced in 2023 helps maintain a significantly lower network cost for this consumer profile compared to the other Belgian regions.
- The **all other costs component** is the highest in Brussels and Flanders. We observe the highest increase compared to 2024 in France (+21 EUR/MWh) due to the cap of the excise duty having been removed. The largest decreased occurred in the UK with a drop of 32 EUR/MWh over the year. Other regions have similar stable levels in 2025 compared to 2024. In Belgium, the mixed picture is due to regional disparities, weighting on the global competitiveness of this component. In Brussels, the increase is mainly due to higher costs of the green certificate schemes and Public Service Obligations, while Wallonia's decrease is caused by the lower costs of the levy for financing of renewable energies, and Public Service Obligations.

Profile E-BSME (Electricity)

Total invoice analysis

The figure below provides a comparison of the total yearly invoice paid by a big professional consumer (E-BSME) in the different studied regions and countries. The results are expressed in EUR/year.

Figure 34: Total yearly invoice in EUR/year (profile E-BSME)



The E-BSME profile (and larger profiles) take a range into account in Germany, because of a possible reduction of the *Konzessionsabgabe*. This has an impact on Germany's competitive position compared to the UK, although it will have a bigger impact with other consumer profiles.

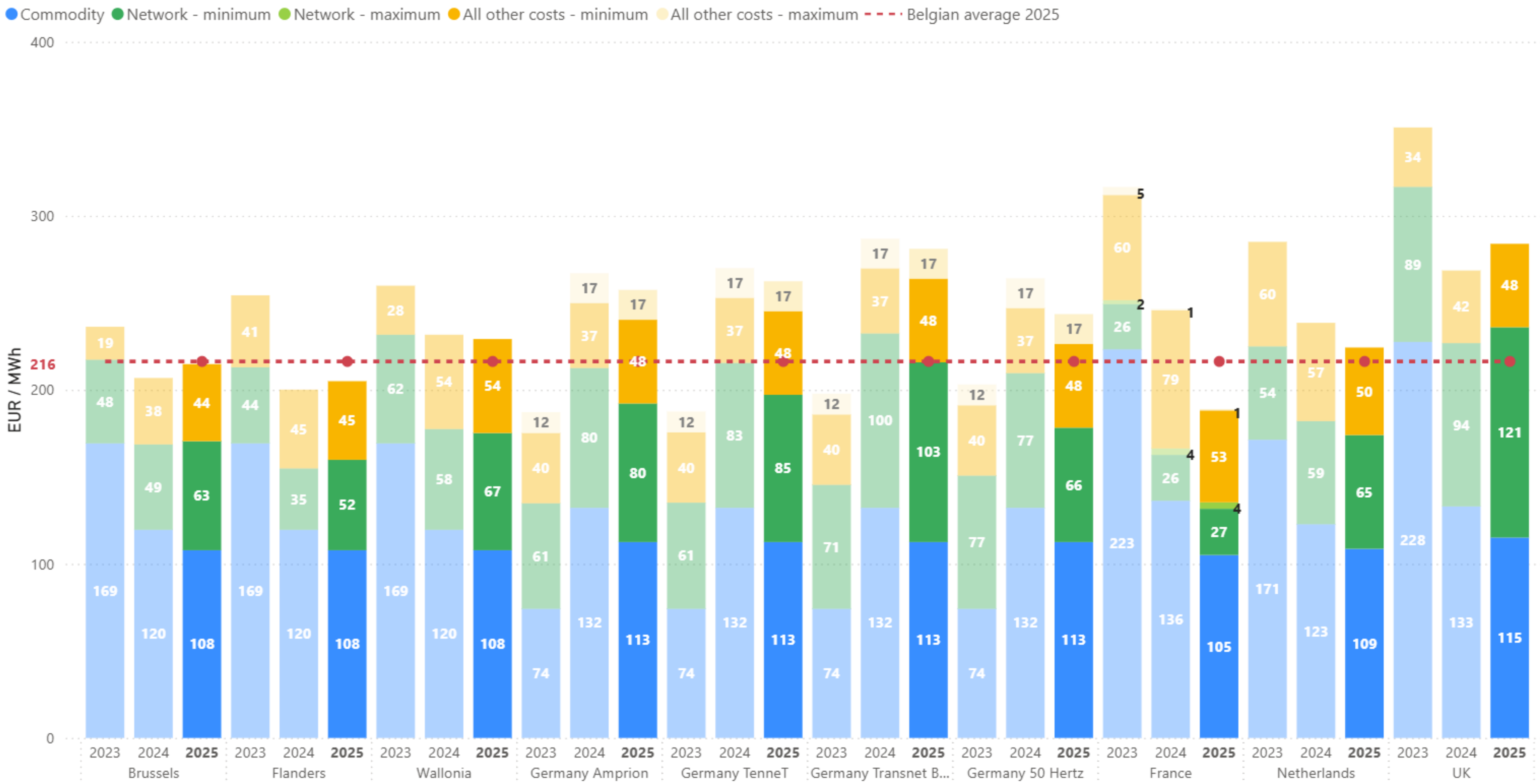
The total yearly invoice has decreased for 7 out of 10 regions/countries under review. The regions having sustained an increase of the bill are Brussels, Flanders and the UK. The drop of the bill is partly due to the commodity prices on the electricity markets having decreased compared to 2024 levels. The biggest decrease happened in France (-9.2 kEUR/year), and the largest increase in the UK (+2.4 kEUR/year). Germany's regions are those paying the most expensive bill in 2025 for this profile, alongside the UK. France is the cheapest country/region observed for this profile. The decrease in the total bill for France is mainly explained by the lower commodity and all other costs price compared to the previous year, while the increase in the UK is attributable to the higher network costs faced by this profile compared to 2024.

The competitive position of all the Belgian regions have increased compared to the E-SSME profile (second cheapest for the E-BSME profile, third for the E-SSME profile). While Wallonia has remained the most expensive region in Belgium, Flanders ranks as the most competitive region of the country in 2025, and the second cheapest region overall, whether the minimum or maximum range in France is taken.

Breakdown per component

The previous results are further detailed for profile E-BSME in the following figure, providing a closer look at the breakdown of the different price components.

Figure 35: Electricity price by component in EUR/MWh (profile E-BSME)



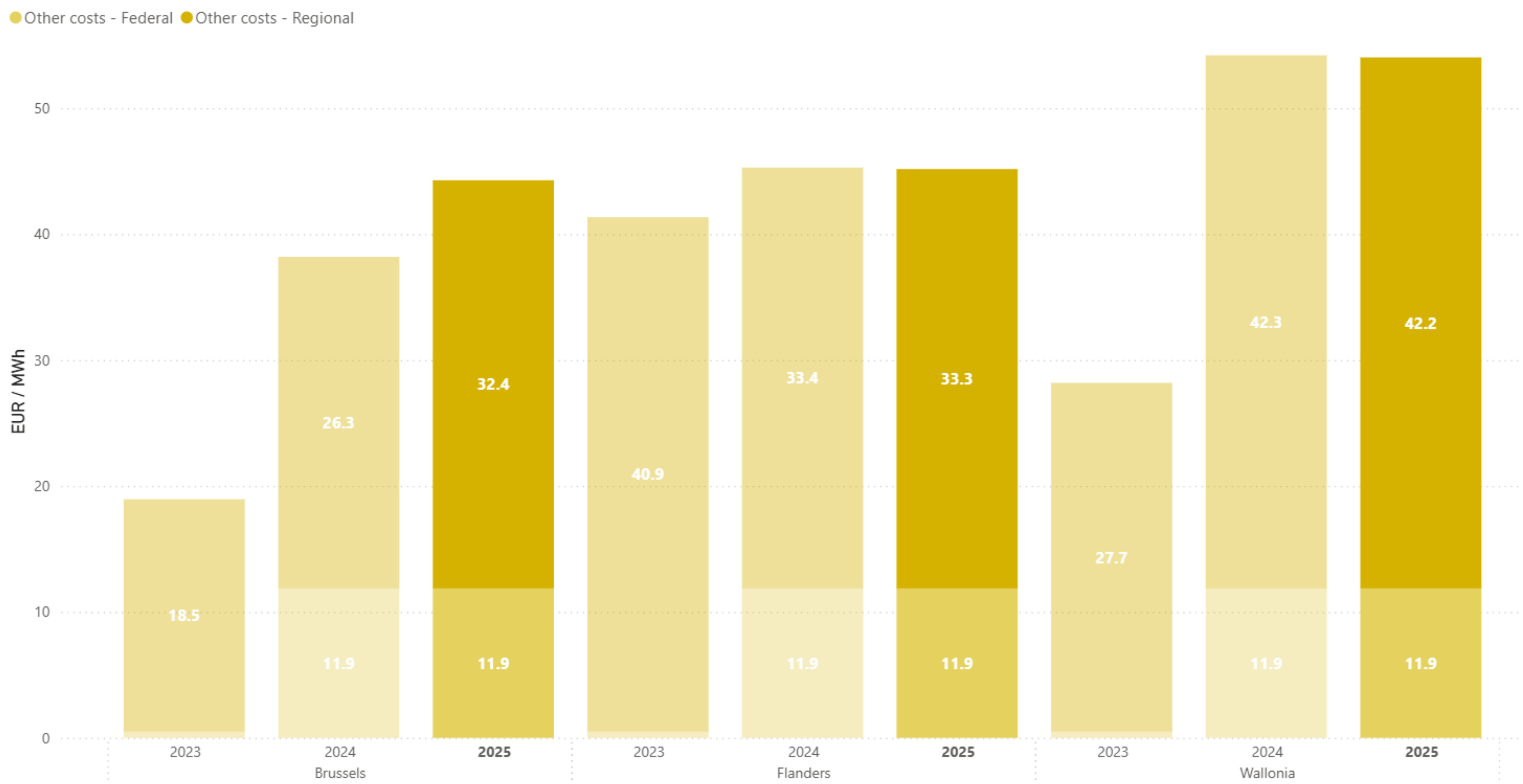
The **commodity component** decreased for all the regions/countries under review. The highest decrease can be observed in France where the commodity component has decreased by 20% (-31 EUR/MWh) compared to 2024. Smaller decreases are observed in other countries, with the lowest one occurring in Belgium (10%; -12 EUR/MWh). Compared to smaller profiles, this component is computed through to a formula and not by using comparison websites. Hence, this component will remain similar for all bigger industrial profiles (in EUR/MWh), except for E3 and E4 where the formula is slightly adapted to consider a 7 days working week as opposed to a 5 days working week. In France the commodity component is adjusted according to the ARENH principle, hence showing some variation between the industrial profiles.

The **network cost** component has increased for most regions/countries under review, except for the German region operated by 50 Hertz. A noticeable increase of 27 EUR/MWh in the UK makes it the region undergoing the largest increase for this component. This is the main cause for the loss of competitiveness of the UK for this profile. The network costs in France stay the lowest in 2025, similarly to previous years, with 27 EUR/MWh cost of the component, followed by Flanders with 52 EUR/MWh. This component oscillates between 63 to 121 EUR/MWh, which shows how different network costs structures are across regions/countries. Belgium’s position with regards to the network component is as performant as in 2024, as it overall ranks second cheapest after France, however the gap with the Netherlands (65 EUR/MWh) is thin. Large increases are also noticed in Belgium (increase of 9 to 17 EUR/MWh depending on the region). In Belgium, the lowest network costs are in Flanders (52 EUR/MWh) while these increased the most from the three Belgian regions (+48%). The highest network costs in Belgium are in Wallonia (67 EUR/MWh) for this profile.

The **all other costs component**[341] is the largest in Wallonia by a tiny margin, when taking the lowest range in Germany. If we take the maximum range in Germany, it is the country with the most expensive all other costs component at 65 EUR/MWh, followed by Wallonia and France (respectively 54 and 53.5 EUR/MWh). In the other regions/countries under review we observe an increase or a stagnation of this component. While, as a figure of exception, France went through a significant decrease of this component (-33%; from 79 to 53 EUR/MWh), we observe a 30% increase in Germany for the minimum threshold of this component (from 37 to 48 EUR/MWh). The latter mainly increased due to StromNEV which has more than doubled over the period. The decrease in France can be explained by the decrease of the *certificate capacité* which value varies depending on the capacity utilised by the consumer. Belgium maintains an average competitiveness on all other costs, mainly decided by regional other costs. The most competitive region in Belgium is Brussels with 44 EUR/MWh for this component, closely followed by Flanders (45 EUR/MWh). Within Belgium, Wallonia has the highest all other costs with 54 EUR/MWh, it remains stable compared to 2024. The all other costs component decreased compared to the small professional profile (E-SSME) in all regions/countries, except for Germany where it is similar, but with a potential reduction of 17 EUR/MWh.

[341] This cost includes taxes, levies and certificate schemes.

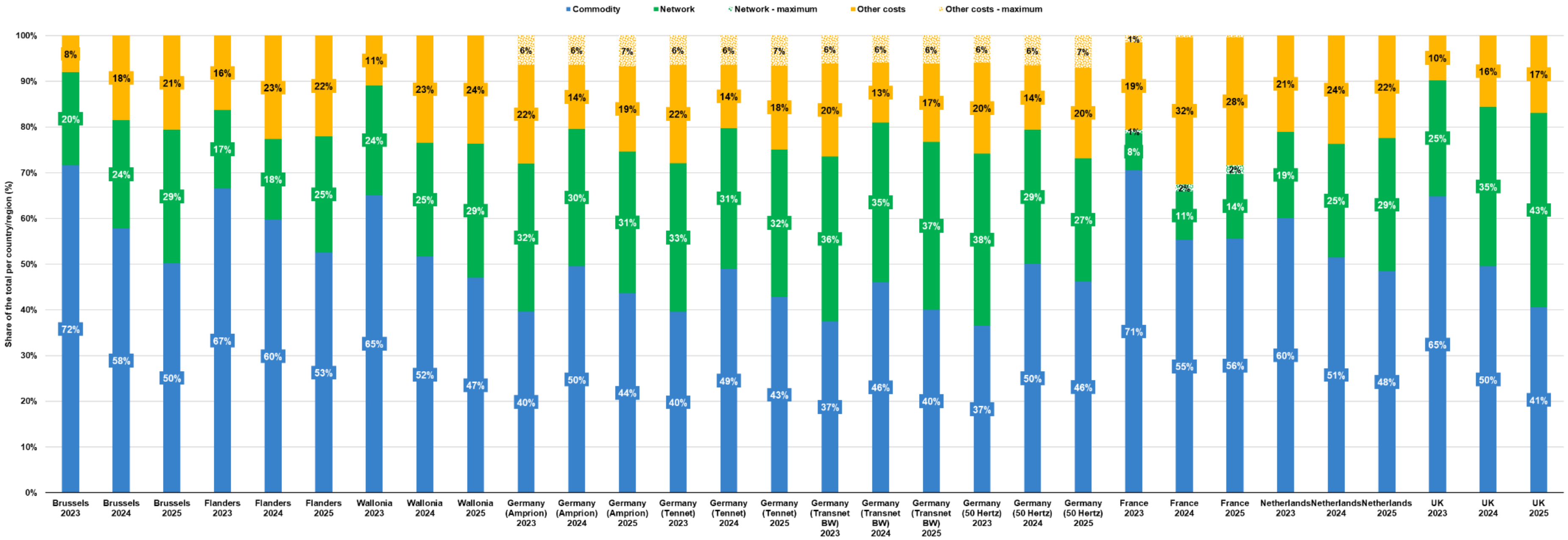
Figure 36: Regional and Federal all other costs in Belgium in EUR/MWh (profile E-BSME)



Proportional component analysis

The percentages of the costs for each component can be found in the figure below.

Figure 37: Proportional component analysis (profile E-BSME)



More distinctively than the previous profiles, the most relevant change we observe for the E-BSME profile in 2025 is the proportional decrease of the commodity component coupled with an increase of the network over the total electricity bill. The commodity component accounts for 41% to 56% of the total invoice, which represents a 15% variability, higher than the variability of 11% in 2024, but with smaller minimum and maximum thresholds. This decrease explains the relative increase in weight for the other components in most of the regions/countries under review, even if we observed definite proportional increase in all regions under review for the network cost. The “all other costs” component varies between maximal thresholds of 17% (Transnet BW region of Germany) to 28% (France). On the Belgian level we observe that Wallonia has the highest all other costs proportion in the total bill (24%), with matching highest network costs (29%, similar to Brussels). While in Belgium Flanders contains the highest share of commodity component in the bill (53%), Wallonia has the highest in the “all other costs” component (24%).

Key findings

For the E-BSME profile, the results demonstrate the ensuing key findings:

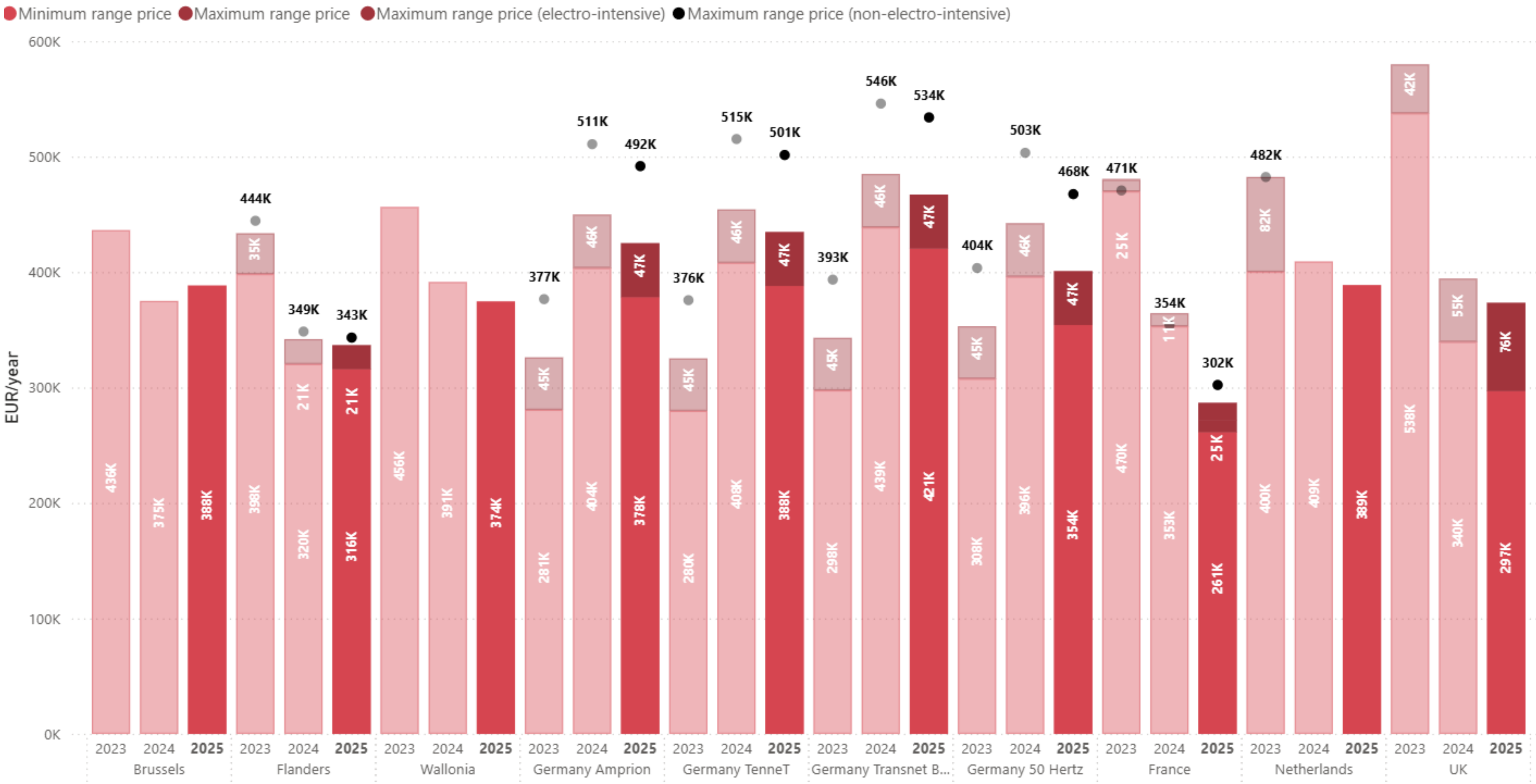
- The **total invoice has decreased in most of the regions/countries under review**, except in Belgium and the UK. The total invoice ranges from 29.5 kEUR/year (minimum range in France) to 45.4 kEUR/year (the UK). The UK is the most expensive region, with the German regions tagging along. Germany and the Netherlands follow up, with Belgium finishing up second after France, the most competitive country for the E-BSME profile.
- **In Belgium, Flanders is the least expensive region**, followed closely by Brussels, where the difference is due to the higher network costs. Brussels and Flanders are the next most competitive regions after France for this profile. This position has worsened since 2024 as all of them were more competitive than their neighbours. The higher network costs in Belgium, and the removal of the *Bouclier tarifaire* in France, are some of the reasons for France taking up the most competitive position, and Belgium coming up second for this profile.
- The **commodity component**'s proportion in the bill has remained at around half of the total invoice in most regions/countries under review, with a peak of 56% in France and a low of 41% in the UK. This commodity component variance has stayed relatively constant across the countries under review.
- The **network costs component** varies across the reviewed regions/countries and goes from 27 (France) to 121 EUR/MWh (the UK). Flanders has the second lowest network costs (52 EUR/MWh), and ranks lower than the other two Belgian regions, though overall Belgium network costs are still cheaper than Germany, the UK, and the Netherlands. However, they increased relatively strongly compared to 2024, mainly due to the increase in transmission grid tariffs for the 2024-2027 period..
- The **all other costs component** and the reductions that can be applied are an important factor when determining the competitiveness of a region/country. Germany's competitive position changes compared to the UK's, due to a potential reduction of 17 EUR/MWh available.

Profile E0 (Electricity)

Total invoice analysis

The figure below provides a comparison of the total yearly invoice paid by an industrial profile E0 in the different studied regions and countries. The results are expressed in kEUR/year.

Figure 38: Total yearly invoice in kEUR/year (profile E0)



For the E0 profile we must take a range into account in Germany, because of a possible reduction of the *Konzessionsabgabe*, as explained in the E-BSME part. Additionally, a range also appears in the UK with the potential reductions on the *Renewable Obligations* scheme. A range is also considered in France due to the consumption behaviour impacting the network rates, similarly to all other profiles previously observed. Lastly, a range is to be considered in Flanders due to the GC and CHCP reduction scheme.

The total yearly invoice has decreased in all the regions/countries under review, except for Brussels. This downward trend is continuing what was already observed in 2024 for most regions. This decrease in large part due to commodity prices on the electricity markets having dropped since 2024. The biggest decrease happened in France (-33 kEUR/year). Similarly to 2024, the German regions are the four most expensive regions in 2025, overtaking the UK which was the most expensive for the E-BSME profile. France is always the most competitive region with 261 kEUR/year, whether reductions/exemptions are taken, or not. Flanders follows up a second most competitive region, with a bill of 316 kEUR/year when reductions are taken, for this profile. The sharp decrease in the total bill in France (as well as most regions/countries) is mainly explained by the reduction both of the commodity costs and the “all other costs” component.

The competitive position of all the Belgian regions change compared to the smaller profiles (second cheapest for the E-BSME profile, third for the E-SSME profile). Flanders is the second least expensive region after France, followed by the UK, Wallonia and Brussels. Overall, France is the cheapest region, for electro (261 kEUR/year) and non-electro intensives consumers (302 kEUR/year). Germany stays the most expensive region/country, with bills going from 468 – 534 kEUR/year for non-electro and 354 – 468 kEUR/year for electro intensive consumers.

Because of regional differences, Belgium is split into three regions and Germany into four regions. The other countries under review – France, the Netherlands and the UK – are represented as one single result. Below, we compare each region and country’s yearly bill with the average Belgian price, which is set at 100. The Belgian average is computed as the mean between Brussels’ and Wallonia’s single price as well as Flanders’ minimum and maximum prices (maximum for non-electro intensive consumers). We have also added a total maximum price range for **non-electro intensive** consumers since some reductions/exemptions will start applying on **electro intensive consumers** from this profile onward.

Figure 39: Total yearly invoice comparison in % (profile E0; Belgium Average 2025 = 100)

Both above figures give us a lot of information about the total invoice and the competitiveness of the different regions/countries depending on the reductions and/or exemptions considered. Because of the large number of ranges different regions/countries have the possibility to be competitive.

With regards to the maximum range of non-electro intensive in 2025, we observe that Germany stays the least competitive country with costs oscillating between 132% and 150% of Belgium's total average invoice. France is the country with the lowest relative part with 88% of Belgium's average for these consumers.

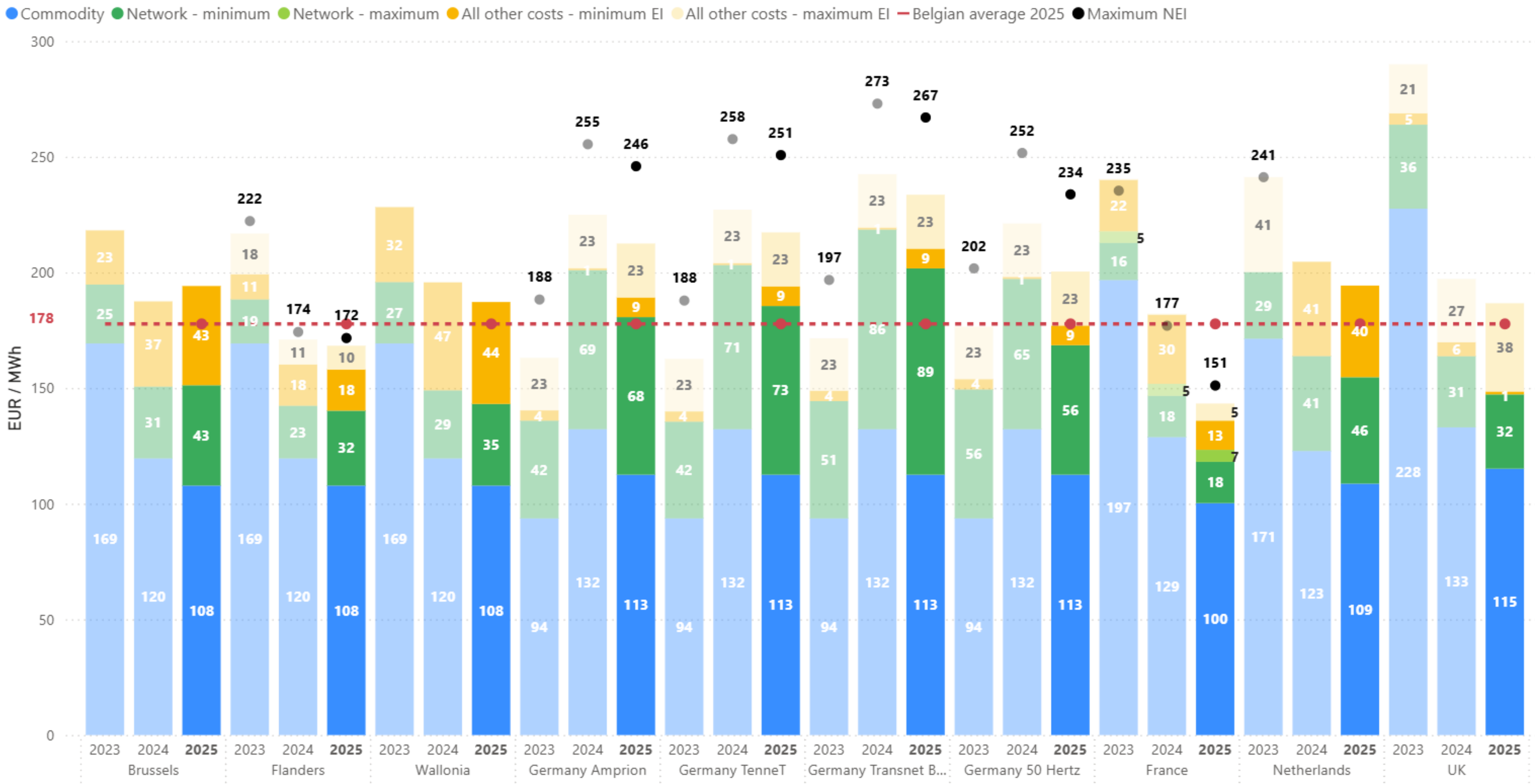
When taking into account potential reductions and electro-intensity of this profile, we notice that the UK competitiveness increases strongly, with a range of prices comprised within 84% to 105% of the Belgian average, which is 5-10% better than in 2024. Germany stays the most expensive though we notice an improvement in the relative positioning of its regions, with 100% to 131% of Belgium's total average invoice depending on the region. This is an 5-10% relative improvement of the position for Germany compared to 2024. The most competitive German region is 50 Hertz, while the least is Transnet BW. This difference finds its roots in the difference in distribution costs within the two regions, due to the commodity and "all other costs" components being similar across them. In France, the most competitive for non-electro and electro intensive profiles, a range going down to 74% of Belgium's average makes it this year more competitive than Flanders, for which the lowest level of the range reaches 89% in 2025. Flanders has the best potential for competitiveness on all profiles across Belgium.

In 2025, the competitiveness of Belgium for non-electro intensive profiles is certainly better than Germany and the Netherlands. However, when reductions and electro intensity is considered, the UK has the potential to be more competitive, while Germany's positioning competes with Brussels (in all German regions except Transnet BW). Flanders, which offers reductions for GC and CHPC, has the possibility to offer its companies a relative average competitive bill if the reduction applies. However, the competitive position of Flanders and Belgium has decreased compared to 2024. Belgium becomes the 3rd most competitive country for electro intensive profiles, while it was the most competitive for this profile in 2024.

Breakdown per component

The previous results are further detailed for profile E0 in the figure underneath, which provides a closer look at the breakdown of the different price components.

Figure 40: Electricity price by component in EUR/MWh (profile E0)



The **commodity costs component** in Belgium sits on the second most competitive position, while France has the lowest value in 2025, and the UK the highest. All commodity costs components are within a range of 100 – 115 EUR/MWh. Like the other profiles examined before we observe, for the E0 profile, a decrease of the commodity price occurred in all regions/countries in 2025. This harmonised decrease and smaller costs range between the cheapest and most expensive countries for this component makes sense. Despite the global decrease of this component, the commodity component still accounts for more than half of the total invoice for most regions/countries.

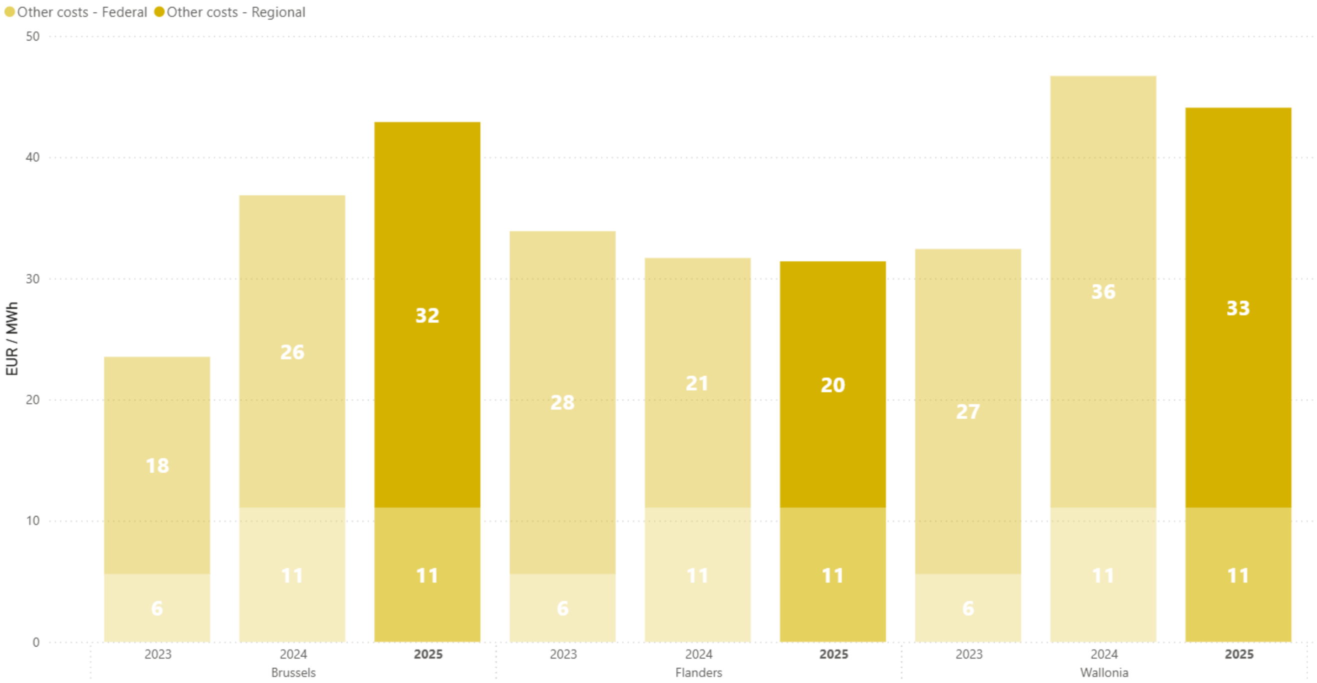
The **network costs component** varies across the regions/countries and we see a clear distinction between the country with the lowest network costs, France, and those with higher network costs such as the German regions with network costs contained between 56 and 89 EUR/MWh, an increase compared to 2024. Similarly to the other profiles previously tackled, the network costs have slightly increased for a part of the regions/countries under review, except for a relative stagnation in France and some German regions (Amprion, TenneT, Transnet BW). The only region which has seen a significant decrease in its network costs is the German region operated by 50 Hertz, mainly due to a capacity tariff at least twice lower than other German regions. Due to a lower commodity cost component for most regions, the relative weight of the network costs over the total invoice has also increased compared to 2024 for the zones analysed. The German region Transnet BW is the zone with the highest network cost (89 EUR/MWh). In France the network cost depends on the price option (i.e. CU fixed peak, CU mobile peak, LU fixed peak or LU mobile peak), depending on the electro intensity profile, is the lowest of all regions with a stable 18 to 25 EUR/MWh. Belgian regions, while sustaining an increase in network costs, become the third most competitive region for this component, with an average of 37 EUR/MWh, just after the UK with 32 EUR/MWh.

Lastly, the **all other costs component**[342] shows the most variation across regions/countries and even in their respective region/country since there are multiple reduction/exemption schemes that affect this component. Except for Brussels, Wallonia and the Netherlands, all the regions/countries present a range. The largest is in the UK with 38 EUR/MWh of potential reductions/exemptions. This range has remained constant in Germany and has the potential to make the 50 Hertz region of Germany more competitive than Wallonia, Brussels and the Netherlands when reductions are applied. For **non-electro intensive**, Germany is the least competitive country. When the UK's minimum range is considered, it becomes the 2nd cheapest region/country after France, overtaking Flanders.

We also note that the size of the all other costs component and the ranges has remained quite similar to last year, except for an increase from 27 to 38 EUR/MWh in the UK, which is due to a potential 100% exemption on the Renewable Obligations, instead of 85% up to 2024. The variations observed in this component make the competitive position of the countries less clear and much will depend on which consumers will be entitled to a reduction/exemption. Similarly to previous profiles, the regional differences in all regions of Belgium have increased the variance in Belgium's competitiveness as a whole, making on the one side Flanders the least expensive region and able to offer reductions/exemptions, and Wallonia the most expensive on this component's cost, although decreasing by 3 EUR/MWh on the same year due to lower Public Service Obligations and levies. In Flanders, the GC and CHCP schemes has been changed to not take electro-intensity into account, but the risk of relocation. As the risk grows bigger, the reduction on GC and CHCP costs increases, introducing a new way to compete on the all other costs component.

[342] This cost includes taxes, levies and certificate schemes.

Figure 41: Maximum Regional and Federal all other costs in Belgium in EUR/MWh (profile E0)



Impact of Flanders' combined cap on profile E0

The cost of green certificates can have a big impact on the energy price of large industrial consumers. To limit these costs, Flanders introduced two caps, in 2018, on the cost of financing of renewable energies, which were later modified in December 2023. These caps are proportional to the risk of relocation of a company, depending on its activity sector. Previously this cap was only applicable on GC but since 2021 it is a combined cap that is applicable on GC and CHPC. In the following example, we attempt to illustrate the potential impact of these caps on industrial consumers.

There are two different caps according to the undertaking type of the industrial consumer:[343]

- **Case 1:** Undertakings part of a sector with a significant risk of relocation (c.f. part 1 of the Appendix IV/1 to the Energiebesluit) see the amount due for the costs related to the financing of renewable energy and qualitative combined heat and power being capped at 0.5% of the average gross value added (GVA) over the last 3 years;
- **Case 2**: Undertakings part of a sector at risk of relocation (c.f. part 2 of the Appendix IV/1 to the Energiebesluit) see the amount due for the costs related to the financing of renewable energy and qualitative combined heat and power being capped at 1% of the average gross value added (GVA) over the last 3 years.

Since the cap's financial impact differs according to the last 3 years' average gross value added, it also differs between companies. Therefore, this analysis focuses on identifying the maximum GVA from which each profile (E0 to E4) no longer benefits from the caps (i.e. a reduction in the total cost of GC and CHPC). The computation of GC and CHPC is explained in Section 5.

Differently than in previous years, due to the introduction of the risk of relocation as the differentiating parameter, and the lowering of the GVA thresholds, the reductions are inherently larger for companies concerned due to a lower cap[344].

[343] (Vlaanderen, 2009)

[344] Although it concerns only companies with a minimum offtake of 1 GWh/year, and 0.25 GWh/year for government buildings.

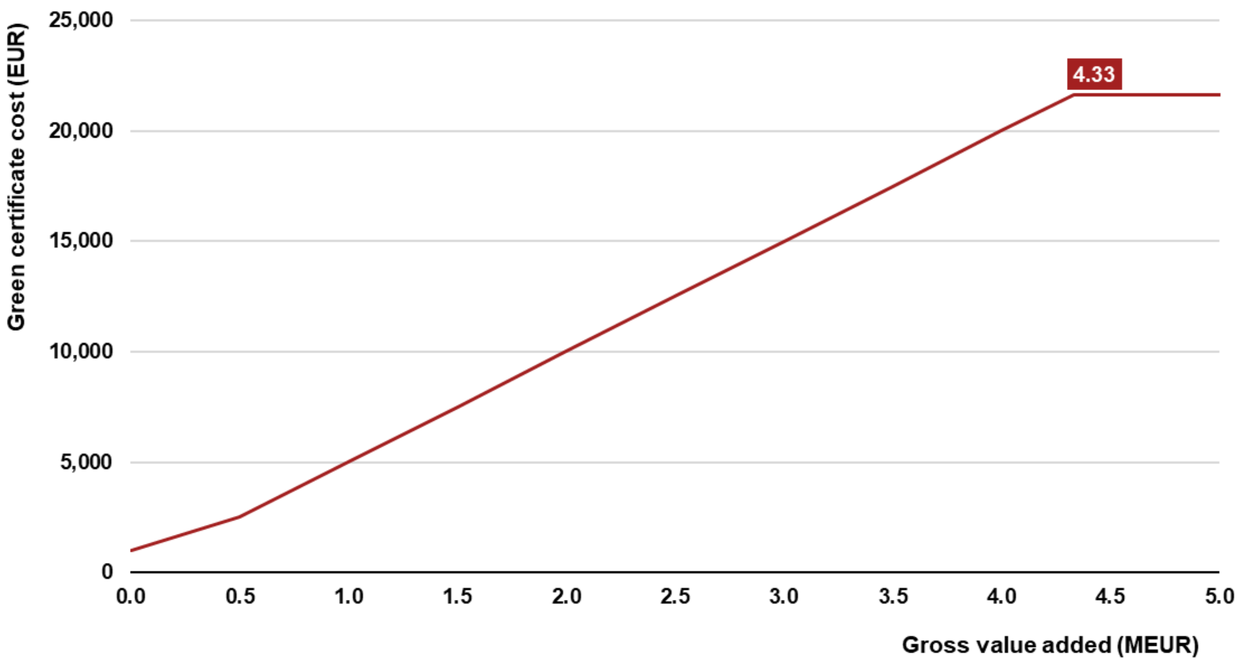
The results for E0[345] are synthesised in the following table:

Table 124: Flanders' cap on profile E0

	Case 1	Case 2
NACE codes	Part 1 of Energiebesluit Appendix IV/1	Part 2 of Energiebesluit Appendix IV/1
Electro-intensity	Sector at significant risk of relocation	Sector at risk of relocation
Cap (% of GVA)	0.50	1%
Average yearly consumption (E0)	2 GWh	
Combined scheme cost (without cap)	21.65 kEUR	
Maximum gross value added to benefit from the cap	4.33 MEUR	2.16 MEUR

Considering only E0 profiles with NACE codes in part 1 of the Energiebesluit appendix IV/1 with a significant risk of relocation (case 1), a company benefits from the application of the cap as long as its gross value added is less than 4,329,747 EUR.

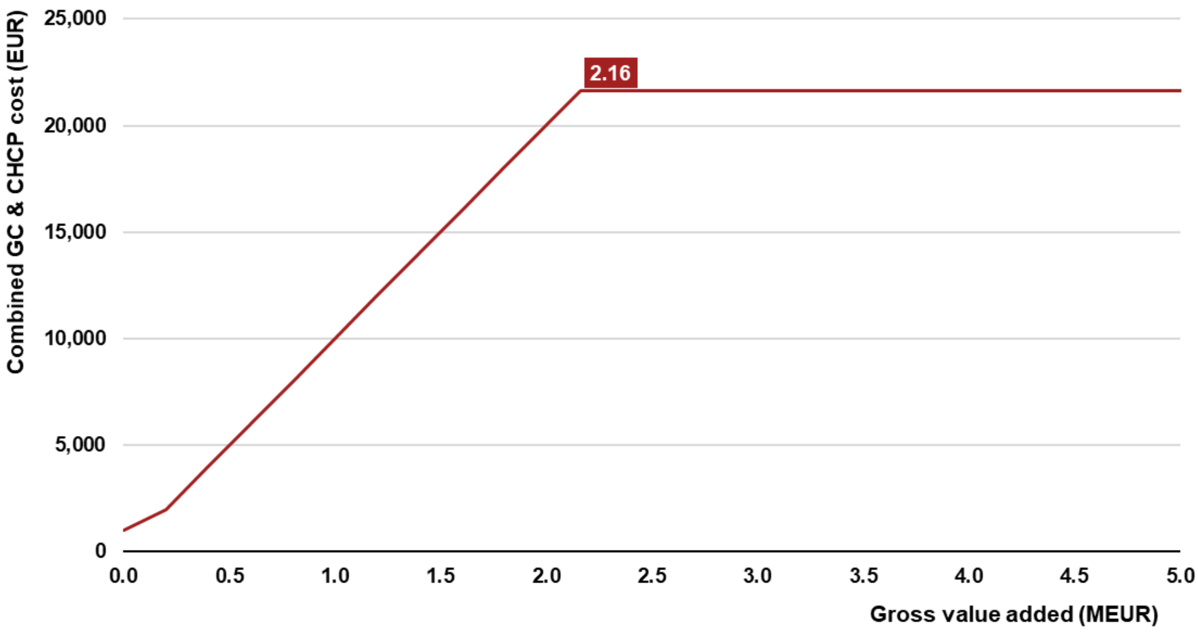
Figure 42: CHPC and GC actual cost for E0 profile (Case 1)



Considering only profile E0 companies with NACE codes in part 2 of the Energiebesluit appendix IV/1 with a risk of relocation (case 2), a company benefits from the application of the cap as long as its gross value added is less than 2,164,874 EUR.

[345] One must be aware that it is less likely that E0-like consumers would fall under the cap application scheme. However, for the sake of the report consistency and the latter analyses, we reflect potential impacts it would have on this consumer.

Figure 43: CHPC and GC actual cost for E0 profile (Case 2)



Key findings

The analysis of the E0 profile leads us to the following findings:

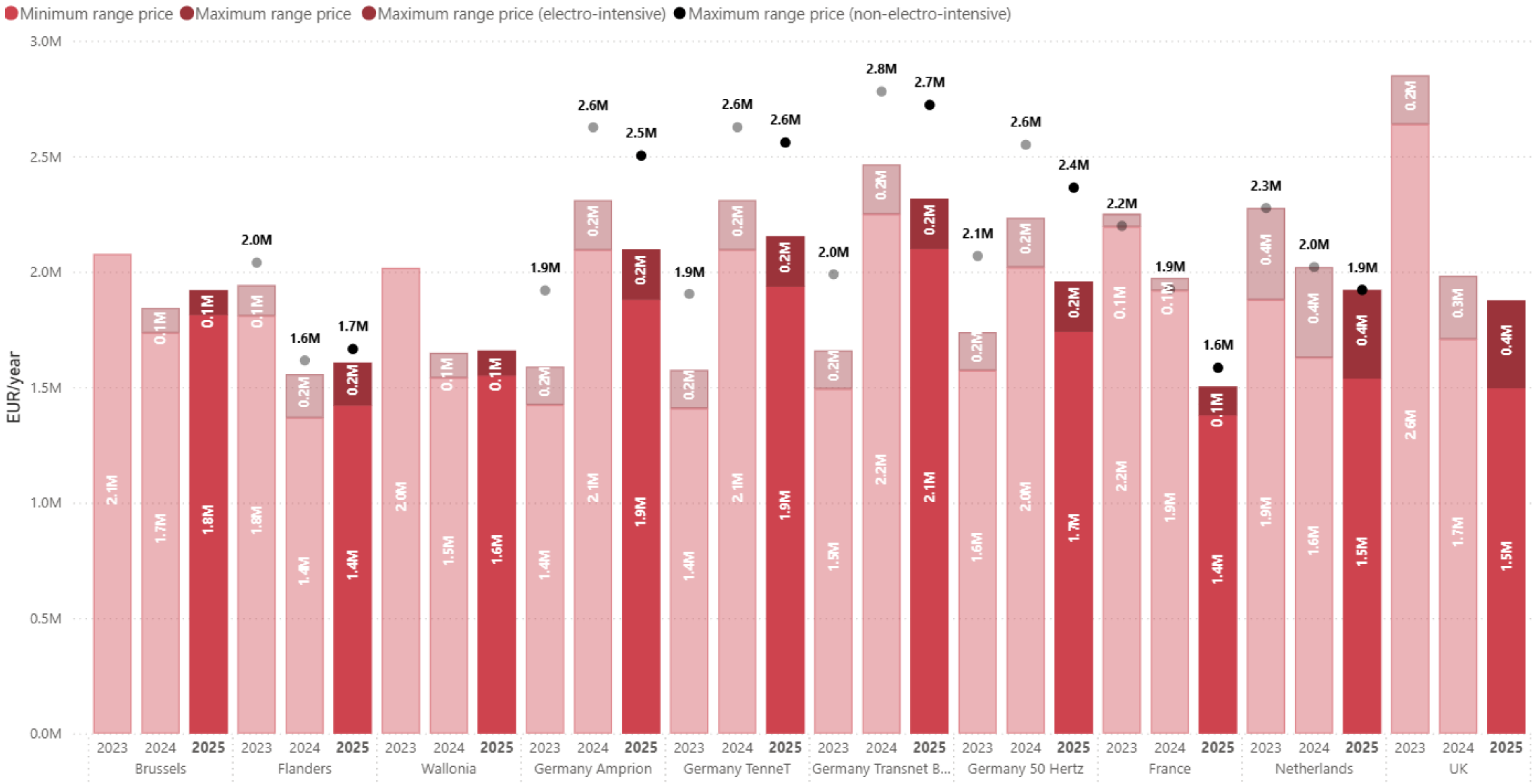
- The **competitiveness of the regions/countries is no longer as clear cut** as it was for the smaller profiles, though it remains observable for some regions/countries. For example, Germany is less competitive than the Netherlands and ranks after Brussels if reductions/exemptions are not granted. However, if they are granted, Germany is on par with the Netherlands and Brussels. We observe differences between regions/countries in terms of total electricity bill for this profile, especially when electro-intensity can be applied. The ranges are thus at a disadvantage, especially when they are large, in Brussels, Wallonia or the Netherlands as they have other costs larger than 40 EUR/MWh.
- **France is the most competitive country for all consumers** thanks to very low all other costs components, and low network costs. Flanders comes up next, although when all reductions/exemptions are considered, the UK comes in second place with a potential reduction of 38 EUR/MWh. Brussels and Wallonia's position is not better in the overall picture than in 2024 as Germany's region of 50 Hertz and its potential reductions makes it more competitive. For non-electro intensives Germany has the highest total invoice of all regions/countries.
- The **commodity component** is less distinctively setting regions/countries apart than previous years due to the decrease observed in 2025. This component is very similar among regions (between 100 and 115 EUR/MWh), with the UK and Germany being the most expensive.
- The most expensive **network cost** is found in the German Transnet BW region (89 EUR/MWh) and the cheapest possible in France (18 EUR/MWh), which remains constant from the picture of 2024. Flanders and the UK remain (+14 EUR/MWh for 2025) more expensive than France. In Belgium, Flanders has the lowest network costs of the country. Brussels falls behind Wallonia with significantly higher network costs (43 EUR/MWh compared to 35 EUR/MWh).
- **In Belgium**, Wallonia and Brussels now have the highest all other costs component. Flanders has the lowest cost for this component whether GC and CHPC reduction schemes are granted for large consumers, or not. This component has a biggest impact on the competitiveness and the positioning of all the regions/countries for this profile type. This component is relatively stable in Belgium, except in Brussels where it grew by more than 15%.

Profile E1 (Electricity)

Total invoice analysis

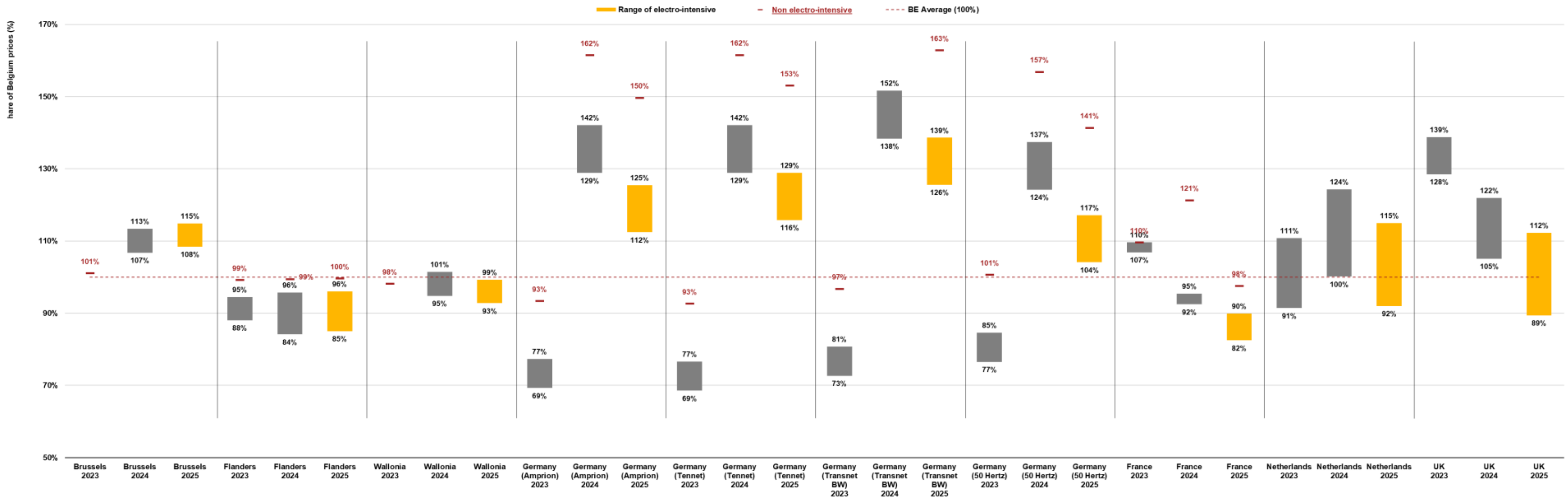
The first figure below provides a comparison of the total yearly invoice paid by an industrial profile E1 in the different studied regions and countries. The results are expressed in MEUR/year.

Figure 44: Total yearly invoice in kEUR/year (profile E1)



In the below figure, we compare each region and country's yearly bill with the average Belgian price, which is set at 100. The Belgian average is computed as the mean between Brussels', Wallonia's and Flanders' minimum and maximum prices.

Figure 45: Total yearly invoice comparison in % (profile E1; Belgium Average 2025 = 100)



As depicted in the previous page, the total invoice has decreased in all the regions/countries under review, except for Belgium where a small increase occurred, largely due to higher transport network costs billed by Elia, the Transmission System Operator. Bigger ranges are observed when comparing this profile to the E0 profile, but unlike the previous profile Wallonia and Brussels now have price ranges for profiles E1 to E4. This is due to the exemption on the special excise duty that these profiles could receive[346].

We notice that Germany's ranges for **electro intensive** and/or companies benefitting from reductions/exemptions decreased by 15-20% to near the Belgian average of 2025. The increase of the network and all other costs in Belgium closed a part of the gap with the German prices, which remained relatively stable to 2024, except for its commodity. In 2025, when considering the lower ranges, the most competitive country appears to be France at 82% of the Belgian average for 2025, which takes over this position from Flanders (back in 2024). The UK has a very large range that depends on the Renewable Obligations full exemption, which could make of it the second most competitive of the countries under review. The least competitive country is the Netherlands, which does not offer reductions/exemptions or ranges for electro intensives consumers, which is the reason why Germany is able to become more competitive than the Netherlands in all regions for this type of consumer.

[346] According to Art. 429.§ 1er of the law from 27th December 2004 an exemption is foreseen when electricity and gas are not used only for heating and transport, but also for metallurgic or chemical industrial procedures, thus being considered as "double usage".

The picture for **non-electro intensive** consumers is different, as German regions are the most expensive with 140% to 163% of Belgian average bill of 2025. The most competitive region is still France, (98%) closely followed by Wallonia (99%) and Flanders (100%). This changes from Flanders being the most competitive on both consumer types in 2024. In Belgium, Brussels comes last with a range that depends on the exemption that can be obtained on the Special Excise Duty, for which the minimum is 107% of the average Belgian bill of 2025 for this profile.

Breakdown per component

The previous results are further detailed for profile E1 in the figure underneath, which provides a closer look at the breakdown of the different price components.

Figure 46: Electricity price by component in EUR/MWh (profile E1)

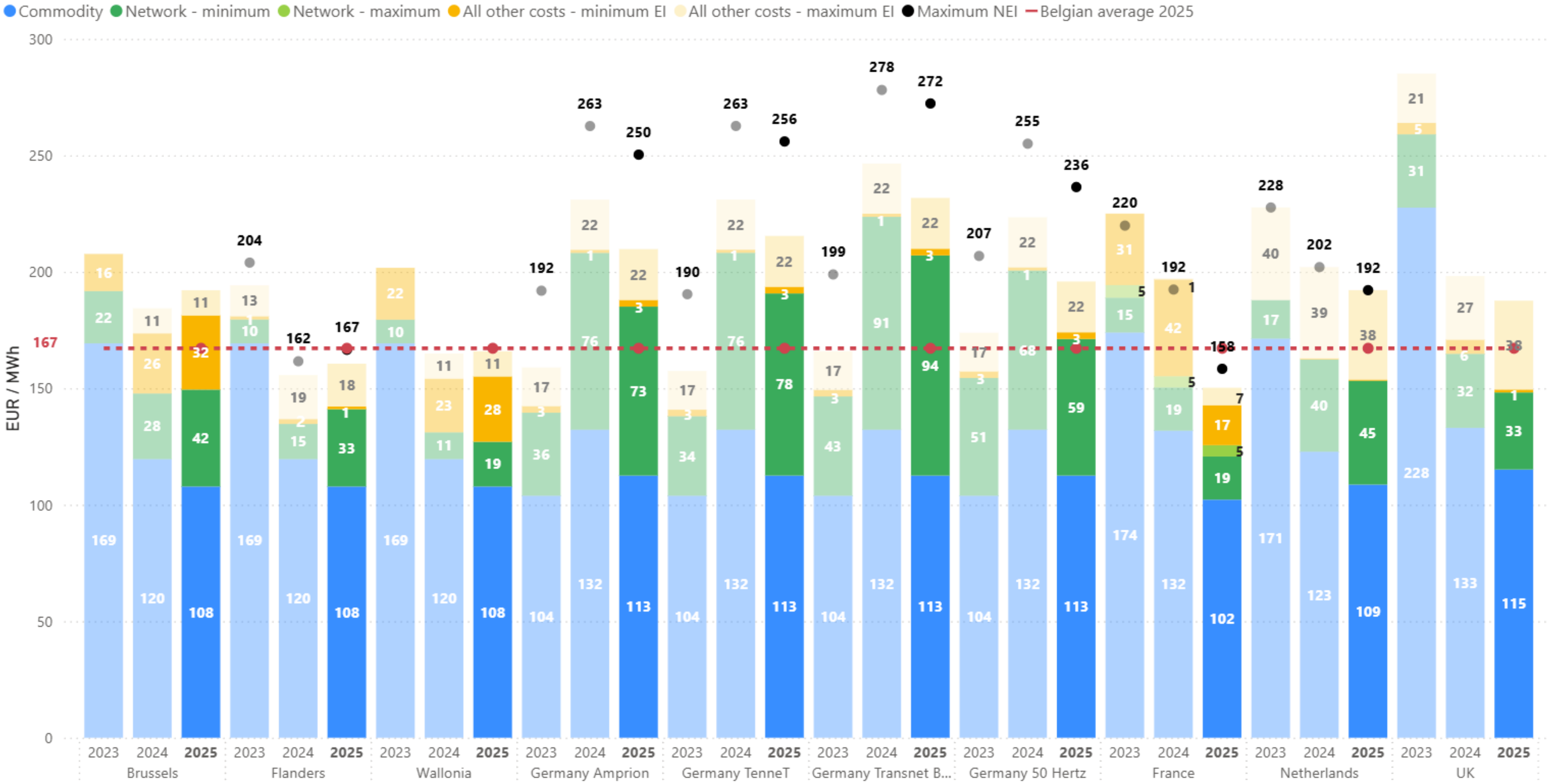
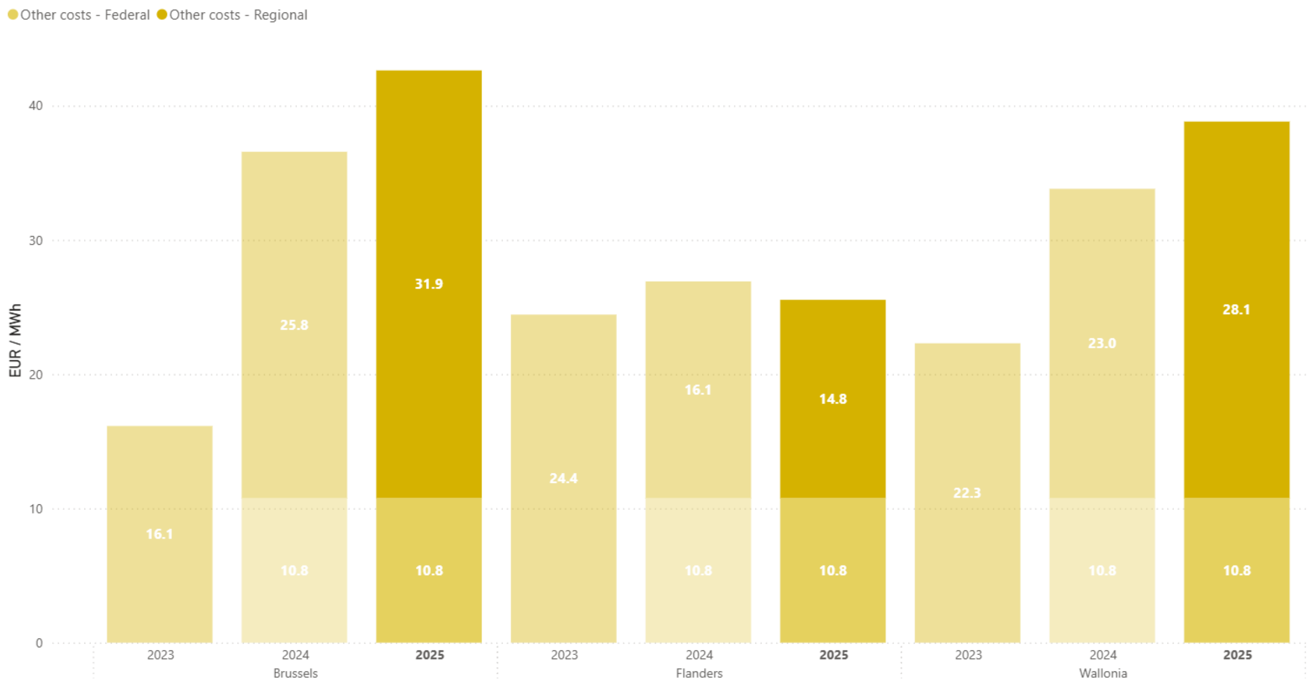


Figure 47: Maximum Regional and Federal all other costs in Belgium in EUR/MWh (profile E1)



Like E-BSME and E0, the **commodity component** decreased for all regions/countries and does not vary much across the different regions with a peak in the UK (115 EUR/MWh) and a low in France (102 EUR/MWh). Belgium has the second least expensive commodity cost (108 EUR/MWh), followed by the Netherlands (109 EUR/MWh) and Germany (113 EUR/MWh).

The **network cost** is the component that still makes a difference in competitiveness across countries, setting Germany further apart from the other countries as the higher network costs push the total bill up, weighing down on the competitiveness of the country with a range from 59 to 94 EUR/MWh. Other regions/countries show network costs varying around 19 to 45 EUR/MWh (respectively France and Wallonia on the lower side, the Netherlands on the other side of the spectrum). Belgium experienced an increase of the network component in all three regions, as explained above. Wallonia now has the lowest network costs with 19 EUR/MWh, while Brussels has the least competitive ones (42 EUR/MWh). Flanders loses its place to Wallonia, for which the slower increase in distribution costs makes of the region the most competitive of Belgium for this component and profile. As the connection level increases (e.g. from E0 to E1), we notice the generalised decrease of network costs per MWh across larger profile for all countries, in different proportions.

The **all other costs component**[347] shows a lot of variation across regions/countries, especially factoring in the electro intensive and non-electro intensive consumers. While Germany's and the Netherlands' ranges for consumers benefitting of exemptions/reductions have stayed relatively constant, France's has tremendously increased due to the lower capacity certificate cost, making France's all other costs reach a minimum of 17 EUR/MWh. Overall, the Netherlands shows the most competitive component cost with 0.5 EUR/MWh, followed by the UK with 1.3 EUR/MWh. The least competitive region, all reductions considered, is Brussels with 32 EUR/MWh, while the most competitive is Flanders with 2 EUR/MWh. This range implies that there is more difference between electro intensive and non-electro intensive consumers due to the differences in cost of several measures. Within Belgium, Flanders is the most competitive region (low of 2 EUR/MWh) on this component, followed by Wallonia (low of 28 EUR/MWh) and Brussels (low of 32 EUR/MWh). There is a difference between electro intensive and non-electro intensive profiles in Belgium, with a minimum electricity excise duty level applicable to companies with specific criteria (active in specific activity sectors such as e.g. chemical, metallurgical activity sectors, etc.). In Flanders, the GC and CHCP schemes has been changed to not take electro-intensity into account, but the risk of relocation, with a potential consequent reduction of these schemes cost to the European minimum (0.5 EUR/MWh). Therefore, it explains the large reduction range observed in Flanders. As the risk grows, the reduction on GC and CHCP costs increases, introducing a new way to compete on the all other costs component.

[347] This cost includes taxes, levies and certificate schemes.

The UK has the same reduction as the E0 profile, with the *Renewable Obligations* from which it is possible to be exempted, lowering the other costs component from 39 to 1.3 EUR/MWh. The E1 profile having most of its electrical consumption on higher bands not previously diminished, the difference is not impactful between 2024 and 2025.

Impact of Flanders' combined cap on profile E1

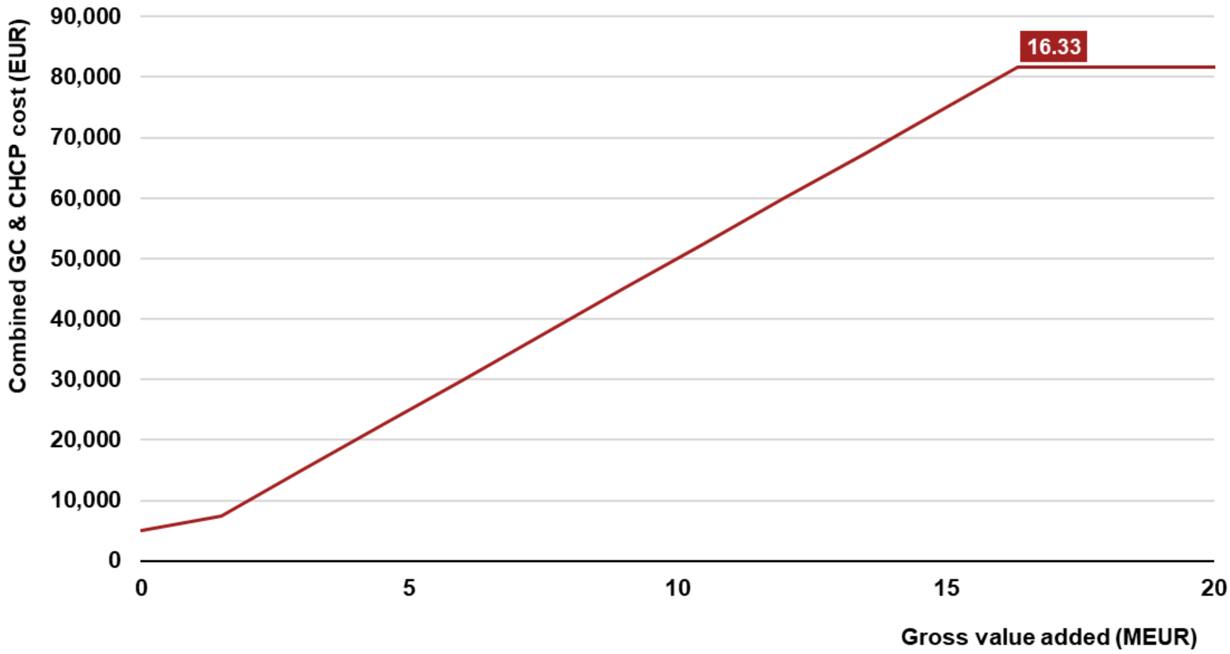
The cost of green certificates can have a big impact on the energy price of large industrial consumers. To limit these costs, Flanders introduced two caps, in 2018, on the cost of financing of renewable energies, which were later modified in December 2023. These caps are proportional to the risk of relocation of a company, depending on its activity sector. Previously this cap was only applicable on GC but since 2021 it is a combined cap that is applicable on GC and CHPC.

Table 125: Flanders' cap on profile E1

	Case 1	Case 2
NACE codes	Part 1 of Energiebesluit Appendix IV/1	Part 2 of Energiebesluit Appendix IV/1
Electro-intensity	Sector at significant risk of relocation	Sector at risk of relocation
Cap (% of GVA)	0.50	1%
Average yearly consumption (E1)	10 GWh	
Combined scheme cost (without cap)	81.6 kEUR	
Maximum gross value added to benefit from the cap	16.32 MEUR	8.16 MEUR

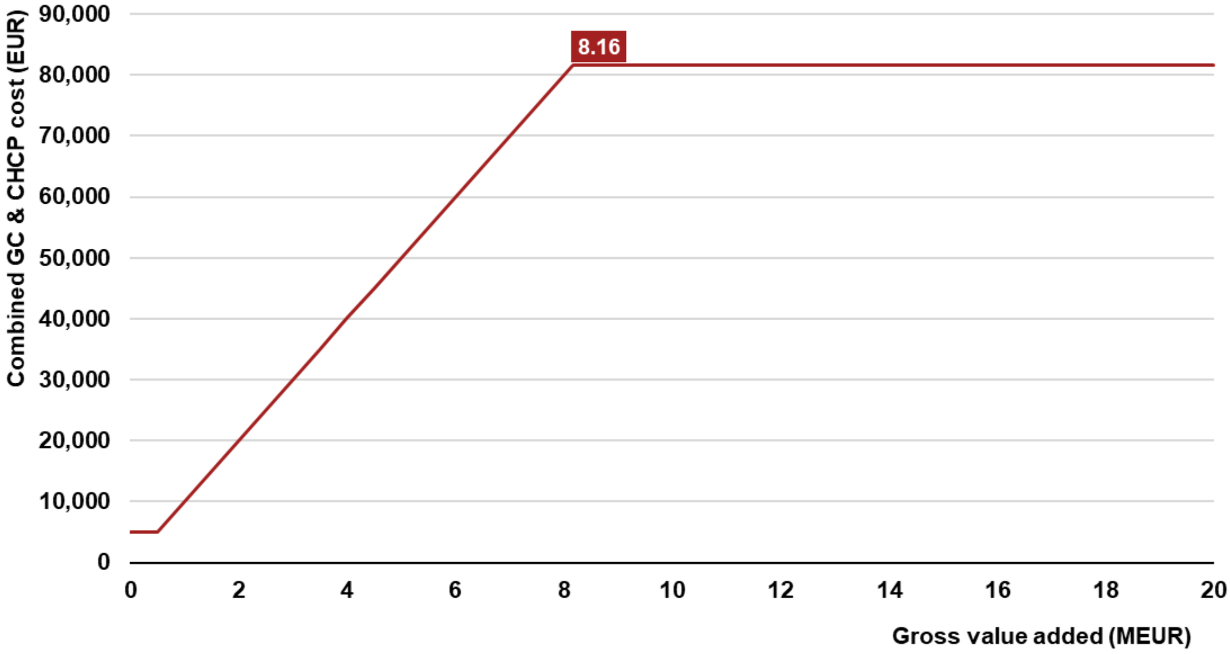
Considering only E1 profiles with NACE codes in part 1 of the Energiebesluit appendix IV/1 with a significant risk of relocation (case 1), a company benefits from the application of the cap as long as its gross value added is less than 16,328,523 EUR.

Figure 48: CHPC and GC actual cost for E1 profile (Case 1)



Considering only Profile E1 companies with NACE codes in part 2 of the Energiebesluit appendix IV/1 with a risk of relocation (case 2), a company benefits from the application of the cap as long as its gross value added is less than 8,164,262 EUR.

Figure 49: CHPC and GC actual cost for E1 profile (Case 2)



Key findings

The analysis for the E1 profile leads us to the following findings:

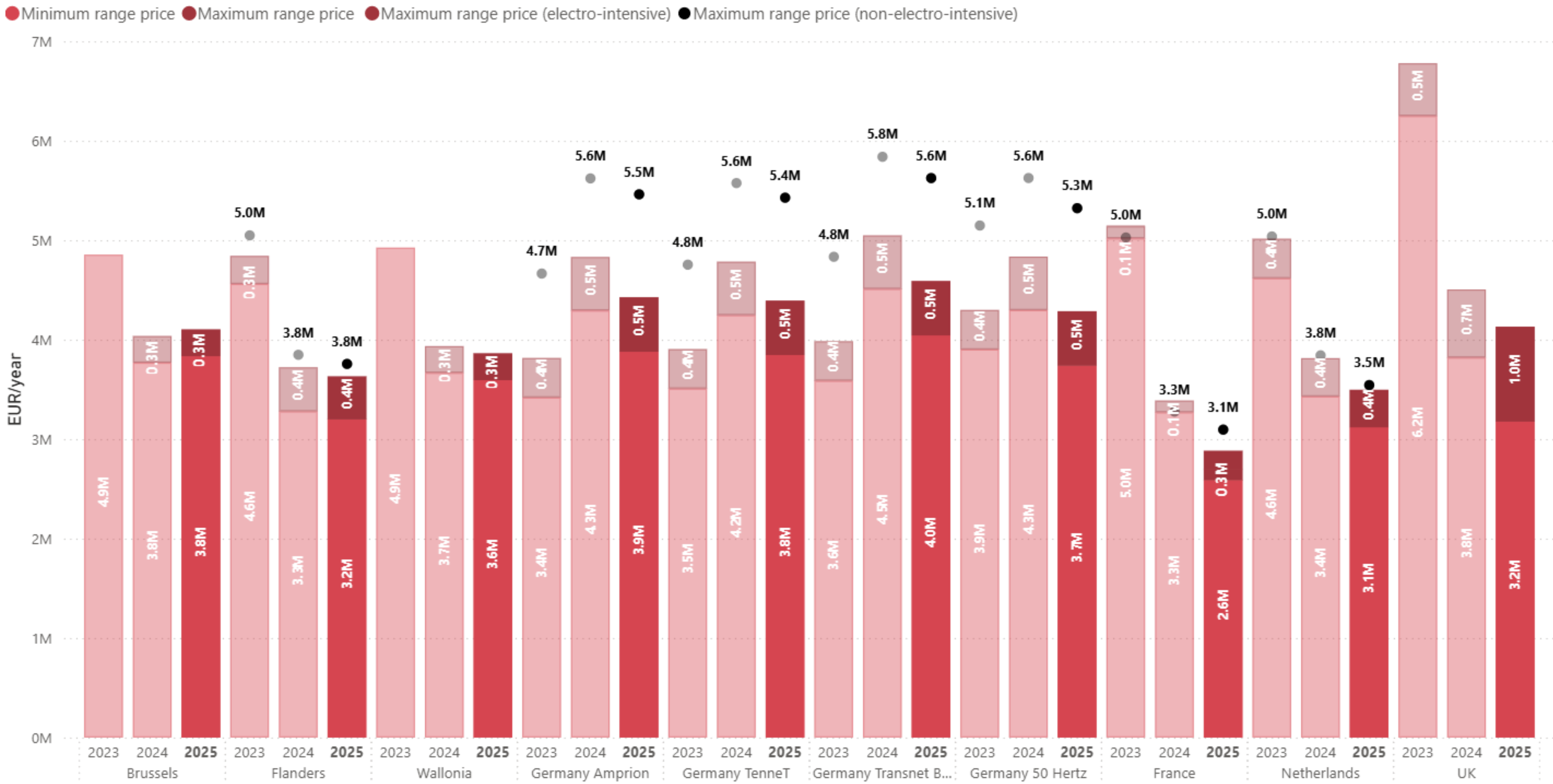
- Looking at **non-electro intensive** consumers, the spread between France (most competitive) and Transnet BW in Germany (least competitive) varies from a bill of 1.58 MEUR to 2.72 MEUR. Looking at electro intensives, the most expensive country remains Germany (all regions), followed by Brussels, similarly to 2024.
- **In Belgium, Flanders is the most competitive** region in 2025 whether reductions/exemptions are considered or not. This is explained by lower all other costs component (due to CHPC and GC reduction schemes potential) compared to the two other Belgian regions.
- The **commodity component** decreased from 2024 to 2025 but does not change significantly across the reviewed regions/countries with the UK being the most expensive with 115 EUR/MWh. France has the lowest commodity costs with 102 EUR/MWh.
- Wallonia and France have the most competitive **network cost** (19 EUR/MWh) for this profile, although it increased from 11 EUR/MWh for Wallonia and remained stable for France. The other regions are in the middle average group of 33 to 45 EUR/MWh while Germany's regions are the most expensive on network costs (from 59 EUR/MWh to 94 EUR/MWh).
- The **all other costs** is a key element setting forward or backward a region/country compared to its neighbours in terms of competitiveness, similarly to previous year. When no reductions/exemptions apply, Germany's consumers pay the highest bill, while the Netherlands is the 2nd least competitive country. When reductions and exemptions apply, France remains the most competitive though Flanders comes up close as 2nd most competitive country, passing in front of other Belgian regions, the UK and the Netherlands. The latter two also show the biggest range for the E1 electro intensive consumers (38 EUR/MWh). Since the all other costs in France are relatively small to begin with, even if the reduction for electro intensive consumers does not apply, they are the most competitive.

Profile E2 (Electricity)

Total invoice analysis

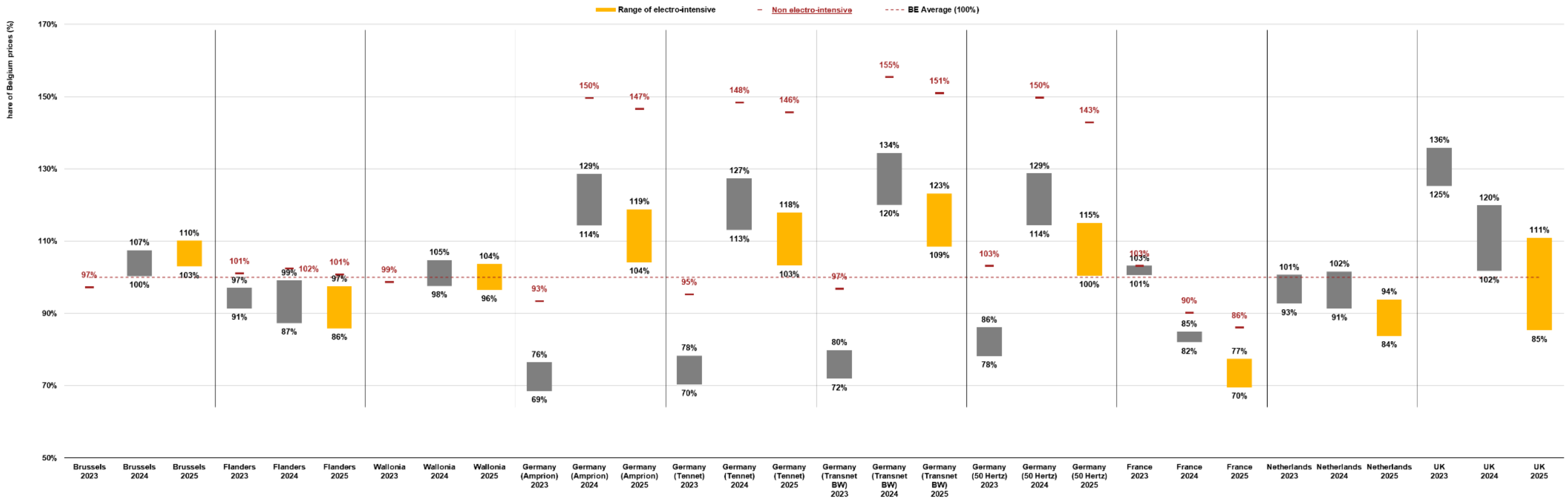
The figure below provides a comparison of the total yearly invoice paid by an industrial profile E2 in the different studied countries and regions. The results are expressed in MEUR/year. The second figure gives the Belgian average of 100% to easily compare the percentual price differences with other countries.

Figure 50: Total yearly invoice in MEUR/year (profile E2)



Below, we compare each region and country's yearly bill with the average Belgian price, which is set at 100. The Belgian average is computed as the mean between Brussels', Wallonia's and Flanders' minimum and maximum prices.

Figure 51: Total yearly invoice comparison in % (profile E2; Belgium Average 2025 = 100)



First and foremost, similarly to all other profiles the general decrease of the electricity bill is observed for all regions/countries under review, due to lower commodity costs in 2025 than in 2024. An inverse trend is however observed for Brussels, due to higher network and other costs.

Regarding the E2 profiles, we notice that Germany is the least competitive country for both electro intensive consumers and non-electro intensives, similarly to last year, although for consumers benefitting from reductions/exemptions Brussels is on par with TenneT region and less competitive than 50 Hertz. France is the most competitive region/country under review for electro intensive consumers, followed closely by the Netherlands.

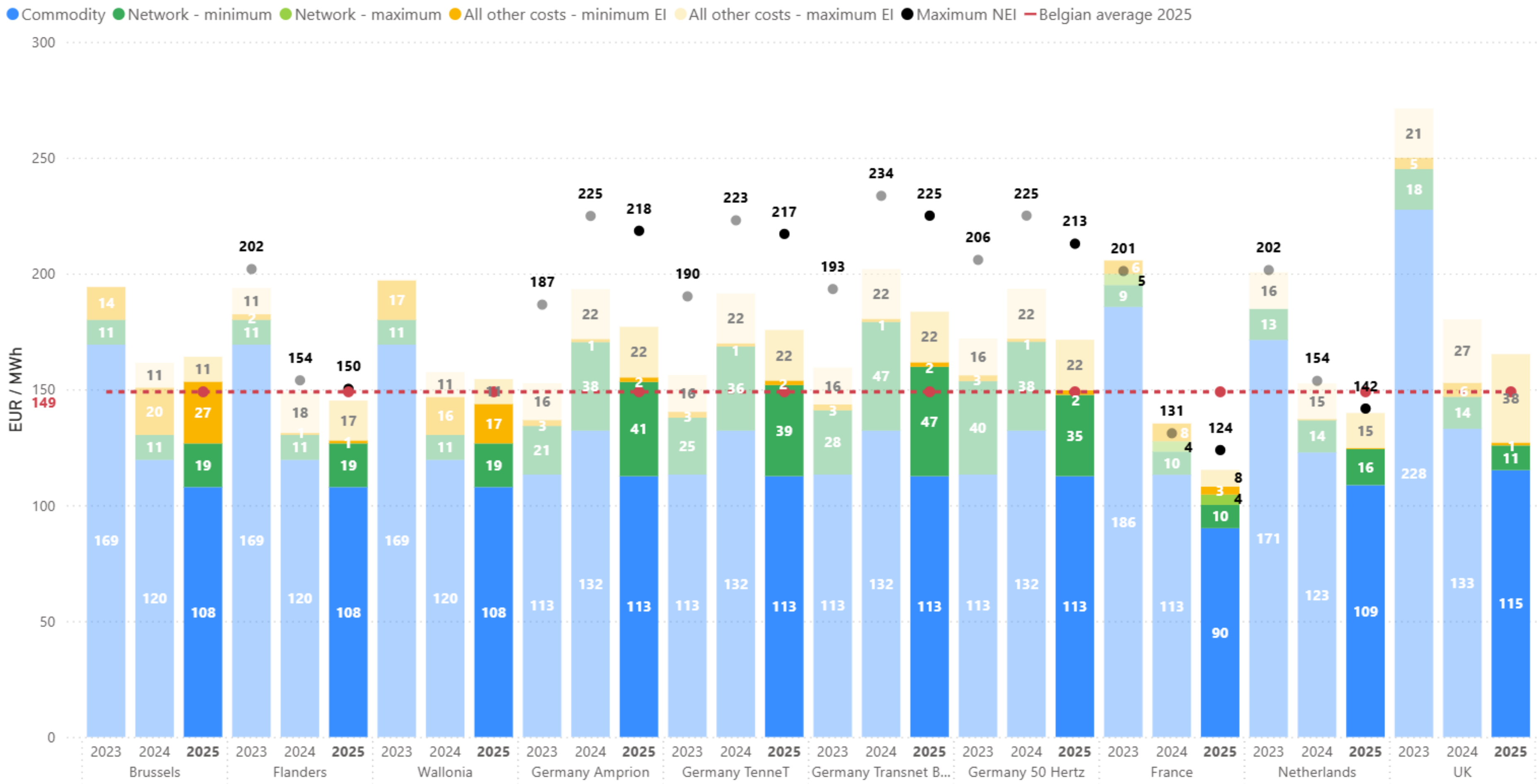
For non-electro intensive consumers, France is also the most competitive country (3.1 MEUR/year, 86% of the 2025 Belgian average), followed by Flanders and Wallonia.

All in all, the decrease in commodity prices has led all countries to stabilise costs differences across regions/countries. The bigger differentiators, as last year, being the network costs and all other costs.

Breakdown per component

The previous results are further detailed for profile E2 in the underneath figure, which provides a closer look at the breakdown of the different price components.

Figure 52: Electricity price by component in EUR/MWh (profile E2)



The **commodity component** is still similar to E-BSME, E0 and E1 profiles, except in France due to the ARENH mechanism (explained in Chapter 5). Hence the same observation can be done about more a relatively close commodity cost among the different countries with a maximum spread of 25 EUR/MWh between the lowest in France (90 EUR/MWh) and the UK (115 EUR/MWh).

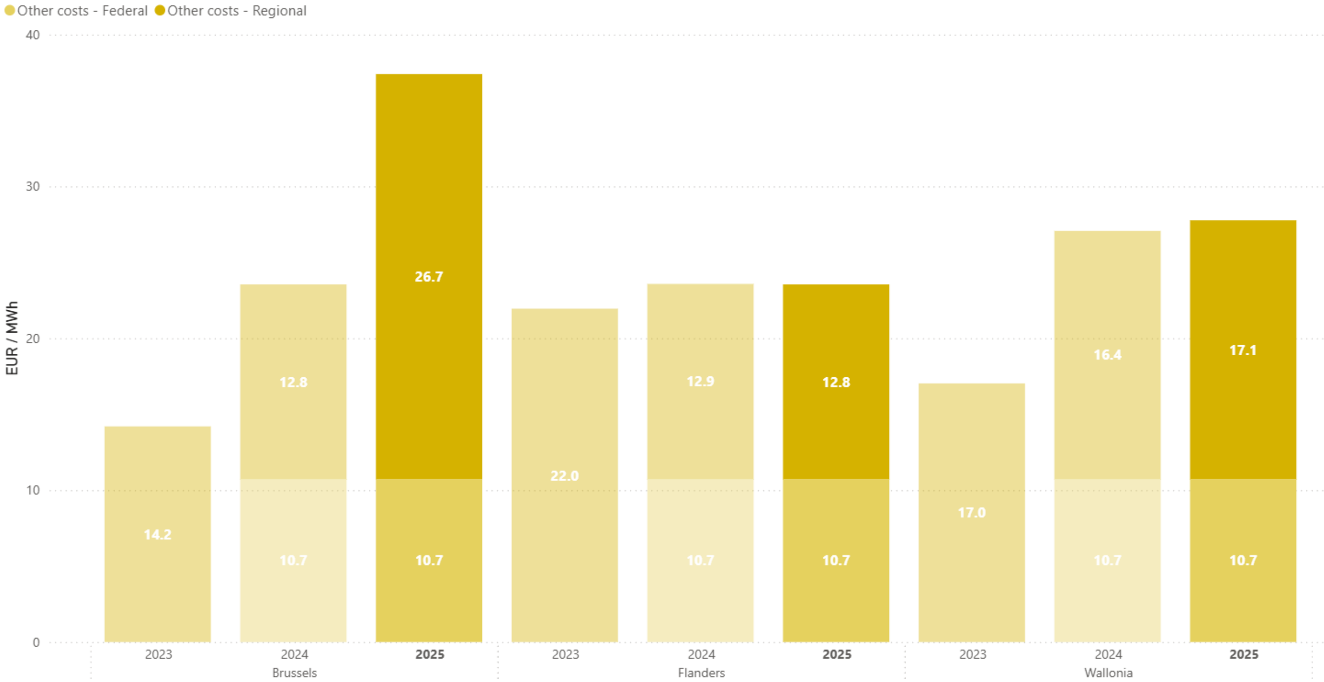
The **network costs component** is slightly different across regions/countries. While France and the UK potentially have the lowest network costs with 10 and 11 EUR/MWh, they are followed by the Netherlands with 16 EUR/MWh. The three regions of Belgium have exactly the same network costs, as these are connected to the same TSO. Since the E2 profile is no longer connected to the distribution grid, this cost is the same in all the Belgian regions. For Belgium, the transmission tariffs approved by the CREG have almost doubled between 2024 and 2025. We observe a small decrease of the network costs in the UK by 3 EUR/MWh. In France and Germany, a stability or slight increase/decrease is observed (+/- 3 EUR/MWh). In the Netherlands, a change in the methodology to compute capacity tariffs slightly influenced the costs of this component up by 2 EUR/MWh.

Finally, the **all other costs component**[348] varies greatly depending on the region/country and on the consumer profile (electro intensive or not). On average, all other costs are relatively stable compared to 2024, except for Brussels (+7 EUR/MWh) and the UK (+6 EUR/MWh) for this profile. In Brussels, green certificates schemes costs increase is the main reason for this change. Depending on the consumer they might be entitled to a reduction or even an exemption. A range is to consider for every region/country in the review, though it is minimal in France. In Belgium the range is available due to the possible exemption on the special excise duty for profiles E1 to E4, and additionally in Flanders for CHCP and GC schemes. The low range for reduction/exemptions changes countries' competitiveness. When considering them, the Netherlands become the most competitive country on this component (0.5 EUR/MWh of other costs) when the profile is exempted, followed by the UK (1.2 EUR/MWh). While France will in any case at least bill 3.4 EUR/MWh to their consumers, this is not the case in the Netherlands which puts France and the other countries at a disadvantage regarding this component[349]. In Flanders, the GC and CHCP schemes has been changed to not take electro-intensity into account, but the risk of relocation. As the risk grows bigger, the reduction on GC and CHCP costs increases, introducing a new way to compete on the all other costs component.

[348] This cost includes taxes, levies and certificate schemes.

[349] In addition to the degressivity rules and limits that apply the larger profiles (E2 and higher) do not pay a part of the all other costs, namely the part billed through the DSO, which the smaller profiles do pay.

Figure 53: Maximum Regional and Federal all other costs in Belgium in EUR/MWh (profile E2)



Impact of Flanders' combined cap on profile E2

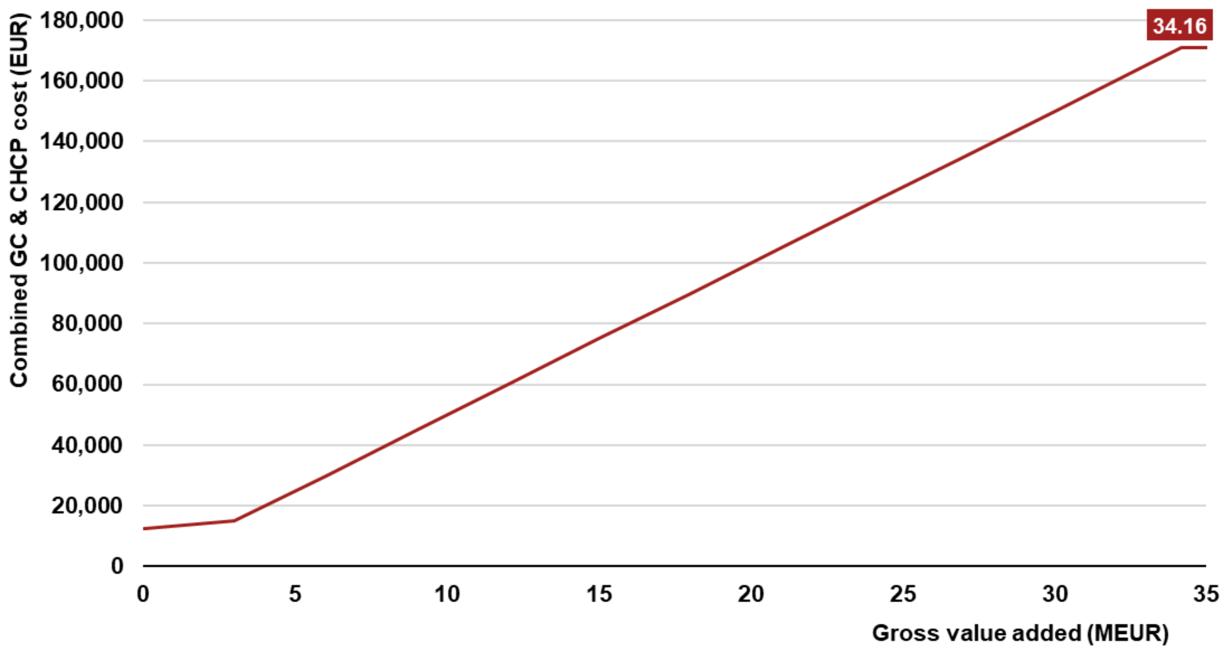
The cost of green certificates can have a big impact on the energy price of large industrial consumers. To limit these costs, Flanders introduced two caps, in 2018, on the cost of financing of renewable energies, which were later modified in December 2023. These caps are proportional to the risk of relocation of a company, depending on its activity sector. Previously this cap was only applicable on GC but since 2021 it is a combined cap that is applicable on GC and CHPC.

Table 126: Flanders' cap on profile E2

	Case 1	Case 2
NACE codes	Part 1 of Energiebesluit Appendix IV/1	Part 2 of Energiebesluit Appendix IV/1
Electro-intensity	Sector at significant risk of relocation	Sector at risk of relocation
Cap (% of GVA)	0.50	1%
Average yearly consumption (E2)	25 GWh	
Combined scheme cost (without cap)	170.78 kEUR	
Maximum gross value added to benefit from the cap	34.16 MEUR	17.08 MEUR

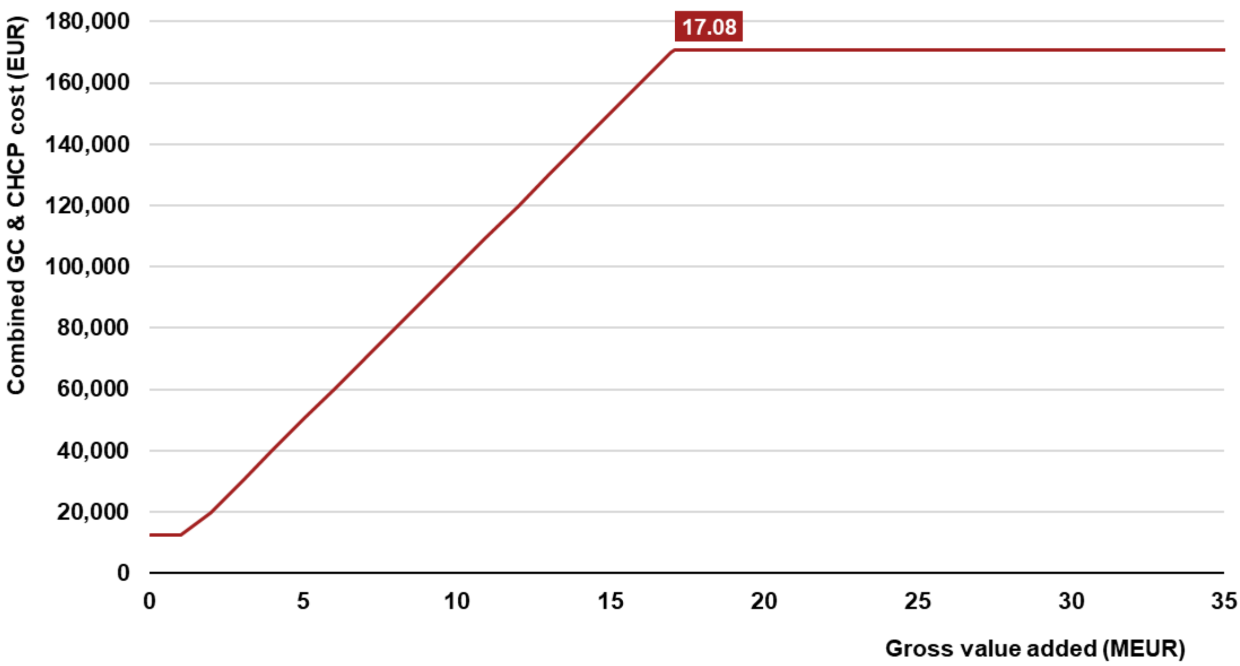
Considering only E2 profiles with NACE codes in part 1 of the Energiebesluit appendix IV/1 with a significant risk of relocation (case 1), a company benefits from the application of the cap as long as its gross value added is less than 34,156,893 EUR.

Figure 54: CHPC and GC actual cost for E2 profile (Case 1)



Considering only Profile E2 companies with NACE codes in part 2 of the Energiebesluit appendix IV/1 with a risk of relocation (case 2), a company benefits from the application of the cap as long as its gross value added is less than 17,078,447 EUR.

Figure 55: CHPC and GC actual cost for E2 profile (Case 2)



Key findings

The analysis for the E2 profile leads us to the following findings:

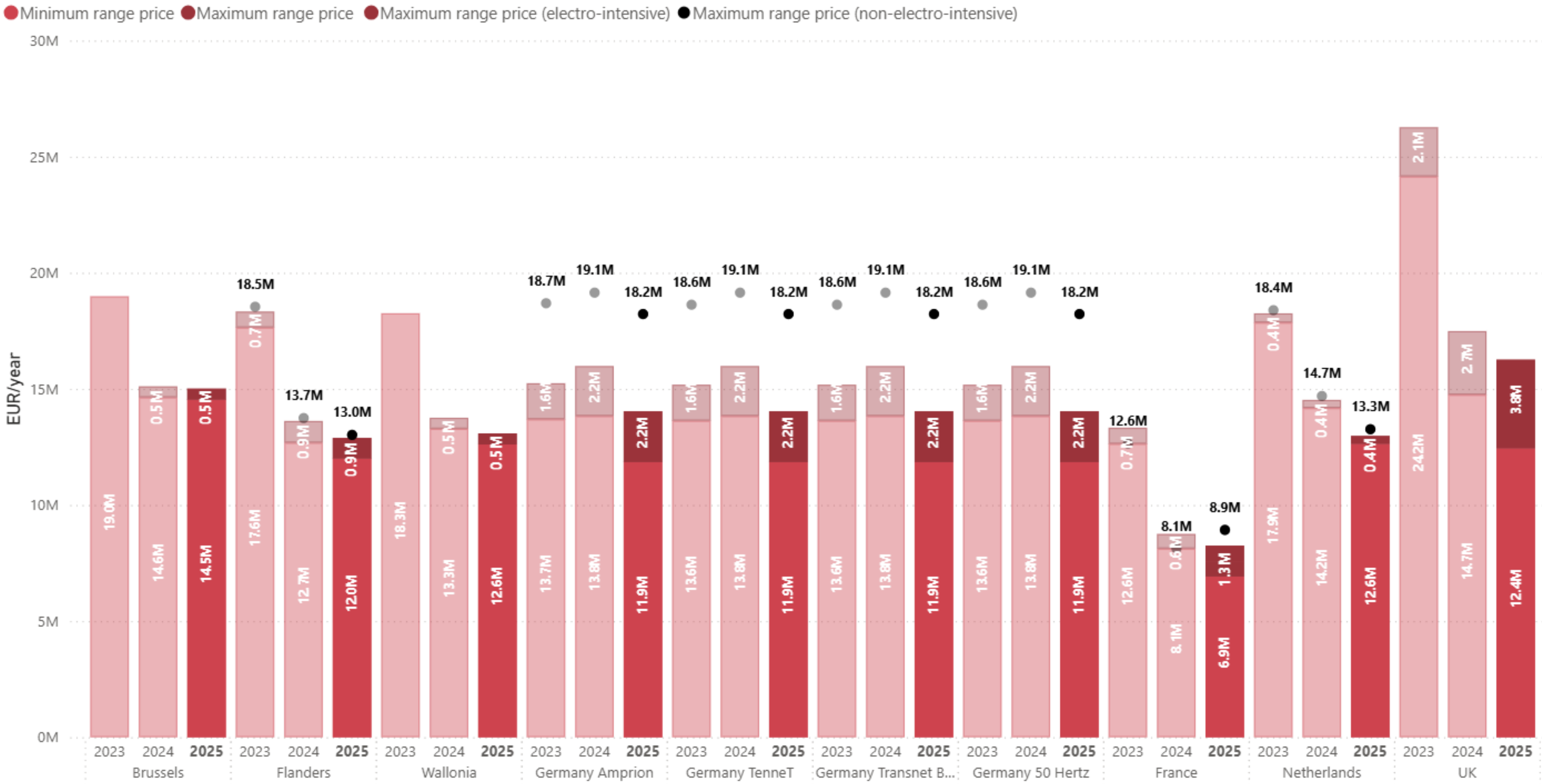
- **The total invoices decreased in all regions/countries** under review except in Brussels and varies between 2.6 MEUR (minimum range in France for electro intensives) and 5.6 MEUR (Transnet BW in Germany for non-electro intensives).
- **In Belgium**, Flanders is the most competitive region thanks to the reductions on the all other costs, specifically through the Supercap on the GC and CHCP. Since the E2 profile is no longer connected to the distribution grid, the network cost component has decreased compared to smaller profiles and is now the same across all Belgian regions, leaving the all other costs as the only competitive differentiator among the Belgian regions.
- The **commodity component** decreases in the same way as the E-BSME to E1 profiles. It also represents the largest share of the invoice bill for the E2 profile, accounting for between 61% (non-electro intensive in Germany, Transnet BW) to 79% (electro intensive minimum in France).
- Compared to last year, we notice an overall slight increase of the **network cost** components in all regions/countries except in Belgium where a significant growth of 72% of the network costs (+8 EUR/MWh). The largest decrease happens in the UK with 22% over the year (-3 EUR/MWh). The network cost is still significant in Germany and is always at least 84% higher than Belgium’s network costs.
- The **all other cost component** still plays its role in determining the competitiveness of the regions. Several regions/countries such as Germany support electro intensive consumers by offering fares reductions. Not falling under these reductions significantly increases the costs. The possibility to be completely exempted from the federal excise duty in Belgium can truly help the competitiveness position of the three Belgian regions up to 11 EUR/MWh, although all other regions/countries offer higher reductions (22 EUR/MWh in Germany, 15 EUR/MWh in the Netherlands, 38 EUR/MWh in the UK). With their reductions, the UK and the Netherlands become more competitive than all Belgian regions, while not benefitting of such makes them less or equally competitive than Flanders and Wallonia overall.

Profile E3 (Electricity)

Total invoice analysis

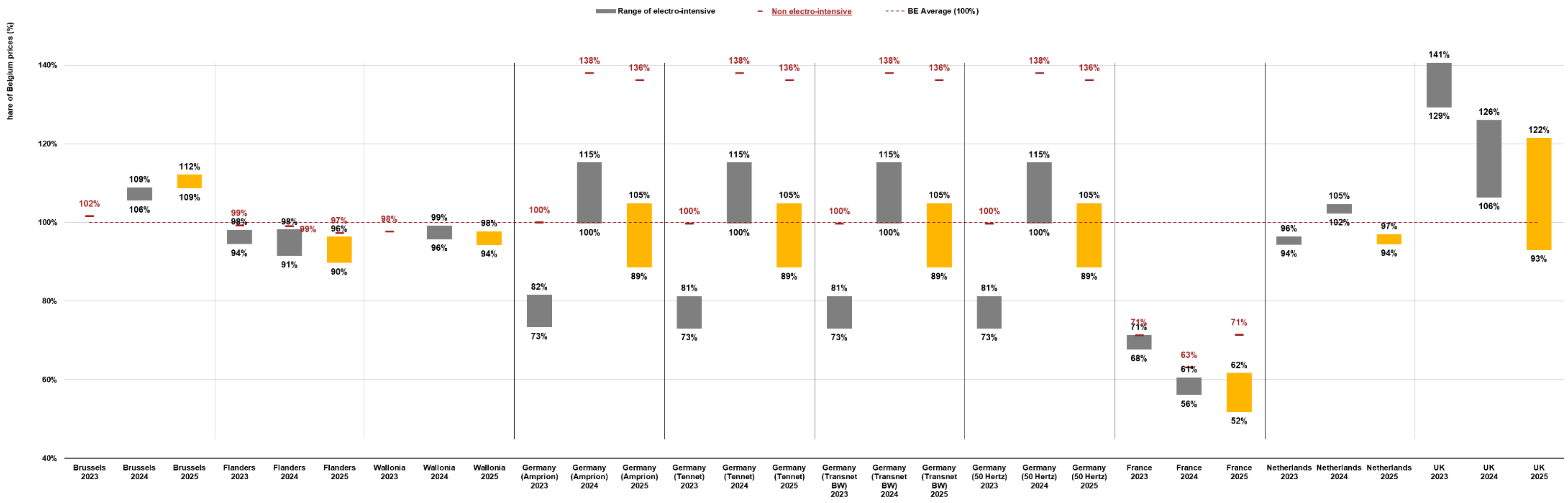
The figure below provides a comparison of the total yearly invoice paid by an industrial profile E3 in the different studied regions and countries. The results are expressed in MEUR/year.

Figure 56: Total yearly invoice in MEUR/year (profile E3)



In this page's figure, we compare each region and country's yearly bill with the average Belgian price, which is set at 100. The Belgian average is computed as the mean between Brussels', Wallonia's and Flanders' minimum and maximum prices.

Figure 57: Total yearly invoice comparison in % (profile E3; Belgium Average 2025 = 100)



The E3 profile graph of the total invoices shows a general decrease in almost all of the regions/countries under review. In Belgium, Flanders is still the most competitive country for electro intensives with a higher reduction/exemption range. For non-electro intensives, Flanders is also slightly more competitive than Wallonia, while Brussels is more expensive in general. The most competitive region/country under review remains, as in 2024, France. This is mainly due to the ARENH mechanism in place, enabling lower commodity costs than in the neighbouring countries.

Looking at all the regions/countries, Germany is more expensive than all countries for non-electro intensive profiles. When reductions/exemptions apply (up to 22 EUR/MWh of reductions), Germany can become more competitive than all Belgian regions, the UK and the Netherlands. Hence, becoming the second most competitive country for this profile. With a higher minimum cost, the Netherlands, Flanders, Wallonia and the UK are on relatively similar levels of competitiveness due to the high exemptions possible in the UK.

Compared to smaller consumption profiles, Belgium is on similar levels of competitiveness thanks to less differences in the network and all other costs, when reductions/exemptions are considered. When not considered, Belgium has an improved level of competitiveness compared to smaller profiles.

Breakdown per component

The previous results are further detailed for profile E3 in the figure underneath, which provides a closer look at the breakdown of the different price components.

Figure 58: Electricity price by component in EUR/MWh (profile E3)

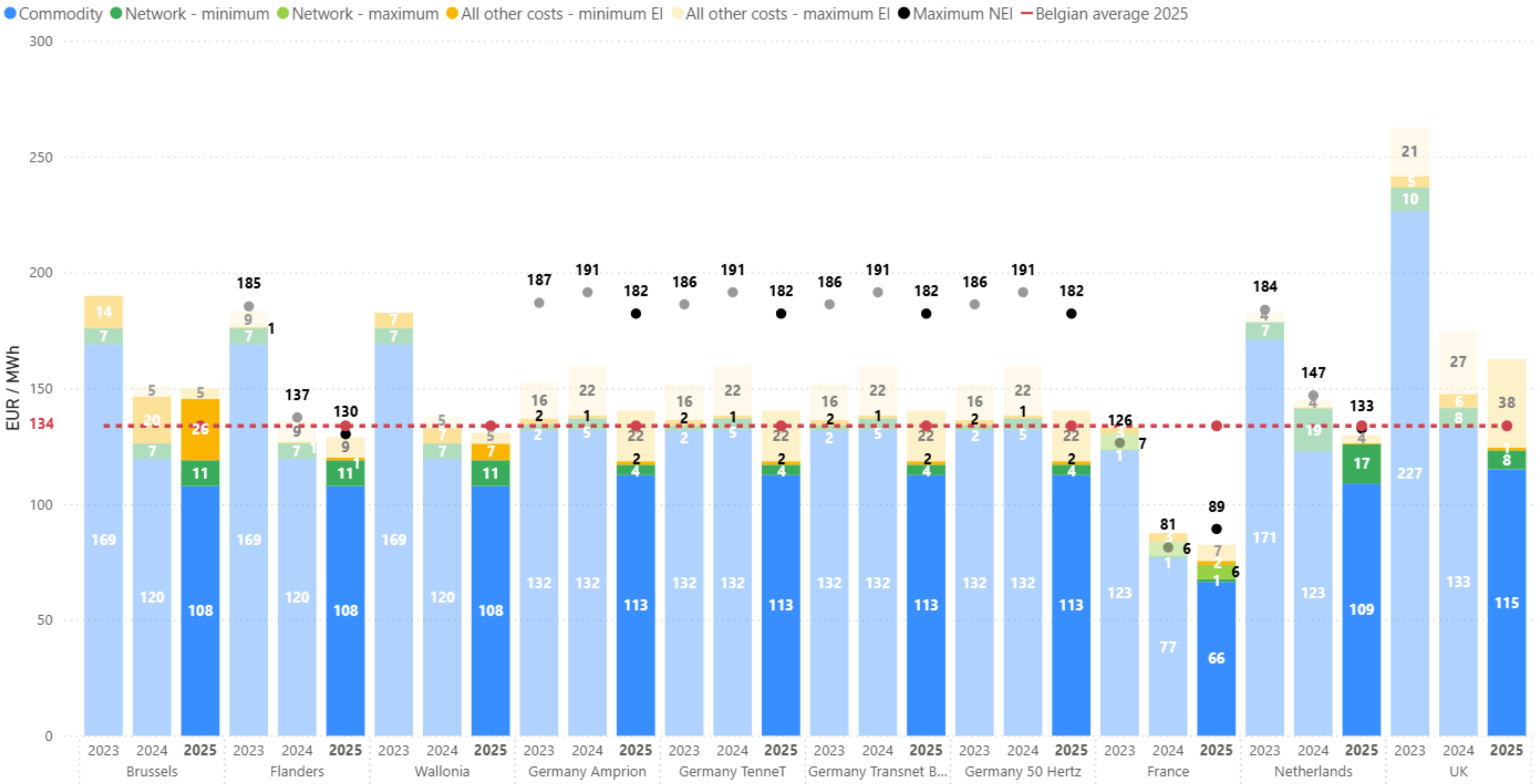
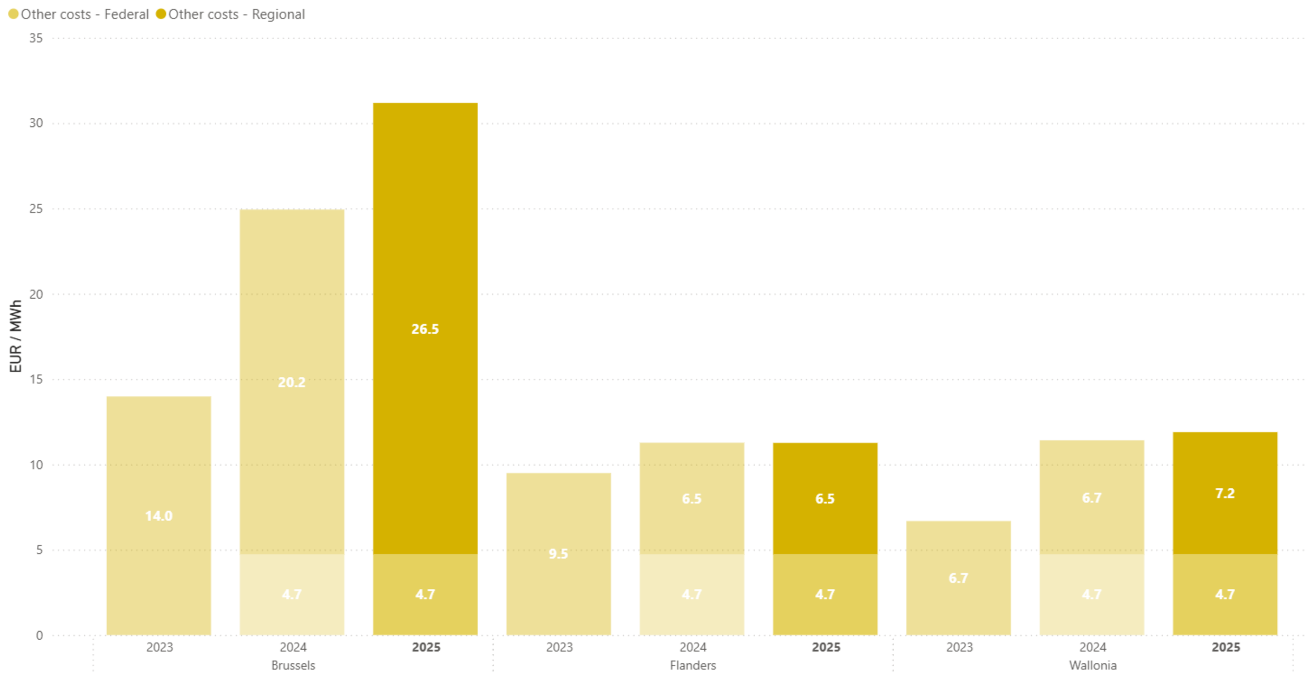


Figure 59: Maximum Regional and Federal all other costs in Belgium in EUR/MWh (profile E3)



In comparison to previous consumer profiles, the **commodity component** of consumer E3 differs as we assume that it constantly operates (24/24, 7/7). Consequently, commodity costs are slightly different compared to previous consumption profiles. Globally, a similar situation is encountered across regions/countries with the lowest cost in France (66 EUR/MWh) followed by Belgium. The commodity price for E3 profiles in France is largely lower than for the previous industrial profiles due to the ARENH mechanism (explained in detail in chapter 5). This explains why France is more competitive than other regions/countries for this profile, while it was average for the smaller profiles. Similarly to 2024, the UK has the most expensive commodity cost (115 EUR/MWh). Germany has had the commodity costs decreasing the most since 2024, with a decrease of - 14%. For the E3 profile, the commodity costs are mostly aligned among countries, with small differences. Similarly to the other profiles, we observe that for E3, the commodity component now accounts for most of the electricity bill, from 70% of the total invoice in the UK to 82% in the Netherlands.

The **network cost component** has a limited impact on the total invoice and, as said for profile E3, as these are now lower and harmonised in Belgium since they are directly connected to the transmission grid and no regional differences are observed for this profile. Although, we notice a x15 factor between the highest network costs in the Netherlands (17 EUR/MWh) and France at the minimum level (1.1 EUR/MWh). These high costs in the Netherlands are due to increased tariffs from TenneT going back to 2024, reflecting the quantity of investments to be made on the grid. This seriously affects the Netherlands on the competitiveness of this component. France presents the lowest transmission costs if the maximum reduction is granted. The reduction in France depends on the proximity from a company with the closest generation plant (following the transmission network), hence the closest the company, the higher the reduction. Reductions could reach up to 81% of transmission costs for close companies, and 0% for companies located far away from generation plants. In Belgium, the network costs component between 2024 and 2025 almost doubled, from 6.5 to 10.5 EUR/MWh.

The minimum rate of **all other costs component**[350] becomes smaller and smaller for most regions/countries under review, though it remains significant and increased between 2024 and 2025 in Brussels (from 20 EUR/MWh to 26 EUR/MWh). In the UK, important reductions are granted on the *Renewable Obligations* scheme, alleviating the other costs by 38 EUR/MWh. Germany also has the potential for large reductions of 22 EUR/MWh for electro intensive consumers and those possessing a sectoral agreement. In Brussels, Wallonia and Flanders the reduction on the federal excise duty enables E3 profile consumers with a range of flexibility of 4.7 EUR/MWh. In Flanders, the GC and CHCP schemes has been changed to not take electro-intensity into account, but the risk of relocation. As the risk grows bigger, the reduction on GC and CHCP costs increases, introducing a new way to compete on the all other costs component.

[350] This cost includes taxes, levies and certificate schemes.

Impact of Flanders' combined cap on profile E3

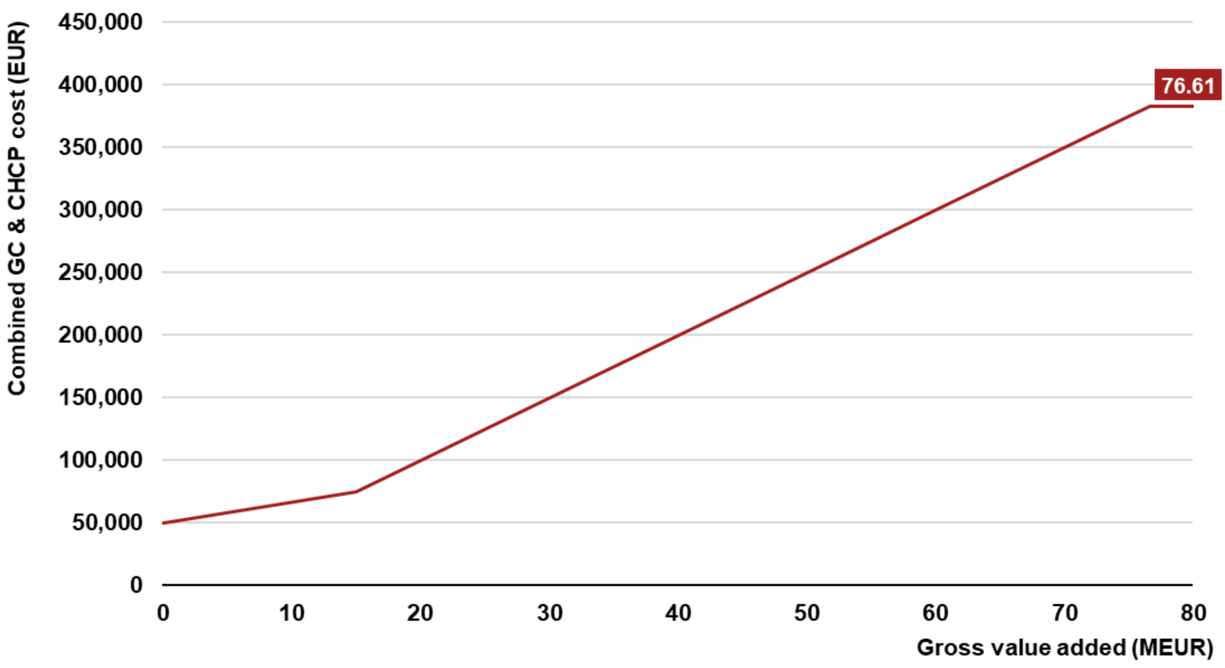
The cost of green certificates can have a big impact on the energy price of large industrial consumers. To limit these costs, Flanders introduced two caps, in 2018, on the cost of financing of renewable energies, which were later modified in December 2023. These caps are proportional to the risk of relocation of a company, depending on its activity sector. Previously this cap was only applicable on GC but since 2021 it is a combined cap that is applicable on GC and CHPC.

Table 127: Flanders' cap on profile E3

	Case 1	Case 2
NACE codes	Part 1 of Energiebesluit Appendix IV/1	Part 2 of Energiebesluit Appendix IV/1
Electro-intensity	Sector at significant risk of relocation	Sector at risk of relocation
Cap (% of GVA)	0.50	1%
Average yearly consumption (E3)	100 GWh	
Combined scheme cost (without cap)	383.03 kEUR	
Maximum gross value added to benefit from the cap	76.61 MEUR	38.30 MEUR

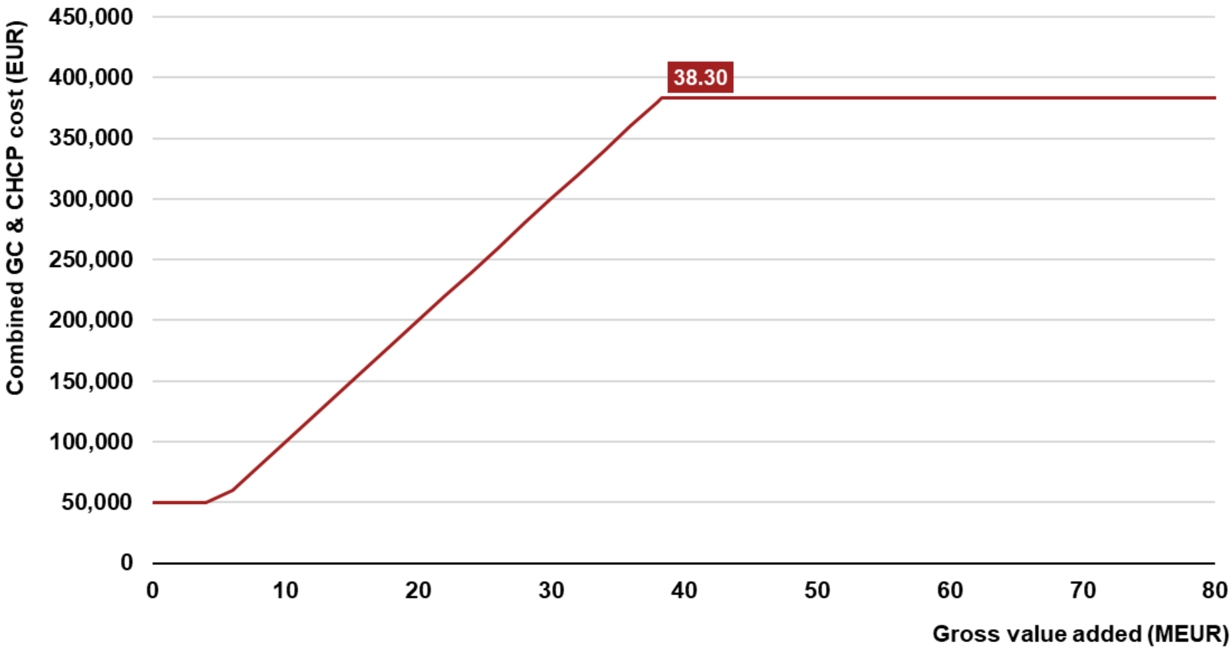
Considering only E3 profiles with NACE codes in part 1 of the Energiebesluit appendix IV/1 with a significant risk of relocation (case 1), a company benefits from the application of the cap as long as its gross value added is less than 76,605,393 EUR.

Figure 60: CHPC and GC actual cost for E3 profile (Case 1)



Considering only profile E3 companies with NACE codes in part 2 of the Energiebesluit appendix IV/1 with a risk of relocation (case 2), a company benefits from the application of the cap as long as its gross value added is less than 38,302,697 EUR.

Figure 61: CHPC and GC actual cost for E3 profile (Case 2)



Key findings

The analysis of the E3 profile leads us to the following findings:

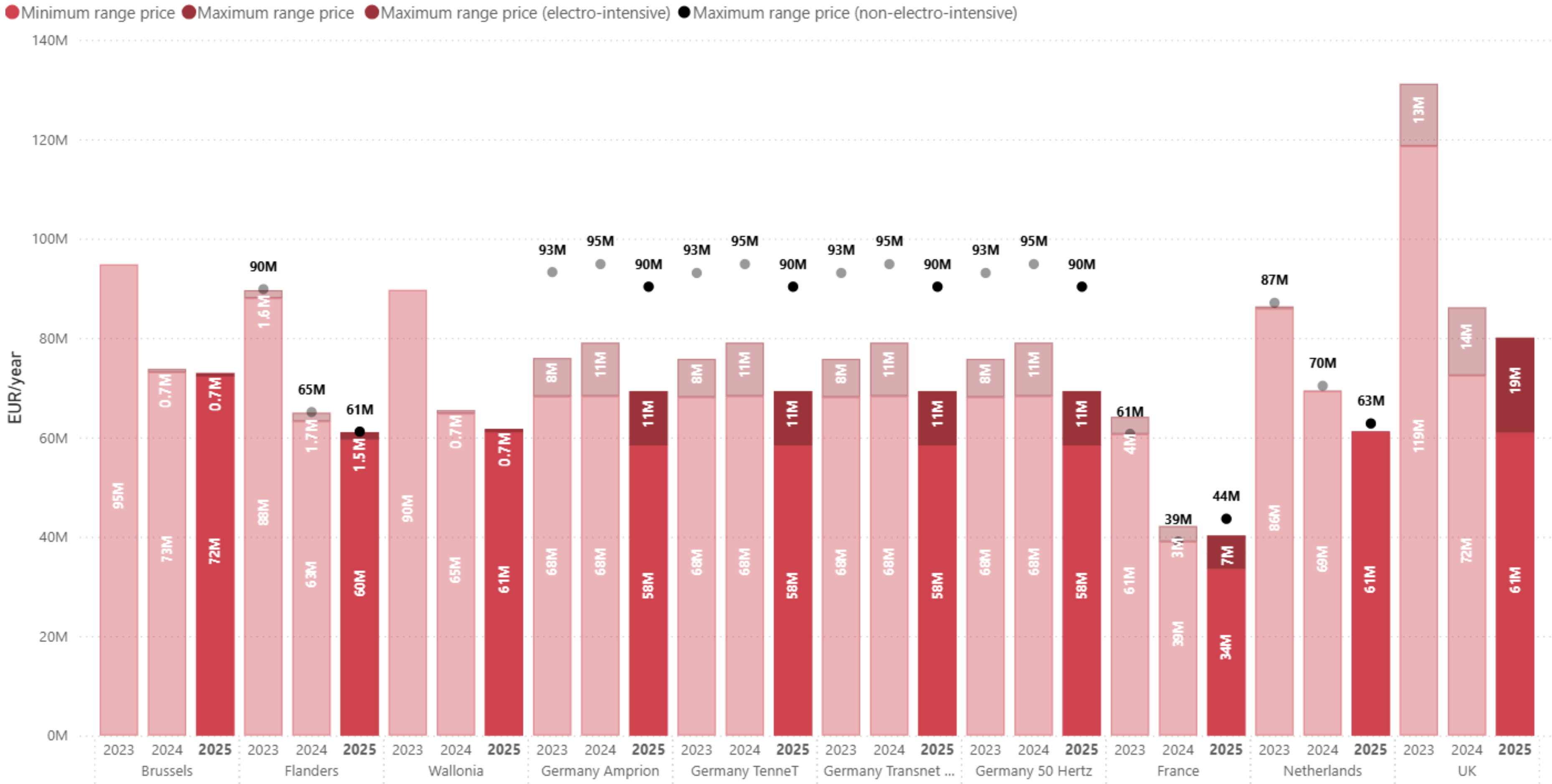
- **The total invoice** ranges from 6.9 MEUR/year (min. range in France) to 16.26 MEUR/year (max. range in the UK) when comparing electro intensive consumers, while Germany becomes the least competitive with 18.2 MEUR/year for non-electro intensive consumers. The total invoice has slightly decreased in all regions/countries under review due to the decrease of the commodity component. The largest decrease in the commodity component happens in Germany and the Netherlands.
- **In Belgium**, we observe that Flanders is the most competitive region, when all reductions apply. Flanders would be slightly below Wallonia if there was no additional Supercap reductions for GC and CHCP for companies with a risk of relocation. Brussels would in any case be the least competitive region. This observation stays similar to 2024 findings.
- The **commodity cost** is relatively similar for this profile compared to E2, though we estimate the consumers to consume 24/7. We see the lowest cost in France with 66 EUR/MWh (-14% since 2024). This component makes up most of the invoice, even for non-electro intensive consumers in France where the commodity component accounts for 70% of the invoice.
- The **network cost** is a small component in the total invoice, especially in Germany and France. The reductions on transmission costs in France are based on consumption profile criteria. Ultimately, France (considering maximum reduction possible) turns out to be the most competitive country on this component's cost. The noticeable increase by 69% of the transmission costs of Elia in Belgium has set Belgium as the second country with the highest network costs, with 11 EUR/MWh, after the Netherlands' 17 EUR/MWh.
- Lastly, the **all other costs** component is potentially the highest in Germany (65 EUR/MWh for non-electro intensives), the UK (39 EUR/MWh) and Brussels (31 EUR/MWh) when not considering reductions/exemptions. The regions/countries considering reductions and even exemption schemes for certain types of consumers allow for more competitiveness with regards to their initial competitiveness rank among the regions/countries under review. Falling under one of these reduction schemes can have a big impact, for example a reduction up to 22 EUR/MWh for electro intensive profiles in Germany or 38 EUR/MWh for the Renewable Obligations in the UK, making the latter jump before Wallonia and the Netherlands in the competitiveness rankings, though not overtaking Flanders.

Profile E4 (Electricity)

Total invoice analysis

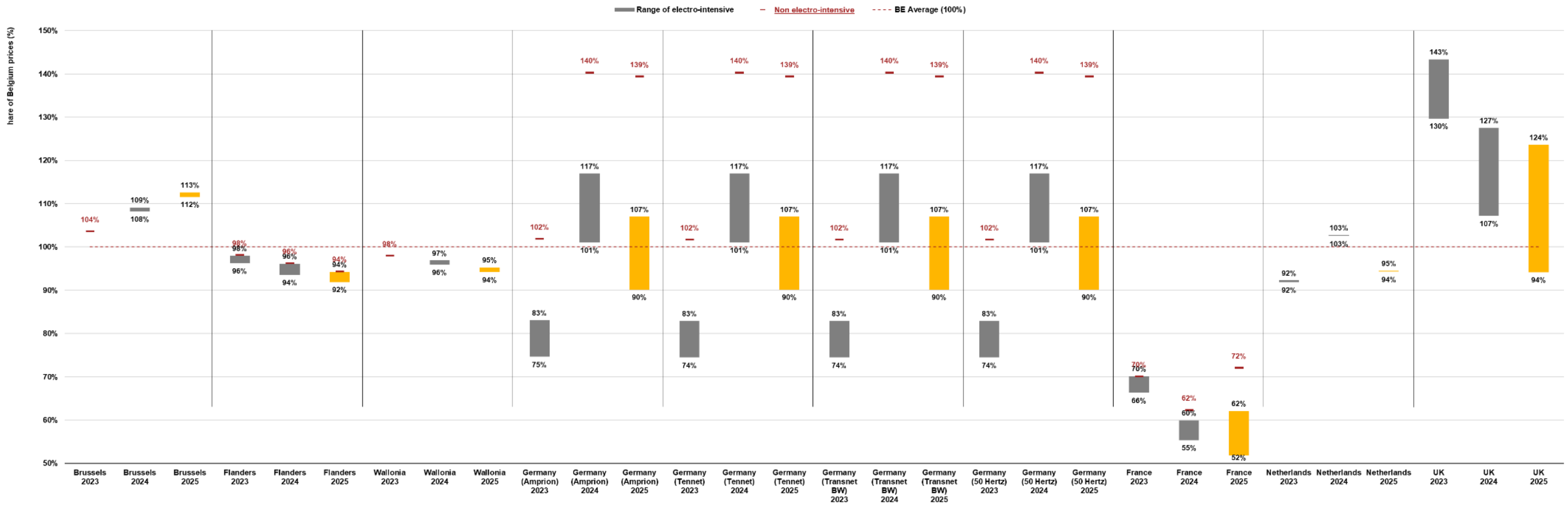
The figure below provides a comparison of the total yearly invoice paid by an industrial profile E4 in the different studied regions/countries. The results are expressed in MEUR/year.

Figure 62: Total yearly invoice in MEUR/year (profile E4)



Below, we compare each region and country's yearly bill with the average Belgian price, which is set at 100. The Belgian average is computed as the mean between Brussels', Wallonia's and Flanders' minimum and maximum prices.

Figure 63: Total yearly invoice comparison in % (profile E4; Belgium Average 2025 = 100)



In 2025, the total invoice has decreased in all the reviewed regions/countries compared to 2024. The total invoice ranges from 33.6 MEUR in France to 73 MEUR in Brussels for electro intensive consumers. For non-electro intensive consumers, the price ranges from 44 MEUR in France to 90 MEUR in Germany. Similarly to the E3 profile, France still offers the lowest price and the competitive gap with the other regions is as large. For electro intensives profiles, the second most competitive region is Germany with 58 MEUR of total invoice, or more than 25 MEUR more than the minimum price in France. In Belgium, Flanders is similarly to the E3 profile, the most competitive region followed by Wallonia and Brussels.

For electro intensive profiles, we observe grouping of competitive region, with a first competitive group comprised of France, a second of Germany – the UK – the Netherlands – Flanders - Wallonia, and a last one with Brussels. For non-electro intensive profiles, the picture remains similar, although Germany becomes the least competitive country for the E4 profile. The difference in competitiveness between Flanders and Wallonia is very small if we take the maximum range for non-electro intensive consumers into account with respective total invoices of 61.17 MEUR/year in Flanders and 61.71 MEUR/year in Wallonia.

In Germany, the existing variance depends on the relative size of power costs in the consumer's gross value added. When the average annual electricity cost over the last three years represents less than 14% of the gross value added of an industrial consumer, the consumer inevitably pays the maximum rate, thereby lowering its competitiveness. We also note that the German competitive position (compared to Belgium average) has lowered for E4, like it was observed for E3. While Germany's minimum range is lower than the Belgian average, the maximum range is above the Belgian average.

Commodity costs are identical to costs displayed for E3. Therefore, an identical situation is observed across all the regions/countries. The lowest cost is found in France (65 EUR/MWh) followed by Belgium and the Netherlands, similarly to 2024. The UK comes as the most expensive country with 115 EUR/MWh. The commodity cost is the biggest component in the total invoice, even for the non-electro intensive profiles in France where this component accounts for almost 70% of the total invoice. However, the proportion is reduced compared to 2024, detailing how important of a differentiator network and all other costs are.

Network costs represent a limited proportion of the final bill. France represents the lowest transmission costs if the maximum reduction is granted. However, if they are not granted, France could become the third most competitive on this component after Germany and theUK. We notice that the Netherlands and Belgium have the highest network costs, respectively of 13 EUR/MWh and 10 EUR/MWh. These costs increased in Belgium by 4 EUR/MWh over the last year, given the strong increase in transmission tariffs of Elia between 2024 and 2025.

While the **all other costs** component[351] can have varying importance among countries, it is mainly dependent on the (non-)electro intensive nature of consumers. Significant reductions are potentially granted on taxes through reduction schemes which makes regions able to drop this cost component significantly such as in Germany (-22 EUR/MWh) or the UK (-38 EUR/MWh). Due to no incentives set forward for electro intensives, Brussels is the region/country with the highest all other costs component at 26 EUR/MWh. France remains the most competitive option for non-electro intensive profiles. As observed previously, Belgium, Germany and France have implemented policies that enable electro intensive consumers to benefit from significant reductions. Brussels' tax level is above the other Belgian regions. Flanders is the most competitive region in Belgium, for electro intensive and non-electro intensive consumer when solely looking at all other costs component[352]. Similarly to the other industrial profiles under review, we see a price range also for Brussels and Wallonia due to the possible exemption on the federal excise duty, though it is smaller than Flanders due to the particular GC and CHCP certificate scheme applicable in that region. In Flanders, the GC and CHCP schemes has been changed to not take electro-intensity into account, but the risk of relocation. As the risk grows bigger, the reduction on GC and CHCP costs increases, introducing a new way to compete on the all other costs component.

[351] This cost includes taxes, levies and certificate schemes.

[352] In addition to the degressivity rules and limits that apply the larger profiles (E2 and higher) do not pay a part of the all other costs, namely the part billed through the DSO, which the smaller profiles do pay.

Breakdown per component

The previous results are further detailed for profile E4 in the figure below, which provides a closer look at the breakdown of the different price components.

Figure 64: Electricity price by component in EUR/MWh (profile E4)

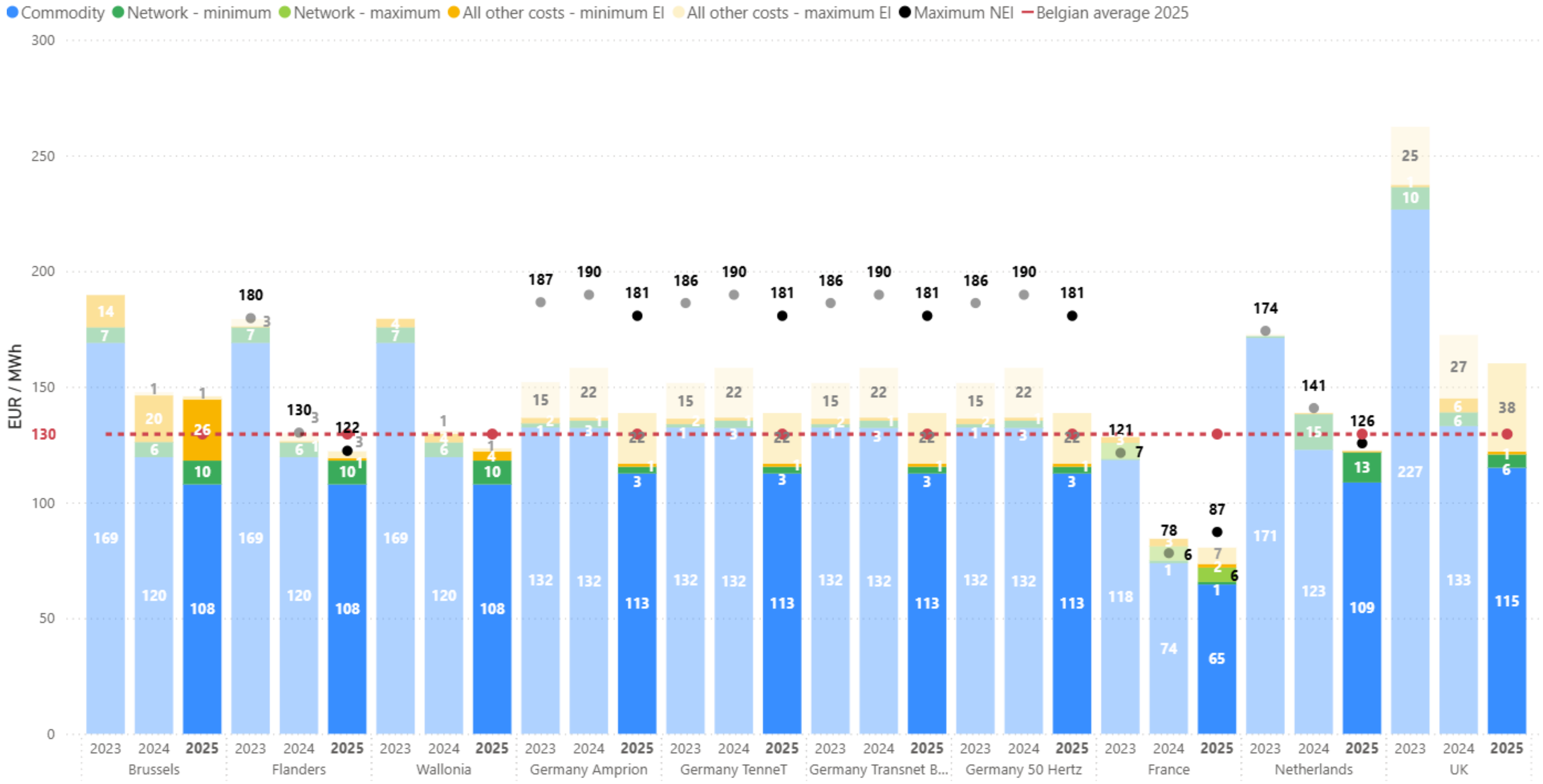
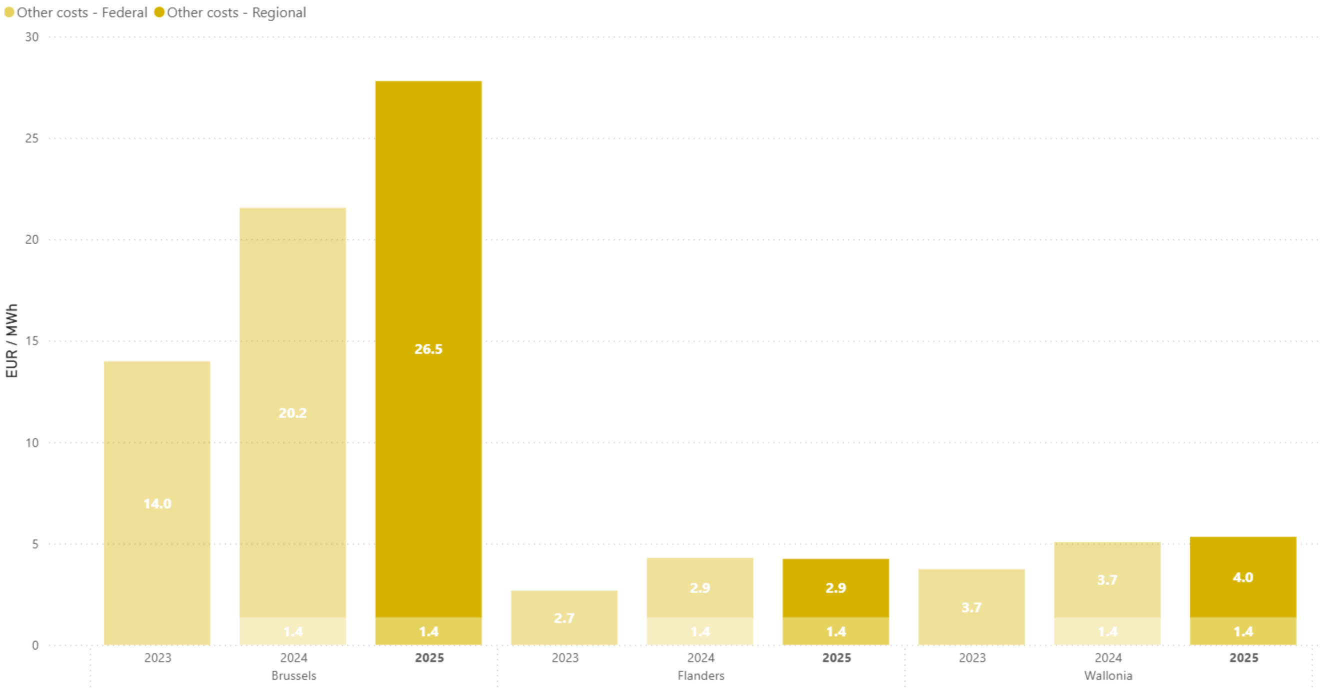


Figure 65: Maximum Regional and Federal all other costs in Belgium in EUR/MWh (profile E4)



Impact of Flanders' combined cap on profile E4

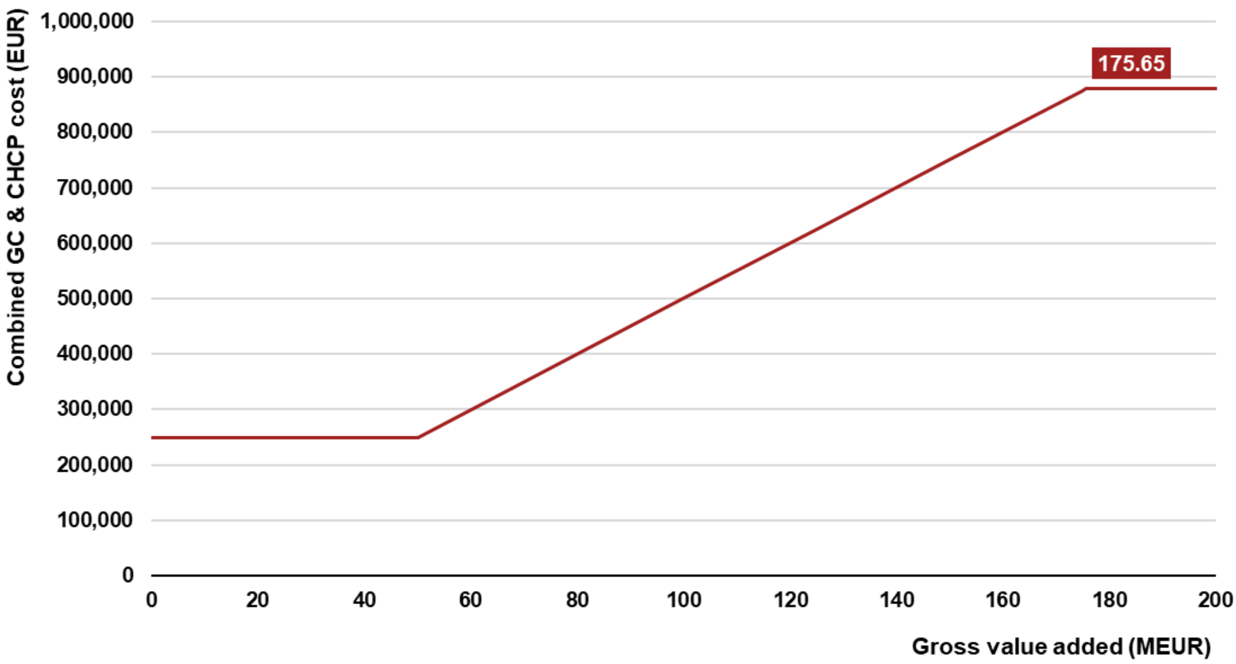
The cost of green certificates can have a big impact on the energy price of large industrial consumers. To limit these costs, Flanders introduced two caps, in 2018, on the cost of financing of renewable energies, which were later modified in December 2023. These caps are proportional to the risk of relocation of a company, depending on its activity sector. Previously this cap was only applicable on GC but since 2021 it is a combined cap that is applicable on GC and CHPC.

Table 128: Flanders' cap on profile E4

	Case 1	Case 2
NACE codes	Part 1 of Energiebesluit Appendix IV/1	Part 2 of Energiebesluit Appendix IV/1
Electro-intensity	Sector at significant risk of relocation	Sector at risk of relocation
Cap (% of GVA)	0.50	1%
Average yearly consumption (E4)	500 GWh	
Scheme cost (without cap)	878.26 kEUR	
Maximum gross value added to benefit from the cap	175.65 MEUR	87.83 MEUR

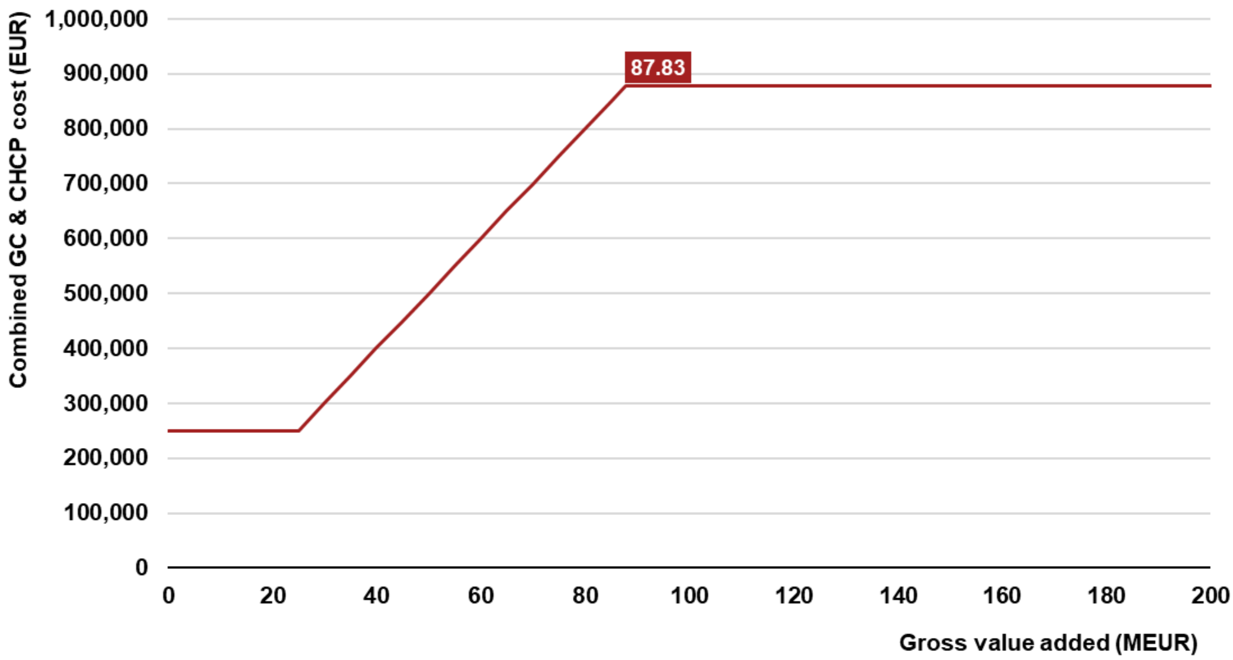
Considering only E4 profiles with NACE codes in part 1 of the Energiebesluit appendix IV/1 with a significant risk of relocation (case 1), a company benefits from the application of the cap as long as its gross value added is less than 175,651,893 EUR.

Figure 66: CHPC and GC actual cost for E4 profile (Case 1)



Considering only Profile E4 companies with NACE codes in part 2 of the Energiebesluit appendix IV/1 with a risk of relocation (case 2), a company benefits from the application of the cap as long as its gross value added is less than 87,825,947 EUR.

Figure 67: CHPC and GC actual cost for E4 profile (Case 2)



Key findings

The analysis of the E4 profile leads us to the following findings:

- The **total invoice** ranges from 32.8 MEUR in France to 72.9 MEUR in Brussels for electro intensive consumers and from 43.6 MEUR in France to 90.3 MEUR in Germany for non-electro intensives. The total invoice has decreased in all the regions compared to 2024. This is explained by the decrease of the commodity component. Similarly to 2024, Flanders is the cheapest Belgian region, though by a tiny margin compared to Wallonia.
- **Commodity costs** represent the most significant component in E4 consumers' final bill, even for non-electro intensive consumers in Germany where it can account for more than 62% of the total bill. While France has the lowest fares for the commodity component, the UK has the highest one.
- **Network costs** are a reduced constituent of the electricity invoice, except in the Netherlands and Belgium where it takes a bigger share with 8 to 10% of the total bill. Further reductions granted on large consumers by countries such as in France lead to competitive disadvantages for other countries. The Netherlands has the most expensive network costs (13 EUR/MWh), followed up by Belgium with 10 EUR/MWh, the latter increased by 62% over the last year due to the strong increase between 2024 and 2025 of the approved transmission tariffs.
- **All other costs** span a vast range of potential levels all very different across regions/countries. However, specific attention is brought to Germany and the UK where electro intensive consumers may benefit from substantial reductions, respectively 22 EUR/MWh and 38 EUR/MWh. It would by itself allow both countries to be as competitive as Wallonia and Flanders, and the Netherlands.

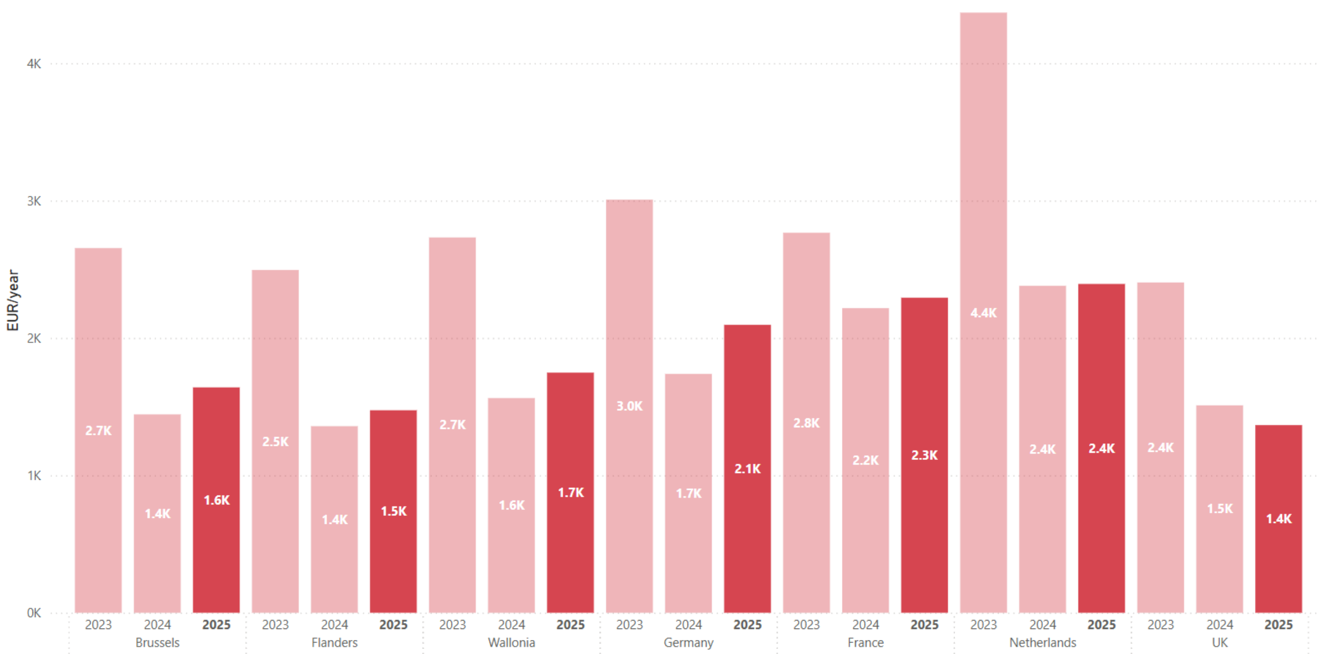
Presentation of figures (Natural gas)

Profile G-RES (Natural gas)

Total invoice analysis

The figure below provides a comparison of the total yearly invoice paid by a residential profile G-RES in the different studied regions and countries. The results are expressed in EUR/year (incl. VAT).

Figure 68: Total annual invoice in EUR/year (profile G-RES)



The graph demonstrates a slight increase in the total invoice for all regions in Belgium. Similarly, Germany also shows a more modest rise, whereas residential consumers in the UK experience a decrease in their natural gas bills compared to 2024. The reason behind the decrease of total invoice in the UK might be explained by the lowering of the price cap of the per unit level price in 2025[353]. Prices in the Netherlands and France remained relatively stable. It is important to note that the annual consumption for the G-RES profile was adjusted in 2024 from 23.26 MWh/year (2023) to 17 MWh/year to better reflect the current situation. This adjustment complicates direct comparisons between 2023 and subsequent years, as a consumption of 23.26 MWh/year was assumed in 2023, resulting in a general increased invoice amount due to higher consumption levels. It is therefore important to look at the next graph (Figure 69), which details the price per MWh of natural gas consumed. This cancels out the consumption factor.

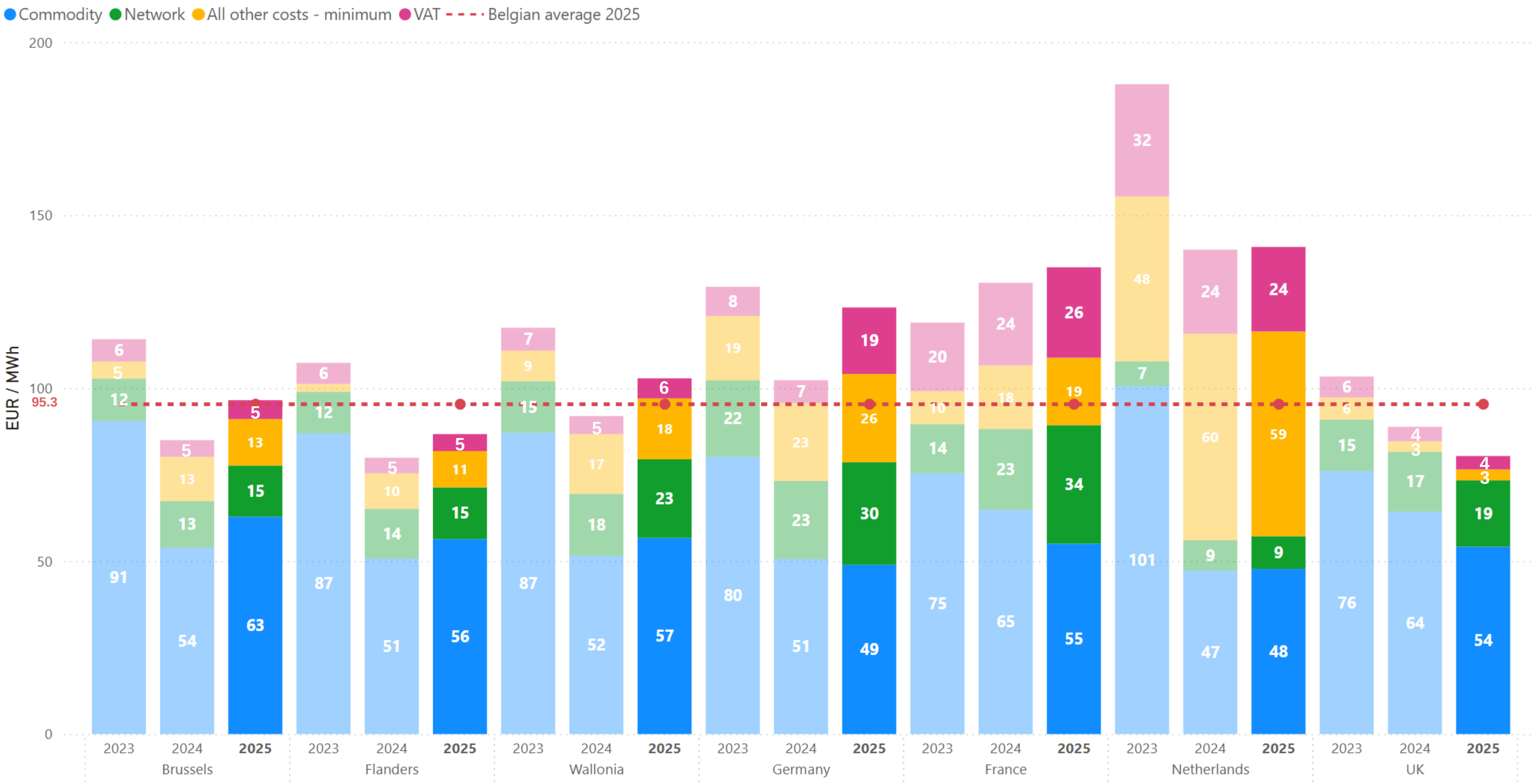
As in 2024, the Netherlands continues to be the most expensive country among all those included in this study, closely followed by France and Germany. Additionally, Flanders has lost its leading position from 2024 to the UK, which now has the lowest natural gas bills due to a 10% decline, while Flanders saw a 9% increase in total invoice. Within Belgium, however, Flanders remains the most competitive region.

[353] The per unit level price decreased from 0.0742 GBP/kWh in 2024 to 0.0634 GBP/kWh in 2025. (OFGEM, 2024)

Breakdown per component

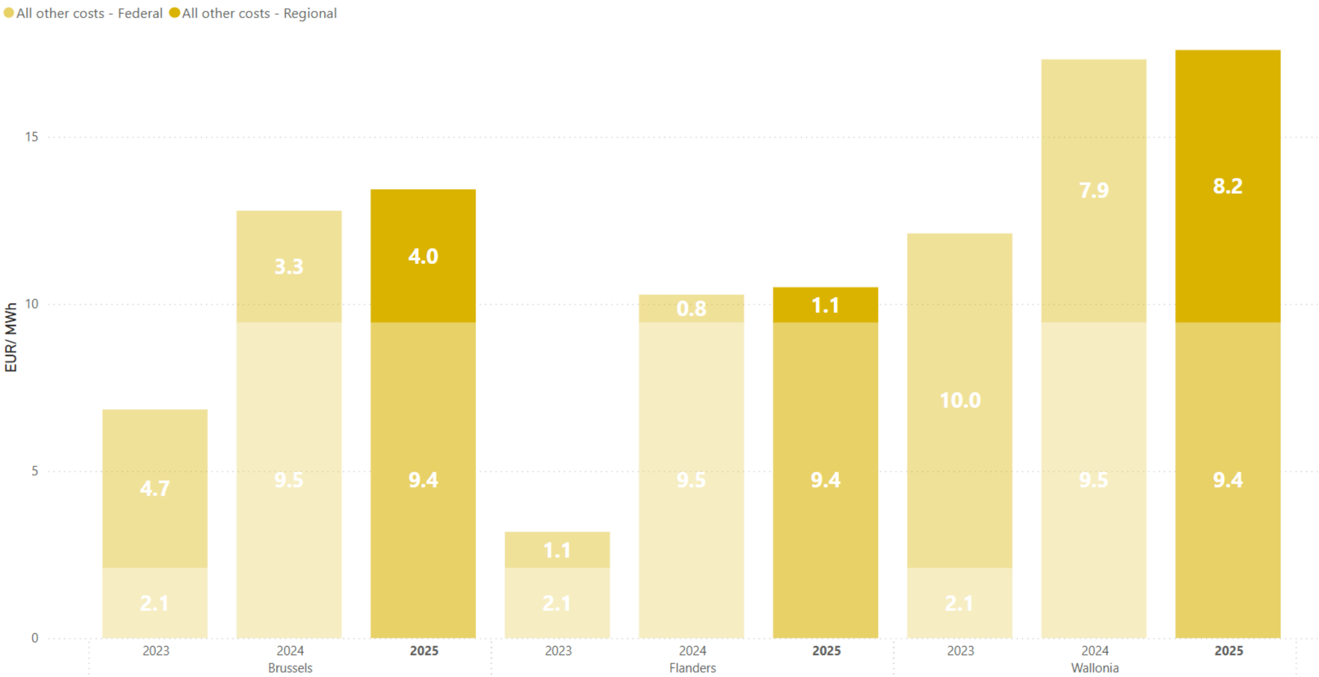
The previous results are further detailed for profile G-RES in the figure underneath, which provides a closer look at the breakdown of the different price components in EUR/MWh.

Figure 69: Natural gas price per component in EUR/MWh (profile G-RES)[354]



[354] To enhance readability, the displayed numbers are rounded up to the nearest whole number.

Figure 70: Regional and Federal all other costs in Belgium in EUR/MWh (profile G-RES)



After adjusting the profile parameter of annual consumption for G-RES, it is easier to compare the three years in scope with each other. The increase in Belgium is mainly due to an increase in commodity costs (between 10% and 16%) as well as a moderate increase in network costs (between 7% and 27%). France and the UK experienced a notable drop in commodity prices (-15%), but in France this was offset by a rise in network costs, caused by an increase in transport and storage costs.

The increase in the invoice in Germany was primarily due to increases in the VAT rate, which rose from 7% to 19%. The VAT rate in Germany has been reinstated to its standard level following the end of the special measures implemented during the energy crisis, which temporarily reduced it to 7%. Germany saw also a notable increase in network costs, distribution and transport costs, as well as some taxes such as the gas storage levy, carbon levy, and bio-gas levy. The UK achieved its decline in the total invoice mainly due to a decrease in commodity costs.

In most of the regions reviewed, the **commodity component**, remains the most significant component of the total gas invoice. However, there is an exception. In the Netherlands, the energy tax (all other costs, 42% of total invoice) remains the most significant component. The regions of Belgium have become the most expensive concerning commodity costs, which range from 56 to 63 EUR/MWh. In contrast, other countries have experienced a decline in their commodity costs.

The **Network component** remains the second most important component for most countries. This component has increased slightly for all countries and regions under review, with the most notable increase in France (+46%) due to increased transport and storage costs. Within the Belgian regions, Wallonia has the highest network costs, accounting for 23 EUR/MWh and Brussels, together with Flanders, the lowest at 15 EUR/MWh.

Except for Germany, where the **VAT tariff** has increased from 7% in 2024 to 19% in 2025, all rates have remained the same across all other regions and countries under review.

The component where we still see the most fluctuation between countries is the **all other costs component**[355]. Considering the Netherlands, the height of their all other costs component, in particular the energy tax which has slightly decreased in 2025, makes them still the most expensive country under review. In Belgium we made the distinction between regional and federal all other costs and the regional component makes a big difference in the competitiveness between the Belgian regions. The regional all other costs component in Wallonia (8 EUR/MWh) is twice as high as Brussels (4 EUR/MWh) which is almost 4 times higher than the regional all other cost of Flanders (1 EUR/MWh).

[355] This cost includes taxes, levies and certificate schemes.

Key findings

The results reported above suggest the ensuing Key findings regarding profile G-RES:

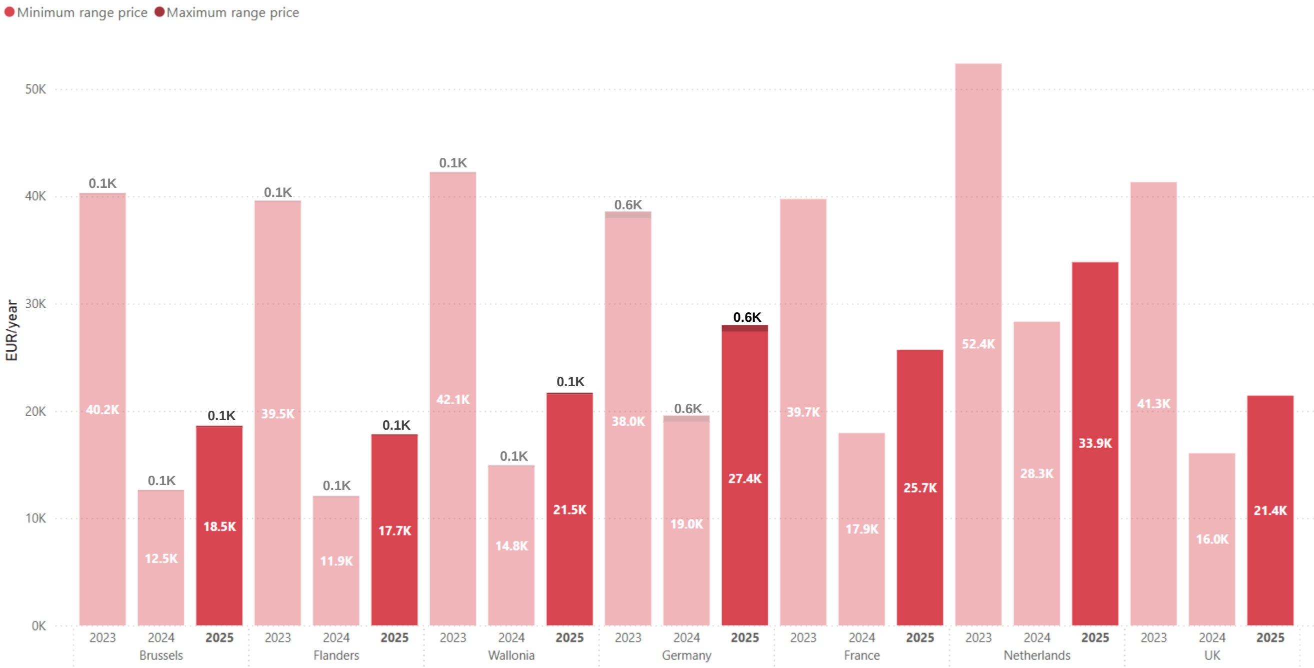
- **Total Invoice Trends**: In 2025, natural gas invoices increased slightly in all Belgian regions and in Germany, while the UK saw a decline. The Netherlands and France remained relatively stable in their total invoice. Flanders lost its leading position in competitiveness to the UK, which now has the lowest invoice due to a 10% drop. The Netherland remained the most competitive region.
- **Component Breakdown**: In Belgium, the invoice increase was mainly driven by rising commodity costs (+10 till 16%) and network costs (+7 till 27%). France's drop in commodity prices (-15%) was offset by higher network costs. Germany's increase stems from network cost hikes and increased levies; the UK benefited from falling commodity prices.
- **Major Cost Drivers**: Commodity costs are still the largest component in most countries. Belgian regions now face the highest commodity costs (56–63 EUR/MWh), however, some of the "all other costs" in the other European countries could be allocated to the energy component, depending on the methodology. In the Netherlands, however, the energy tax (other costs) is the main cost driver.
- **VAT**: VAT rates remained stable in all regions except Germany, where the rate increased from 7% to 19%.
- **Regional Disparities in Belgium**: "All other costs" vary significantly — Wallonia is highest (18 EUR/MWh), Brussels follows (13 EUR/MWh), and Flanders remains most competitive (11 EUR/MWh), reinforcing internal regional price gaps.

Profile G-PRO (Natural gas)

Total invoice analysis

The figure below provides a comparison of the total yearly invoice paid by a professional profile G-PRO in the different studied regions/countries.

Figure 71: Total annual invoice in EUR/year (profile G-PRO)



Similar to G-RES, we observe an increase in the total invoice for all regions of Belgium. This rise is now also evident across all other countries under review for the G-PRO profile. Despite this widespread increase in prices, the Belgian regions continue to be the most competitive, with Flanders maintaining its position as the most competitive among the three Belgian regions. The Netherlands remain the most expensive country, closely followed by Germany when considering the maximum range for all related costs.

It is important to note the price range for G-PRO in the Belgium regions. This is due to the fact that this profile does not typically have an EBO or sector agreement standardly applied, unlike the larger industrial profiles G0, G1, and G2. Consequently, the total invoice amount can therefore vary depending on whether a company has a sector agreement, allowing them to benefit from a reduced rate on the energy contribution.

Breakdown per component

The previous results are further detailed for profile G-PRO in the figure underneath, which provides a closer look at the breakdown of the different price components.

Figure 72: Natural gas price per component in EUR/MWh (profile G-PRO)

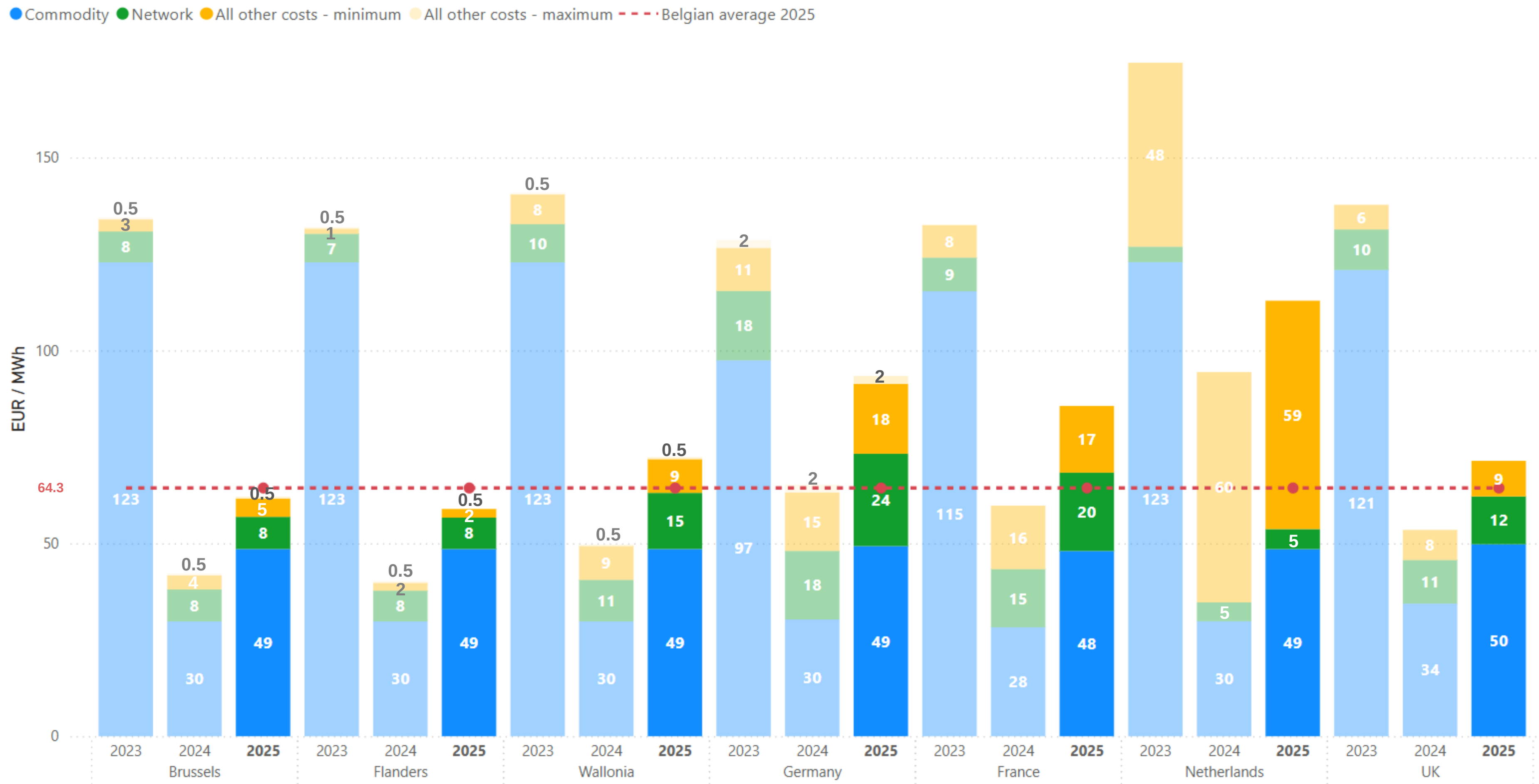
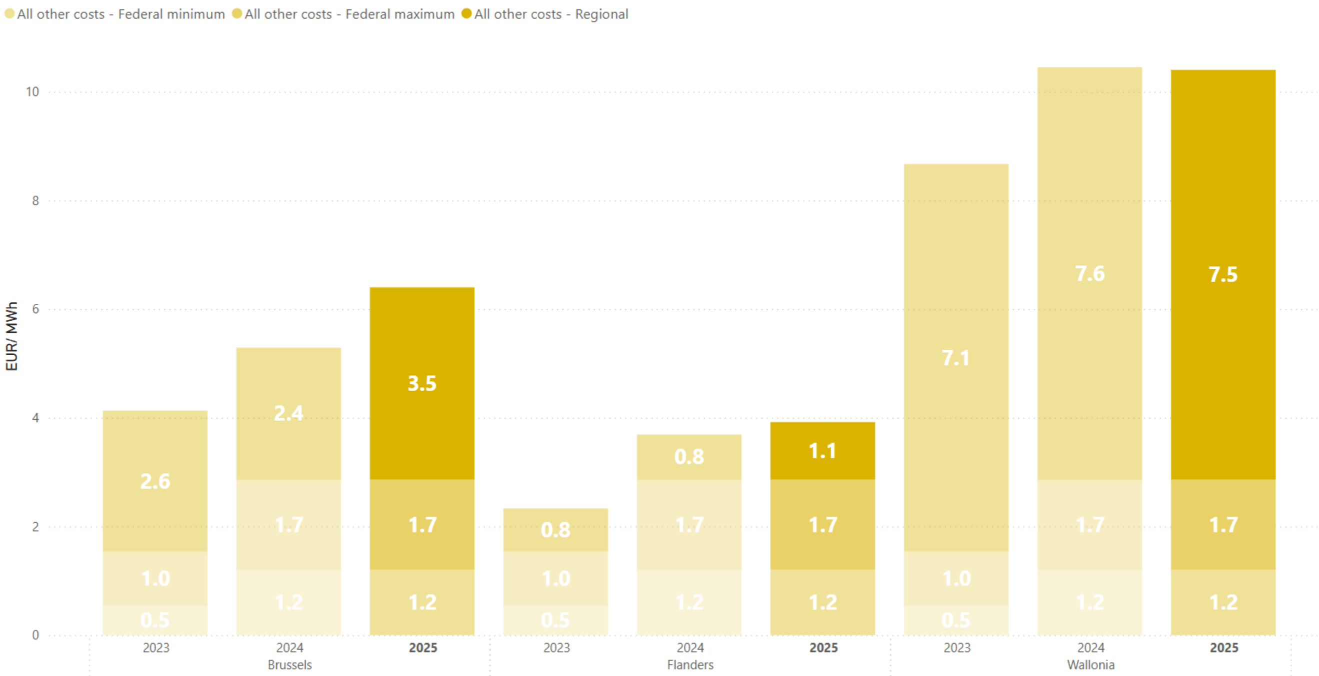


Figure 73: Regional and Federal all other costs in Belgium in EUR/MWh (profile G-PRO)



The first component we will analyse is the **commodity component** which has been computed according to the market price and not through comparison websites. This explains why the commodity cost does not alter between the Belgian regions for the G-PRO profile and onwards. In 2025, there has been a substantial increase again in the commodity component cost across all regions. The commodity component rose by more than 60% for almost all regions and countries (except for the UK, 47%) compared to 2024. Commodity costs remain, however, far below the levels seen in 2023.

It is worth noting that the commodity component is quite similar across regions, with most regions having a commodity cost of around 49 EUR/MWh (with France being at 48 and the UK at 50 EUR/MWh). The similarity is even more noticeable compared to 2024.

There are a few observations that can be made regarding the **network cost component**. The smallest network costs are observed in the Netherlands, followed by Belgium and the UK, with France and Germany having the highest network costs. Differences among Belgian regions are however present. The most expensive network cost (Wallonia, 15 EUR/MWh) is 7 EUR/MWh higher than the cheapest network cost (both Brussels & Flanders at 8 EUR/MWh). The biggest differences in network costs can be observed in France, Germany and Wallonia, which saw there network components quite significantly increase compared to 2024.

Lastly, we have the **all other costs component**[356] which is one of the components that has the most effect on the overall position of the region/country. The regions/countries, that have the lowest all other costs is Flanders, followed by Brussels. While this component is still by far the highest in the Netherlands, France and Germany stand in the middle of the pack, both having experienced an increase in these costs. In France this is mainly due to a slight increase in the standard TICGN[357]-rate (16.37% to 17.16%). For Germany this is caused by increased rates for the Bio-gas levy, carbon levy and gas storage levy.

[356] This cost includes taxes, levies and certificate schemes.

[357] La taxe intérieure de consommation sur le gaz naturel

Key findings

The results reported above suggest the ensuing Key findings regarding profile G-PRO:

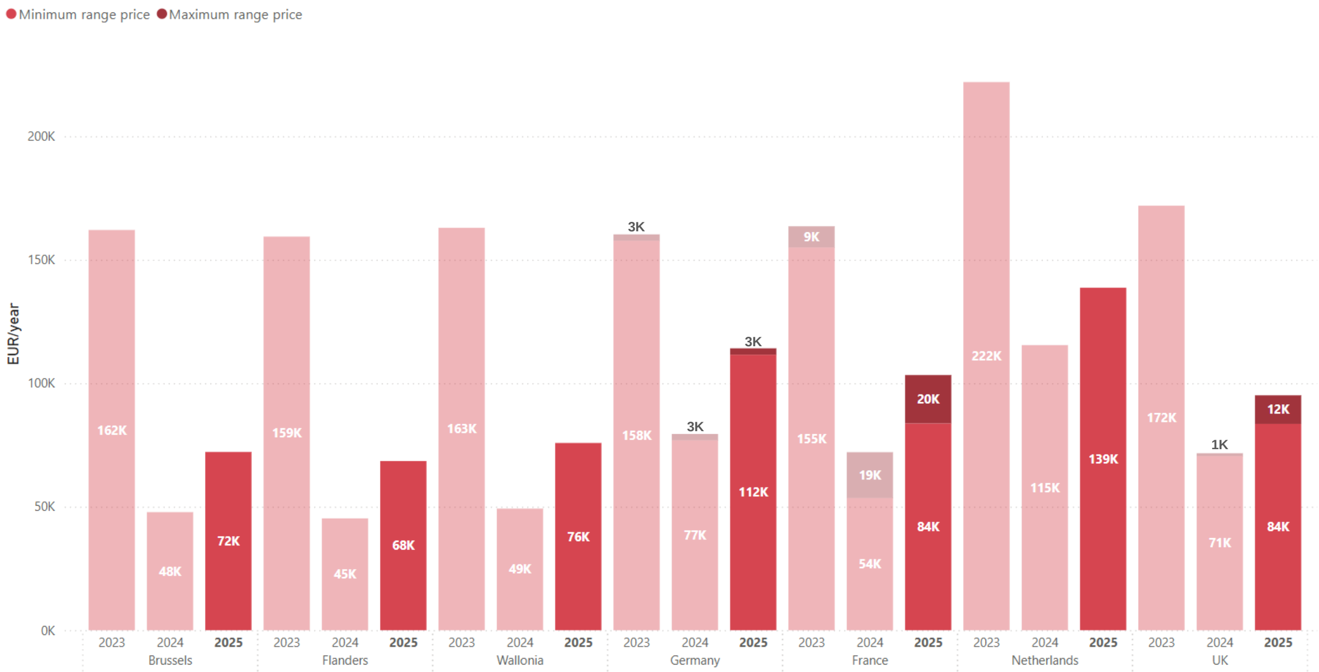
- **Total Invoice Trends**: All regions in Belgium and all other countries experienced an increase in the total natural gas invoice for professional consumers in 2025. Despite this, Belgian regions remain the most competitive overall, with Flanders leading in affordability. The Netherlands remains the most expensive, closely followed by Germany.
- **Commodity Costs**: The commodity component rose sharply in 2025 — over +60% in nearly all regions (except the UK at +47%) — yet remains well below 2023 levels. Commodity prices are now very similar across regions (~49 EUR/MWh), showing more alignment than in previous years.
- **Network Costs**: The lowest network costs are observed in the Netherlands, followed by Belgium and the UK, while France and Germany remain the most expensive. Within Belgium, Wallonia (15 EUR/MWh) is the costliest, while Flanders (8 EUR/MWh) is the cheapest. Several countries and regions, including France, Germany, and Wallonia, saw a notable increase in this component.
- **All Other Costs**: This component significantly influences competitiveness. Flanders has the lowest all other costs, followed by Brussels. The Netherlands remains the most expensive, while France and Germany fall in the mid-range. Increases in these costs were driven by higher levies and taxes, including the TICGN in France and the bio-gas, carbon, and storage levies in Germany.
- **Overall Competitiveness**: Despite rising costs across the board, the Belgian regions maintain a strong competitive edge, primarily due to low network and "all other" costs — especially in Flanders, which leads in affordability across components.

Profile G0 (Natural gas)

Total invoice analysis

The figure below provides a comparison of the total yearly invoice paid by an industrial G0 profile in the different studied regions and countries. The results are expressed in EUR/year.

Figure 74: Total yearly invoice in EUR/year for industrial consumers (profile G0)



For the G0 profile, a similar observation can be made as for G-PRO, where we see an overall increase in the total invoice for all regions and countries under review. Furthermore, Germany is not the only region/country with a price range anymore since we take the possibility of a reduction of the TICGN in France starting with the G0 profile. We also include the possibility of a reduction in the climate change levy in the UK for holders of a climate change agreement or companies who use natural gas for the use in metallurgical and mineralogical processes. In the Belgian regions, it is evident that G0 does not have a price range, unlike G-PRO. This change is due to the assumption that all large industrial consumers participate in an EBO or sector agreement, which enables them to benefit from a reduced rate on energy contributions.

Due to the overall increase in all invoices, the competitive order of the countries and regions does not significantly change. Flanders still remains the most competitive region with the other two Belgium regions completing the remainder of the top three. The Netherlands remains the least competitive country, followed by Germany.

Breakdown by component

The previous results are further detailed for profile G0 in the figure underneath, which provides a closer look at the breakdown of the different price components.

Figure 75: Natural gas price by component in EUR/MWh (profile G0)

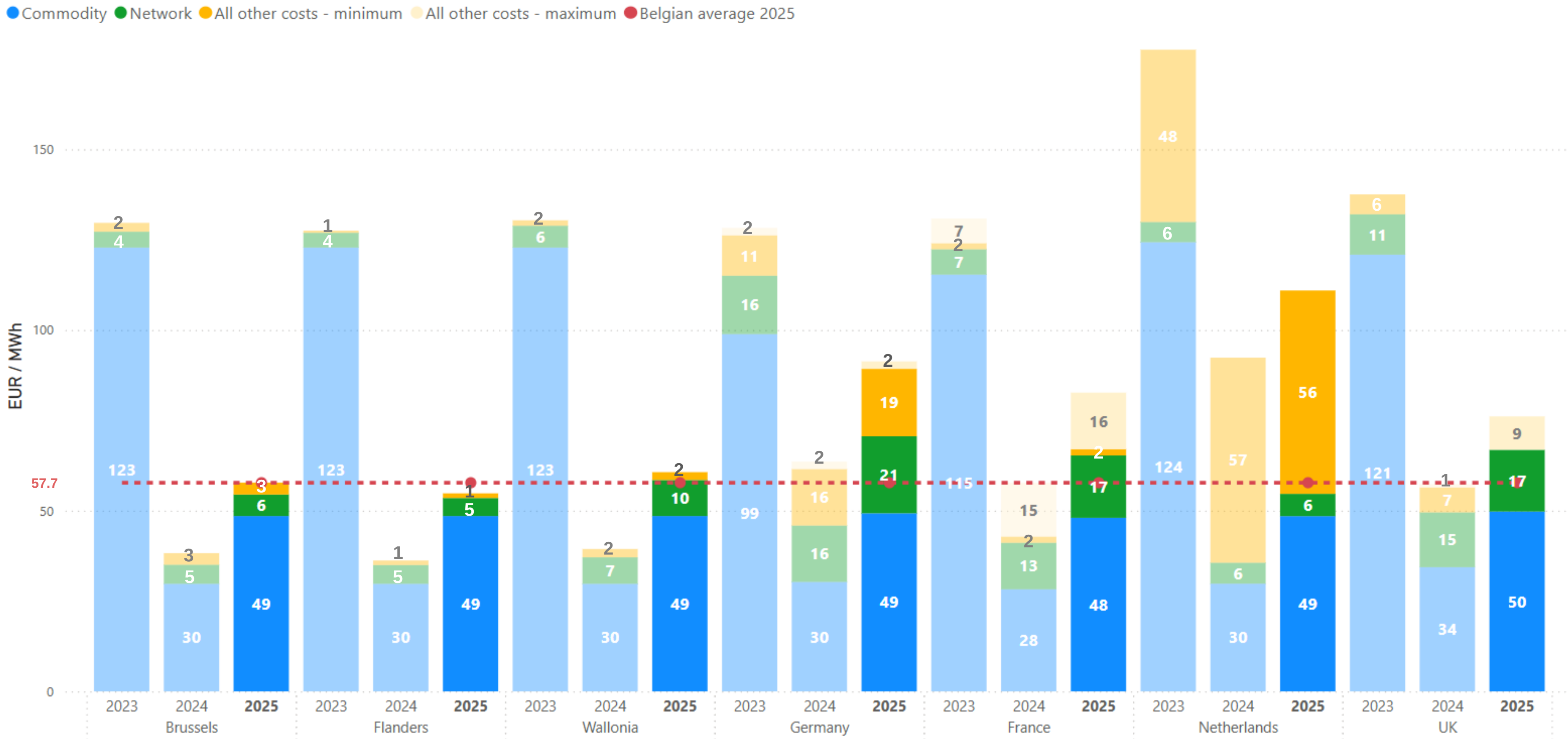
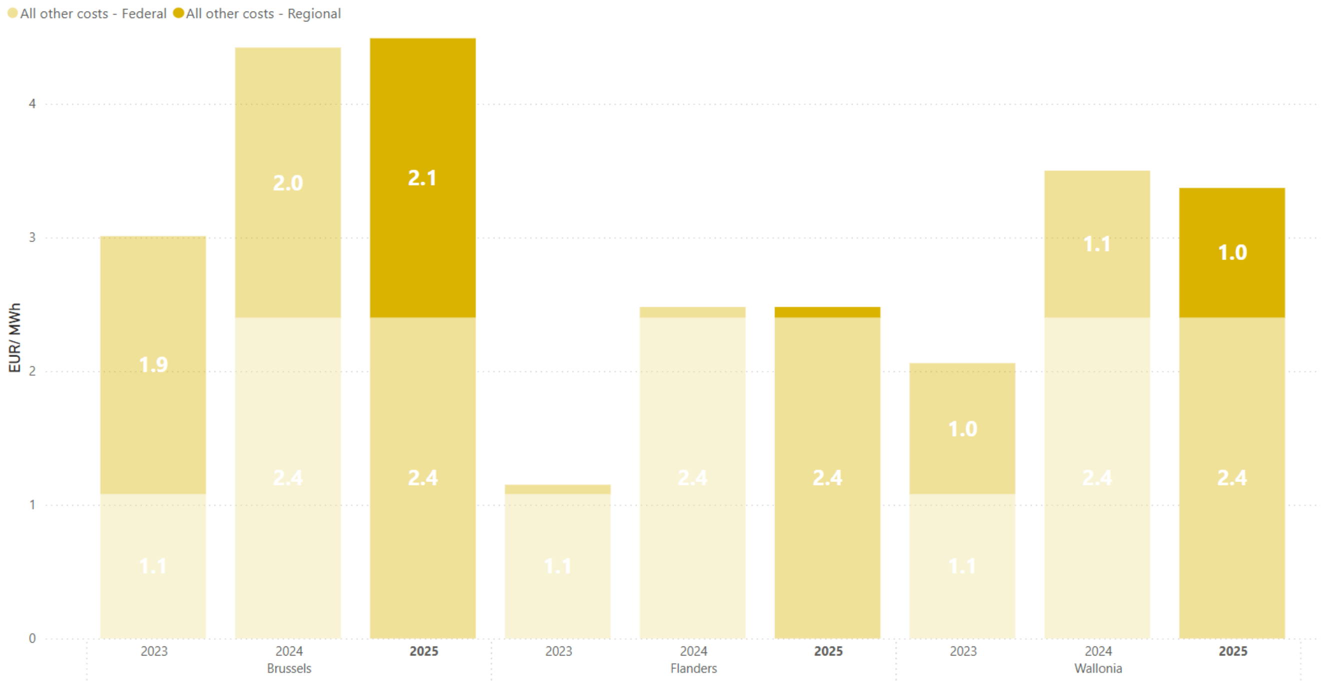


Figure 76: Regional and Federal all other costs in Belgium in EUR/MWh (profile G0)



Since the **commodity cost** is based on the market price and this is the same for all the bigger consumer profiles (G-PRO - G2) the price per MWh will remain roughly the same at 49 EUR/MWh with small deviations for France, at 48 EUR/MWh, and the UK, at 50 EUR/MWh.

The **network component** remains a significant component of the total bill, especially in the UK, Germany and France as well. Overall network costs have increased for countries, with France and Germany seeing their network costs increase by roughly 30%. In Belgium, the network costs are generally quite low on average. In Wallonia (10EUR/MWh), however, the network costs are almost twice as high as in Brussels (6 EUR/MWh) and Flanders (5 EUR/MWh).

Lastly, the **"all other costs" component** has some important variations across the different countries. In Belgium we generally observe the lowest other costs (1 - 3 EUR/MWh) and little changes compared to 2024, which benefits the competitive position of all Belgium regions. Germany has seen the biggest increase (+18%) in its other costs, thanks to increased rates of the Bio-gas levy, carbon levy and Gas storage levy. Also France increased slightly due to the increased TICGN rate.

Key findings

The results reported above suggest the ensuing Key findings regarding profile G0:

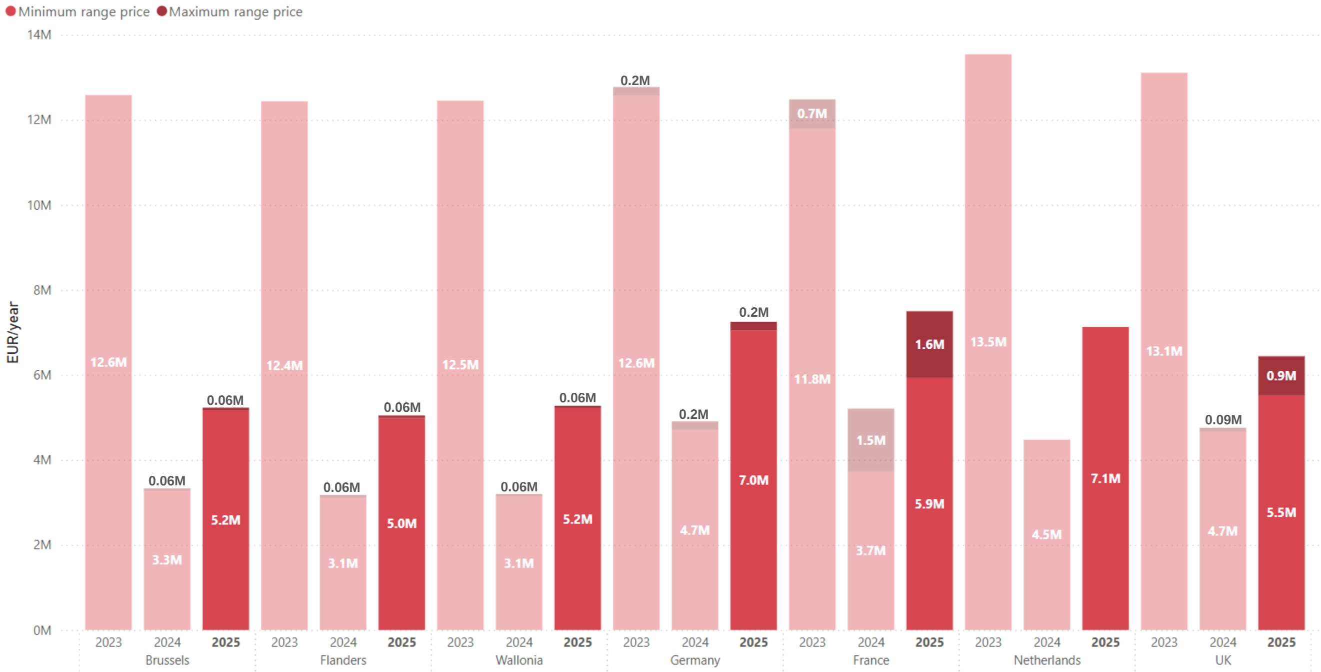
- **Total Invoice Trends**: All regions and countries saw an overall increase in total invoices for industrial consumers in 2025. Despite this, the competitive ranking remained stable, with Flanders maintaining its top position, followed by the other Belgian regions. The Netherlands remains the least competitive, closely followed by Germany when considering maximum cost values.
- **Commodity Costs**: Commodity prices are uniform across regions, at around 49 EUR/MWh (with slight deviations: France at 48, UK at 50). This cost is based on market prices, which apply consistently across larger consumer profiles (G-PRO to G2).
- **Network Costs**: This component has increased across the board, especially in France and Germany (up by ~30%). Belgium retains relatively low network costs, though Wallonia (10 EUR/MWh) is nearly twice as expensive as Flanders (5 EUR/MWh) and Brussels (6 EUR/MWh).
- **All Other Costs**: Belgium maintains a strong advantage here, with very low and stable all other costs (1.3–3.3 EUR/MWh), reinforcing its competitiveness. By contrast, Germany recorded the largest increase (+18%), driven by rising bio-gas, carbon, and gas storage levies, while France saw a modest rise due to the increased TICGN rate.

Profile G1 (Natural gas)

Total invoice analysis

The figure below provides a comparison of the total yearly invoice paid by an industrial G1 profile in the different studied countries and regions. The results are expressed in MEUR/year. The second figure gives the Belgian average natural gas invoice, presenting the percentual price differences with other countries.

Figure 77: Total yearly invoice in MEUR/year for industrial consumers (profile G1)



In terms of G1 profiles, again a similar pattern can be seen as with the other industrial profiles. In 2025, there was again a notable increase in the total invoice for all countries compared to 2024. Flanders remains the most competitive region within Belgium, as well as compared to all other countries. Brussels and Wallonia, remain second and third most competitive. The Netherlands remains the least competitive country when taking into account all possible reductions.

As stated in Section 5, for profiles G1 and G2 in the three Belgian regions, we show a price range, due to the possible exemption of the federal excise duty. Therefore, the minimum price shown is the one taking the full exemption into account, while the maximum is including the full cost of this federal cost for these two profiles[358]. The Belgian average used in the following figures for G1 and G2, considers both the minimum and the maximum, as done for the industrial electricity profiles.

[358] According to Art. 429.§ 1er of the law from 27th December 2004[358] an exemption is foreseen when electricity and gas are not used only for heating and transport, but also for metallurgic or chemical industrial procedures, thus being considered as “double usage”. For the sake of this report, we assumed that profiles G1 and G2 could potentially benefit from this exemption, if they fall within the conditions specified by the law.

Breakdown by component

The previous results are further detailed for profile G1 in the figure underneath, which provides a closer look at the breakdown of the different price components.

Figure 78: Natural gas price by component in EUR/MWh (profile G1)

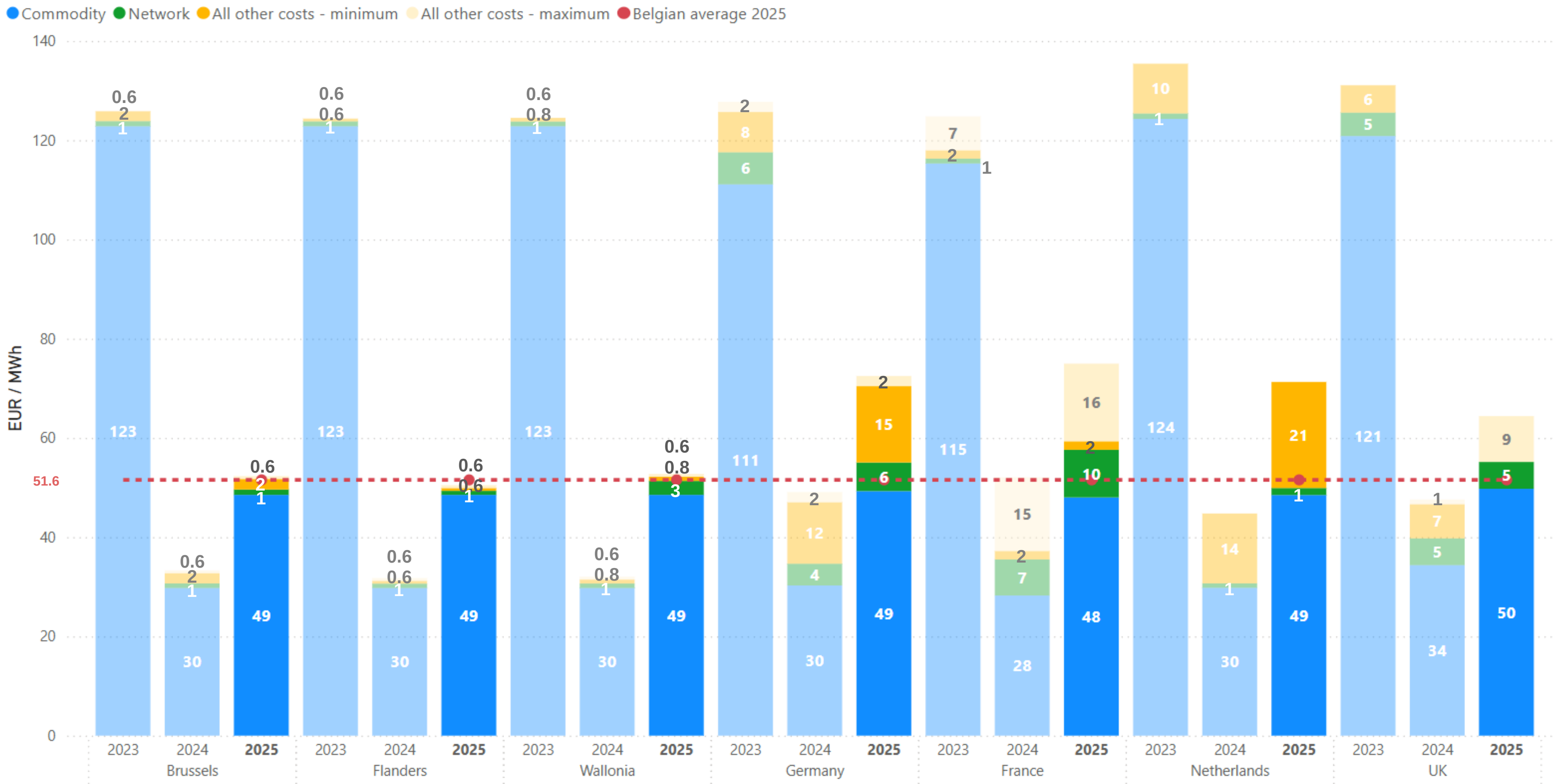
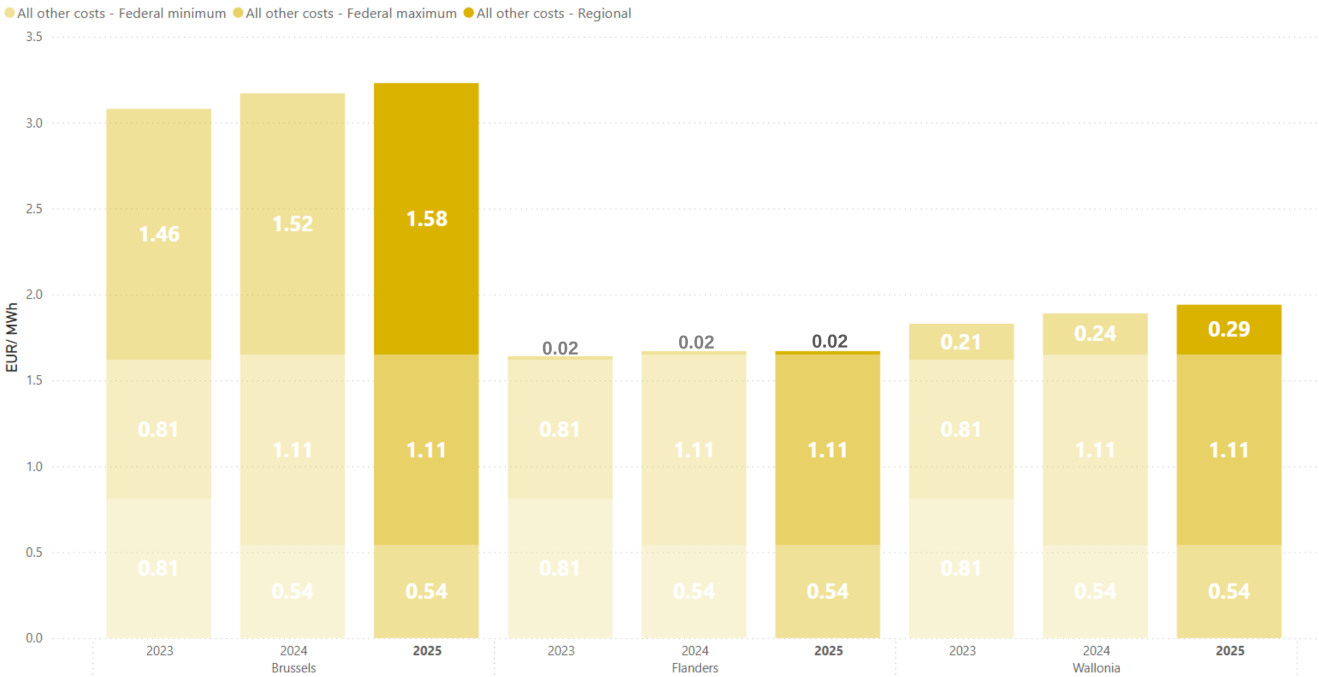


Figure 79: Regional and Federal all other costs in Belgium in EUR/MWh (profile G1)



Similar to the previous industrial profiles, the **commodity costs** have increased in 2025 and is roughly the same over all regions and countries observed (49 EUR/MWh), with small deviations for France, at 48 EUR/MWh, and the UK, at 50 EUR/Mwh.

When it comes to the **network component**, we can again observe a significant increase in the Network costs for France, Germany and Wallonia. Flanders, Brussels and the Netherlands still have the lowest network costs ranging between 0.8 EUR/MWh (Flanders) and 1.4 EUR/MWh (Netherlands).

Lastly, the **all other costs component**[359] has some important variations across the countries. In 2024 we observed an increase in both regional surcharges as federal taxes and PSO's for all Belgium regions. In 2025 however, these have stayed roughly the same. Germany and the Netherlands have seen a (more notable) increase in their "all other cost" component because of increases in the energy tax for consumption above 170,000 m^3 of natural gas[360] in the Netherlands (+50%)[361]. For Germany this increase in other costs was caused by increased rates for the Bio-gas levy, Carbon levy and Gas storage levy.

The application of possible reductions has a significant impact on most countries competitive position. For Germany, this is crucial to be slightly more competitive than the Netherland and in the UK this is important to stay more competitive as France, when all reductions are applied in France as well. In any case the Belgium regions, with Flanders leading the pack, remain the cheapest of all regions and countries.

[359] This cost includes taxes, levies and certificate schemes.

[360] The rate of the energy tax for consumption below 170,000 has decreased slightly with 1%

[361] Taking into account all possible reductions.

Key findings

The results reported above suggest the ensuing Key findings regarding profile G1:

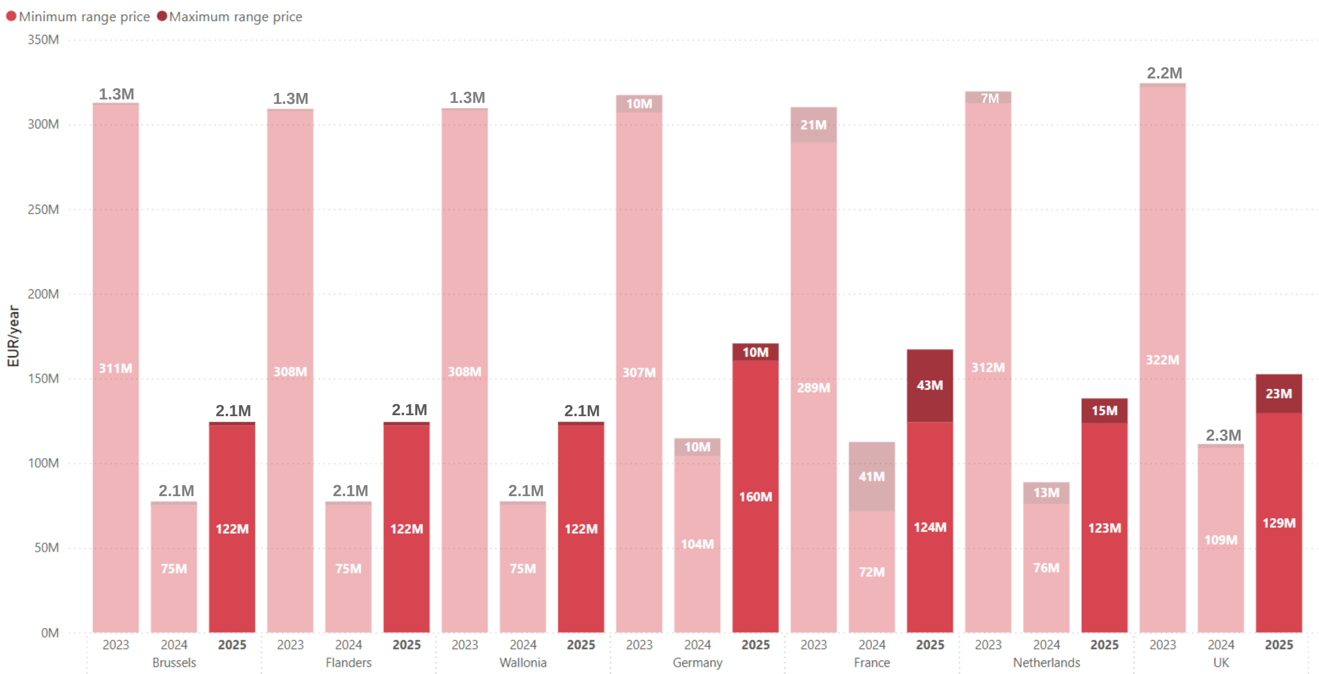
- **Total Invoice Trends**: All countries and regions saw a notable increase in total natural gas invoices for G1 industrial consumers in 2025. Flanders remains the most competitive, both within Belgium and across all countries. Germany is the least competitive, while Brussels and Wallonia follow Flanders in terms of affordability.
- **Commodity Costs**: These remained uniform across regions at ~49 EUR/MWh (France: 48, UK: 50), continuing the trend from other industrial profiles.
- **Network Costs**: Significant increases were seen in France, Germany, and Wallonia. In contrast, Flanders, Brussels, and the Netherlands maintain the lowest network costs, ranging between 0.8 EUR/MWh and 1.4 EUR/MWh.
- **All Other Costs**: These costs stayed stable in Belgium compared to 2024, reinforcing its competitive edge. In contrast, Germany and the Netherlands saw increases due to higher energy taxes and levies — notably, a +50% rise in the Dutch energy tax for high-volume consumption and further increases in Germany's bio-gas, carbon, and gas storage levies.
- **Impact of Reductions**: The application of exemptions (e.g. energy tax reductions or levy exemptions) can significantly impact rankings, especially for Germany and the UK. However, even with such adjustments, Belgium (led by Flanders) remains the most cost-effective option for G1 consumers.

Profile G2 (Natural gas)

Total invoice analysis

The figure below provides a comparison of the total yearly invoice paid by an industrial G2 profile in the different studied countries and regions. The results are expressed in MEUR/year. The second figure gives the Belgian average natural gas invoice, with the aim of presenting the percentual price differences with other countries.

Figure 80: Total yearly invoice in MEUR/year for industrial consumers (profile G2)



The G2 profile is the largest natural gas consumer under review and the first observation is that every region/country has a price range for this profile. The range in Belgium is the result of a possible exemption for feedstock consumers on the energy contribution and of the special excise duty. In the UK the G2 profile, similar to G0 and G1, can benefit from an exemption from the climate change levy which is why they also have a range. Lastly, we have the Netherlands that always had the highest all other costs component that offers an exemption of the energy tax.

When considering all exemptions, The Belgian regions become the most competitive with a total amount of 122 MEUR, but are closely followed but the Netherlands and France with a total amount of 123 and 124 MEUR respectively. In addition, the UK saw a significant increase in competitiveness compared to last year when it was the least competitive country and quite far away from the other more competitive countries. Although still being the second least competitive country, the gap is significantly shrinking.

Breakdown by component

The previous results are further detailed for profile G2 in the underneath figure, which provides a closer look at the breakdown of the different price components.

Figure 81: Natural gas price by component in EUR/MWh (profile G2)

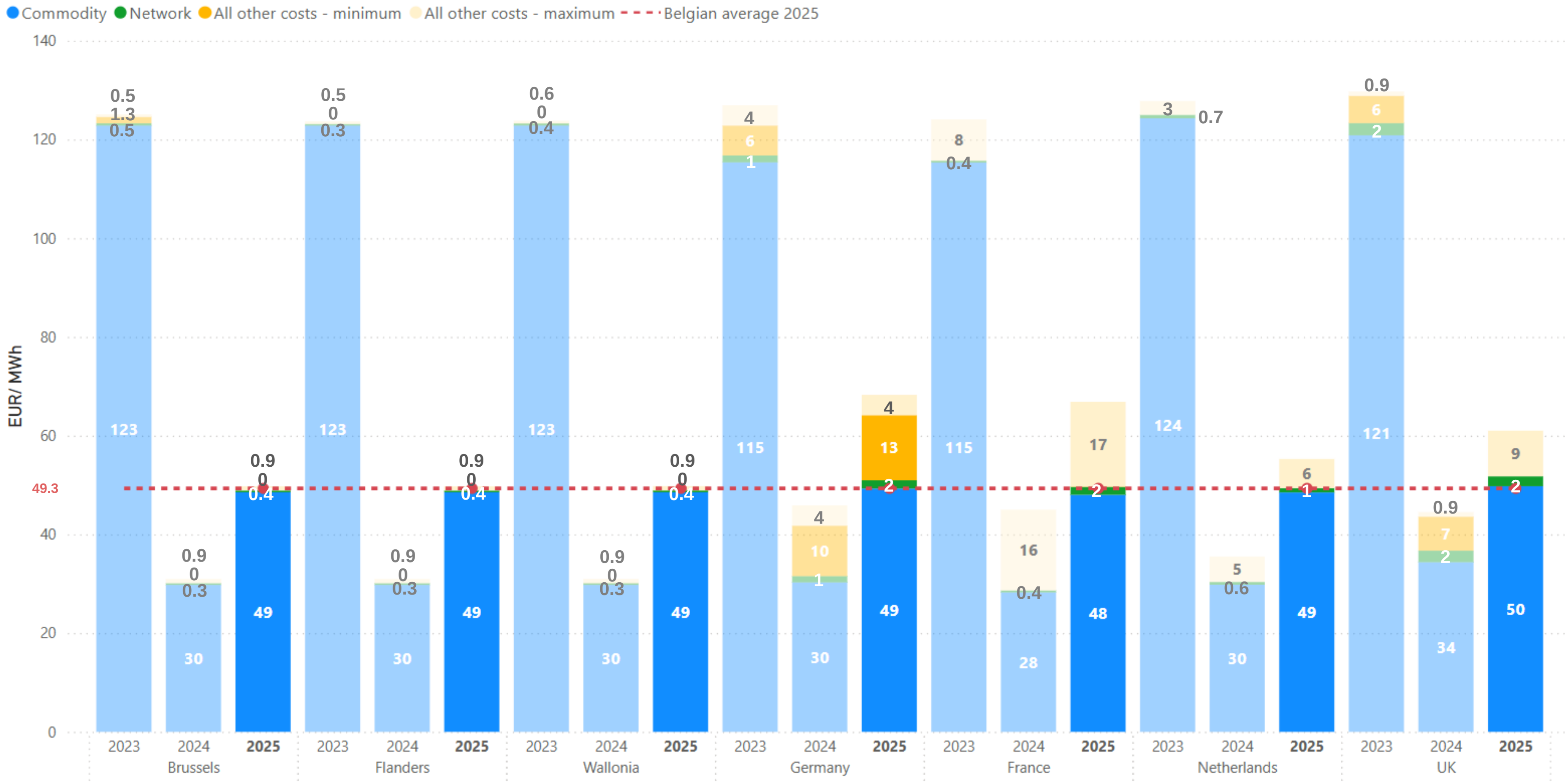
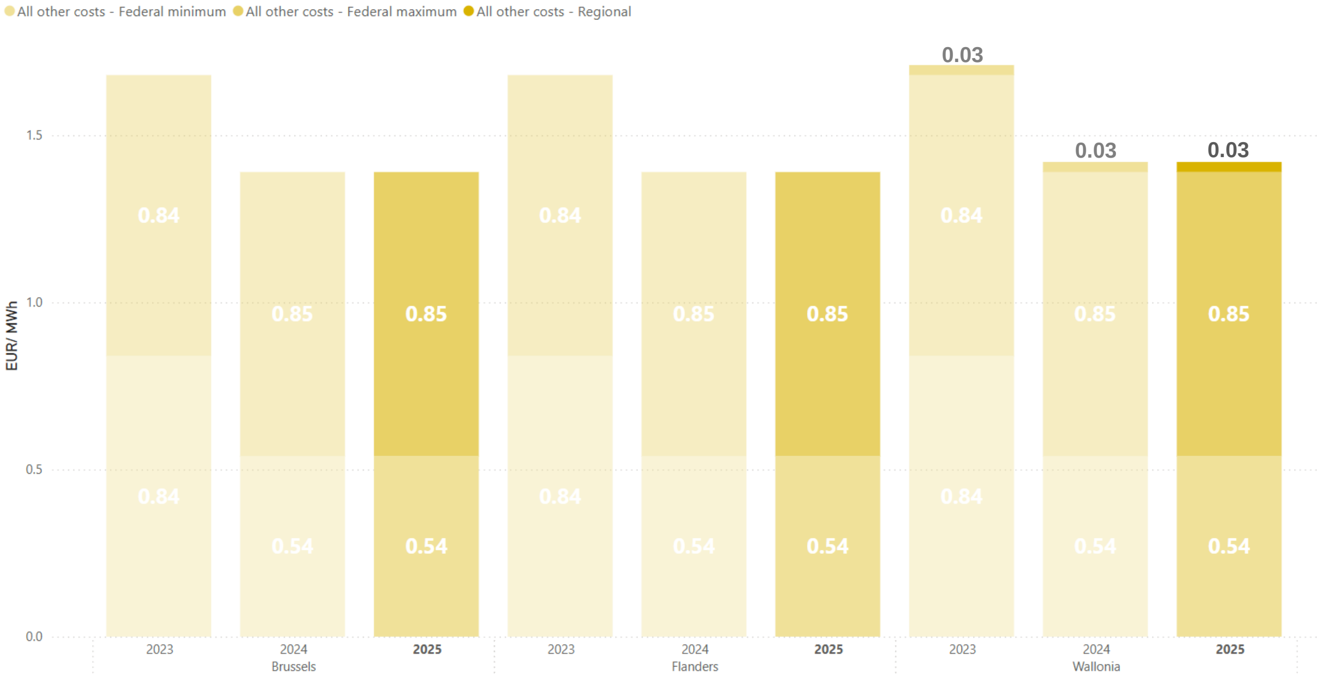


Figure 82: Regional and Federal all other costs in Belgium in EUR/MWh (Profile G2)



The figure with the breakdown per component clearly shows that the **commodity component** still makes up most of the total invoice in all regions/countries under review. Once again, the commodity price is rather similar for all countries and regions.

When comparing the different components in EUR/MWh we observe that the **network cost**[362] plays a relatively minor role in the overall total invoice for all countries.

Lastly, the **all other costs component**[363] still plays a big role in defining the competitiveness of the regions/countries, in whether the reduction(s) applies or not. When the reduction applies this component becomes negligible in every region/country except for Germany (13 EUR/MWh). Like the G1 profile, the G2 profile might be eligible for a federal excise duty exemption. Even with this possible tax break, Belgium's competitiveness is strengthened overall, becoming the most competitive of all countries. In 2024, when reductions applied, this was still France.

[362] This study acknowledges the natural gas consumption tariffs invoiced to industrial consumers based on the consumer profiles defined in the hypotheses. It is therefore important to clarify that potential disparities occurring between network tariffs invoiced to industrial consumers (i.e., G1 and G2 profiles) in this study and the tariffs they empirically pay, when exceeding their contractual capacity, might differ. The details of this variation are outlined in the 2022 study byCREG : https://www.creg.be/fr/publications/etude-f2716

[363] This cost includes taxes, levies and certificate schemes.

Key findings

The results reported above suggest the ensuing Key findings regarding profile G2:

- **Total Invoice Trends**: The G2 profile, representing the largest industrial consumers, shows price ranges for all regions and countries due to various tax and levy exemptions. Belgium becomes the most competitive country (122 MEUR/year) when reductions apply, narrowly followed by the Netherlands (123 MEUR/year) and France (124 MEUR/year).
- **UK's Improved Position**: The UK, previously the least competitive, saw a notable improvement in 2025. While still the second least competitive, the gap with other countries has narrowed considerably.
- **Component Breakdown**: The commodity cost remains the dominant component of the total invoice and is relatively uniform across all countries and regions, in line with earlier industrial profiles.
- **Network Costs**: These costs have minimal impact for G2 consumers across all regions, playing only a minor role in the overall invoice.
- **All Other Costs**: This component has the strongest impact on competitiveness, especially depending on whether reductions apply. When exemptions are applied, this component becomes negligible in most countries, except in Germany (13 EUR/MWh), where it remains significant. This further enhances Belgium's leading position, a shift from 2024 when France held the top spot under similar exemption conditions.

7. Energy prices: Conclusions

7. Energy prices: Conclusions

Electricity

Residential and small professional consumers

(1) For most regions and countries under review, commodity cost decreased for residential and small professional consumers, though some regions experienced increases for some profiles (Belgium, the UK, Germany). This dilutes the overarching trend observed in 2024, where a general decrease was observed. France is the country where this drop is the most significant. All of the countries or regions' under review do not have energy price caps (except in the UK for variable tariffs) or guarantees, government refunds (except in the Netherlands with the *belastingvermindering*) or temporary lowered VAT rates. With a stabilising commodity price for small professionals (not residentials), it has become an opportunity for some governments to adjust tax levels, certificate schemes and levies, to focus on supporting residentials and small businesses after some years of high energy prices and a current period of turmoil (in the UK and the Netherlands, for instance). In other countries, governments took the opportunity to revise the mechanisms in place for funding initiatives, cutting exemptions used in crisis times and balancing levies. The aftermath of the energy crisis has pushed governments to increase infrastructure investments on their energy networks, for more country energy resilience. This has consequently contributed to an increase of transmission tariffs. The differences observed on the final bill across countries are less significant than what was observed the previous years, which makes the competitivity analysis less clear, with countries like the Netherlands and the UK supporting the smallest profiles more than before. This year, we do notice a convergence of total invoices as from the E-BSME profile, while it is less clear for smaller ones. Since we used the commodity market prices for the E-BSME profile, these being relatively similar across the regions/countries, this convergence is logical.

(2) When compared to other countries, France is the most competitive region for small and residential consumers, thanks to the regulated product helping its consumers with a low electricity bill (E-RES and E-SSME profiles). The UK and the Netherlands are closely competitive with Belgium for these two smaller profiles, while Belgium regain its competitiveness against them for E-BSME consumers. On the other side, Germany as a whole is the most expensive country for E-RES and E-SSME profiles. It becomes competitive with the UK only as from the E-BSME profile. The three regions in Belgium are on an average competitiveness level among themselves for the E-RES, while discrepancies start to occur as from the E-SSME profile. Flanders becomes more competitive, and Wallonia lags behind Brussels. Flanders' competitiveness is due to lower regional all other costs and (to a smaller extent for residentials) and lower network costs.

(3) To compare the profiles, it is best to look at the cost for a megawatt hour. It becomes clear that small professional consumers usually pay less than residential consumers for electricity. The reason for this being twofold. There is first the impact of VAT. As we take the assumption that VAT is deductible for professional profiles and since it can reach up to 21% of the total invoice depending on the country, it makes obviously a difference when it is removed from the invoice. When removing the VAT component, it appears however that E-RES and E-SSME still show a cost gap as the difference in network costs and other levies and schemes remains consequent. Some tariffs being dependent on connection levels, we can therefore observe a difference between E-RES and E-SSME on the one hand, and E-BSME on the other hand. Additionally, we also observe that the commodity, network and all other costs all tend to decrease for larger consumers.

Industrial consumers

(1) The commodity cost is a very important component for the industrial profiles. It becomes even more important for the largest industrial consumers where reduction and/or exemptions are applied on network and/or all other costs. The commodity price is the global common component that decreased for all countries under review, compared to January 2024. Given the methodology followed, the industrial commodity costs vary in a different way than for small consumers. The commodity cost often makes up more than 60% of the total invoice and up to 80%. For all regions/countries under review, the commodity costs accounts for a slightly smaller share of the total energy bill than observed in January 2024. The general decrease of the commodity price partly explains the converging trend between the regions/countries under review in terms of total invoice. The UK has the highest commodity cost for all E0 to E4 profiles, while France bears the smallest due to the ARENH mechanism that helps lowering the price down.

(2) The reductions and exemptions on network and all other costs greatly vary between regions/countries and profiles, while having an important impact on their competitiveness. These reductions are especially important in Germany, the UK, the Netherlands as well as in Flanders. When consumers need to pay the maximum amounts, France is the most competitive country, except for the E1 profile where a very small margin differentiates France and Flanders. France is still the most competitive country when reductions and exemptions apply. Despite possible reductions/exemptions in Flanders starting with E0, the UK's reductions allow its companies to be more competitive. A clear distinction between electro and non-electro intensive consumers can also be observed. Numerous regions/countries (France, Germany, the UK, Flanders) have designed mechanisms to support electro intensive consumers by offering lower fares, the cheapest prices being observed in France and the UK, although Germany becomes very competitive for the largest industrial profiles E3and E4. Compared to last year, the federal excise duty still allows the three Belgian regions to benefit from an exemption for profiles E1 to E4. This allows for Flanders, and sometimes Wallonia, to be on par with the UK and the Netherlands, depending on the profile, though slightly behind Germany. A lack of competitiveness from Belgium is however observed for E1 and E2 compared to the Netherlands and the UK, though this observation is inversed for the two largest profiles.

(3) Looking at the competitiveness of the Belgian regions, we observe that when all reductions apply, Flanders is the most competitive region within the country, for all industrial profiles, largely due to the GC and CHCP reduction schemes. Brussels lags behind, for all industrial profiles.

(4) When comparing electro intensive consumers across countries, we see that the most competitive region remains France for all industrial profiles. The second rank is often interchanged among Flanders, the UK and the Netherlands. As from the E3 profile, Germany gets more competitive thanks to its largest possible reductions on the all other costs, and smaller network costs than its neighbours. While Brussels' lack of competitiveness lies in the high all other costs components range, it is also explained by the industrial landscape of the region, containing very few if no companies of this scale. Wallonia's lack of competitiveness can be explained by the small all other costs components reduction range compared to its most competitive neighbours, namely the UK and the Netherlands (as well as Germany a from the E3 profile). This is however not the only driver as for very large consumers (E3 and E4 profiles) the network component takes a large proportion compared to the direct neighbours.

(5) When comparing the total invoices for the non-electro intensive consumers, Flanders appears to be the second cheapest country, while France tends to always be cheaper. Germany is the most expensive country for these consumers, for all profiles.

Summary

Figure 83 (see next page) shows the overall trend for the yearly electricity bills across all countries and regions simultaneously. Solid lines may represent three different kinds of prices depending on countries: a unique price, a maximum price due to a range of possibilities in network and/or tax prices (e.g. France for residential and small professional consumers) or a maximum price for non-electro intensive consumers as from profile E0. Dotted lines symbolise maximum prices for electro intensive consumers (from profile E0), whereas dashed lines showcase the minimum prices observed.

For the E-RES profiles, a mixed trend of increases and decreases of the total invoice is observed, compared to last year. However, for E-SSME and E-BSME profiles, most regions/countries see their total invoice go down (except in Belgium) in comparison with the situation observed last year. This is partly due to decreased commodity costs and, depending on the country, network and/or all other costs. France's lowest costs can be explained by the regulated tariff for E-RES and E-SSME, and the Netherlands by the *belastingvermindering*, reducing the all other costs component to a negative mark. We observe a pronounced convergence of the electricity bill between the regions/countries under review, in particular as from the E0 profiles, for larger industrial consumers. This was already observed in 2024.

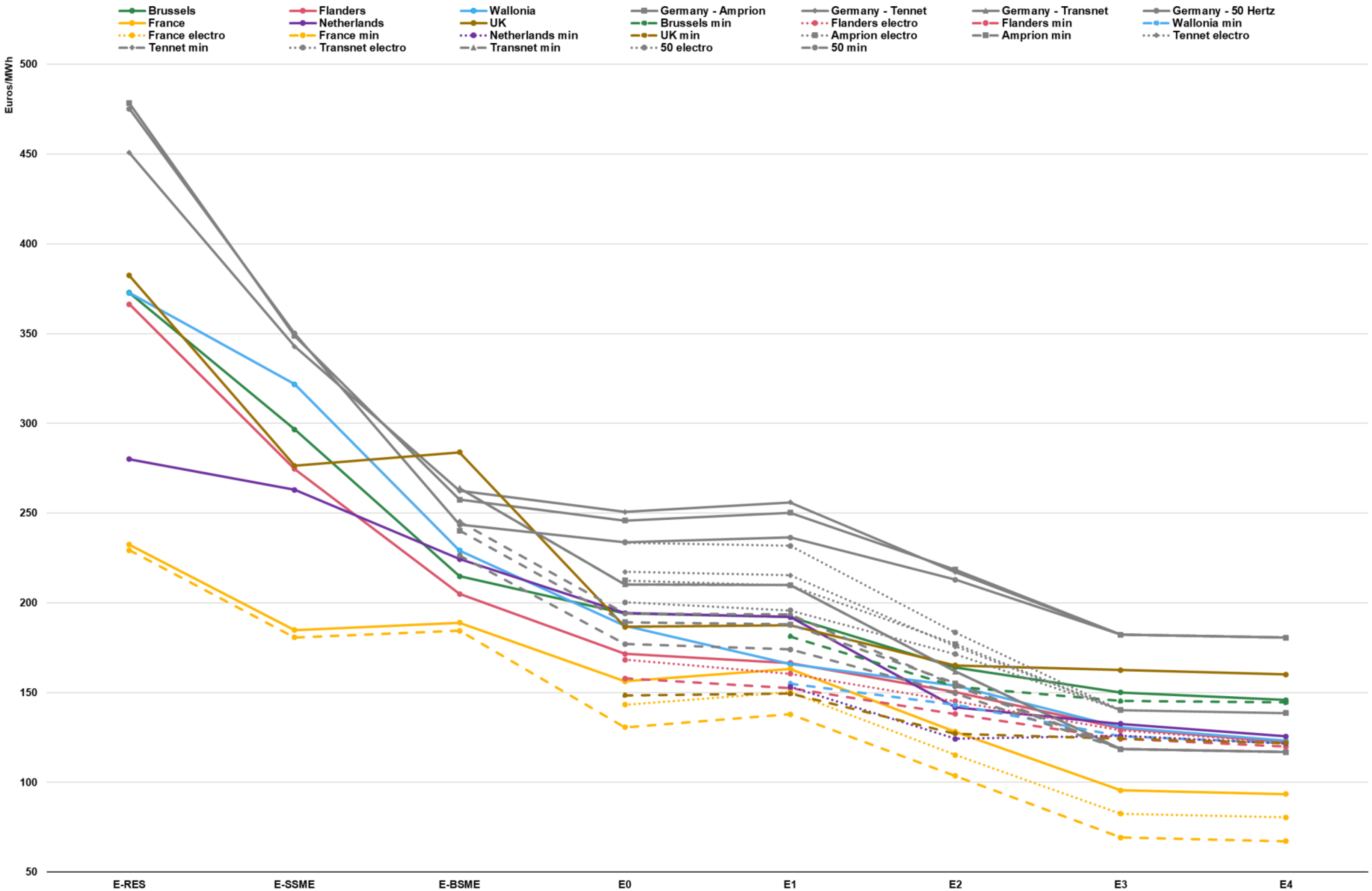
Moreover, governments have chosen to keep measures, taxes and levies on electricity differently depending on the profile: the smaller the profile, the higher the costs related to levies, taxes and schemes per unit of electricity consumed. This reflects a cost burden transfer from large consumers to small consumers but is also related to the network that the consumer is connected to. The higher the connection level of the consumer the lower the network cost.

The taxing mechanisms are identified by the splitting of lines (i.e. multiple pricing possibilities) from profile E0 onwards and designed to support electro intensive consumers. Overall, France is the only country to differentiate all profiles as prices differ on selected pricing options as of consumer E-RES, while most regions applying this differentiation do it as from E-BSME profiles.

In Belgium, unit prices (in EUR/MWh) vary notably between residential and small professional consumption profiles. Across all regions, prices gradually decrease from the E-RES to the E-SSME profile, followed by a more pronounced drop between the E-SSME and E-BSME profiles. This sharp decline is mainly due to the transition from a low-voltage to a medium-voltage connection in the E-BSME profile. In Flanders, medium-voltage consumers benefit from significantly lower distribution network tariffs, as these are structured differently — based more on power and capacity than on capacity and consumption. While other cost components, such as energy prices and levies, remain largely unchanged, the reduction in network tariffs has a substantial impact on the total bill.

It should be noted that these profiles are representative and may not reflect every individual consumer's situation.

Figure 83: Electricity yearly bill in EUR/MWh per profile



Natural gas

Residential and small professional consumers

(1) In comparison with the situation observed in January 2024, the most notable difference in the gas bill for residential and small professional consumers is a notable increase in commodity prices across all regions in Belgium, especially for G-RES where we see stable or decreasing commodity costs for all other countries. The rise in commodity costs for G-PRO, however, can be observed universally across all regions. This difference is likely to be explained by our methodology in retrieving prices for both profiles. For G-RES, price comparison websites where used, while for G-PRO we made use of market prices. Besides the increase in commodity costs, total invoice prices remain far below those seen in 2023.

(2) In 2025, most countries under review experienced higher network costs on their energy invoices, particularly France, which faced increased transport and gas storage expenses. Additionally, various taxes included under "all other costs" saw slight increases. Notably, this includes the French TICGN tax and Germany's levies on bio-gas, carbon, and gas storage. In the Netherlands, there was a minor decrease in the energy tax for consumption below 170,000 m³, resulting in slightly reduced "other costs." However, this decrease did not enhance the Netherlands' competitive position.

(3) There are some regional differences in Belgium that have an impact on the competitiveness of the Belgian regions compared to each other, but also when comparing to the other countries under review. Belgium, on average, is the most competitive country for G-PRO (although the UK being more competitive than Wallonia). When looking at G-RES, the UK becomes the most competitive country overall and surpassing Flanders. Within Belgium, Flanders remains the most competitive region followed by Brussels in second place and Wallonia is in third. A same trend can be observed for G-PRO. The regional differences observed are the result of larger network costs in Wallonia and higher regional all other costs in Wallonia and Brussels.

(4) To further compare the two residential and small professional consumers, we must look at the price they pay per MWh. We see that the professional consumers pay less per MWh in all countries and regions under review. The reason behind this is twofold. First the absence of VAT for the professional consumers helps to mechanically reduce the total invoice price. Second, we also see that the commodity and network costs per MWh are also lower for professional consumers.

Industrial consumers

(1) The commodity component for industrial natural gas consumers has also significantly increased again in comparison with the situation observed last year, similarly to what is observed for residential profiles. The differences in commodity costs across regions and countries are relatively small, with France being slightly cheaper and the UK slightly more expensive. In Belgium, the differences between regions are smaller compared to electricity, especially for G1 and G2 where the difference is almost negligible. Flanders is the least expensive region in Belgium for all industrial profiles and also the cheapest region of all regions/countries under review for G0 and G1. Even when considering the minimum range, France is no longer cheaper than the Belgian regions, due to increased network costs. Additionally, in the Netherlands, the "all other costs" component makes up around 50% (60% in 2024) of the invoice for G0, but this cost decreases significantly for G1 and G2 profiles due to reductions in the energy tax for larger consumers.

(2) The differences between the G0, G1 and G2 profiles are very small. In 2024 Belgium was the most competitive one for the smaller profiles (G0 and G1), and the Netherlands and France were more competitive for the G2 profiles. However, in 2025, Belgium was able to improve its competitive position and was able to become the most competitive region for all profiles. It must be noted, however, that prices converged more notable between countries, indicating more fierce competition, especially when applying reductions.

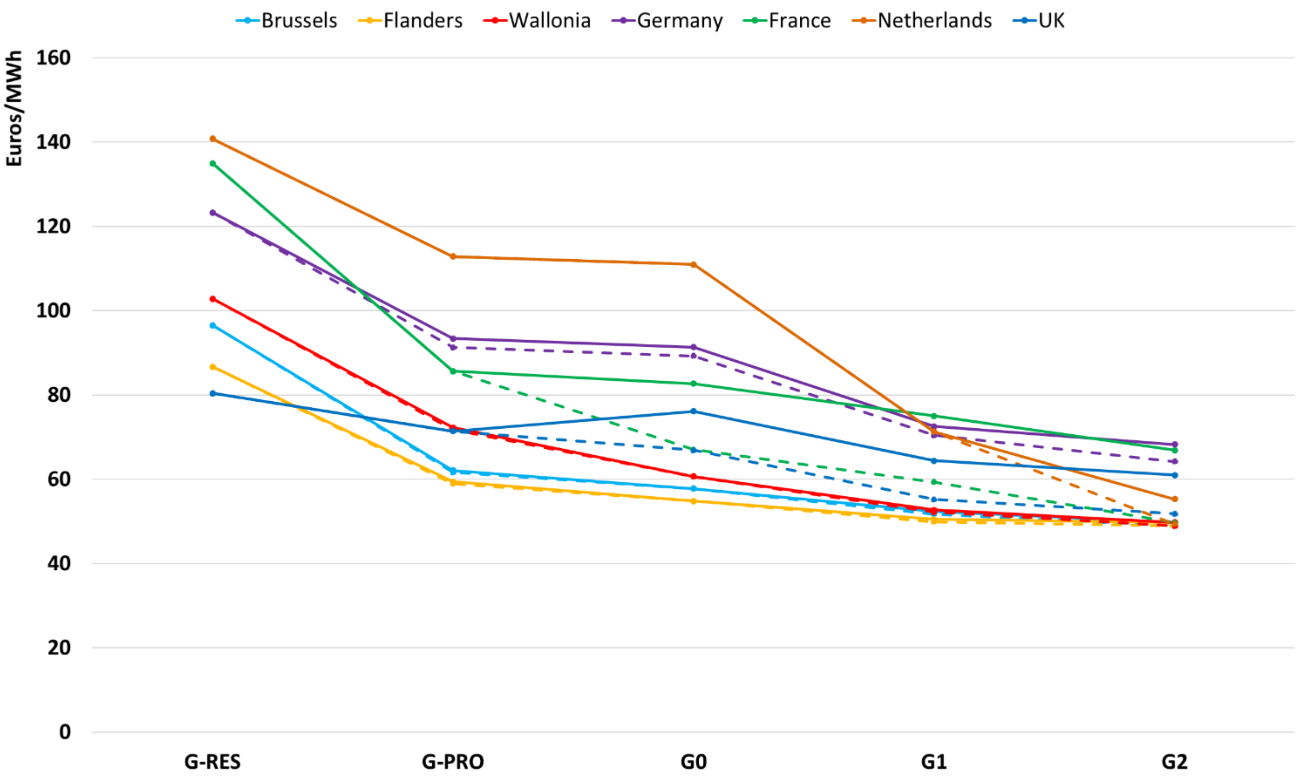
Summary

Figure 84 provides a summary of the natural gas yearly bill in EUR/MWh per profile. The full line indicates the maximum value, when we do not take into account any possible reductions on the invoice. The dashed line represents the situation where we take into account all possible reductions, which becomes especially important for the larger industrial consumers.

Similar to electricity, the global trend indicates a mixed view in competitiveness of Belgium for natural gas. Belgium remains the most competitive for nearly all natural gas profiles, although it lost its competitive edge slightly for the G-RES, where the UK now has become the cheapest. Increased network costs reduce France's competitiveness significantly for G-RES, while the UK gains competitiveness due to a lower relative increase in commodity costs. The Netherlands (especially for G0 and G1) and Germany continue to be among the least competitive countries, especially for the smaller industrial and residential profiles.

It is evident that, for larger profiles, the total invoice prices are becoming increasingly convergent, leading to heightened competition among regions. This trend is even more pronounced when examining the minimum prices.

Figure 84: Natural Gas yearly bill in EUR/MWh per profile



Competitiveness score

Throughout this report, we addressed complex situations with a lot of nuances that we intend to present in a simplified manner. For this reason, we have drawn up competitiveness scorecards that give a clearer representation of how competitive Belgium/Brussels/Flanders/Wallonia is, regarding a certain profile, compared to neighbouring countries/regions.

Methodology

Results presented in this section were derived following two approaches: a national and a regional approach. The first method (national) compares figures obtained for Belgium with the other four countries from our study, namely Germany, France, the Netherlands and the UK. Belgian values were estimated by using the arithmetic average of all three Belgian regions. The second approach (regional) compares each Belgian region with the foreign regions and countries. While this leads Belgian regions to be compared with the same four countries previously mentioned for natural gas, seven countries and regions are used when it comes to electricity: Amprion (Germany), TenneT (Germany), Transnet BW (Germany), 50 Hertz (Germany), France, the Netherlands and the UK.

Electricity

Residential and small professional consumers

Firstly, we discuss the competitive position of the regions/countries for residential and small professional consumers under review. Before going more in-depth, we can already note that for the residential and small professional profiles the competitiveness of a region/country is clearly identifiable and does not depend on certain qualifications of the consumers as it can be seen under the industrial profiles.

On the national level, Belgium seems to be in the middle of the pack in terms of competitiveness, for the E-RES and E-SSME profiles. France and the Netherlands are more competitive, due to the lower "all other costs" component with levies and taxes for both countries. In the case of France, there is also a lower commodity and network cost compared to the Belgian regions. For the E-SSME profile specifically, Flanders is the only region of Belgium to overcome the UK, which becomes competitive due to its low all other costs. As we move on to the E-BSME profile, the competitiveness increases for the individual regions in Belgium as they mainly compete with each other rather than with neighbouring countries (except for France), although Wallonia gets closer to the Netherlands. This competitiveness in Belgium is due to lower commodity and network costs for small industrials. In fact, except Wallonia which is struggling with the Netherlands and gets close to the UK, the Belgian regions have the second lowest possible bills compared to their neighbours (with the exception of France which is always cheaper). Wallonia's higher network costs and all other costs make it the least competitive in Belgium regarding E-BSME. German companies have the possibility to benefit from reductions as from the E-BSME profile, making them more competitive ahead of the Netherlands.

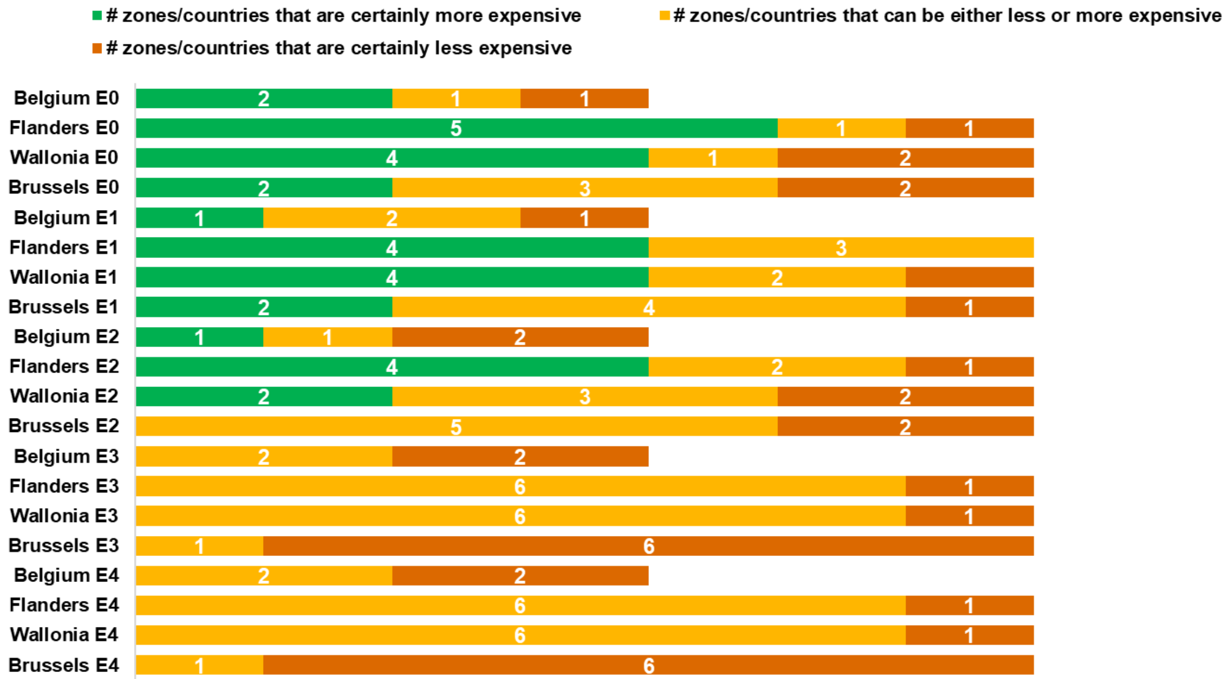
Compared to 2024, Flanders, Wallonia and Brussels are less competitive for all profiles in scope. The main changes are that in 2025, France regained an overall competitiveness, and the Netherlands drew closer to Wallonia and the other regions for residential and small professional consumers.

Figure 85: Competitiveness scorecard for residential and small professional electricity consumers (profile E-RES, E-SSME and E-BSME)

Large industrial consumers

Hereunder, we have set out the scorecards for every industrial profile (profiles E0 to E4), which gives an overall overview but also a specific one for electro- and non-electro intensive consumers. The competitive position is more complex to grasp for our industrial profiles, compared to the residential and small professional profiles, the competitiveness of a region/country cannot always be determined in a binary approach (certainly less or more expensive). Comparing the scorecards of the industrial profiles we see that the complexity mainly stems from the electro intensive consumers where there are different reductions to consider.

Figure 86: Competitiveness scorecard for industrial electricity consumers (profiles E0 – E4)



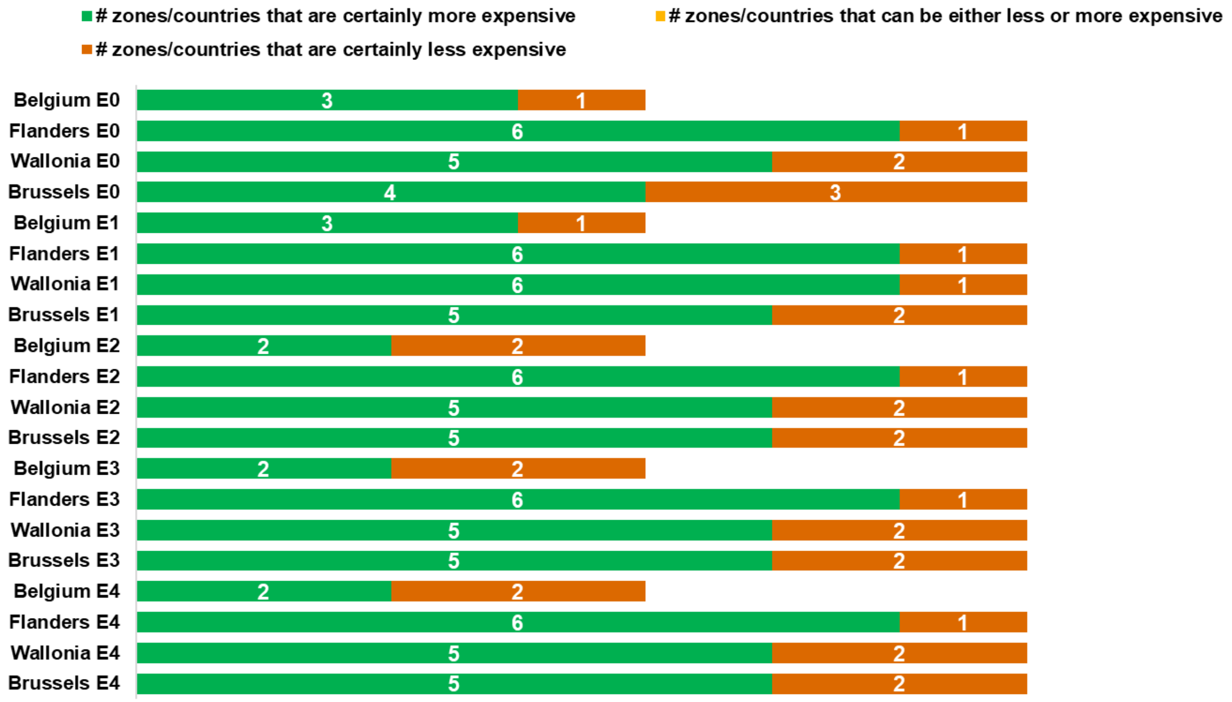
Before going into detail of the first figure, we note that Belgium as a whole and each of its regions have an average competitiveness for the E0 and E1 profiles. The country and its regions are always cheaper than Germany for E0 to E1 profiles, although German regions TenneT and Transnet BW compete with Brussels. The E2 profiles is a profile where Belgian competitiveness becomes uncertain. Except for Flanders, which keeps its competitiveness thanks to potential cost reductions on the CHCP and GC schemes, Wallonia and Brussels' competitiveness is unclear. For E3 and E4 profiles, it becomes clear that higher network costs and, specifically in Brussels and Wallonia, a lack of potential reductions on the taxes, levies and schemes become a burden on the Belgian competitiveness. Another general observation is that Flanders is the most competitive region of the country along Wallonia for E3 and E4 profiles. France is always more competitive than Belgium all large industrial profiles.

Given the large number of countries/regions that can be either less or more expensive, it is difficult to draw conclusions based on the previous figure: therefore, we also present scorecards that detail the competitive position of Belgium and its regions for **non-electro intensive** and **electro intensive consumers**. We firstly analyse the competitive situation for the non-electro intensive consumers.

Since there are no ranges for **non-electro intensive consumers**, the competitive position of each region and country is much clearer. In general, Flanders is always the most competitive regions, after France, with Wallonia and Brussels following-up next. The main reason for it is the low presence of industries in Brussels, hence the low number of mechanisms allowing them to lower the electricity costs. France is less expensive than Flanders for the E3 and E4 profiles mainly due to the ARENH mechanism lowering the commodity costs. While Germany lags behind for all profiles, it offers much lower network costs for E3 and E4 large industrials. As such, it shows uncertainty over the competitive landscape, though Wallonia and Flanders still remain more competitive. The determining factor of competitiveness is not only the all other costs, but also the network costs.

When comparing the scorecard on industrial non-electro intensive consumers from 2025 with the one from 2024 we notice that the competitive position of Belgium and its regions has slightly decreased compared to the neighbours, while it is more pronounced for Brussels the larger the profile is. For E3, we notice that the competitiveness of Belgium and its regions decreases due to higher network and all other costs. While other countries offer incentives for electro intensive companies, Belgium has a relatively high network costs and all other costs base value, which offers less flexibility for electro intensive companies, but provides incentives to non-electro intensive consumers which would not benefit from reductions and exemptions abroad.

Figure 87: Competitiveness scorecard for industrial non-electro intensive consumers (profiles E0 – E4)



As we noted before, the complexity and ambiguity of the competitive position of Belgium and its regions is mainly because of the potential reductions for **electro intensive consumers**. First of all, we notice a strong decrease in the competitiveness of all Belgian regions as from the E3 profile. The lower network costs of neighbouring countries combined with incentives for electro intensive consumers creates uncertainty in the competitiveness scenarios. The only country that is always more competitive than Belgium's regions is France, for all profiles.

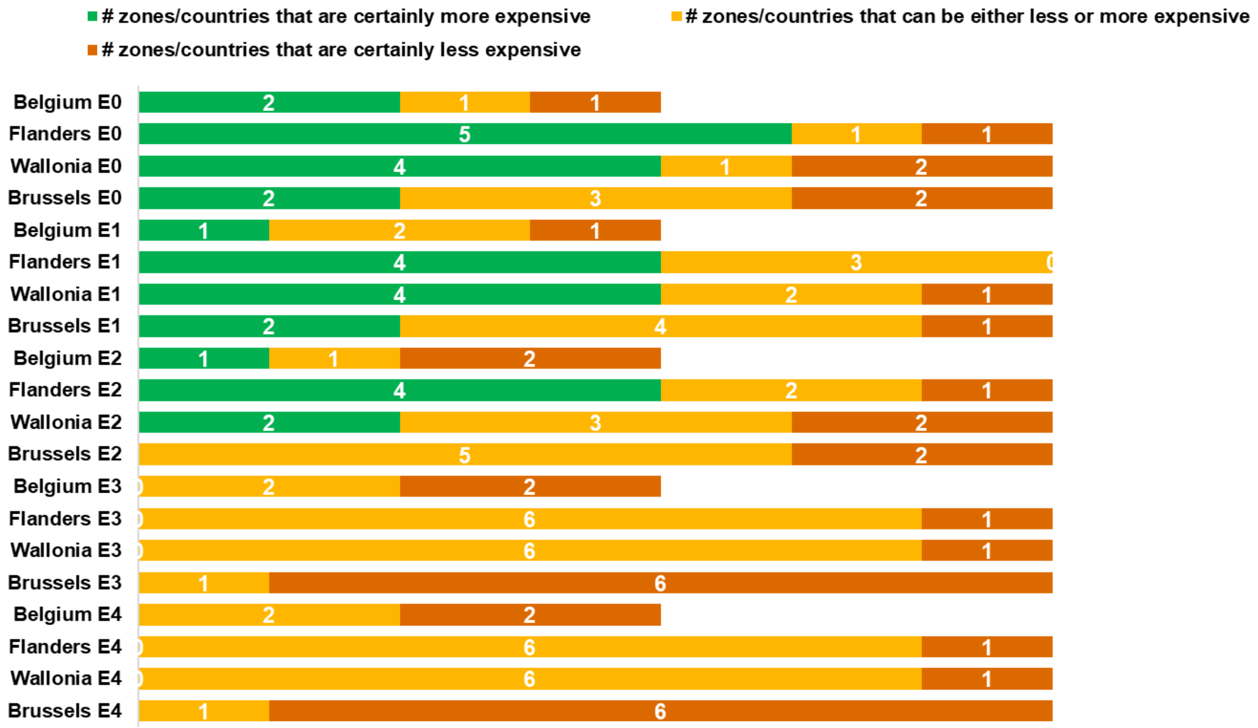
For E0 to E1 profiles, Flanders and Wallonia hold their competitiveness against Germany. Brussels, on the other end, keeps a competitive landscape against two German regions (TenneT, Transnet BW) up to the E1 profile.

The UK offers a wide range of potential reduction. As such, it heavily depends on the eligibility of companies. If they are eligible, the UK becomes very competitive for the E0 to E4 profiles, but slightly less for the E3 and E4 profiles. However, the UK remains very competitive with Brussels. As from the E3 profile, France becomes much cheaper, keeping its most competitive position thanks to the ARENH mechanism lowering its commodity costs.

Within Belgium, we notice that the competitive position of Flanders regarding electro intensive consumers is better than Wallonia and Brussels until the E2 profile. For the E3 and E4, Wallonia and Flanders are neck-to-neck, although Wallonia remains second, due to similar costs structures. The only differentiator among the three Belgian regions remains regional levies, schemes and incentives. We also note that the reductions measures revolving around GC and CHCP in Flanders, adapted in the end of 2024 to support companies at risk of relocation, lowers the all other costs component further than in 2024. The larger electro-intensity range in Flanders offers the possibility for consumers to benefit from lower costs than in the other Belgian regions. Although, for most profiles Flanders and Wallonia have competitive prices, there is a lot of uncertainty regarding their competitive position, due to a lower range than in the UK, the Netherlands or Germany.

When comparing the scorecard on industrial electro intensive consumers from 2025 with 2024, we notice that the competitive position of Belgium and its regions did decrease, and competitiveness uncertainty grew stronger.

Figure 88: Competitiveness scorecard for industrial electro intensive consumers (profile E0 – E4)



Natural Gas

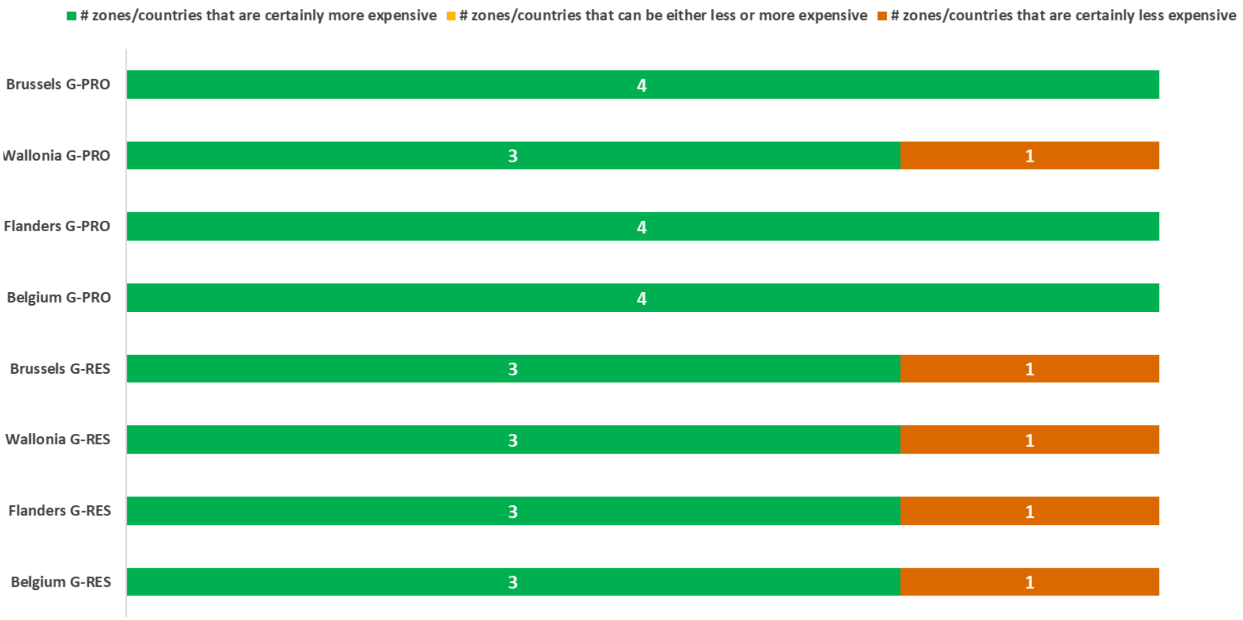
Residential and small professional consumers

Figure 89 shows Belgium's competitiveness regarding natural gas for residential and small professional consumers under review. As for electricity, the competitiveness of a region/country is clearly identifiable and does not depend on certain qualifications of the consumers. This does change however for the industrial profiles.

On the national level, Belgium is the second-most competitive country with regards to the G-RES, with the UK becoming the cheapest country under review. This indicates a decline in competitiveness for Belgium for the G-RES profile, since it was still the most competitive one in 2024. The UK was able to become the most competitive country under review thanks to a decrease in commodity costs. The decrease in commodity costs in the UK might be explained by the decrease of the per unit level price cap in 2025. When turning to G-PRO, Belgium remains the most competitive country. This is mainly due to its relatively low all other costs compared to the other countries under review.

On a regional level, for G-RES and G-PRO, Flanders is more competitive than the other Belgian regions. In addition, Flanders is also more competitive than all other countries considered for G-PRO, but more expensive than the UK for G-RES. Wallonia is the most expensive Belgian region and is also less competitive than the UK for G-PRO profiles, due to its higher network costs.

Figure 89: Competitiveness scorecard for residential and small professional natural gas consumers (profile G-RES and G-PRO)



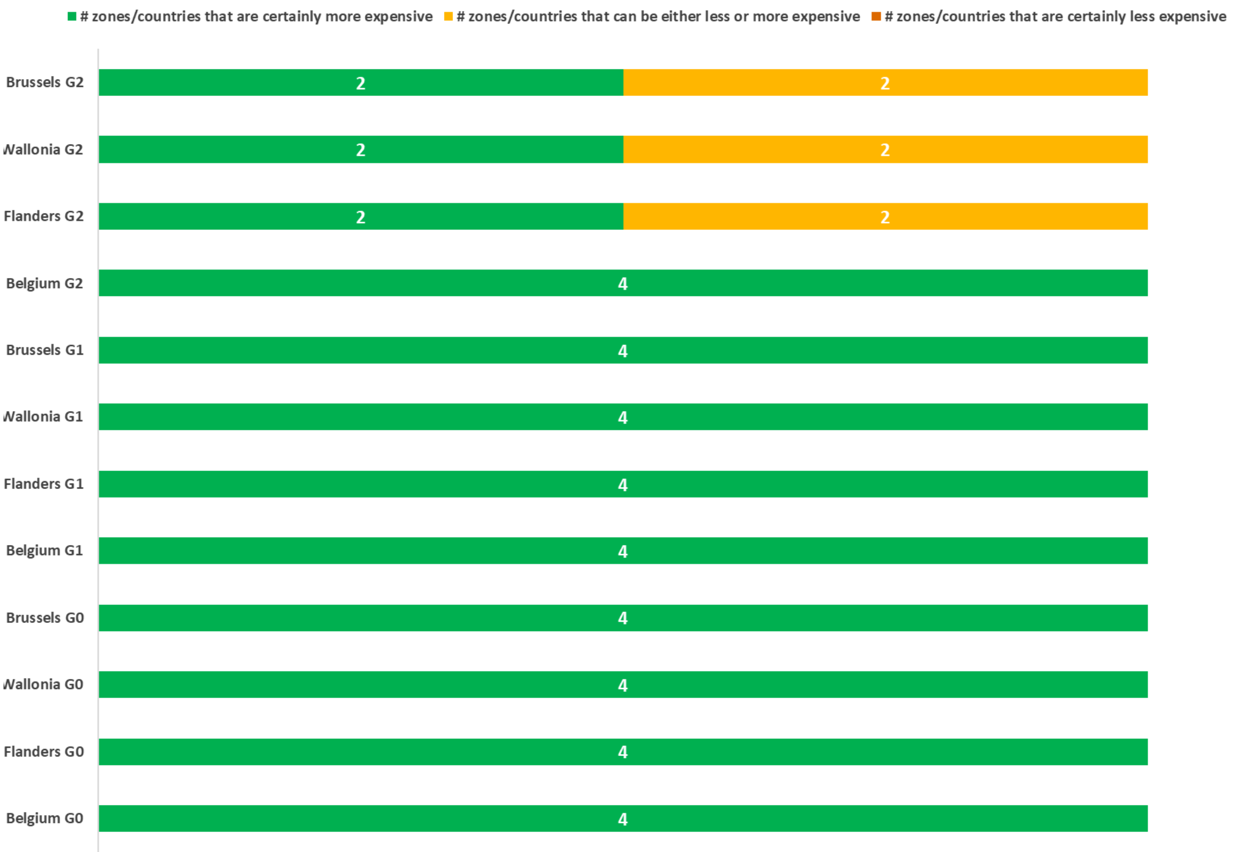
Large industrial consumers

In the next figure, Figure 90, we set out the scorecards for every industrial profile (profiles G0 to G2). The competitiveness of a region/country remains fairly clear for G0 and G1, but becomes more complex for the G2 profile. The complexity in determining the competitiveness of G2 profiles across the countries/regions depends on the applicability of certain reductions. When evaluating regional differences within Belgium, it is important to note that any potential reduction applicable in one region should also be considered applicable in other regions. This is because such reductions pertain solely to Federal taxes and not to any regional other cost components.

Starting at the national level, we can conclude that the average Belgian industrial consumer is more competitive than all other countries for all industrial profiles. This competitive position can mainly be attributed to the relatively low network – and all other costs components, in comparison with the other countries. For the G2 profile, this is an improvement in competitiveness, since France was still more competitive than the Belgian average in 2024, but due to increased network costs this has shifted in 2025. For G0 and G1 profiles, Belgium was already the most competitive country in 2024 and remains the most competitive in 2025.

If we take the analysis to a regional level in Belgium, we can observe that Flanders is the most competitive region, followed by Brussels and with Wallonia being the least competitive region within Belgium. For the G0 and G1 profiles, all Belgian regions demonstrate higher competitiveness than their neighbouring countries. The competitiveness of G2[364] changes depending on the application of reductions. If federal reductions do not apply in each Belgian region, while all possible reductions do apply in France (reductions on TICGN) and the Netherlands (reductions on Energy Tax), then France and the Netherlands become more competitive than the Belgian regions. If no reductions apply in France and the Netherlands or federal reductions in Belgium are applicable, the Belgian regions remain more competitive. A similar trend could be observed in 2024.

Figure 90: Competitiveness scorecard for industrial natural gas consumers (profile G0 – G2)



[364] The G2 profile in Brussels is a theoretical profile, as there are currently no industrial consumers of this profile active in the Brussels-Capital region.

The tax burden for electricity and natural gas consumers

When presenting the results, the importance of the third component (all other costs) was already set forward. It is thus interesting to compare the variations of this component across countries and for all consumers and particularly, its evolution because of reductions.

Electricity

Residential and small professional consumers

The all other costs component bears a significant importance on residential and small professional consumers' bills, and great variances can be observed across regions/countries. The general trend seems to indicate that the larger the consumer, the lower the tax rate. If reductions apply in certain countries (Belgium, France, Germany and the Netherlands), they are granted based on criteria directly related to consumers' annual offtakes or the nature of professional consumer's activity.

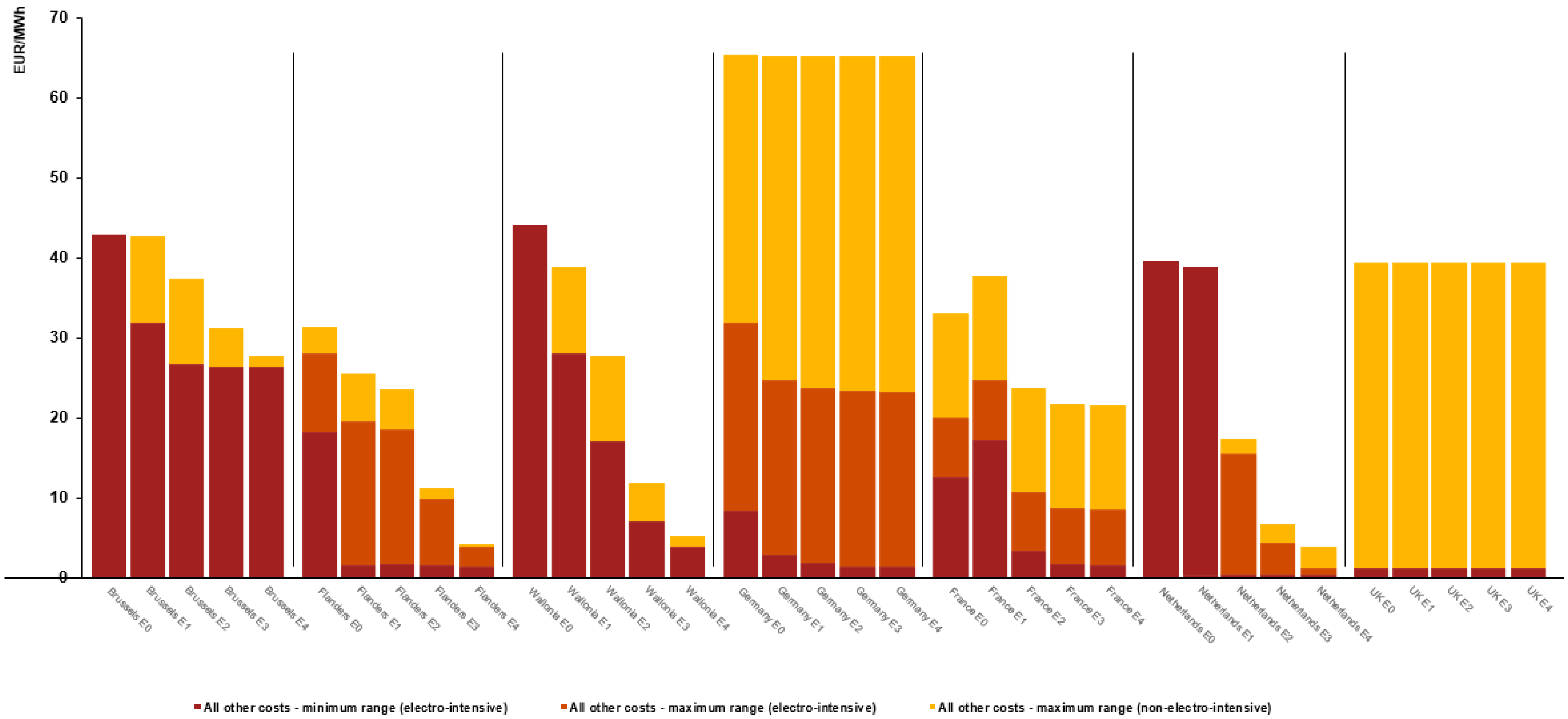
Large industrial consumers

It was observed that depending on the countries' tax regimes, electro intensive and non-electro intensive consumers could be charged differently. This differentiation entails competitive (dis)advantages across regions/countries when they introduced electro-intensity criteria to lower industrial consumers' tax burden. It is thus interesting to compare the variations of this component across regions/countries from our studied panel.

In the figure below, the full red bars represent the minimum amount of taxes that each consumer profile must pay in the specific country/region. The full orange bar indicates the minimum-maximum cost range where different options are possible. Lastly, there is a yellow bar which represents the difference between the minimum and maximum cost for non-electro intensive consumers. This last bar is only applicable in Flanders, Germany, France and the UK.

For the sake of readability of the figure below, we considered the minimum, red bar in the figure below, the amount of all other costs without the excise duty, for the three Belgian regions. We included the full amount of the excise in the electro intensive range so that it is also included in the minimum for non-electro intensive profiles.

Figure 91: Variance of the all other costs component in EUR/MWh (profile E0 - E4)



Firstly, we observe that the component is different in all Belgian regions and that only Flanders displays variable prices between non-electro and electro intensive consumers, while the three Belgian regions are all impacted by the exemption on the federal excise duty in the same way for E1 – E4 profiles[365]. While the extent of the reductions differs, we see a decreasing trend across all countries/regions, namely that the larger the consumption, the lower the tax burden. For the UK and Germany, this does not seem to be true. Indeed, the all other costs component does not vary between profiles as no specific threshold depends on the consumption level. This explains, among others, the less competitive position of the UK and Germany compared to all other regions/countries under review on that component. The higher competitiveness of Flanders compared to the other Belgian regions results from this shift made by the region when implementing the cap on the costs related to the green certificate and CHCP quota, changed at the end of 2023 to include the risk of relocation in the selection parameters, and lowering the GVA threshold to support more heavily impacted companies. In Germany, qualifying as an electro intensive consumer significantly lowers the importance of the component in the total electricity cost. In France, the all other costs component's size is large for non-electro intensive consumers before the E2 profile, while in Germany fares might indicate that non-electro intensive consumers could finance the cost of reductions granted to electro intensive consumers as the taxes soar to a maximum that is more than 2.5 times greater than for electro intensive consumers[366].

Belgian federal and regional authorities mainly grant reductions and/or exemptions on taxes, levies and certificate schemes based on the level of electricity offtake, and not on the level of electro-intensity of an industrial consumer, except in Flanders with the cap on the financing of renewable energy and at the federal level with exemptions of the special excise duty[367]. This could entail that regional policy choices in Wallonia and Brussels' do not favour consumers that are not particularly affected by a lack of competitiveness of electricity prices. For Brussels, this must be nuanced as it is a very urban region where the number of large industrial consumers is limited.

In Belgium, delving further into this component composition highlights that for Brussels and Wallonia, the cost of regional green certificates is the top-most tax component[368]. This is also the case for Flanders if we consider the non-electro intensive consumers with the profiles defined in this study. This tends to emphasise that regional strategies largely support the financing of renewable energies through taxes included in the electricity bill. In Brussels the "levy compensating for use of public highways" is one of the two most important components for profile E3 and E4.

[365] For the sake of this report, we assumed that profiles E1 to E4 could potentially benefit from this exemption, if they fall within the conditions specified by the law. Hence, E0 does not benefit from this exemption.

[366] Ratio between the non-electro intensive maximum cost (e.g. 65.24 EUR/MWh in 2025) and the maximum cost for electro intensives (e.g. 23.22 EUR/MWh for E4 profile in 2025), or a 2.8 ratio.

[367] In Flanders, the compensation for the indirect CO_2 emissions is eligible for consumers belonging to electro intensive industries. However, this mechanism and similar emissions compensation schemes existing in other countries were not part of this study.

[368] See 5.1 Electricity: Detailed description of the prices, price components and assumptions Belgium Component 3 – all other costs (p.162)

Natural gas

Residential and small professional consumers

As it was the case for electricity, the all other costs component bears a significant importance on residential and small professional consumers' bills, and great variances can be observed across regions/countries. For natural gas too, the general trend seems to indicate that the larger the consumer, the lower the tax rate. If reductions apply in certain countries, they are granted based on criteria directly related to consumers' annual offtakes or the nature of professional consumer's activity.

Large industrial consumers

Tax rates imposed on industrial consumption of natural gas are relatively low. If reductions and exemptions may be granted on taxes, one can observe that taxes are less numerous, and conditions of applications are less complex.

Impact of reductions on network costs

Electricity

When presenting the results of the electricity and natural gas costs, it was observed that network costs are quite small for the largest industrial profiles but might play a significant role when comparing the overall competitiveness of a country/region. As such, we detail below the importance reductions on network costs may have for countries.

Residential and small professional consumers

There is no reduction in force on network costs for electricity residential and small professional consumers.

Large industrial consumers

The figures below set out the reductions that can be granted in the regions/countries under the review and which might affect their global competitiveness. The dark orange bar represents the full transmission tariff while the yellow bar represents the transmission tariffs after reductions.

Belgium, the Netherlands and the UK do not offer any reduction on the network cost component, but in France, large baseload consumers such as E3 and E4 can benefit from a transmission tariff reduction up to 81%. In Germany, large industrials can also benefit from reductions going from 85% to 90% of their network costs, for E3 and E4 profiles. It should be clear from the figures below that these reductions have a significant impact on the network costs eventually paid by industrial consumers. The reductions in France must be financed, and the country compensates it with the transmission tariff itself (through regulatory accounts, for instance).

Figure 92: Network costs reduction in EUR/MWh (profile E3)

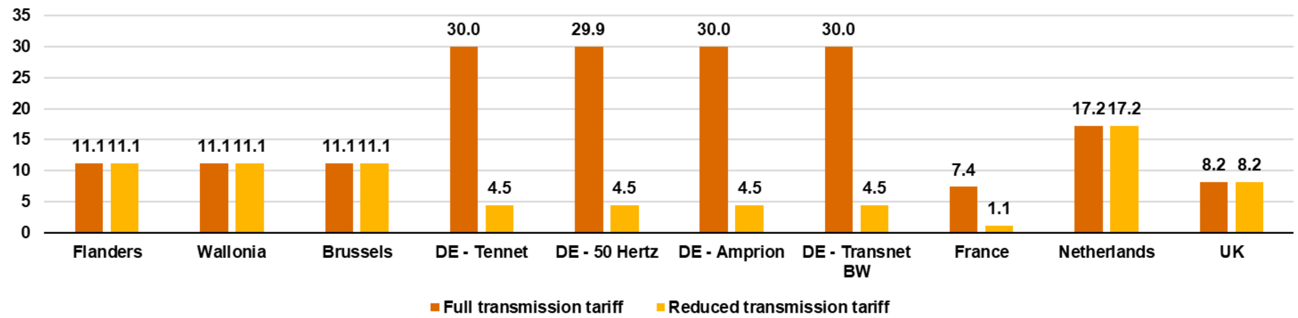
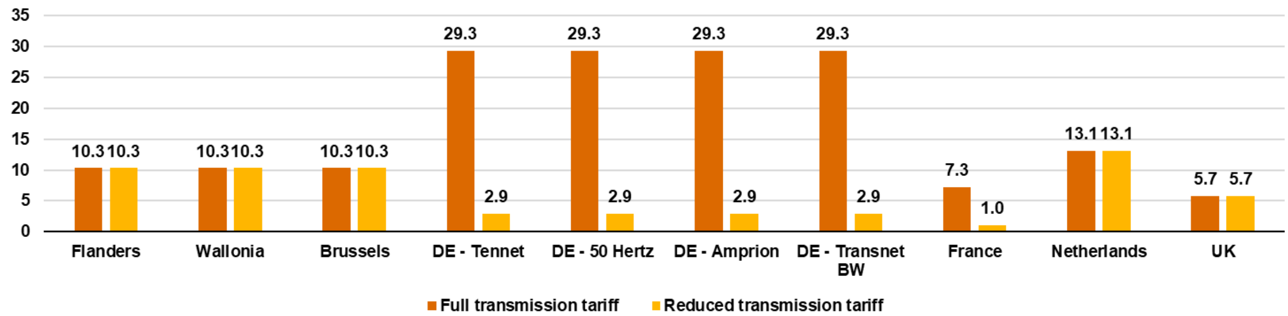


Figure 93: Network costs reduction in EUR/MWh (profile E4)



Natural gas

There exists no reduction for natural gas' network costs for residential, small professional consumers and industrial consumers as identified by this study.

8. Comparison of social measures for residential consumers

8. Comparison of social measures for residential consumers

Impact of social measures

For all countries under review, we provide an extensive analysis of social measures that were implemented to financially support households that are exposed to energy poverty, which develops “as a result of energy-inefficient buildings and appliances, high energy expenditures, low household incomes and specific household needs”[369]. Depending on the country, the concept varies but globally targets households with difficulties to afford their energy bills. As social measures are most frequently designed to tackle energy as a whole, we consider financial measures applying as such and therefore including both electricity and natural gas. This chapter explores the impact of potential reductions on total energy bills for residential consumers (E-RES and G-RES) across countries and regions under review.

Methodology

As this exercise is based on the assessed energy bills from this study, it is important to mention that the objective of this task is not to reflect real consumer profiles. The residential profiles (3,500 kWh of electricity and 17,000 kWh of natural gas) used in this study can be considered as “standard” consumption profiles for a 2 parents-family with 2 children. Figures reported with regards to the living income in this study therefore always refer to a four-members household including 2 adult parents and 2 children.

The cross-country comparison of social measures is based on a two-step approach:

(1) Extensive desk research is conducted to identify all the social measures that are offered to households by the countries in scope of this study to help coping with their energy bills. We also focus our analysis on the other social measures that can help a household composed of 2 adult parents and 2 children to increase its living wage. While measures are considered at national level in most countries, Belgium is a specific case were measures need to be assessed both at the federal and regional levels.

(2) The energy bills (including electricity and natural gas) are then weighted against the households’ income to compare the households’ energy effort rate across the different countries in scope of this study[370]. We make a distinction here between:

   a. Countries’ effort rates compared to the average disposable income, housing costs excluded; and

   b. Countries’ effort rates compared to a total living wage, by comparing the energy bill impact on average incomes and on low incomes households.

The approach followed this year is in line with the previous iteration of this report. As it was already the case in previous years’ studies, we acknowledge that there is an inherent bias in the approach followed due to the fact that data relating to average household income in 2025 are not yet available for all the countries falling within the scope of the study. For this reason, we are therefore forced to compare the prices of electricity and natural gas paid by consumers in January 2025 to average household incomes for the year 2023 (the most recent year for which consolidated figures are available at the time of writing).

As the aim of this chapter is to compare the relative effort required by households to pay their energy bill, this bias does not prevent us from drawing robust conclusions regarding the positioning of each country in relation to its neighbours.

[369] (European Commission, 2020)

[370] In France, the ONPE defines the energy effort rate as the “share of total energy expenditure in the household's disposable income”. (ONPE, 2020)

Identification of social measures and living income within studied countries

Belgium

Social measures

Residential consumers may benefit from several measures to lower their energy bills. The present section covers all social measures existing in Belgium while distinguishing common federal measures from specific regional ones. In Belgium, support for households mainly depends on the granting of a specific status: federal or regional protected consumer, which is broader. This status enables households to meet eligibility criteria to benefit from social measures.

Federal level - Belgium

Social tariff

The social tariff for electricity and/or natural gas is a reduced tariff reserved for specific categories of households. It corresponds to the lowest commercial tariff on the market[371], associated to the lowest distribution costs in the country, and is the same for all energy suppliers and distribution system operators. The price increase of social tariff for electricity is capped to 10% per quarter and to 20% compared to the average of the previous four quarters. The price increase of social tariff for natural gas is capped to 15% per quarter and to 25% compared to the average of the previous four quarters. As it is set every three months, we consider the social tariff in force for January 2025.

At the federal level, residential households that meet one of the following two conditions can be recognised as "**federal protected consumers**" and benefit from the social tariff:

(1) Be a residential end customer from category 1, 2A (Federal), 2B (Regional), 2C (Regional) or 3;
(2) Be the tenant of a social apartment (category 4).

These categories are described below:

Category 1: households benefiting from one of the below allocations from the Public Social Welfare Centre (PSWC)[372]:

a. Social integration income;
b. Financial social assistance equivalent to the social integration income;
c. Social assistance partially or fully covered by the State;
d. An advance on the income guarantee for the elderly or a disabled person's allowance.

(1) **Category** 2A **(federal level)**: households benefiting from one of the below allocations from the FPS Social Security:

a. Allowance for the disabled people due to permanent work incapacity of 65%;
b. Income replacement allowance;
c. Social integration allowance;
d. Allowance for third party assistance.

(2) **Category 2B (regional level)**: households benefiting from one of the below allocations:

a. Walloon Region: allowance for assistance to the elderly, via the Agency for Quality Life (AVIQ);
b. Brussels-Capital Region: allowance for assistance to the elderly, via Iriscare ;

[371] Only active products offered by energy suppliers having a market share of minimum 1% of the Belgian residential customers are considered. Grouped purchases and products offered by energy cooperatives are excluded. Only distribution zones with minimum 1% of the population are taken into account.

[372] Centre public d'action sociale (CPAS) / Openbaar Centrum voor Maatschappelijk Welzijn (OCMW)

c. German-speaking community: allowance for assistance to the elderly, via FPS SS DGPH

d. Flemish Region: care budget for elderly people in need of care (formerly: allowance for assistance to the elderly) via the "Zorgkas" to which the beneficiary is affiliated.

(3) **Category 2C (regional level)**: households benefiting from one of the below allocations:

a. Walloon Region: an additional family allowance for children suffering from a physical or mental disability with a minimum score of 4 points in pillar 1 of the medico-social scale (recognition established by the AVIQ);

b. Brussels-Capital Region : an additional family allowance for children with a physical or mental disability with a minimum score of 4 points in pillar 1 of the medico-social scale (recognition established by Iriscare);

c. German-speaking community: an additional family allowance for children with a physical or mental disability with a minimum score of 4 points in pillar 1 of the medico-social scale (recognition established by the Dienststelle für Selbstbestimmtes Leben);

d. Flemish Region: via "Opgroeien, team Zorgtoeslagevaluatie", a care supplement for children with specific support needs with a minimum score of 4 points in pillar 1 of the medico-social scale.

(4) Category **3**: households benefiting from one of the below allocations from the Federal Pension Service:

a. Income guarantee for the elderly (GRAPA/IGO);

b. Allowance for assistance to the elderly;

c. Allowance for the disabled due to permanent work incapacity of 65%;

d. Allowance for assistance from a third party.

(5) Category **4** (only for natural gas): households are tenants of a social apartment whose natural gas heating depends on a collective installation, in a building managed by:

a. A social housing corporation;

b. Regional housing corporations;

c. Social housing companies approved by the regional governments (Vlaamse Woningfonds, Fonds du Logement des Familles nombreuses de Wallonie, Fonds du Logement de la Région de Bruxelles-Capitale)

d. Public Social Welfare Centre.

Since July 1st 2023, according to the Law of March 19th 2023 reforming taxes on the energy bill[373], **residential protected customers** have been subject to the federal excise duty on electricity and natural gas as defined in art 429 § 2 of the law from 27th December 2004 (e.g. 23.62 EUR/MWH for their total consumption vs. 47.48 EUR/MWh for the first slice 0-3 MWh for electricity and 2.77 EUR/MWh for their total consumption vs 8.23 EUR/MWh for the first slice 0-12 MWh/year for natural gas) [374].

VAT on electricity and natural gas bills permanently lowered from 21% to 6%

The Belgian Federal government agreed on a permanent reduction of the VAT from 21% to 6% for residential consumers on electricity and natural gas since 1 April 2023[375].

Social tariff premium for collective installations

The social tariff premium for collective installations in Belgium is designed to support energy users who benefit from a social tariff in situations where they use common heating systems in residential units. It aims to address situations where customers who are entitled to the social tariff on their invoice based on the above listed category may not have an individual heating system, but benefit from heating solutions managed at a collective level, such as in apartment complexes or group living settings. This premium offers financial compensation to residents who cannot benefit from the social tariff directly because they don't have an individual heating system. The measure came into force on the 1st of July 2024.

[373] (OpenJustice.be, 2023)

[374] (Chancellerie du Premier Ministre, n.d.)

[375] (OpenJustice.be, 2023)

Eligibility for the social tariff premium requires specific criteria to be met, including residing in a type of housing that utilises these collective installations and qualifying for the social tariff due to social, economic, or health conditions. The social tariff premium only applies to natural gas, electricity, and heating networks. This premium does not apply to fuel oil (mazout), propane, and petroleum. To qualify for the premium, applicants must meet certain conditions:

1. **Eligibility for social tariff**: Residents must be eligible for the social tariff, which applies to individuals in specific socioeconomic or health-related situations, such as those receiving certain types of social benefits or experiencing financial hardship.
2. **Type of installation**: The building or housing unit must utilize a collective heating installation where residents do not have individual direct contracts with energy suppliers for these services.
3. **Application process**: Residents need to apply for the premium, providing necessary documentation regarding their eligibility and details about the collective heating system servicing their residence.[376]

The premium provides a fixed quarterly amount to help offset energy costs and ensure fair access to affordable energy. The amount of the social tariff premium is not linked to the actual consumption or the size of the household; rather, it is calculated quarterly by the CREG and approved or reviewed by the Minister of Energy based on the available budget. The premium amount will change each quarter based on the social tariff, which is calculated using the lowest energy prices available on the market. The CREG's calculation also considers average consumption patterns for families living in apartment buildings, with a seasonal breakdown of annual consumption per quarter:

- 5.24% of annual consumption in the 3rd quarter;
- 36.41% of annual consumption in the 4th quarter;
- 46.61% of annual consumption in the 1st quarter;
- 11.74% of annual consumption in the 2nd quarter.

For the third quarter starting on July 1, 2024, the amounts of the social tariff premiums are as follows:

- Social tariff premium for natural gas: €6.52;
- Social tariff premium for electricity: €5.41;
- Social tariff premium for heat: €2.93.

Regional level - Brussels

The granting of ***regional protected customer status*** is a regional provision aimed at protecting vulnerable people who are in default of payment. In Brussels, according to the ordinance, anyone in an overdue situation who has received a formal notice from their gas and/or electricity supplier can apply for regional protected customer status. It's important to note that, with some suppliers, the second reminder is often treated as a formal notice. To be granted this status, an application must be made to the CPAS, Brugel or Sibelga. There is an exception in the case of households that are entitled to the federal social tariff and are in default with their commercial supplier (cf. Order of 17 March 2022). The latter are automatically transferred to Sibelga 60 days after the aforementioned formal notice is sent. This semi-automation applies if the people concerned have received a formal notice and owe more than €150 for an electricity or gas bill, or more than €250 for a single bill for both sources of energy.

Regardless of the channel through which the request is made, households must be committed to a process of clearance/mediation of the existing energy debt and must not exceed a certain income ceiling. At CPAS level, they must not be the subject of a social investigation.

The status is valid for 5 years and the conditions of eligibility are reviewed every 2 years. However, it ends as soon as the debt is paid. The person/household then returns to his commercial supplier, because during the protection period, SIBELGA becomes their social supplier.

If you receive the following regional allocations, you can also benefit from the federal social tariff (category 2B and 2C[377]):

(1) Allocation for the elderly (IRISCARE)

[376] (FPS Economy, n.d.) (FPS Economy, n.d.) (Vlaanderen, n.d.)
[377] Categories considered for social tariffs, (CREG, 2025)

(2) Additional family allowance for children with a physical or mental disability with a minimum score of 4 points in pillar 1 of the medical-social scale.

Besides the reduced tariff, households do not pay any rental charges on electricity and/or natural gas meters.

The social tariff granted to additional regional categories – in comparison with federal categories – is financed by DSOs PSO's tariffs.

Regional level - Flanders

In Flanders, residential households can only be recognised under the **federal protected consumer** status as no additional regional categories of consumers exist to benefit from the social tariff.

However, if you receive the following regional allocations, you can also benefit from the federal social tariff (category 2B and 2C[378]):

(1) A care budget for older people in need of care (Zorgkas)
(2) Additional family allowance for children with a physical or mental disability with a minimum score of 4 points in pillar 1 of the medical-social scale.

Besides that, households facing financial difficulties may be granted the below-listed measures:

Table 129: Flanders socia l measures

Flanders Social Measures		
Measures	**Explanation**	**Eligibility criteria/Conditions of application**
Pre-paid meters[379]	Smart meter that works as a conventional meter but with a prepayment function. The consumer is either subject to the maximum social tariff or a fixed price (average price of commercial suppliers). The installation of the smart meter with an activated prepayment function is always free of charge.	Such meter is placed and prepayment function is activated when: DSO is the energy supplier, and consumer is in payment default.[380] (1) DSO becomes an energy supplier as a commercial supplier terminates the contract due to payment default, and consumer does not have a new supplier after 45 days. Minimum energy supply for pre-paid meters: (1) Electricity: pre-paid meters for electricity are equipped with a 10 Ampere function that switches on when all credit (including emergency credit) has been used. This function can, however, be switched off when a household fails to charge his meter for a certain amount of time. (2) Natural gas: during the winter months (1/11 – 31/03), PSWCs can be asked for financial help to have a minimum natural gas supply. The decision to grant financial help is discretionary to each PSWC and based on a review of each applicant's profile. If granted, financial help is provided every two weeks, and the extent of the help depends on the consumer status (protected customer or not) and house. Emergency credit[381]: Every consumer of a pre-paid meter is awarded an emergency credit. The amount of this credit is EUR 85 for both energy types[382]

[378] ibid

[379] (Vlaamse Overheid, n.d.)

[380] This changed from the 1st July 2022. From then on, the prepayment function will be activated in the distribution for electricity for everyone who contacts the DSO directly.

[381] Energiebesluit (Art.3.1, §5 and 5.4.1, §6)

[382] (Vlaanderen, s.d.)

Payment plan	A payment plan can be planned when a household faces financial issues to pay for its electricity and/or natural gas bills.	Such a mechanism can be activated either: (1) Upon household's demand; (2) Upon the supplier's initiative in the event of formal notice following the non-payment of an invoice. As the payment plan depends on each household's situation, this social measure is presented in this study in a qualitative manner.
Payment exemptions	Consumers recognised as federal protected consumers are exempted from paying the: Bijdrage energiefonds (or Energieheffing)[383]; Costs related to reminders or notices of default.	Meeting federal protected consumers conditions.

Regional level - Wallonia

Wallonia may grant a "**regional protected consumer**" status to households which are in:

(1) Educational guidance of a financial nature from the PSWC;
(2) Debt mediation with a PSWC or an approved debt mediation centre;
(3) Collective debt settlement.

Furthermore, if you receive the following regional allocations, you can also benefit from the federal social tariff (category 2B and 2C[384]):

(1) A care budget for older people in need of care (AVIQ)
(2) Additional family allowance for children with a physical or mental disability with a minimum score of 4 points in pillar 1 of the medical-social scale.

[383] (Vlaamse Overheid, n.d.)
[384] Categories considered for social tariffs, (FOD Economie, n.d.)

Table 130: Wallonia social measures

Walloon Social Measures		
Measures	**Explanation**	**Eligibility criteria/Conditions of application**
Social tariff	The social tariff for electricity and/or natural gas is a reduced tariff reserved for specific categories of households. It has the lowest commercial tariff on the market associated to the lowest distribution costs of the country, and is the same for all energy suppliers and distribution system operators. The price increase of social tariff for electricity is capped to 10% per quarter and to 20% on an annual basis. The price increase of social tariff for natural gas is capped to 15% per quarter and to 25% on an annual basis. As it is set every three months, we consider the social tariff in force for January 2025. In addition to the reduced tariff, households do not pay any rental charges on electricity and/or natural gas meters. The social tariff granted to additional regional categories – in comparison with federal categories – is financed by DSOs PSO's tariffs.	Federal and regional protected consumers can benefit from the social tariff. For regional protected consumers, social tariff can only be granted if they are supplied by the DSO.
Pre-paid meters	Meter that works as a conventional meter with a prepayment function. The prepayment meter is free of charge if requested by the PSWC or in case of a move if the consumer had a prepayment meter in his former place. Pre-paid meters placement costs are free for: (1) Unprotected consumers with payment default from 100 euros (electricity) or 150 euros (natural gas). (2) Federal or regional protected consumers.	Such meter is placed: (1) Upon any consumer's demand; (2) Upon PSWC's demand; (3) Upon supplier's demand in case of payment default from 100 euros (electricity) or 150 euros (natural gas). Federal or regional protected consumers who have pre-paid meters: (1) Are directly provided in electricity and natural gas by their DSO; (2) Are provided with meters equipped with a power limiter (only for electricity) to ensure a minimum supply. The guaranteed minimum supply is only activated at the request of the PSWC; (3) Can receive financial assistance to recharge their natural gas budget meter during the winter period if they encounter payment difficulties. The decision to grant winter assistance is overseen by the local energy commission.
Payment plan	A payment plan can be planned when a household faces financial issues to pay for its electricity and/or natural gas bills.	Such a mechanism can be activated either: (1) Upon household's demand; (2) Upon the supplier's initiative in the event of formal notice following the non-payment of an invoice. The supplier must propose a reasonable payment plan to his customer and inform him that he can benefit from the assistance of the PSWC in his negotiation. The collection procedure is suspended if a reasonable payment plan is concluded or until the

		PSWC can make a socio-budgetary analysis of the customer and intervene, if necessary, in the payment of the customer's debt. No fee can be claimed for a reasonable payment plan. Furthermore, a limit is set on the collection costs that can be claimed by suppliers from customers under the non-payment procedure[385]. As the payment plan depends on each household's situation, this social measure is presented in this study in a qualitative manner.

Disposable income and living wage

According to Eurostat, Belgium's ***gross adjusted disposable income corrected for PPP*** for 2023 reached 32,047 EUR[386]. This value is used to weigh energy's relative share in a residential consumer's income. From the latter, 18.8% are dedicated to housing[387] that is deducted, resulting in a corrected gross disposable income of 26,022 EUR for all three Belgian regions.

In Belgium, the living wage ("revenu d'intégration" of "leefloon") is under the responsibility of PCSWs. They may grant such revenues to low-income people that meet all the following conditions:

(1) The person must be of Belgian nationality or:

   a. a European citizen (or a family member with European nationality), and have the right of residence for more than three months;

   b. a foreigner registered in the population register;

   c. a recognized refugee;

   d. a stateless person;

(2) The person must live in Belgium and be legally resident;
(3) The person must be of legal age (18) or:

   a. a minor emancipated by marriage;

   b. an unmarried minor who is responsible for one or more children;

   c. a minor who is pregnant;

(4) The person must not have enough financial resources and not able to obtain them on his own;
(5) The person must be willing to work unless health reasons or special reasons related to one's situation prevent from doing so;
(6) The person must have asserted all his entitlement to other social benefits, such as unemployment.

The amount of this living wage varies depending on one's conditions as presented below:

(1) **Category 1**: a person living with one or more other people with whom they constitute a common household;
(2) **Category 2**: a person living alone;
(3) **Category 3**: a person responsible for a family with at least one unmarried minor child.

The minimum amount that can be claimed by a household of four people (2 adults and 2 children) with social revenues in Belgium is 1,741.29 EUR (category 3)[388].

[385] According to the March 30th, 2006 Walloon Government decrees on public service obligations in the electricity and natural gas markets (respectively Art. 30 ter and Art. 33 ter), the collection costs cannot exceed the sum of: the outstanding balance due on overdue invoices, any contractual interest, capped at the legal rate and any collection costs for unpaid invoices, capped at 7.5 euros for a reminder letter and 15 euros for a letter of formal notice. The total costs claimed for sending reminders and letters of formal notice or for non-payment may not exceed 55 euros per year and per energy.

[386] (Eurostat, 2025)

[387] (Eurostat, 2025)

[388] Allocation for a couple in charge of minimum one minor child in January 2025 (SPP Intégration Sociale, 2025)

In addition, child allowances are granted in Belgium to any household with children. These extra allowances increase the maximum potential living income perceived by Belgian low-income households (including the possibility of a financial aid for disabled children). Depending on the region, these allowances might change as follows[389]:

- **Brussels**: for a two-children household, allowances for small children under 5 years old would reach a minimum of 503.85 EUR/month[390] to reach a maximum of 553.43 EUR/month[391] for children following higher education.
- **Flanders**: for a two-children household, allowances for small children under 4 years old would reach a minimum of 507.95 EUR/month[392] to a maximum of 542.84 EUR/month[393] for children above 18 years old following higher education.
- **Wallonia:** for a two-children household, allowances for small children under 4 years old would reach a minimum of 518.74 EUR/month[394] to a maximum of 541.88 EUR/month[395] for children above 17 years old following higher education.

The minimum amount that can be claimed by a household of four people (2 adults and 2 children) with social revenues in Belgium is therefore ranging from a monthly minimum of 2,245.14 EUR to a monthly maximum of 2,294.72 EUR for Brussels, from a monthly minimum of 2,249.24 EUR to a monthly maximum of 2,284.13 EUR for Flanders, and from a monthly minimum of 2,260.03 EUR to a monthly maximum of 2,245.07 EUR for Wallonia.

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[389] (Kids Life, 2025)

[390] Considering the 2024 system, indexed on 01-05-2024, this situation is a minimum situation when the children are between 0-11 years old (182.85 EUR/month per child). Plus, if parents have gross yearly revenues <83,600 EUR, extra allowances are granted (48.76 EUR/month for a first child between 0 and 11; 85.33 EUR/month for the second). Finally, an additional age allowance is granted yearly and reaches 24.38 EUR/year per child between 0 and 5. Allowances for large households are not considered as this starts from 3 children.

[391] Considering the 2024 system, this situation is a maximum situation when the children are between 18-24 years old following higher education (+191.22 EUR/month per child). Plus, if parents have gross yearly revenues <40,200 EUR, extra allowances are granted (59.76 EUR/month for the first child; 95.61 EUR/month for the second child). Finally, an additional age allowance is granted yearly and reaches 99.47 EUR/year per child between 18 and 24 following higher studies. Allowances for large households are not considered as this starts from 3 children.

[392] Considering the 2024 system, for children born as of 1 January 2019, this situation is a minimum situation when the children are below 18 (180.19 per child). Plus, if parents have gross yearly revenues <40,187.19 EUR, extra allowances are granted (71.91 EUR/month per child). An additional 22.52 EUR/year per child (schoolbonus) is also granted for children under 4 years old.

[393] Considering the 2024 system, this situation is a maximum situation when the children are born before 2019 and above 18 (103.72 + 63.40 EUR/month for the youngest child; 191.92 + 28.72 EUR/month for the second child). Plus, if parents have gross yearly revenues that range between 40,187.19 EUR and 46,885.06 EUR, extra allowances are granted (36.41 EUR/month per child). An additional 67.56 EUR/year per child is granted if child goes to school.

[394] Considering the 2024 system, this situation is a minimum situation when the children are between 0-17 years old and born after 2020 (188.95 EUR/month per child). Plus, if parents have gross yearly revenues <33,887.51EUR, extra allowances are granted as social supplement (+68.39 EUR/month perchild). An additional 24.38 EUR/year per child is granted if children go to school who are between 0-5. Allowances for large households are not considered as this starts from 3 children.

[395] Considering the 2024 system, this situation is a maximum situation when the children are between 18-24 years old and born before 2020 (+114.49 EUR/month for the first child, + 211.85 EUR/month for the second child). Plus, if parents have gross yearly revenues <37.9 kEUR, extra allowances are granted as social supplement (+77.28 EUR/month per child). An additional 137.29 EUR/year per child is granted if children go to school and are at least 18 years old and household benefits from the social tariff. Allowances for large households are not considered as this starts from 3 children.

Germany

Social measures

To support consumers in the context of the energy crisis, a “defence shield” package amounting to 200 billion euros was approved in Germany in December 2022. The measures came into force as of the 1st of March 2023, and would normally have lasted until April 2024. However, due to problems in the country’s budget, the measures came to an end already in December 2023.

Extraordinary electricity costs or debts can, however, be covered by the social welfare office/jobcentre in the following exceptional cases[396]:

(1) The threat of the electricity supplier to cut off the electricity.
(2) Electric heating systems, decentralised hot water production.
(3) If a subsequent payment from the annual electricity settlement cannot be made.

Cash payments for back payments or accrued electricity debts are generally made in the form of loans, in rare cases aid is granted, and partial loans and partial aid are also possible. A loan can only be refused if it can be proven that the high electricity costs are due to their own fault.

If the water heating is operated with electricity, there is a claim for additional demand. In the case of a flat with electrically operated heating systems, only the actual, reasonable heating costs are covered.

These measures are difficult to quantify in this study because they are discretionary and applicable on a case-by-case basis. Consequently, no social measures with regards to the reduction of electricity and natural gas bills can be used in this exercise. However, we do depict the difference in effort rates for low-income consumers compared with other consumers in more prosperous conditions.

Disposable income and living wage

Germany’s ***gross adjusted disposable income corrected for PPP*** amounted to 34,820 EUR in 2023[397]. As housing costs are estimated to be 25.2% of Germany’s disposable income[398], we obtain a corrected gross disposable income of 26,045 EUR.

Regarding low-income consumers, Germany was previously offering the ‘*Arbeitslosengeld II*’ – ALG II in short – (or Unemployment Benefit II) and the ‘*Sozialgeld*’ (or Social Security Benefit) as part of the benefits for securing living and thus part of the benefits for securing a decent minimum subsistence level[399]. ALG II and SGB II were merged under the Hartz IV law, and then replaced since 1 January 2023 by a new “citizen income” (*Bürgergeld*). This led to a significant increase of the standard rate received people in need in Germany[400].

The basic standard monthly rate in force in 2025 is 563 EUR and applies if you are single and/or a single parent and run your own household. A monthly amount of 506 EUR per person is granted for partners with no other revenues who are living together (90% of the standard benefit). The standard rate for children living in a household under that scheme in 2025 is 471 EUR/month for children between 14 and 17 years. It reaches 390 EUR/month for children between 6 and 13 years old, and 357 EUR/month for children up to 5 years. [401]

Besides the new “citizen income”, additional financial supports can be granted under certain circumstances but depending on a case-by-case basis.[402]

The minimum amount that can be claimed by a household of four people (2 adults and 2 children) with social revenues in Germany is therefore estimated at 1,726 EUR with two small kids whereas the maximum amount reaches 1,954 EUR with 2 older children. For the minimum amount, the “citizen income” (*Bürgergeld*) allocation and the child allowances for 2 children below 5 years old (as it represents the minimum possible amount) are here considered. For the maximum account, we take the child allowances granted for 2 kids between 14 and 17 years old as it represents the maximum amount that can be claimed.

No changes in the amounts allowed have been processed between 2024 and 2025, while it has constantly increased in the past three years.

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[396] (Betanet.de, 2019)
[397] (Eurostat, 2025)
[398] (Eurostat, 2025)
[399] Bundesministerium für Arbeit und Soziales, 2021
[400] ibid
[401] (Bundesregierung, 2025)
[402] Further financial support mechanisms exist but cannot be precisely quantified in the scope of this study.

France

Social measures

France implemented social measures to help households considered in “energy poverty” (“précarité énergétique”). To be considered as vulnerable, a household or person must face “difficulties in obtaining the supply of energy necessary to meet his or her basic needs in his or her home because of inadequate resources or housing conditions”[403]. Objectively speaking, three criteria are defined to measure energy poverty:

(1) Energy effort rate (“Taux d’effort énergétique (TEE)”):

   a. More than 8% of income is spent on energy;

   b. Households are part of the poorest 30% of the French population (first 3 income deciles).

(2) Low income, high expenses indicator (“Indicateur bas revenus, dépenses élevées”): the household is considered in the situation of “energy poverty” if they have:

   a. An income below the poverty line or 60% of national median income;

   b. Energy expenditures, compared to their housing size (m^2) or family composition, are higher than national median energy expenditures.

(3) Feeling of discomfort: a subjective indicator that assesses people’s feelings towards thermal (dis)comfort and economic vulnerability.

To counter energy poverty, France replaced social tariffs with an energy voucher (“chèque énergie”) in 2018. This energy voucher is a direct financial help that households are to use to pay for their energy bills, regardless of their heating means (electricity, natural gas, fuel, wood, etc.). The amount perceived depends on the level of income and the composition of the household. Since 2023, any household whose Reference Tax Income (RTI) is below 11,000.00 EUR per consumption unit (CU) was eligible to this energy voucher.

In 2024 an energy voucher was sent again to affected households to help them pay their bills, between April and May. In 2025 the vouchers will be sent in a similar period. As we are looking at the situation on 1 January 2025, the numbers in the table below are the ones of the energy voucher of 2024[404]. The table below therefore depicts the amount that could be perceived by households in 2024 and that could still be used by March 31st 2025[405].

Table 131: France energy vouchers amounts applicable in 2024[406]

Energy Voucher 2024				
Consumption Unit (CU)	**RTI < 5,700 EUR/CU**	**RTI between 5,700 and 6,800 EUR/CU**	**RTI between 6,800 and 7,850 EUR/CU**	**RTI between 7,850 and 11,000 EUR/CU**
1 person (1 CU)	194 EUR	146 EUR	98 EUR	48 EUR
2 people (1 < CU < 2)	240 EUR	176 EUR	113 EUR	63 EUR
≥ 3 people (2 CU or more)	277 EUR	202 EUR	126 EUR	76 EUR

In France there is also a fund that helps people regarding different housing costs aspects. This aid can take many forms, e.g. payment of first rent, payment of the costs regarding the opening of meters (gas, electricity, water), etcetera. This additional support is however not quantifiable as established on a case-by-case basis, and is thus not considered for the computation of social measures.

403 (Ministère de la Transition écologique et solidaire, 2020)
404 (République Française, 2024)
405 (République Française, 2024)
406 (République Française, 2025)

Disposable income and living wage

The ***gross adjusted disposable income corrected for PPP*** for France was 30,641 EUR in 2023[407]. Furthermore, we deduct housing costs that are deemed to be 17.9%[408] of France's disposable income (2023 value, latest data available). Therefore, we estimate a corrected gross disposable income of 25,156EUR.

France implemented a living income, called "Revenu de Solidarité Active" (RSA) since 2009, which targets low-income people. To benefit from this allowance, one must respect several conditions that are listed hereafter:

(1) Be over 25 years old or of 18 if the applicant has a dependent or unborn child or if he can prove 2 years of full-time equivalent professional activity in the last 3 years;
(2) No age requirement exists for people who are responsible for the care of one or more children (or unborn children);
(3) Permanent residence in France. Stays outside France must not exceed 3 months;
(4) For European Union nationals: a valid residence permit is required;
(5) For people of foreign nationality, the applicant must have been legally resident in France for at least 5 years;
(6) The average monthly income for the 3 months preceding the application of the entire household must be less than the amount of the RSA corresponding to the composition of the family;
(7) Entitlement to other aid (e.g. specific solidarity allowance) must have been claimed as a matter of priority.

Similarly to Belgium and Germany, the amount granted by France to low-income citizens varies according to the person's conditions (e.g. isolated or not). In France this revenue is called "Revenu de solidarité active" (RSA - *active solidarity income*). This amount increases with the number of children that we assumed to be limited to two here, leading to a RSA amount of 1,334.98 EUR/month for 2025[409]. In addition, France also grants family allowances to all households with a minimum of two children[410]:

(1) **Family allowances**: paid without conditions as from the second dependent child residing in France. Their amount is modulated according to the resources of the household or the person in charge of the children, and the number of children (148.52 EUR/year for 2 children in 2025). They can be completed by an additional amount of 74.26 EUR/year for each child above 14 years old.

Back-to-school allowance: provided on an income-basis for any child attending school and aged from 6 to 18 years old. The amount of the allowance for school year 2024 ranged from 416.40 EUR/year (for a child from 6 to 10 years old) to 454.60 EUR/year (for a child from 15 to 18 years old)[411].

The minimum monthly amount that can be claimed by a household of four people (2 adults and 2 children) with social revenues in France is therefore estimated at 1,483.50 EUR with two small kids whereas the maximum amount reaches 1,707.79 EUR with 2 older children studying. For the minimum amount, the "Revenu de solidarité active" allocation and the standard child allowance (for children below 14 years old, as it represents the minimum possible amount) have been solely considered, where the additional amount for children above 14 years old and the 'back-to-school' allowance for children above 15 years old have been added on top for the maximum amount that can be claimed.

[407] (Eurostat, 2025)
[408] (Eurostat, 2025)
[409] (Aide Sociale, 2025)
[410] (République Française, 2025)
[411] (République Française, 2025)

The Netherlands

Social measures

Discount on the energy tax

A reduction of the energy tax for each residential electricity connection was put in place in 2022. This tax discount on energy taxes will go slightly up for 2025, from an amount of 631.39 EUR in 2024 to an amount of 635.19 EUR in 2025 (with 21% of VAT included). [412]

Disposable income and living wage

According to Eurostat, the Netherlands' ***gross adjusted disposable income corrected for PPP*** reached 32,135 EUR for 2023[413]. With a 22.9%[414] share of disposable income for housing costs, the Netherlands has a corrected gross disposable income of 23,776 EUR in 2025.

The Dutch government introduced a social minimum ("*sociaal minimum*")[415] that represents the minimum amount a person needs to make a living. In case a person who is entitled to the above-mentioned energy tax discount does not reach the social minimum, a supplement can be granted[416] for low-income people to make up for the social minimum. For the year 2025 the social minimum is 2,191.80 EUR/month for married people or equivalent.[417] We will therefore use this amount as the basis for our computations.

Additionally, several financial support incomes exist for low-income people to address different basic needs:

A housing **allowance ("*huurtoeslag*")[418]**: allowance granted to low-income people to help them pay for their rent. To be granted this allowance, the following criteria must be met[419]:

a. Rent is below 900.07 EUR (for people >23 years old or with a child) or 477.20 EUR (for people between 18 and 23 years old);

b. The rented housing is a self-contained living space;

c. The income of the person and his partner/co-inhabitants is not too high. This limit depends on the person's rent, age and composition of the household;

d. Assets are below 37,395.00 EUR/person or 74,790.00 EUR for partners together;

e. The person must live in the Netherlands, be registered at the municipality and have (or the partner/co-residents) the Dutch nationality or a valid residence permit;

f. The person must be ≥ 18 years old;

g. The person must have a signed tenancy agreement, pays the rent and can prove it with bank statements;

h. Other specific situations may slightly change applying rules if the person is under 18 years old, is cared for at home, has a large household, is disabled, etc.

This allowance differs from one to another (depending in particular from incomes of the household and the number of children), with an estimated average of 175 EUR/month in 2024.[420]

[412] (Engie, 2025)
[413] (Eurostat, 2025)
[414] (Eurostat, 2025)
[415] (Rijksoverheid, 2020)
[416] Toeslagenwet.
[417] (Samen van morgen, 2024)
[418] (Belastingdienst, 2023)
[419] (Rijksoverheid, 2024)
[420] (Rijksoverheid, 2024)

A **Care allowance *("Zorgtoeslag")*[421]**: this allowance is a contribution to help support the costs of people's Dutch health insurance. To be granted this allowance, people must meet the following criteria in 2025:

a. Be ≥ 18 years old;

b. Have Dutch health insurance;

c. Have an income < 39,719.00 EUR (lone person) or < 50,206.00 EUR (partners);

d. Have the Dutch nationality or a valid residence permit;

e. Have a maximum (combined) assets 141,896,00 EUR (179,429.00 EUR for partners).

f. Other specific situations may slightly change applying rules be a military, detained, foreign student, not having a fixed address, etc.

For 2024, partners with a net income of less than 28,000 EUR/year would be granted a total monthly amount of 250.00 EUR.[422] This amount is degressive and depends on the income of the household. As this amount is conditional on the subscription of a health insurance, we do not consider it here in the calculation of the minimum disposable income.

There are two allowances for children that can be added on top of those measures:

Regular child allowances[423] ("*kinderbijslag*"): allowance that can range in 2025 from 286.45 EUR/quarter (children between 0 to 5 years) to a maximum of 409.21 EUR/quarter (children aged between 12 to 17 years old) per child and per quarter.

Child budget allowance[424] *("kindgebonden budget")*: people having children can benefit from an additional allowance their income (and the partner's income) are not too high and if their total assets are not too high neither (on January 1, 2025, a single parent may not have more assets than 141,89.00 EUR, and no more than 179,429.00 EUR for a couple). The amount granted depending on a lot of parameters, it is however not possible to calculate a precise amount as part of this study.

The minimum monthly amount that can be claimed by a household of four people (2 adults and 2 children) with social revenues in the Netherlands is therefore estimated at 2,807.77 EUR with two small kids (below 5 years old) whereas the maximum amount reaches 2,889.61 EUR with 2 older children (12-17 years old). For the minimum amount, the "Sociaal minimum" is combined with a "huurtoeslag" of 175 EUR/month and the regular child allowances for two children under 5 years old. For the maximum monthly amount, we take into consideration the higher regular child allowance for children from 12 to 17 years old.

[421] (Zorgwijzer, n.d.)

[422] ibid

[423] (Sociale Verzekeringsbank, 2025)

[424] (Rijksoverheid, 2022)

The UK

Social measures

In the UK, households are considered to be energy poor, when[425]:

- Energy costs are above average (> national median level)[426];
- If that amount was to be spent, households would be left with a residual income[427] below the official poverty line, which is of 60% of national median income.

To further delimit energy poverty, the UK also considers the average energy poverty gap, defined as the reduction in the energy bill that the average energy-poor household needs to not be classified as energy poor[428].

Several measures exist in the UK to support households in a situation of energy poverty:

The Warm Home Discount Scheme[429]

This allowance is a direct financial support to a lower energy bill. It was introduced to replace social tariffs in 2011. This measure gives a 150 GBP (179.98 EUR)[430] rebate on energy bills in winter 2024 (thus, applicable in January 2025) for certain categories of people. While some people are automatically granted this help, others must apply.

Mainly two groups of people can apply to this scheme[431]:

(1) Core group: low-income pensioners that receive a Guarantee Credit via the Pension Credit, i.e.:

   a. People have reached State Pension age (66 or 67 depending on birth date);
   b. People over State Pension age are getting Universal Credit (help to pay for living costs).

Broad group households at risk of energy poverty. Five cases determine a person/household's belonging to the broad group432:

   a. People receiving Income Support;
   b. People receiving an Income-related Employment and Support Allowance;
   c. People receiving an Income-based Jobseeker's Allowance;
   d. People receiving child tax credit based on an annual income not exceeding 19,978 GBP (23,971.68 EUR).

The Cold Weather Payment[433]

This is a direct financial support to lower energy bill only offered during periods of extremely cold weather. When the average temperature in the area is recorded or forecast to be at or below zero degrees Celsius for 7 consecutive days. The state is offering an allowance of 25.00 GBP (29.99 EUR) for each 7-day period of very cold weather between November 1, 2024 and March 31, 2025.

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[425] This definition was introduced in 2013 and is in application in England. Officially, remaining countries part of the UK (Northern Ireland, Scotland and Wales) still use the old definition where a household is living in energy poverty if, to heat their home to a satisfactory standard, they spend more than 10% of their household income on fuel.

[426] Costs required to have a warm, well-lit home, with hot water and the running of appliances. An equivalisation factor is applied to reflect that households require different levels of energy depending on who lives in the property. This term encompasses various energy goods (e.g. natural gas).

[427] Residual income is defined as equivalised income after housing costs, tax and National Insurance. Equivalisation reflects that households have different spending requirements depending on who lives in the property.

[428] (Department for Business, Energy & Industrial Strategy, 2020)

[429] (UK Government, s.d.)

[430] (Ofgem, s.d.)

[431] (Ofgem, s.d.)

[432] (Ofgem, s.d.)

[433] (UK Government, s.d.)

To qualify, households must be getting one of the following allowances:

(1) Pension Credit,
(2) Income Support,
(3) Income-based Jobseeker's Allowance,
(4) Income-related Employment and Support Allowance,
(5) Universal Credit,
(6) Support for Mortgage Interest.

For all above-listed allowances, people/households must also meet the conditions listed for the Warm Home Discount Scheme.

Considering the potential variable amount, we use here the average amount of 7-day periods triggered on average in 2024-2025 in the UK (2 periods of 7 days in a row with negative temperatures, rounded up)[434] to provide an estimate.

The Winter Fuel Payment[435]

This payment is a direct financial support to lower energy bill aiming elderly people. To be granted this allowance, the following criteria must be met:

A person can receive this allowance if they were born on or before September 23, 1958, they can receive between 200.00 GBP (239.98 EUR) and 300 GBP (359.97 EUR) to help pay heating bills. This is called the "winter fuel payment." The amount received included a "cost of living allowance for retirees" until 2023 and has been stopped ever since. The amount will be received during the winter of 2024 to 2025. This is in addition to any other cost of living payments you receive with your benefit or tax credits. This measure is not included in the calculation of the energy effort rate.

In case the person did not live usually in the UK, the person must have lived in Switzerland or an eligible European Economic Area (EEA) country and have a genuine and enough link to the UK (work, facility, etc.) to qualify for this payment[436].

The ECO scheme[437]

This scheme helps to reduce carbon emissions and tackle energy poverty. The ECO scheme "has seen 4 iterations […]. The ECO3 scheme closed on 31 March 2022 and the ECO4 Order came into force in July 2022. ECO4 applies to measures installed from 1 April 2022 and will cover a four-year period until 31 March 2026". To be eligible for the ECO scheme, households should at least benefit from:

(1) Child Tax Credit
(2) Working Tax Credit
(3) Universal Credit
(4) Pension Guarantee Credit
(5) Pension Savings Credit
(6) Income Support
(7) Income-based Jobseeker's Allowance (JSA)
(8) Income-related Employment and Support Allowance (ESA)
(9) Child Benefit
(10) Housing Benefit

If the person has their own house, it must have an energy efficiency rating of D, E, F or G to be eligible.

If the person rents from a private landlord, the house must have an energy efficiency rating of E, F or G to be eligible. You must have the owner's permission to do the work.

This measure is not included in the calculation of the energy effort rate.

[434] (UK Government, 2024)
[435] UK Government, s.d.)
[436] (UK Government, s.d.)
[437] (Ofgem, 2024)

Disposable income and living wage

The ***gross adjusted disposable income*** for the UK amounted for 28,507 EUR in 2023[438].

With a 18.0% share of disposable income for housing costs in 2023 according to a recent study[439], the UK has a corrected gross disposable income of 23,376 EUR.

The UK provides a living wage ("Universal Credit")[440] to help low-income people cover their living costs. To be entitled to this allowance, people must respect all below-listed criteria:

(1) Have either no income or a low income, with a maximum of 16,000.00 GBP (19,198.46 EUR) in savings;[441]
(2) Not being in full-time paid work (<16 hours a week, and, if any, a partner working <24 hours a week);
(3) Not being eligible for Jobseeker's Allowance or Employment and Support Allowance;
(4) Living in England, Scotland or Wales;
(5) Be between 16 and legal pension age, and at least one of the following:

    a. Pregnant;
    b. A lone parent (including a lone adoptive parent) with a child under 5;
    c. A lone foster parent with a child under 16;
    d. A single person looking after a child under 16 before they're adopted;
    e. A carer;
    f. Be on maternity, paternity or parental leave;
    g. Be unable to work and receiving Statutory Sick Pay, Incapacity Benefit or Severe Disablement Allowance;
    h. Be in full-time education (not university), aged between 16 and 20, and a parent;
    i. Be in full-time education (not university), aged between 16 and 20, and not living with a parent or someone acting as a parent;
    j. Be a refugee learning English;
    k. Be in custody or due to attend court or a tribunal.

As it is the case with the other countries in scope of this study, the UK provides to poverty-exposed citizens some form of revenue. In the UK, this revenue is called "Standard allowance". For a couple, this amount ranges in 2024-2025 from 489.23 GBP (587.03 EUR) for both people if you live with your partner and are both under 25 years old to 617.60 GBP (741.06 EUR) for both people if you live with your partner and at least one person is 25 years old or above[442].

Extra amounts are granted for children, with two different child benefits rates: 25.60 GBP (30.71 EUR) per week for an eldest or only child and 16.95 GBP (20.34 EUR) per week for any additional child[443]. (For the computations, we multiplied those amounts by 52 weeks and then divided the amount in 12 to get an amount per month)

The minimum monthly amount that can be claimed by a household of four people (2 adults and 2 children) with social revenues in the UK is therefore estimated at 673.61 GBP (808.27 EUR) for a couple under 25 years old with two small kids whereas the maximum amount reaches 801.98 GBP (962.30 EUR) for a couple above 25 years old with 2 older children.

[438] (ONS, 2025)
[439] (ONS, 2025)
[440] (UK Government, s.d.)
[441] To convert this amount and the ones of the other allowances, we come back to the January 2025 average exchange rate of 0.8334 GBP/EUR.
[442] (UK Government, 2024)
[443] (UK Government, 2024)

Energy effort rates comparison

Based on the above-mentioned information, we present four charts designed to compare effort rates of residential consumers to pay for their energy bills. The energy effort rate can be understood as “the share of total energy expenditure in the household's disposable income”[444]. The higher this share is, the more effort one makes to pay for the energy and the less can be spent on other goods and services.

It is important to note that the results presented in this section do not take into consideration one-off reductions on energy bill that may apply in some countries as the amount such allowances often vary a lot depending on the households’ characteristics.

Energy effort rates compared to the average disposable income (housing costs deducted)

Disposable income reflects the purchasing power of households and their ability to invest in goods and services or save for the future, by accounting for taxes and social contributions and monetary or in-kind social benefits. With house prices and rents rising, the cost of housing represents more than ever a significant share of household spending as it is shown below. To reflect more precisely the weight of the energy bill on household’s disposable incomes, the average share of housing costs is here retrieved from the disposable income as shown in the table below[445].

All data for EU countries were extracted from Eurostat at national level with the most recent data available at consolidated level. For the adjusted gross disposable income of households per capita (corrected for purchasing power parity) for EU countries, 2023 were the latest figure available at the time of writing[446]. For the share of housing costs in comparison with the disposable income, the latest data available at a consolidated level for EU countries were related to 2023 as well[447].

For the UK, we had to use official data from the British government[448] and desktop research[449] as Eurostat do not include the UK in its dataset anymore. We then converted the amounts from GBP to EUR using the 2023 average EUR to GBP conversion rate[450] as we were referring to 2023 figures.

Using such an approach for the UK has some caveats as the amount retrieved cannot directly be adjusted with the purchasing power parities (PPP), but as the analysis is focused on the relative weight of the energy bill compared to the gross disposable income of households, we do not believe it has an impact on the conclusions provided in this study. This analysis allows us to measure the relative weight of the energy bill against the average disposable income for all countries in scope of this study.

Table 132: Adjusted gross disposable income of households per capita in EUR, housing costs deducted

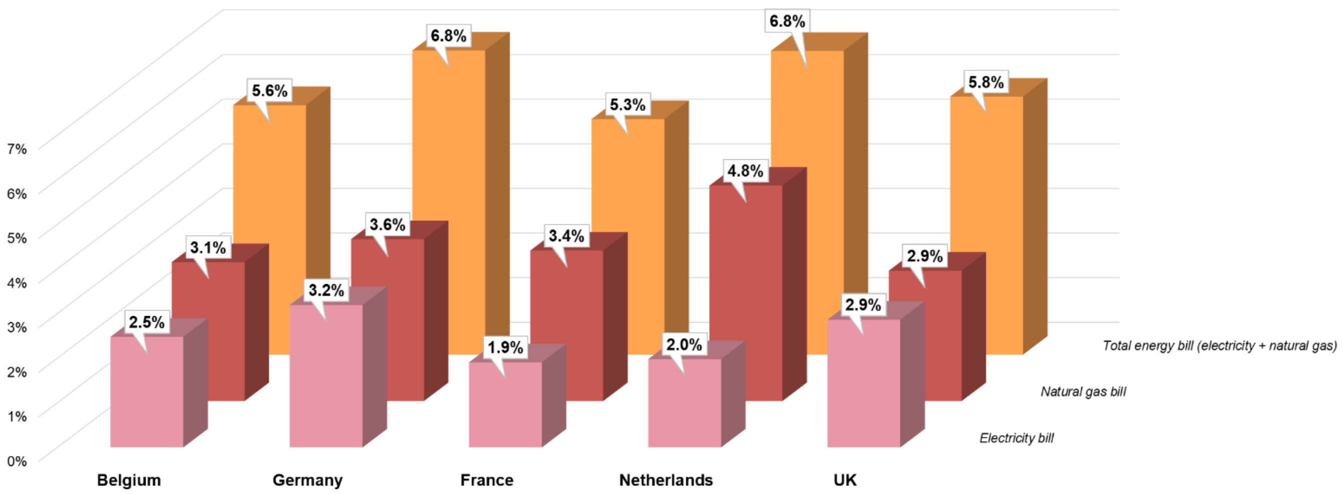
2023 Data (see above for sources)	Belgium	Germany	France	Netherlands	UK
Adj. gross disposable income of households per capita, corrected of PPP (EUR)	32,047	34,820	30,641	32,135	28,507
Share of housing costs in disposable income (%)	18.8%	25.2%	17.9%	22.9%	18.0%
Adj. gross disposable income of households per capita, housing costs deducted (EUR)	**26,022**	**26,045**	**25,156**	**24,776**	**23,376**

[444] (ONPE, 2020)
[445] It must be noted that we do not do the split here between Belgian’s regions. This limitation is dictated by the Eurostat data availability at national level only.
[446] (Eurostat, 2025)
[447] (Eurostat, 2025)
[448] (ONS, 2025)
[449] (ONS, 2025)
[450] (European Central Bank, 2025)

Taking the disposable income of households – housing costs deducted – as a basis, the figure below looks closer at the weight of the energy bill on a household with an average disposable income (2 working people). A split is done between the weight of electricity and natural gas.

When we compare the weight of the total energy bill against the average disposable income – housing costs deducted – for countries in scope of the study, we can see that for all countries the electricity bill has a lower impact on budget than the natural gas invoice.

Figure 94: Importance of energy bill compared to average disposable income (housing costs deducted, in %)



All in all, France is in January 2025 the country where the total weight of the energy bill is the lowest in comparison with disposable income (5.3%), mainly due to a competitive advantage regarding low electricity costs. Belgium comes second with 5.6%, which is higher than in 2024 due to higher price of electricity. The UK sits in the middle with a total annual bill reaching 5.8% of the annual disposable income while Germany and the Netherlands bring up the rear with the same importance of energy costs in the bill: 6.8%. The Netherlands is penalised by high natural gas prices, while Germany has a more balanced weight for both commodities. It must be noted that while Belgium and Germany observe a slight increase of the total energy bill weight against the average disposable income in comparison with what was observed last year at the same period, the opposite is true for France, the Netherlands and the UK. The latter dropping of around 1.5 percentage points (the UK), while France drops by 0.5 percentage points and the Netherlands by 0.7 percentage points. It should be noted that Belgium is the country where the effort rate on energy increased the strongest since 2024 (+0.3 percentage points), while in other countries it decreased or increased very slightly (up to +0.1 percentage points in Germany).

If we focus on the price of electricity[451], France is the country where the electricity bill weights the least with 1.9% of the annual disposable income (housing costs deducted). The Netherlands comes second with an average of 2.0% of the disposable income, followed by Belgium with 2.5%. The UK and Germany are the countries where the electricity bill weights the most with a respective weight of 2.9% and 3.2% of the disposable income.

When looking at natural gas prices[452], the UK is the country where the bill weighs the least in comparison with disposable income, with an average of 2.9%. Belgium comes second with 3.1%, closely followed by France and Germany (both around 3.5%). In an opposite trend than what we see for electricity, the Netherlands is here the country where the natural gas bill is weighting the most, with just below 5% of the disposable income.

[451] Considering natural gas and electricity bills taken separately and not in combined plans
[452] Ibid

Energy effort rates compared to disposable incomes: average income vs. low income

In a second analysis, we aim to compare the countries' average energy bill against:

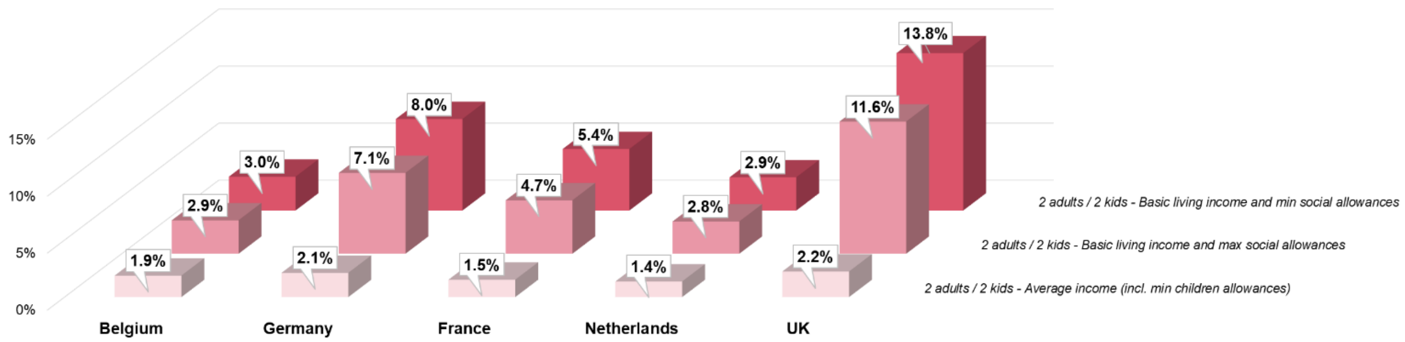
(1) The revenues of a household made of 2 adults perceiving the average country income, and 2 children allowing them to perceive the minimum available level of children allowances;
(2) The revenues of a household made of 2 adults, both perceiving the country's basic living income, and 2 children allowing them to perceive the minimum level of social allowances.
(3) The revenues of a household made of 2 adults, both perceiving the country's basic living income, and 2 children allowing them to perceive the maximum level of social allowances.

This allows us to assess the weight of the average energy bill on people earning the country's average income against the impact it has on the most vulnerable people. To do so, based on the above-mentioned research, all social measures that can be quantified are added to the basic income that our typical household (2 adult parents and 2 children) could earn without having other sources of revenue. We believe that this situation represents a worst-case scenario, but it allows us to provide a rather good overview of the impact on the energy bill on the most exposed consumers.

This time we do not deduct the share of housing from the disposable income. As most households with minimum incomes also often benefit from significant aid in that area too, that would indeed provide a biased picture of reality. By doing so, the relative weight of the energy bill for a household with 2 adults earning the country's average income will therefore decreases compared to the previous figure[453].

Figure below show the electricity effort rate compared to the living income for the 3 scenarios mentioned.

Figure 95: Electricity effort rate compared to living income (in %)



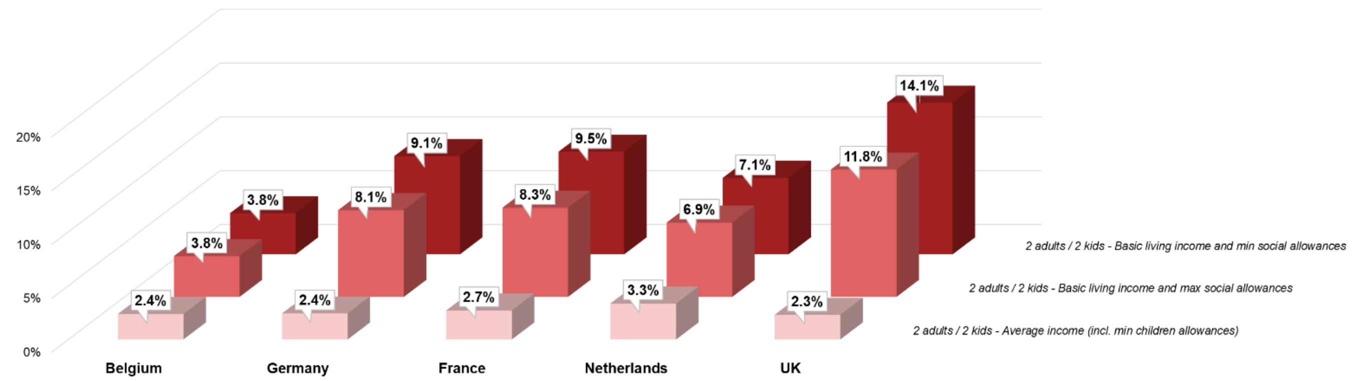
When comparing the effort rate for electricity across countries for a household with an average income, we can see that the Netherlands becomes the country where the electricity bill weights proportionally the least (1.4%), followed by France with 1.5%, and Belgium at 1.9%. Germany follows at 2.1% while the UK comes last, with a weight of the electricity reaching 2.2%.

Things change however when we consider households with the lowest incomes. In that case, Belgium can maintain a rather low weight of the electricity bill compared to a basic income in the country thanks to its social tariff, keeping the weight of the electricity bill around 2.9% of the available income (improvement by 0.8 percentage points compared to 2024), slightly above the Netherlands which has a lower proportion. With an electricity bill ranging from 4.7 to 5.4% of the available income depending on the number of social allowances received, France stands in the middle countries in scope. Germany comes next with a significantly higher effort rate ranging from around 7.1% to 8.0%. The UK is closing the walk with a slightly better position than in the previous year when it comes to low-income households. In this case the electricity bill weighs indeed from 11.6% to 13.8% of the household available living income, which is better than the situation observed last year at the same period by about 1.5 percentage points. This can be explained by a lower electricity proportion relative to the living income for this year's study.

If we focus on the natural gas bill, the results are opposite. As already mentioned, the gas bill weighs more heavily on the household budget than the electricity bill. The figure below illustrates this fact.

[453] On top of that, the minimal social measures associated with the 2 kids also help to increase the total income available, even if often only at a margin.

Figure 96: Natural gas effort rate compared to living income (in %)

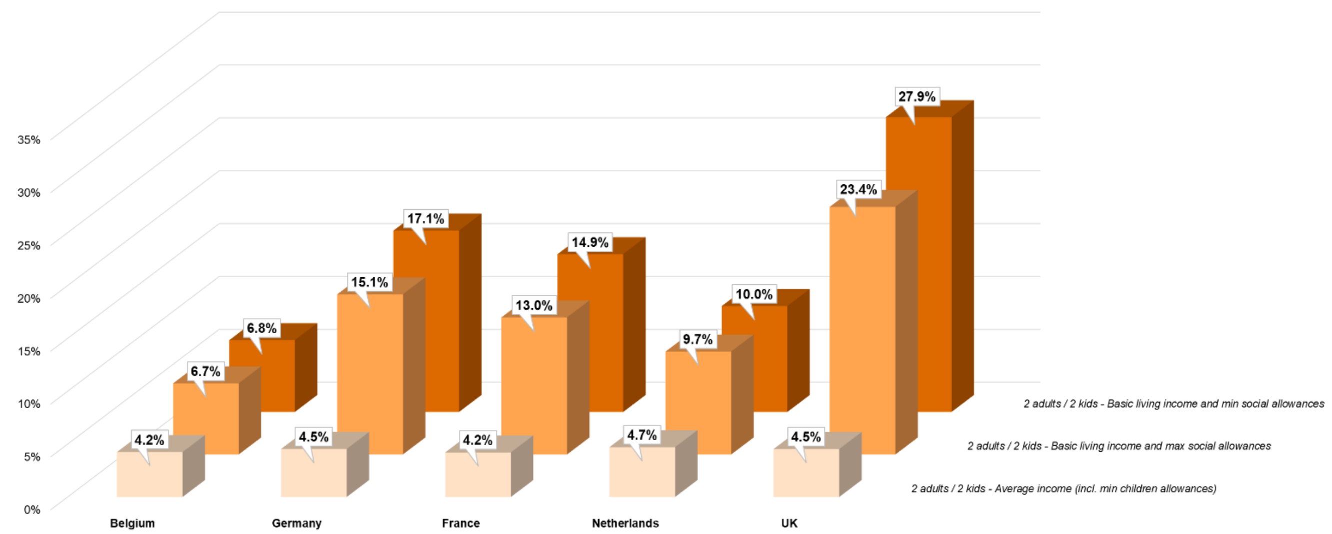


When comparing the effort rate for natural gas across countries for a household with an average income, we observe that the UK bears the lowest rate with 2.3% of the living income. Similarly to last year, but stepping down one position each, Belgium and Germany are tied with 2.4% of the living income. France follows with 2.7%, and the Netherlands brings up the rear with 3.3%.

Things change a bit when we consider households with the lowest incomes, though all countries' effort rates improve compared to previous year, except for Germany. Belgium is once again able to maintain a low weight of the natural gas bill compared to a basic income thanks to an available social tariff, which helps to keep the weight of the natural gas bill at 3.8%, which is a better effort rate than in the neighbouring countries. The Netherlands comes next with a natural gas bill accounting for around 7% of the available income depending on the number of social allowances received. The situation of France improves with a weight of the natural gas bill ranging from 8.3% to 9.5%. Germany is next with a wide gap ranging from 8.1 to 9.1% of the living income, followed by the UK. The latter is, again, the country with the largest bill in relation to living income for the most exposed households, with ranges going from 11.8% to almost 14.1% of available income. While the situation improved compared to last year for all countries except Germany, particularly in the UK (by around 2.5 percentage points) and to a lower extent for Belgium (by around 0.2 percentage points), the weight of the natural gas bills remains a serious issue for the most vulnerable households. This situation is explained by a low amount of substitute revenue for low-income households available in the country.

All in all, if we look at the total picture by adding up the electricity and natural gas bills, the main observations remain relevant as shown in the figure below:

Figure 97: Total energy bill effort rate compared to living income (in %)



When comparing the effort rate for the total energy bill across countries for a household with an average income, we can see that France and Belgium are the countries where the energy bill weights proportionally the least with 4.2%, followed by a tie between the UK and Germany at 4.5%. The Netherlands comes next with 4.7%. This year, we notice smaller disparities among the different countries observed, with the first and last countries observing a difference of 0.5%

Unsurprisingly, the situation becomes much more complicated for households with modest living incomes. In that case, Belgium can maintain a rather low weight of the energy bill compared to a basic income thanks to a social tariff available. This helps to keep the weight of the energy bill around 6.7%, which is around 56% more than what is observed for an average household. The Netherlands comes next, with a total energy bill counting for a bit less than 10% of the available income. France stands third with a total energy bill weighting between 13%, and almost 15% depending on the perceived allowances, representing a 1.5 percentage points decrease from last year. Next, Germany presents between 15% and 17% depending on the allowances that can be perceived. Finally, the UK is the country with the heaviest bill in relation to living income for the most exposed households, with figures ranging from more than 23% to almost 28% of available income. The total energy bill in the UK has however decreased by around 4 percentage points from last years' observations, though it still bears a disproportionate burden on households that are most at risk of energy poverty.

Important note: *The approach followed in this section has limitations as it does not necessarily correspond to the consumption profile of* some *people in the situation of energy poverty (such as an isolated person without children for instance). Furthermore, it doesn't take either the fact that some more exposed people would decide to consume less energy to lower their energy bill for example. On top of that, we are comparing the January 2025 energy bill in comparison with 2023 disposable income, which is inducing another bias, especially for a country such as Belgium where an automatic index is applied on wages. The ultimate objective of this chapter being to determine the effort rate needed to pay the energy bill (and compare it across countries to assess the impact of the energy bill in relative terms), we believe this approach is however robust enough to draw conclusions.*

Conclusion

All countries in scope do provide financial support and/or social measures aimed at helping consumers having difficulties in supporting energy costs. From our analysis, it appears that the position of France is better than other countries under review for the average incomes, when deducting housing costs. For modest revenues, Belgium once again comes first thanks to a social tariff which is not available anywhere else. Even if the gap between social tariff and commercial tariff has decreased since last year, this system remains the most advantageous one observed across all countries in scope of this study. For households with standard incomes, i.e. when the social tariff is not applicable, Belgium shows a comparatively low effort rate for both electricity and gas combined this year. It also appears to be higher than Frances' (for electricity), is close of Germany and the Netherlands' depending on the commodity under review. However, for households with standard incomes, the effort rate in Belgium has increased compared to last year (from 4.0% to 4.2% with housing costs and from 5.2% to 5.6% without housing costs). This is also the case in Germany, but the trend is opposite in France, the Netherlands and the UK, where the effort rate has decreased compared to previous year.

Within Belgium, Flanders is the region where the energy bill weighs the less, followed by Brussels and finally Wallonia.

In all countries in scope the governmental intervention through the granting of some sort of living income and social measures aimed at reducing one's energy expenses have a significant impact on lowering the financial burden for households, but the lowest incomes obviously remain the most vulnerable to high energy prices.

As Belgium (on par with Germany) displays one of the highest living incomes between the countries analysed when housing costs are deducted, it directly helps dilute the efforts made to pay for energy. Besides, the social tariffs for electricity and natural gas further supports vulnerable households as this significantly reduces their energy expenses.

Within Belgium and considering both living incomes, a tendency can be highlighted as Flanders and Brussels tend to display lower effort rates than Wallonia for both electricity and gas. The effort rates of the three Belgian regions tend however to converge once social measures are considered, for both electricity and gas.

Limitations of the analysis

This analysis has potential limitations that were already outlined in the previous pages. The study scope covers the comparison of households' energy effort rates depending on their disposable income. Various scenarios can be elaborated to reflect the weight of energy prices against disposable income. By using figures at national level, we cannot take into consideration the regional differences in disposable incomes. Furthermore, taking the assumption that a standard household is made of two working people that do earn their country's average disposable income is also a shortcut.

Then, minimum and maximum basic living incomes were estimated for each country based on a two-adults and two-children household only earning the minimum income available in the country. If a clear direction was given by considering all basic incomes and potential allowances for this type of household, no real common measure exists between the countries and regions under study and the observed situation may be completely different for people living alone for example. This entails increasing comparison difficulties. Moreover, we do not include here potentially "extreme" cases (e.g. highest level of child disability) as it may not be highly representative of a country or region's situation as few families might be concerned by all the measures in effect simultaneously.

At the reading of this analysis' conclusions, one must bear in mind the limitations mentioned here before. In this regard, complementary research must be conducted to consolidate the results obtained. As such, conducting similar research based on the first deciles of the average household income from the EU-SILC study could offer a harmonised measure to derive households' lower incomes. Besides, considering the number of households impacted by each governmental intervention would be necessary. We notably refer to studies from the CEER[454] to do so.

[454] (CEER, 2024)

9. Competitiveness of the Belgian industry in terms of energy prices

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Competitiveness analysis

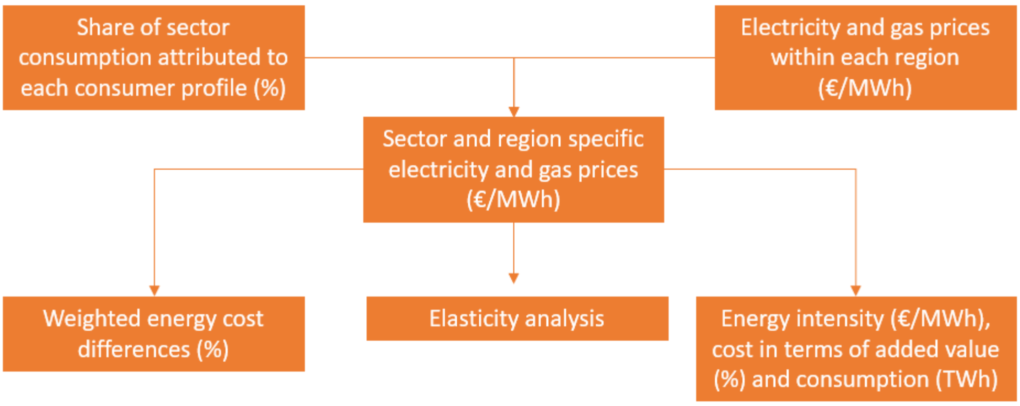
Methodology

When writing the 2024 edition of this report, the six most prominent industrial sectors in Belgium in the scope of an energy price comparison were selected: the chemical industry (NACE 20), the food & beverages industry (NACE 10-12), the manufacture of non-metallic mineral products (NACE 19), the basic metals industry (NACE 24) and the pharmaceutical industry (NACE 21). On top of the selected industries, an additional relevant manufacturing industry was added: the coke and petroleum products (NACE 23). For comparison reasons, the same industries will be used in this 2025 update of the study.

In the previous chapters of this report, the gas and electricity prices were compared with those of Belgium's neighbouring countries: Germany, France, the Netherlands, and the UK.

In this chapter, the information gathered in previous chapters is combined to analyse the competitiveness of the six most important sectors in Belgium. The reasoning behind the analysis is detailed in the following figure.

Figure 98: Methodology flowchart



The electricity and natural gas prices in Flanders, Wallonia and Brussels are first combined with the distribution of the different consumer profiles over the six most important sectors, resulting in sector- and region-specific electricity and natural gas prices. Then, these prices are used to calculate two important variables, through two separate pathways. The first pathway computes a weighted energy cost difference, which combines electricity and natural gas prices in one single measure. It makes it possible to compare energy prices of a certain sector (within a certain region) with that of the average of the neighbouring countries. The second pathway elaborates on the energy intensity, which expresses the energy cost of a certain sector and region in terms of added value.

This chapter is structured around this flow chart, which is further detailed in the following sections.

Sector- and region-specific electricity and natural gas prices

In the previous chapters, the electricity and natural gas prices for the Belgian three regions were collected. Since the aim of this chapter is to analyse the competitiveness of these prices for the six most important sectors, it is necessary to define a method which uses these regional prices and expresses them at the sectoral level. That is done by combining the regional electricity and natural gas prices with the breakdown of consumer profiles by sector. They are based on data provided by the CREG and show how the consumer profiles are broken down by sector[455], which consumer profile is the most predominant within each sector and therefore which one has the greatest impact on electricity and natural gas prices for that sector.

The relative frequency of each consumer profile per sector (obtained by multiplying the absolute number of profiles by the consumption of each profile[456] [457] and dividing it by the total consumption per sector) is presented in the tables below. As it can be seen in the following table, E4 is the predominant profile in the manufacture of coke and refined petroleum products (NACE 19) and in the manufacture of basic metals (NACE 24). The E3 profile is the most prominent in the manufacture of chemicals (NACE 20) and in the manufacture of other non-metallic mineral products (NACE 23). For the food products, beverages and tobacco products (NACE 10-11-12) and pharmaceuticals (NACE 21), the main profile represented is E2. The prices of these predominant consumer profiles have the largest effect on electricity prices for each of the six sectors. Table 133 shows that, the G2 profile is predominant in the chemicals (NACE 20), manufacture of non-metallic mineral products (NACE 23) and the basic metals (NACE 24) sectors, while G1 profile is preponderant for the food and beverages (NACE 10-12), the petroleum products (NACE 19) and the pharmaceutical (NACE 21) sectors.

The first column, for each profile, of the table underneath refers to absolute frequencies (#), while the second column, for each profile, of the same table refers to relative frequencies weighted by consumption profiles (%).

Table 133 : Distribution of electric consumer profiles per sector

Code NACE - Sector	E0 (2-10 GWh/year)[458]		E1 (10-17,5 GWh/year)		E2 (17,5-62,5 GWh/year)		E3 (62,5 -300 GWh/year)		E4 (>300 GWh/year)	
	#	%	#	%	#	%	#	%	#	%
NACE 10-11-12 - Manufacture of food products, beverages and tobacco products	57	5.1%	46	20.9%	49	55.7%	4	18.2%	0	0.0%
NACE 19 - Manufacture of coke and refined petroleum products	3	0.6%	2	1.6%	0	0.0%	2	16.3%	2	81.5%
NACE 20 - Manufacture of chemicals and chemical products	34	1.7%	20	5.2%	20	12.9%	16	41.4%	3	38.8%
NACE 21 - Manufacture of basic pharmaceutical products and pharmaceutical preparations	7	4.6%	6	20.1%	5	41.8%	1	33.5%	0	0.0%
NACE 23 - Manufacture of other non-metallic mineral products	22	2.7%	11	7.0%	17	26.9%	10	63.4%	0	0.0%
NACE 24 - Manufacture of basic metals	15	1.1%	3	1.1%	10	8.9%	10	35.6%	3	53.4%

Source: CREG (2024)[459], PwC Computations

Table 134: Distribution of gas consumer profiles per sector

[455] To identify the proportion of E0 companies, thanks to the CREG data, we extrapolated the proportion of big companies in the E0 profile by also using Statbel data sources.

[456] The data in both tables based on billing data from the CREG for all consumers with an offtake of more than 2 GWh of electricity or 1,25 GWh of natural gas per year.

[457] For electricity – E0: 2GWh, E1: 10GWh, E2: 25 GWh, E3: 100GWh, E4: 500GWh; For natural gas – G0: 1,25GWh, G1: 100GWh, G2: 250 GWh

[458] The split between E0 and E1 is different from the other profiles split, due to a lack of data for companies consuming less than 10 GWh/year. We estimated the E0 number of companies and relative consumption based on the Belgian companies' landscape while the other profiles are based on data given by the CREG.

[459] No update could be provided for 2025.

Code NACE - Sector	G0 (1.25-10 GWh/year)		G1 (10-1.000 GWh/year)		G2 (>1.000 GWh/year)	
	#	%	#	%	#	%
NACE 10–12 - Manufacture of food products; beverages and tobacco products	0	0.0%	17	100.0%	0	0.0%
NACE–19 - Manufacture of coke and refined petroleum products	1	0.1%	15	99.9%	0	0.0%
NACE–20 - Manufacture of chemicals and chemical products	2	0.0%	29	18.9%	5	81.2%
NACE–21 - Manufacture of basic pharmaceutical products and pharmaceutical preparations	0	0.0%	1	100.0%	0	0.0%
NACE-23 – Manufacture of other non-metallic mineral products	3	0.1%	14	35.9%	1	64.0%
NACE–24 - Manufacture of basic metals	1	0.0%	13	34.2%	1	65.8%

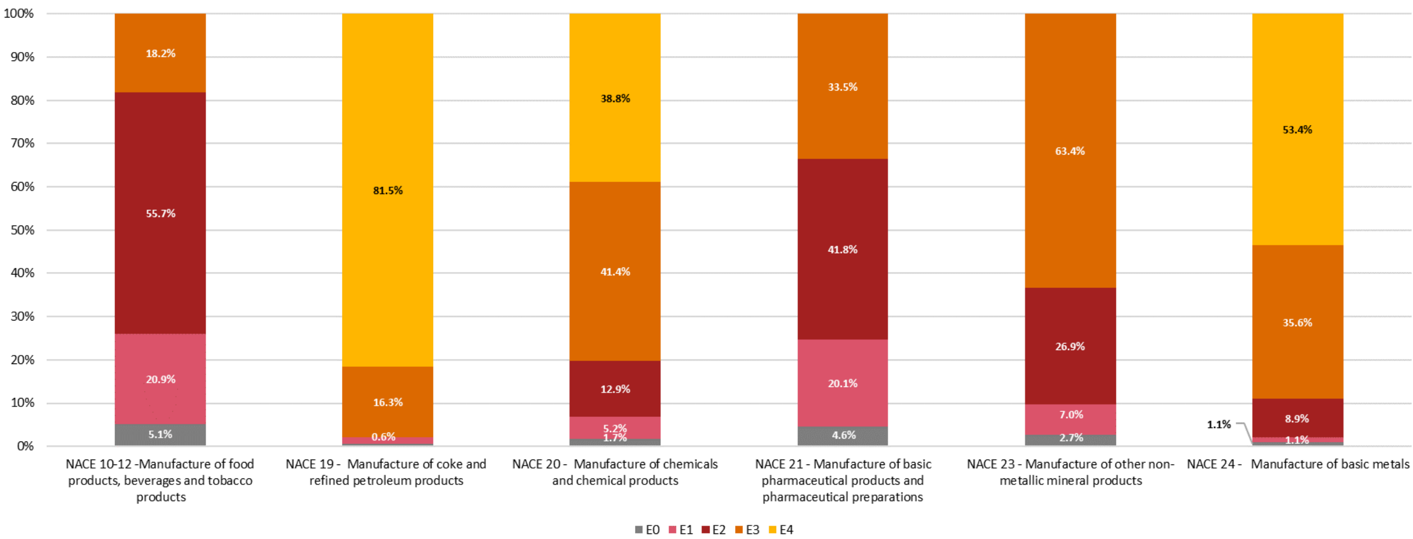
Source: CREG (2024)[460], PwC Computations

As an example, the absolute frequency for the chemicals (NACE 20) sector is 34 for E0. This means that 34 consumers have a quantity of invoiced electricity like the consumption of profile E0, 20 consumers for E1, 20 consumers for E2, 16 consumers for E3 and 3 consumers for E4. Multiplying these numbers by their respective consumption and summing them, results in a theoretical total electricity consumption on the sector level of 3,868 GWh. Expressed in relative frequencies, 1.7% of the total consumption is represented by profile E0, 5.2% by E1, 12.9% by E2, 41.4% by E3 and 38.8% by E4.

For natural gas, there are 2 consumers of profile G0, 29 for G1 and 5 for G2. Multiplying these numbers by their consumption and summing both up, results in a total theoretical gas consumption for the sector of 15,402.5 GWh. This reflects a relative frequency of 0.0% for G0, 18.9% for G1 and 81.2% for G2.

Along with the same logic, the relative frequencies of the consumer profiles for the other sectors have been calculated and are presented again in the two following figures. As it is clear from the figure below, the E1 profile is relatively more active in the pharmaceuticals (NACE 21) and food and beverage (NACE 10-11-12). For the E3 and E4 profiles, the predominance in the sectors of coke and refined petroleum (NACE 19), chemicals (NACE 20), non-metallic mineral (NACE 23) and basic metals sectors (NACE 24) is explained by the energy-intensity nature of the sector.

Figure 99: Share of sectoral electricity consumption attributed to each consumer profiles

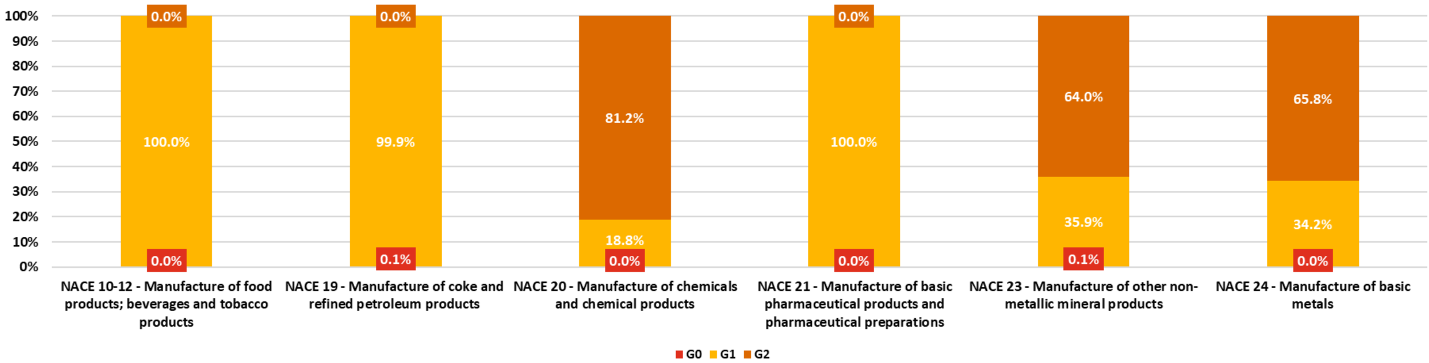


Source: CREG (2024), PwC Computations

460 No update could be provided for 2025.

Based on the chart provided, it can be seen that G1 is the most common profile in half of the sectors, namely NACE 10-12, NACE 19, and NACE 21. However, in some other sectors, G2 has a higher relative frequency than G1, although there are only a few G2 consumer profiles represented. This can be attributed to the significant volume of natural gas consumption by these profiles. For instance, in the manufacturing sector for basic metals and non-metallic mineral products, one company alone accounts for approximately 65% of the total consumption in this sector, leading to a substantial relative frequency of G2.

Figure 100: Share of sectoral natural gas consumption attributed to each consumer profile



Source: CREG (2024), PwC Calculations

As previously stated, these relative frequencies can be used together with the electricity and natural gas prices for each region to calculate sector and region-specific electricity and natural gas prices (in EUR/MWh). This is done by summing the multiplications of the prices retrieved for each consumer profile and their relative frequencies according to the formulas below:

$$P_{elec}\ for\ Sector_i\ in\ Region_j = \sum_{X=0}^{4} (Price\ for\ E_X\ in\ Region_j * Relative\ frequency\ of\ E_X\ in\ Sector_i)$$

$$P_{gas}\ for\ Sector_i\ in\ Region_j = \sum_{X=0}^{2} (Price\ for\ G_Y\ in\ Region_j * Relative\ frequency\ of\ G_Y\ in\ Sector_i)$$

When comparing those regions and sector-specific prices to the European average[461], they can be expressed as price differences with the European average. We have calculated the average prices of electricity and natural gas in the neighbouring countries according to the following formulas[462]:

$$European\ average\ of\ P_{elec}\ for\ Sector_i = \sum_{X=0}^{4} (Average\ price\ for\ E_X\ in\ neighbouring\ countries * Relative\ frequency\ of\ E_X\ in\ Sector_i)$$

$$European\ average\ of\ P_{gas}\ for\ Sector_i = \sum_{X=0}^{2} (Average\ price\ for\ G_Y\ in\ neighbouring\ countries * Relative\ frequency\ of\ G_Y\ in\ Sector_i)$$

$$X_{ij} = \left(\frac{P_{elec}\ in\ Sector_i\ in\ Region_j - European\ average\ of\ P_{elec}\ in\ Sector_i}{European\ average\ of\ P_{elec}\ in\ Sector_i}\right)$$

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461 The European average throughout this section refers to the average of Germany (average of the four regions for electricity in Germany), France, the Netherlands, and the United Kingdom, for both electricity and natural gas.

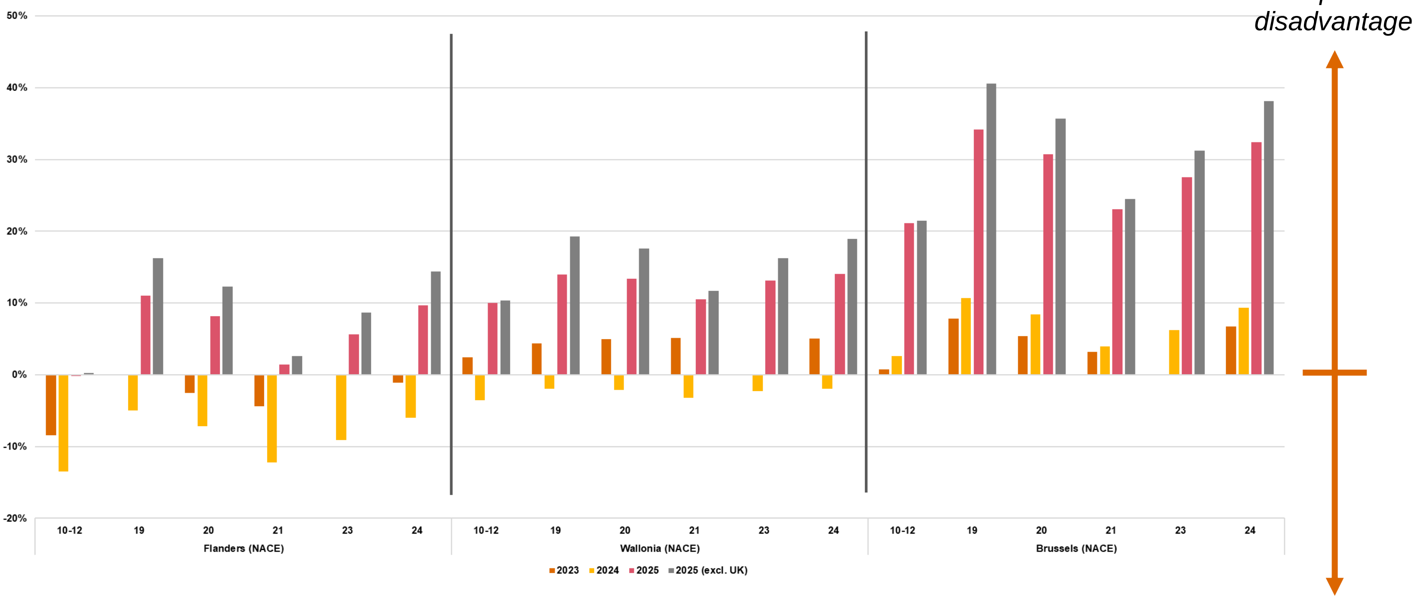
462 We have used the same share of sectoral electricity and natural gas consumption attributed to each consumer profile to calculate the average price of electricity and natural gas in the neighbouring countries. This way we assume that the different consumer profiles are equally distributed in the sectors under scope of the neighbouring countries.

$$Y_{ij} = \left(\frac{P_{gas}\ in\ Sector_i\ in\ Region_j\ - European\ average\ of\ P_{gas}\ in\ Sector_i}{European\ average\ of\ P_{gas}\ in\ Sector_i}\right)$$

Electricity and natural gas price differences (in %) measure the difference in price for a certain sector *i*, in a certain region *j* with the European average. These electricity and natural gas price differences in relation to the average in Belgium's regions and neighbouring countries, specific to a sector or region, are presented below and are illustrated in Figure 101 (for electro intensive consumers), Figure 102 (for non-electro intensive consumers) and Figure 103 for natural gas consumers.

Electricity price differences for electro intensive consumers

Figure 101: Electricity price differences for electro intensive consumers compared with the average in the neighbouring countries



Source: PwC Calculations (2025)

Inclusion of the UK

One can observe on the above figure, that electricity prices differ substantially from sector to sector and region to region. Flanders appears to be the most competitive region in 2025 in Belgium. However, it must be noted that while Flanders still had a notable competitive advantage for all sectors in 2024, this has changed drastically to a competitive disadvantage in 2025. A comparable trend was observed in Wallonia. Although it gained a slight competitive advantage across all sectors in 2024, this shifted to a competitive disadvantage in 2025, which is even more significant than in 2023. The competitive position for Brussels in 2024 declined further in 2025, confirming the declining trend in competitivity for all Belgian regions.

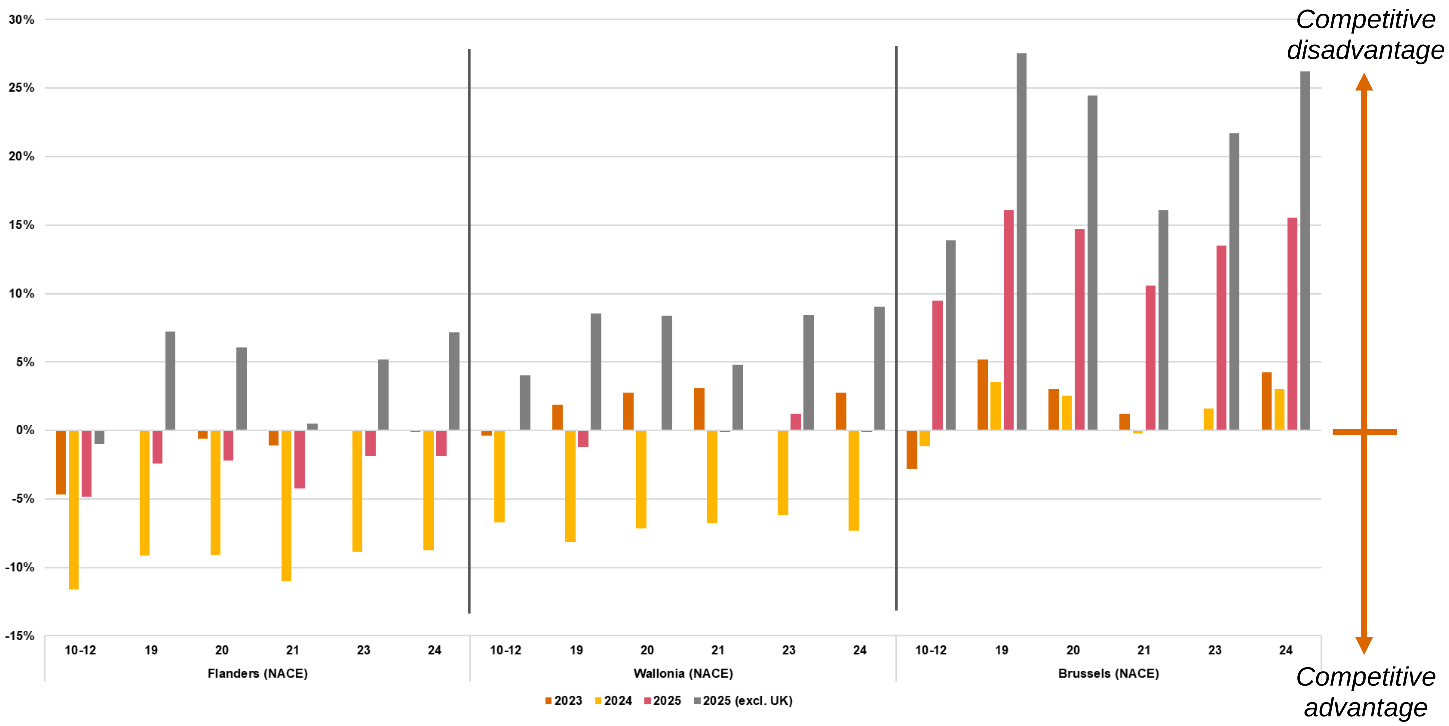
The reason for the difference in competitiveness between Flanders and the other Belgian regions is the Supercap on the GC and CHCP scheme cost, which helps reducing the electricity bill for industrial profiles. In Flanders, the activity sectors NACE 10-12 and 21 have what is closest to a competitive advantage, compared to other sectors in review. Sectors NACE 19 and 24 are the most impacted by this competitive disadvantage. In Wallonia, the situation has also worsened compared to 2024, with a decreased global competitiveness in all sectors. The NACE 10 to 12 and the NACE 21 are, similarly to Flanders, the sectors with the least important competitive disadvantage within the region. In the case of Brussels, this region is probably a theoretical case due to the limited number of industries on its territory, but the same outcome is observed.

Exclusion of the UK

When excluding the UK from the observations, Belgium's competitiveness decreases further for all regions. The presence of the UK positively affects Belgium's relative competitiveness across all industries. The most significant decreases in competitiveness for all Belgian regions when excluding the UK of the observations are observed in the sectors of coke and petroleum products, chemicals, and basic metals. The sector of food and beverages is impacted very little by the removal of the UK in every region from the observations.

Electricity price differences for non-electro intensive consumers

Figure 102: Electricity price differences for non-electro intensive consumers compared with the average in the neighbouring countries



Source: PwC Calculations (2025)

Inclusion of the UK

The figure above demonstrates that Belgium's competitiveness in non-electro intensive companies from the analysed industries is significantly better for all regions compared to electro intensive companies. However, it should be noted that the competitive advantage in Flanders and particularly Wallonia is rapidly deteriorating. In Brussels, where there was already a competitive disadvantage in 2024, this disadvantage has considerably worsened.

In Belgium, Flanders remains the most competitive region overall, maintaining a notable competitive edge in various industries when including the UK. Wallonia follows, although its competitive advantage is diminishing swiftly across all industries, and in the non-metallic mineral industry (NACE 23), it has turned into a competitive disadvantage. While Brussels had already a competitive disadvantage in 2024, this disadvantage became markedly worse in 2025.

Flanders still exhibits a relatively strong competitive advantage in 2025 for the food and beverages industry (NACE 10-12) as well as the pharmaceutical sector (NACE 21). Lesser competitive advantages are found in the remaining sectors: NACE 19, NACE 20, NACE 23, and NACE 24, with similar, smaller competitive advantages.

The situation in Brussels remains alarming for non-electro intensive consumers, with significant competitive disadvantages for all sectors. Although in the case of Brussels, this is probably a theoretical case due to the limited number of industries on its territory.

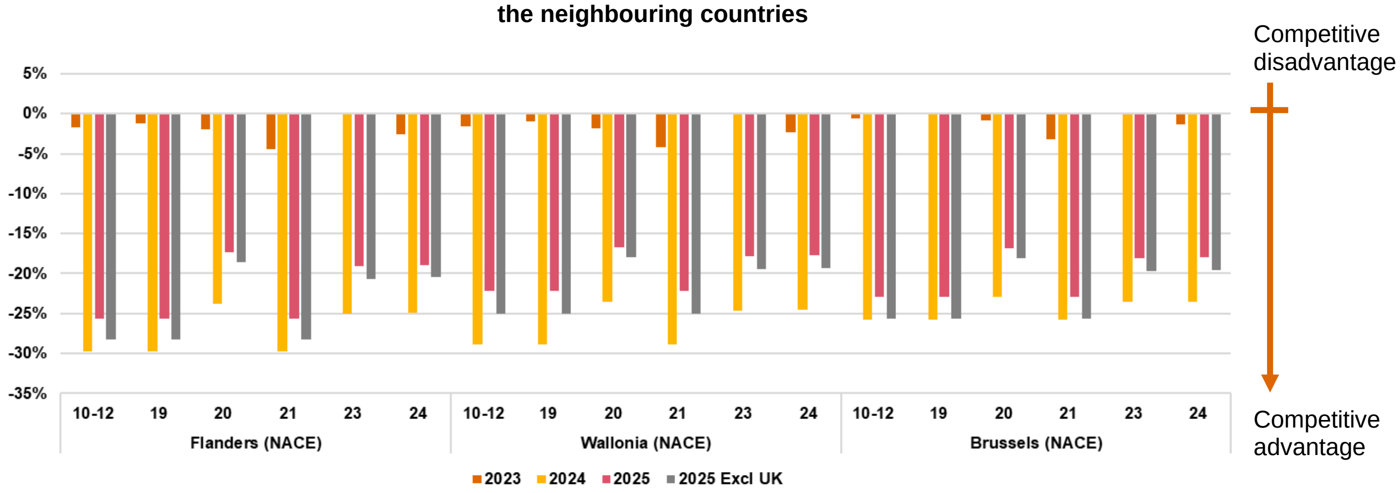
Exclusion of the UK

Excluding the UK from the analysis leads to a notable decline in the competitive position of all Belgian regions across all sectors. Nevertheless, NACE 10-12 in Flanders continues to maintain a competitive advantage, even without the UK in the comparison. Competitive disadvantages are generally less pronounced for non-electro intensive consumers than for their electro intensive counterparts. However, even in sectors where non-electro intensive profiles previously performed well, the absence of the UK reveals a significant drop in competitiveness across Belgium. This is mainly due to the UK's relatively weak competitive position compared to Belgium, which previously helped to improve Belgium's standing in the comparison.

The relatively strong position of Flanders and Wallonia compared to the UK—especially for smaller industrial consumers—meant that Belgium benefited from the UK's inclusion. Once the UK is excluded, Belgium's comparative advantage weakens, particularly in cases where the UK was less competitive than both Flanders and, at times, Wallonia.

Natural gas price differences for consumers

Figure 103: Natural gas price differences for industrial natural gas consumers in comparison with the average in the neighbouring countries



Source: PwC Calculations (2025)

From the figure above, it is evident that natural gas prices in the Belgian regions are still considerably more competitive than in neighbouring countries across various sectors and regions in 2025. However, this competitive advantage has slightly declined for all regions and sectors compared to 2024 (when including the UK).

The G1 and G2 profiles are the most prominent industrial profiles in Belgium, resulting in the fact that these profiles competitive position have the most influence on the average industrial natural gas consumer. Given that commodity costs are generally comparable across countries for these profiles, and network costs constitute only a small portion of the total invoice, the competitive position is primarily influenced by the all other costs component. Belgium tends to excel in keeping this component at a low level for these profiles, which enhances its competitive position.

The competitive advantage of Belgium and all its regions show a notable increase when excluding the UK. This is due to the UK's significant rise in competitiveness for natural gas compared to 2024, particularly when considering potential reductions. Although prices in the UK remain slightly above the Belgian average, they have become some of the most competitive across all regions and countries (in this report). This is particularly true for the G1 profile, which is predominantly found in Belgium and significantly impacts the average industrial natural gas consumer.

Difference between the Belgian regions are rather small, with Flanders leading the pack, followed closely by Wallonia and lastly Brussels.

Electro intensive and non-electro intensive consumers

In the previous and following sections, two different results in terms of energy price differences are presented: one shows the comparison within electro intensive consumers, and the other shows the comparison within non-electro intensive consumers. The first, valid for the electro intensive consumer, compares prices in each region of Belgium with the lower range of prices observed in neighbouring countries; assuming that, in each of the neighbouring countries, the ‘competitors’ of Belgian industrial consumers meet the national electro-intensity criteria and therefore benefit from significant reductions in several components of the electricity price, as shown in the following table.

Table 135: National electro-intensity criteria

Country/Region	Criteria
Germany	For consumers of most industrial sectors: when electricity cost >14% of gross value added.
The Netherlands	Industrial consumers classified as being energy-intensive and concluded a multiple-year agreement with the Dutch government to save energy by improving their energy efficiency[463].
France	Substantial reductions for the excise duty (down to 0.5 EUR/MWh) on electricity exist for industrial consumers for which the electro-intensity represents at least 0.5% of their value added. For example, for a consumer of 10 GWh/year, a value added of 45 MEUR or less in the annual accounts is necessary to qualify for this criterion (i.e. the excise is at least 0.5% of the value added).
Belgium	Industrial consumers from the three regions for both electricity and natural gas can be exempted from the federal special excise duty. According to Art. 429.§ 1er of the law from 27th December 2004[464] an exemption is foreseen when electricity and gas are not used only for heating and transport, but also for metallurgic or chemical industrial procedures.
Flanders	The reductions on green and CHP certificates previously existing for industrial consumers were based on an electro-intensity of more than 20 % for the sectors listed in Annex I of the CEEAG (cap of 0.50% of gross value added) and for all consumers belonging to the sectors listed. 454 However, since the end of 2023, the risk of relocation is the criteria factoring in the decision to allocate reductions or not. Hence, this is not stricto sensu an electro-intensity based reduction anymore.
The UK	Until 2024, energy intensive industries in the UK had an exemption from up to 85% of the indirect costs of the Renewable Obligations. Since March 2024, 100% of the indirect costs due to the Renewable Obligations. To be eligible and obtain Electro Intensive exemption schemes in the UK, a company must (1) pass a minimum of 20% of electro intensity (i.e., electricity costs amount to 20% or more of its Gross Value Added), and (2) belong to one of the activity sectors referenced in the Annex 1 of the EEAG[465].
All countries	All countries/regions under review in this study have introduced a CO2 compensation scheme for indirect emissions costs that companies are obliged to pay according to the EU ETS system (or UK ETS system). This cost is alleviated for electro intensive companies according to the own countries’ schemes (e.g., in the UK[466], in Flanders[467] or Germany[468]). The impact of these schemes has not been included in this years’ study, but a presentation of the ETS and its impacts has been introduced in Appendix I.

The second result is valid for non-electro intensive industrial consumers in Belgium. It compares prices in the three Belgian regions with the upper range of prices observed in neighbouring countries, assuming that, in each of the neighbouring countries, the “competitors” of Belgian industrial consumers do not meet the national electro-intensity criteria and therefore pay the maximum price.

Whenever a series of results in neighbouring countries was available, we compared the prices in the three Belgian regions to the middle of the range of neighbouring countries.

Both at the Belgian level and in the neighbouring countries, there is a lack of publicly available information, making it impossible to identify the importance of electro intensive enterprises in each of the industrial sectors studied.

[463] An energy-intensive enterprise is an enterprise for which energy or electricity costs represent more than 3 % of the total value of production or for which energy and mineral oil taxes represent at least 0.5 % of the value added. (Overheid.nl, 2020)

[464] (Chancellerie du Premier Ministre, n.d.)

[465] (UK Government, 2025)

[466] (Gov.uk, 2024)

[467] (Vlaamse Regering, 2023)

[468] (European Commission, 2022)

However, it is possible to give an indication at the purely macroeconomic level as to the electro-intensity (and natural gas intensity) of the sector. It must be made clear that behind these figures, at the macroeconomic level, lies a great complexity in terms of specific sub-sectors and consumer profiles. They do, however, highlight the sectoral energy intensity in Belgium and the severity of the criteria in neighbouring countries.

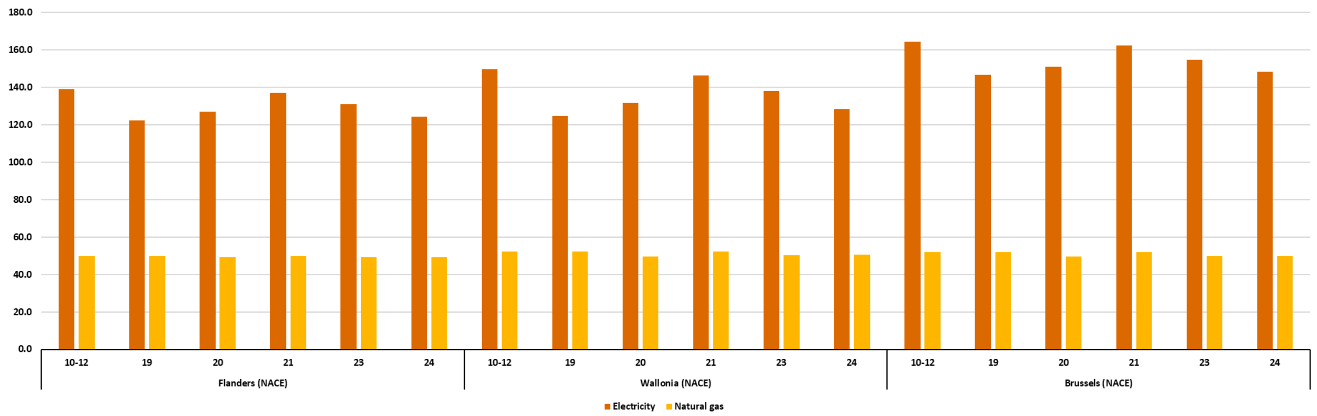
To get an idea of the relationship between the electro-intensity criteria of the neighbouring countries and the level of electro-intensity in Belgium and its 6 main sectors, we first introduce in this section the concept of energy cost based on:

- The electricity and natural gas prices for each sector and region (EUR/MWh) on the one hand (Figure 104);
- Energy intensity or MWh/EUR of value added for both electricity and natural gas per sector on the other hand (Figure 105).

The cost of energy reflects the cost of electricity and natural gas for the sector as a whole in terms of value added.

As it can be seen in the following figure, electricity prices are the highest for the NACE 10-12, followed by NACE 21 due to important energy consumption with a high added value created per MWh for NACE 21. Natural gas prices present a flattened curve with similar price levels among sectors. NACE 10-12 is highest for natural gas too, with NACE 19 on second place.

Figure 104: Sector and region-specific electricity and natural gas prices (in EUR/MWh) in 2025[469]

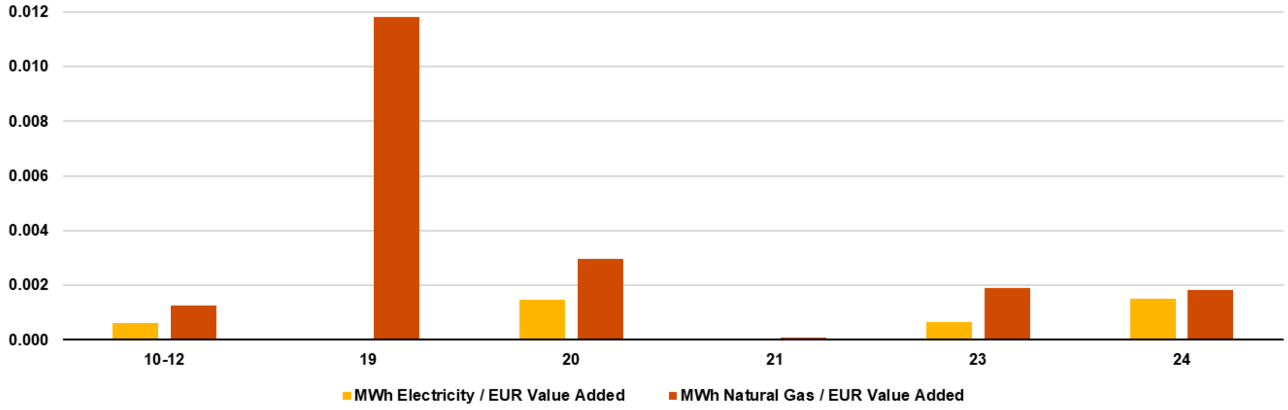


Source: PwC Calculations (2025)

As shown in Figure 105, the energy intensity is higher for natural gas than for electricity and varies depending on the sector. Sectors with high values in MWh/EUR value added are considered as energy-intensive, as is the case for NACE 23 and NACE 24 regarding electricity. NACE 19 and NACE 23 seem to be contrasting cases: while they are natural gas-intensive sectors, they have almost the lowest electricity-intensive sectors.

[469] This graph is based on average price values between electro intensive consumers and non-electro intensive consumers.

Figure 105: Energy intensity per sector in Belgium in 2025



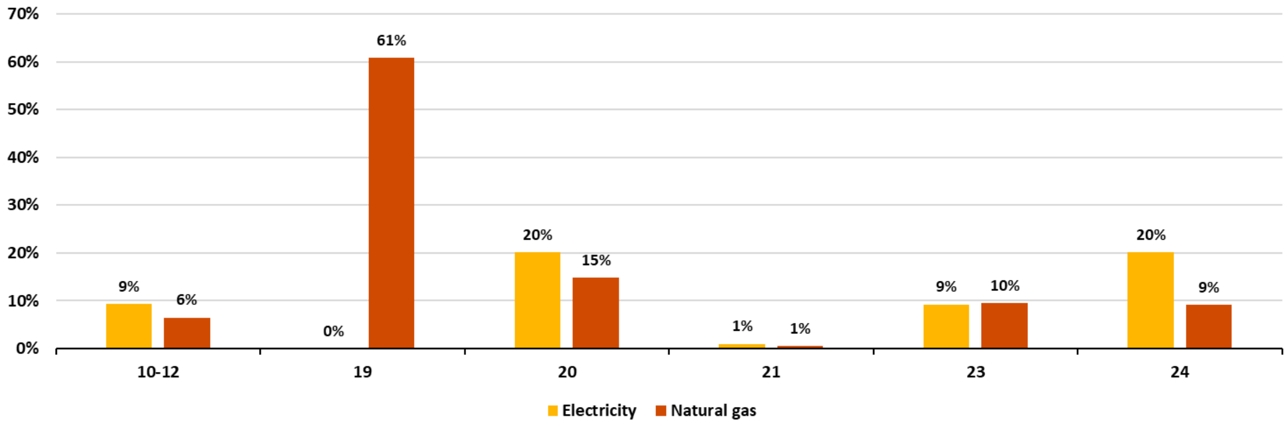
Source: Federal Planning Bureau, Eurostat (2022), PwC Calculations

Combining sector- and region-specific electricity and natural gas prices with energy intensity figures produces a measure that represents the cost of electricity or natural gas as a percentage of value added (presented in Figure 106). These data are extracted according to the following formulas:

$$Electricity\ cost\ for\ Sector\ i\ in\ Region\ j\ (\%\ of\ added\ value) \\ = P_{elec}\ for\ Sector\ i\ in\ Region\ j * Energy\ intensity\ (electricity)\ for\ Sector\ i$$

$$Natural\ gas\ cost\ for\ Sector\ i\ in\ Region\ j\ (\%\ of\ added\ value) \\ = P_{gas}\ for\ Sector\ i\ in\ Region\ j * Energy\ intensit\ (natural\ gas) for\ Sector\ i$$

Figure 106: Energy cost as % of value added in Belgium in 2025



Source: Federal Planning Bureau, Eurostat (2022), PwC Calculations

The figure above shows that natural gas cost as a percentage of value added is lower than that of electricity, except for the NACE 19 and NACE 23, which is probably a natural-gas intensive sector and barely requiring electricity. Furthermore, it can be observed that the cost of energy in relation to value added is highest in the NACE 19 and NACE 20, while the cost of energy, in general, is lowest for the NACE 21 sector in Belgium.

As mentioned above, in Flanders, Germany, France and the Netherlands, certain industrial consumers can claim reductions or exemptions from their energy taxes, based on national criteria. Most of these criteria are related to the cost of energy as a percentage of value added. For example, in Germany, the criterion for a lower tax regime is the cost of electricity exceeding 14% of value added. As shown in the above figure, the sectors NACE 10-12, NACE 20, NACE 23 and NACE 24 are the sectors in Belgium which achieve an electricity cost of more (or almost) than 10% at sector level. However, as these are aggregated figures that hide information on the level of industrial consumers, some individual industrial consumers may have a higher-than-average electricity intensity and therefore must compete with the so-called electro intensive consumers in neighbouring countries. As will be seen in the next section, these energy-intensive companies could be at a significant disadvantage compared to their European competitors.

Weighted energy cost differences

The graphical representation of the energy prices in the regions/countries under review are interesting to see what the origin of the cost differences are. However, they cannot tell us whether or not the cost of energy as a whole is advantageous. It depends on the amount of electricity and natural gas consumed throughout the production process. As this information is publicly available, we detail in this section how to combine the differences in electricity and natural gas prices with the consumption volumes of both types of energy into a single measure: the weighted energy cost difference. This measure compares the overall cost of energy in each sector and region with the European average[470]. If an industrial company consumes lots of electricity and almost no natural gas during its process, it is likely that electricity prices will have a significant impact on its energy bill.

The weighted energy cost difference is calculated according to the below formulas[471]. The two first formulas are helpful to better understand the final computation, which is the relative energy cost difference expressed in percentage.

$$Energy\ cost\ difference\ for\ Sector_i\ in\ Region_j\ (in\ \frac{EUR}{MWh})$$

$$= \frac{(European\ average\ of\ P_{elec}\ for\ Sector_i\ *\ X_{ij}) * C_i + (European\ average\ of\ P_{gas}\ for\ Sector_i * Y_{ij})}{C_i + 1}$$

$$Energy\ cost\ difference\ for\ P_{energy}\ for\ Sector_i\ (in\ \frac{EUR}{MWh})$$

$$= \frac{(European\ average\ of\ P_{elec}\ for\ Sector_i\ *\ C_i + European\ average\ of\ P_{gas}\ for\ Sector_i}{C_i + 1}$$

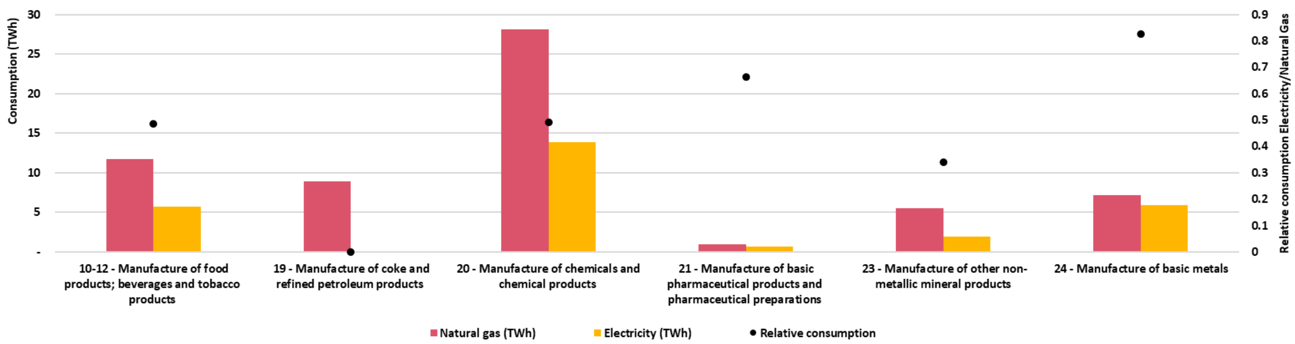
As mentioned previously, using the two formulas above, we compute the energy cost difference thanks to the following formula:

$$Weighted\ energy\ cost\ difference\ for\ Sector_i\ for\ Region_j\ (in\ \%)$$

$$= \frac{European\ cost\ difference\ for\ Sector_i\ in\ Region\ _j}{European\ average\ of\ P_{energy}\ for\ Sector_i}$$

The relative consumption (C_i) used in the first equation to calculate the energy cost difference is the ratio of the total volume of electricity to the total volume of natural gas consumed in each sector. It represents which of the two types of energy is used more intensively during the production process. It is calculated based on the macro-economic data from the energy consumption accounts that we have recovered for each sector (from the Federal Planning Bureau). Figure 107 gives an overview of relative consumption by sector.

Figure 107: Energy consumption per sector



Source: Federal Planning Bureau, Eurostat (2022), PwC Calculations

[470] The European average throughout this section refers to the average of the neighbouring countries under scope in this report: Germany, France, the Netherlands and the United Kingdom

[471] Where X_{ij} refers to the electricity price for Sector i in Region j and Y_{ij} refers to the natural gas price for Sector i in Region j

The volume of each energy type consumed by sector is presented on the left axis, while the relative consumption (volume of electricity divided by the volume of natural gas) is presented on the right axis. It is clear that the 6 most important sectors have a relative consumption of less than 1, which means that these most important sectors consume more natural gas than electricity during the production process. For NACE 24, consumption is relatively balanced (relative consumption of 0.83), but within NACE 20, NACE 23 or even more in NACE 19, natural gas consumption is at least double compared to electricity consumption[472].

Relative consumption plays an important role in the calculation of the weighted energy cost differences since the lower the value of C_i (i.e. the more natural gas is consumed compared to electricity fed during the production process), the greater the importance of natural gas prices in the total cost of energy and in the calculation of the weighted energy cost differences is.

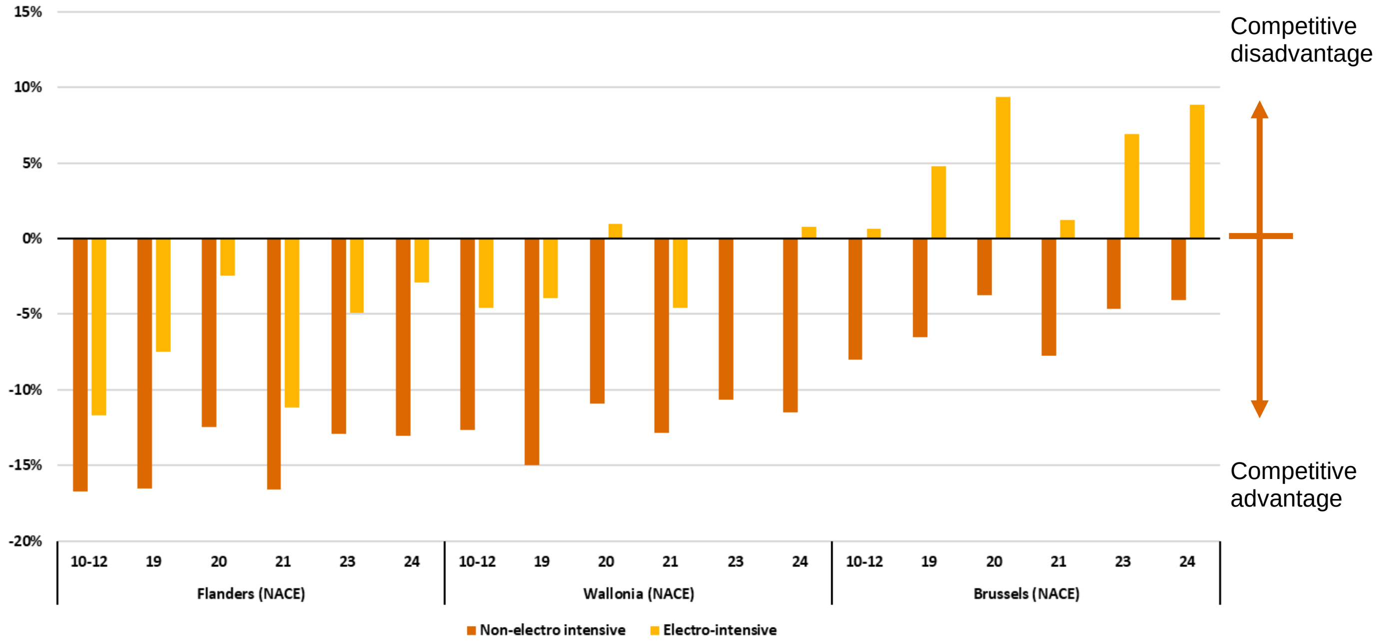
The results of the electricity and natural gas price differences for electro intensive and non-electro intensive consumers and the calculation of the weighted energy cost differences are presented in Table 136. These electricity and natural gas price differences have been calculated for the whole sector. As they are presented at a macro level, they may hide important differences between industrial consumers in the same sector.

Table 136: Results for every industrial sector in Flanders, Wallonia and Brussels compared to the average prices in Germany, France, the Netherlands and the UK (2025)

Region	Sector	Electricity price difference (electro intensive)	Electricity price difference (non-electro intensive)	Natural gas price difference	Relative consumption	Weighted energy cost difference (electro intensive)	Weighted energy cost difference (non-electro intensive)
Flanders	NACE 10-12	-1.30%	-5.42%	-22.12%	0.49	-11.68%	-16.71%
	NACE 19	10.31%	-2.52%	-22.13%	0.00	-7.48%	-16.52%
	NACE 20	7.02%	-2.51%	-11.89%	0.49	-2.45%	-12.45%
	NACE 21	0.00%	-4.96%	-22.12%	0.66	-11.16%	-16.62%
	NACE 23	4.45%	-2.32%	-14.31%	0.34	-4.89%	-12.95%
	NACE 24	8.91%	-1.96%	-14.06%	0.83	-2.93%	-13.08%
Wallonia	NACE 10-12	9.34%	-0.53%	-18.57%	0.49	-4.57%	-12.63%
	NACE 19	13.80%	-1.27%	-18.58%	0.00	-3.96%	-14.98%
	NACE 20	13.04%	-0.20%	-11.07%	0.49	0.97%	-10.93%
	NACE 21	9.72%	-0.70%	-18.57%	0.66	-4.56%	-12.87%
	NACE 23	12.66%	0.96%	-12.84%	0.34	-0.03%	-10.65%
	NACE 24	13.97%	-0.06%	-11.63%	0.83	0.77%	-11.52%
Brussels	NACE 10-12	20.43%	8.97%	-26.12%	0.49	0.65%	-8.04%
	NACE 19	33.98%	15.95%	-26.13%	0.00	4.78%	-6.52%
	NACE 20	30.00%	14.28%	-21.95%	0.49	9.35%	-3.73%
	NACE 21	22.13%	9.91%	-26.12%	0.66	1.25%	-7.77%
	NACE 23	26.75%	12.99%	-22.91%	0.34	6.89%	-4.67%
	NACE 24	32.05%	15.37%	-22.81%	0.83	8.86%	-4.08%

[472] NACE 19 does of course consume electricity even if it cannot be clearly displayed in the figure. Based on Eurostat data, the quantity of electricity consumed by this sector has been decreasing in recent years. (Eurostat, 2024)

Figure 108: Sectoral weighted energy costs differences (electricity and natural gas) between the Belgian regions and the average of 4 European countries (Germany, France and the Netherlands, including the UK) for electro intensive and non-electro intensive consumption



Source: PwC Calculations (2025)

All sectors in Belgium possess a competitive advantage regarding differences in weighted energy costs for non-electro intensive consumers. In contrast, the situation for electro intensive consumers vary. While all sectors in Flanders and, to a lesser extent, most sectors in Wallonia still maintain a competitive edge, the opposite is observed in Brussels. Electro intensive consumers in all sectors in Brussels experience competitive disadvantages of up to almost 10% (Chemical sector, NACE 20). Overall, the competitive advantage is most significant in Flanders, specifically within NACE 10-12, NACE 19, and NACE 21.

- Electro intensive consumers: industrial consumers in all sectors in Flanders who compete with electro intensive consumers in neighbouring countries have a competitive advantage ranging from 2.45% (NACE 20) to 11.68% (NACE 10-12). Regarding Wallonia, some electro intensive consumers face a competitive disadvantages, namely in sectors NACE 20 and NACE 24, from 0.97% to 0.77% respectively. NACE 10-12, NACE 19 and NACE 21 still have a competitive advantage over the neighbouring countries in Wallonia ranging between 4% and 5%.

  A different situation applies to Brussels which faces a competitive disadvantage for all electro intensive consumers up to 10%.

- Non-electro intensive consumers: for industrial consumers in the three Belgian regions which are in competition with non-electro intensive competitors in Germany, France, the Netherlands and the UK, the situation is more favourable compared to the one for the electro intensives. All three regions have a competitive advantage for all their industries. In the three regions, the food and beverages sector (NACE 10-12), the manufacturing of coke and refined petroleum products (NACE 19) and pharmaceuticals (NACE 21) have the most advantageous weighted energy cost

The differences in weighted energy costs for non-electro intensive consumers remain negative (advantageous) for Flanders and for some sectors in Wallonia (NACE 10-12, 19 & 21), as opposed to 2024 where weighted energy costs were lower (and so more advantageous) in almost all regions and sectors. The production of chemicals (NACE 20) and non-metallic mineral products (NACE 23) are in Wallonia and Flanders, those with the less interesting weighted average energy costs, especially Wallonia, where the weighted average energy costs have become more expensive or as expensive as the other regions and countries under review.

Weighted energy cost differences when excluding the UK

When the UK is excluded from the benchmark, the competitive position of Belgian industrial sectors clearly deteriorates across all regions for non-electro intensive sectors. This shift is also visible for most electro intensive industries in Brussels, where disadvantaged sectors experience a further increase in their competitive disadvantage. However, for electro intensive industries NACE 10-12 and NACE 21, the competitive disadvantage in the case of including the UK has turned into a small competitive advantage in Brussels. For electro intensive consumers in the other two regions, a similar mixed trend can be observed.

In Wallonia, excluding the UK also further increases the competitive disadvantage of electro intensive sectors for NACE 20 and NACE 24. However, the electro intensive consumers of the remaining sectors face a increase in their competitive advantage when excluding the UK. This is similar to Flanders, which has a competitive advantage for electro intensive consumers in all industrial sectors and this advantage increases further when excluding the UK. This is in contrast to the decreasing competitive advantage for non-electro intensive consumers.

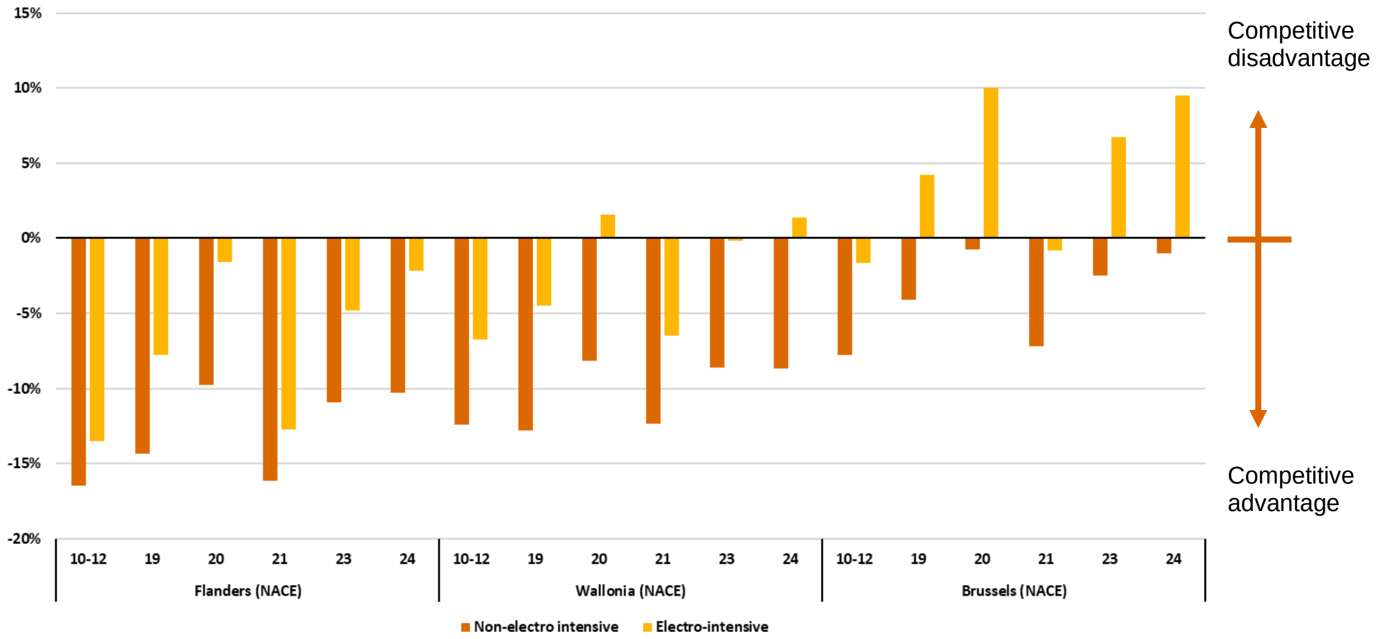
Overall, excluding the UK tightens the competitive advantage for non-electro intensive consumers in all regions and industries. For electro intensive consumers this exclusion particularly exposes already existing structural disadvantages in Brussels but also increases for all regions the competitive advantages that were already in place when including the UK.

The differences in weighted energy costs for electro intensive and non-electro intensive consumers are shown in the below figure.

Table 137: Results for every industrial sector in Flanders, Wallonia and Brussels compared to the average prices in Germany, France and the Netherlands, excluding the UK (2025)

Region	Sector	Electricity price difference (electro intensive)	Electricity price difference (non-electro intensive)	Natural gas price difference	Relative consumption	Weighted energy cost difference (electro intensive)	Weighted energy cost difference (non-electro intensive)
Flanders	NACE 10-12	-1.39%	-2.17%	-25.56%	0.49	-13.71%	-16.50%
	NACE 19	15.39%	6.95%	-25.57%	0.00	-7.99%	-14.36%
	NACE 20	10.59%	5.23%	-13.59%	0.49	-1.83%	-9.74%
	NACE 21	0.56%	-0.95%	-25.56%	0.66	-12.95%	-16.12%
	NACE 23	6.88%	4.10%	-16.48%	0.34	-5.03%	-10.93%
	NACE 24	13.31%	6.80%	-16.18%	0.83	-2.36%	-10.26%
Wallonia	NACE 10-12	9.25%	2.90%	-22.17%	0.49	-6.76%	-12.41%
	NACE 19	19.05%	8.32%	-22.18%	0.00	-4.48%	-12.78%
	NACE 20	16.81%	7.73%	-12.78%	0.49	1.61%	-8.17%
	NACE 21	10.34%	3.49%	-22.17%	0.66	-6.48%	-12.36%
	NACE 23	15.28%	7.59%	-15.05%	0.34	-0.19%	-8.58%
	NACE 24	18.57%	8.87%	-13.81%	0.83	1.36%	-8.65%
Brussels	NACE 10-12	20.33%	12.72%	-22.82%	0.49	-1.66%	-7.80%
	NACE 19	40.16%	27.22%	-22.83%	0.00	4.21%	-4.10%
	NACE 20	34.34%	23.36%	-12.96%	0.49	10.04%	-0.75%
	NACE 21	22.81%	14.55%	-22.82%	0.66	-0.79%	-7.22%
	NACE 23	29.70%	20.42%	-15.34%	0.34	6.73%	-2.46%
	NACE 24	37.38%	25.68%	-15.10%	0.83	9.49%	-0.97%

Figure 109: Sectoral weighted energy costs differences (electricity) between the Belgian regions and the average of 3 European countries (Germany, France and the Netherlands, excluding the UK) for electro intensive and non-electro intensive consumption



Source: PwC Calculations (2025)

Elasticity

In this section, Belgium's relative competitiveness in terms of electricity and natural gas prices is further explored through the elasticity of demand. Previously, prices charged to industrial consumers in the 3 Belgian regions (Brussels, Flanders and Wallonia) and in 4 countries (France, Germany, the Netherlands and the UK) were estimated. The concept of elasticity of demand aims at depicting the expected reaction in terms of demand, following a change in prices or consumed quantities. This exercise becomes particularly interesting in order to help design efficient energy policies. The elasticity of demand, in this study, is evaluated from a price perspective. This reaction can be transcribed into the following equation[473]:

$$\text{The elasticity of demand} = \frac{\%\ \text{change in quantity demand}}{\%\ \text{change in price demand}} = \frac{\frac{\Delta\ Quantity}{Quantity} * 100}{\frac{\Delta\ Price}{Price} * 100}$$

Conceptually, the price elasticity of demand helps to assess how demand adapts to price variations. Changes can be looked at from two time-horizon perspectives: in the short term and in the long-term. In the short-term, price elasticity of demand attempts to reflect energy consumption changes resulting from new prices. In the long-term, price elasticity of demand, which generally tends to be higher (more elastic demand) aims at reflecting rather structural changes in behaviour from the considered industrial consumers. However, when prices are high and regardless of the elasticity and the short-term or long-term changes in behaviours, a limit to adaptation and adjustments in energy demand exists from where industries would potentially consider shutting down or relocating their activity elsewhere with lower prices.

This section aims at assessing industrial consumers' price elasticity with regards to energy demand. By doing so, it is assumed to observe how industrial consumers react to price and adapt quantities.

[473] This formula means that for every increase in energy prices of 1%, energy consumption falls by the respective proportion identified.

As such, regardless of other factors that may contribute to the decision, the objective of this exercise is two-fold: it intends to evaluate the likelihood for a company to either leave or come to Belgium[474] because of energy prices differences. Concretely, this section tries to answer the following questions:

1. Is Belgium attractive to foreign industrial consumers with regards to power and natural gas prices?
2. Are other countries attractive to Belgian industrial consumers with regards to power and natural gas prices?

To that end, the elasticity of demand based on the price paid for both electricity and natural gas is used to observe the potential reaction of our industrial consumers. Based on the literature review that is later explained, it is assumed to consider the energy bills as a whole, thereby aggregating electricity and natural gas bills as both elasticity estimates (inelastic demand) are relatively similar. However, previously derived results led us to understand that significant price differences exist between non-electro intensive and electro intensive consumers.

When considering electricity, non-electro intensive companies currently face relatively lower prices in Belgium than in other countries considered in this study. This means that these consumers should have, at the moment, higher incentives to come to Belgium from an electricity price perspective only. With this in mind, we attempt to grasp the consumption variation they could face between abroad and Belgium, given the current price differences and up to what maximum price, they are expected to remain in Belgium. Conversely, electro intensive consumers are here looked at as companies that could potentially relocate their activity from neighbouring countries to Belgium in case prices appear to be lower in Belgium. As several countries under study implemented financial measures to support such consumers, they often benefit from more advantageous conditions abroad than in Belgium. Concretely, we assess what consumption adjustments these consumers would benefit from if they were to leave these countries and how important would their price change should they consider operating a move in Belgium.

Considering the two different questions we want to answer, which are to evaluate to what extent consumers are either inclined to come to Belgium or at risk of leaving Belgium, prices employed play a significant role[475]. Given the different observation angles, different prices derived from previously detailed results are used. Maximum applying prices are used to estimate the probability to come to Belgium due to sufficiently low prices. Therefore, we use maximum prices paid by non-electro intensive and natural gas consumers for consumers potentially coming to Belgium. Inversely, we employ minimum applying prices for electro intensive consumers and natural gas consumers for consumers at risk of leaving Belgium. Our approach thus distinguishes two types of consumers that are categorised into two consumers categories based on the prices paid:

- ***High range consumers***: maximum prices paid by non-electro intensive consumers for electricity + maximum price paid for natural gas;
- ***Low range consumers***: minimum prices paid by electro intensive consumers for electricity + minimum price paid for natural gas.

In this context, Belgium's top six sectors used in the competitivity analysis are considered[476].

[474] Given that the competitivity analysis highlighted the top five sectors in Belgium, it was decided to assess the impact of elasticity at the Belgium level. However, this exercise could be more nuanced, would it be conducted considering the economic fabric of each region specifically.

[475] One could assume that a company might only transfer part of its production volume or production assets to another country to benefit from more advantageous prices. However, given the macro-level of this analysis, we do not have enough information to consider partial transfers and consider the risk for a company to relocate.

[476] The identification of these five sectors was performed in chapter 3.3.

Methodology

This exercise was conducted through a four-step approach:

(1) Through a literature review, presented below, elasticity rates are determined.

(2) Based on existing results, the difference between countries in the average total energy bills is computed per sector. To do so, we aggregate the final electricity and natural gas bills as elasticity rates employed to apply for energy considered as a whole. The total consumption volumes and the distribution of companies per profile were identified through data provided by the Federal Planning Bureau. For each sector, each country's final bill was ultimately evaluated considering the average electricity and natural gas consumer weighted by the proportion of energy used per profile and the associated price per unit of energy (EUR/MWh)[477].

(3) Then, for each sector, we compute the magnitude of energy demand variation that would exist for the two consumer groups. This variation is estimated both in absolute and relative terms based on countries' price differences and considering the elasticity of demand. While results for high range consumers (i.e. non electro intensive) depict their energy demand variation in Belgium if a foreign consumer were to leave Belgium, results for low range consumers (i.e. electro intensive) represent Belgian companies' energy demand variation if they were to leave Belgium. In both cases, companies would face lower energy consumption, given the current price differences.

(4) Finally, for each sector, we estimate the maximum price up to which a company is expected to remain in its current country following a variation in the quantity of consumed energy. As such, a high range of consumers' figures displays the maximum foreign price that foreign non-electro intensive consumers are ready to accept while facing a decrease in their energy consumption. Conversely, we estimate the maximum rise in Belgian prices that Belgian consumers are willing to accept prior to considering leaving the country due to a decrease in their energy consumption. To derive the maximum price, a fixed threshold is set to determine the maximum decrease in quantity, which can be understood as the maximum acceptable company's consumption reduction due to multiple reasons such as energy efficiency, lower activity, etc. From that maximum price, it is assumed that industrial consumers start considering shutting down or relocating their activities in case they can find lower energy prices elsewhere.

Through this methodology, we expect to determine how sensitive companies are to price changes considering the sector they are active in and the existing prices in countries under study.

[477] Considering a specific sector - NACE 19 for instance - there are 2 E1-like consumers out of 88. Knowing that they consume about 20 GWh out of 179 GWh consumed by industrial consumers from the sector, it represents 1.6% of the total industrial consumption. With an estimated maximum price of 169.65 EUR/MWh in Brussels (see profile E1 in chapter 6) the electricity bill per company weighted by the profile's relative consumption in the total sector consumption is computed as follows: 169.65*(88/2)*1.6% or 1.194.433 EUR electricity bill. Replicating this for each industrial profile, the sector total energy (electricity and natural gas) bill is eventually computed by including the natural gas bill.

Literature review

Various academic papers have worked on energy price elasticity, providing a wide literature on the topic. While many research studies are relevant to this report, none identified could exactly meet our needs. Consequently, a selection of studies covering related topics was selected and used to derive values that could be used as proxies for this exercise. As research studies on elasticity are usually conducted at a macro-level and tend to aggregate large amounts of data from several countries, it was also decided to select papers covering industrialised or European countries in the priority given the considered countries for this study.

Most papers consider energy as a whole without narrowing it down to types of energy goods. As such, Labandeira et al. (2017)[478], a meta-analysis of 416 papers from 1990 to 2014, estimated price elasticity of demand for energy to be ranging from -0.22to -0,224 in the short-term (ST), from -0,6 to -0,652 in the long-term (LT)[479]. However, the latter figures are not specific to industrial consumers whose energy price elasticity of demand would be of -0,166 on the short-term and of -0,508 on the long-term. Therefore, it can be understood that industrial consumers' price elasticity tends to be lower than when considering all consumers (e.g. households). Considering energy as a whole regardless of the time horizon, Trinomics (2018)[480] derive similar results with a relatively inelastic price demand for industrial consumers of -0,2 where Adeyemi & Hunt (2007)[481] estimate an elasticity of -0,22.

As this study focuses on both electricity and natural gas demand, it was decided to further detail elasticities to reflect differences in terms of industrial consumers' dependence towards both types of energy goods rather than sole energy. As no specific study could be found doing this, particularly for industrial consumers, figures were approximated from existing research studies. Labandeira et al. (2017)[482] observed short-term and long-term price elasticities for both electricity and natural gas. While the former is estimated to range from -0,209 to -0,231 (ST) or from -0,677 to -0,686 (LT), natural gas price elasticity is estimated to range from -0,216 to -0,239 (ST) or from -0,614 to -0,850 (LT). As mentioned here-above, this study reflects price elasticity on an economy-wide perspective. Consequently, we expect those figures to be lower (i.e. relatively less elastic demand in the short run) for industrial consumers, as suggested in previously introduced papers. Both short-term tendencies can be confirmed through other studies such as Horáček (2014)[483], benchmarking 36 studies, which evaluates electricity price elasticities to range from -0.16to -0.21and Bilgili (2013)[484], conducted on OECD countries, that deems that price elasticity of natural gas on the economy is of -0,318 to -0,345.

Additional attention was brought to identify papers that would assess the elasticity of demand for industrial consumers specifically and on those making the distinction between energy-intensive and non-energy-intensive sectors when possible. In this perspective, Chang et al. (2019) conducted this analysis of data from 20 OECD countries in 16 industries.

Authors classified industries as follows:

Table 138: Classification of industry according to energy-intensity by Chang et al. (2019)

Energy Intensity	Industry
Energy-Intensive	Non-ferrous metals; Iron and steel; Chemical and petrochemical; Non-metallic minerals; and Paper, pulp, and printing
Non-energy-intensive	Fishing, Mining and quarrying, Commercial and public services, Non-specified (industry), Wood and wood products, Agriculture/forestry, Transport equipment, Textile and leather, Construction, Machinery, and Food and Tobacco

[478] (Labandeira, 2017)

[479] While no specific definition is provided for short-term or long-term, it is assumed to be based on several papers to be of 1-2 years for the short-term and about 5 years for the long-term.

[480] (Trinomics, 2018)

[481] Adeyemi, O.I. and L.C. Hunt, 2007. Modelling OECD industrial energy demand: Asymmetric price responses and energy-saving technical change

[482] (Labandeira, 2017)

[483] (Horáček, 2014)

[484] (Bilgili, 2013)

Their estimates resulted in price elasticity for energy demand for:

- ***Energy-intensive group***: in the ST, values range from -0,029 to -0,200 and, in the LT, values range from -0,128 to -0,529.
- ***Non-energy-intensive group***: in the ST, values range from -0,078 to -0,165 and, in the LT, values range from -0,210 to -0,594.

As we observed, results differ from one paper to another. This can be due to models used, data employed or scope of the study. Even if absolute values are different, tendencies observed are similar and serve as the basis for our choices of parameters. The following table synthesizes study scopes and estimated values:

Table 139: Summary of elasticities of price demand from the literature review

Articles	Focus	Energy good	Energy-intensity	Short-term elasticity	Long-term elasticity
Labandeira et al. (2017)	Economy	Energy	All	[-0,224; -0.22	[-0,652; -0,6]
	Economy	Electricity	All	[-0,231; -0,209]	[-0,686; -0,677]
	Economy	Natural Gas	All	[-0,239; -0,216]	[-0.85 -0,614]
	Industrial consumers	Energy	All	-0,166	-0,508
Trinomics (2018)	Industrial consumers	Energy	All	-0,2	/
Adeyemi & Hunt (2007)	Industrial consumers	Energy	All	-0,22	/
Horáček (2014)	Economy	Electricity	All	[-0.21 -0.16	-0,43
Bilgili (2013)	Economy	Natural Gas	All	-0,318	-0,345
Chang et al. (2019)	Industrial consumers	Energy	Energy-intensive	[-0,2; -0,029]	[-0,529; -0,128]
	Industrial consumers	Energy	Non-energy-intensive	[-0,165; -0,078]	[-0,594; -0,210]

From this literature review, it appears clear that setting a fixed value on elasticity is sensitive and largely variable. Therefore, to limit bias from the determination of parameters values, we use the average from values observed in the literature for both time-horizons. Estimated parameters are as follows:

- Average short-term price elasticity of demand: **-0,193**;
- Average long-term price elasticity of demand: **-0,525**.

As short-term price elasticity of demand appears to be relatively inelastic, companies are less likely to relocate because of energy price changes in the short run. While this statement does hold in the long-term as well, the suspected impact is already much more significant. Therefore, this exercise only makes use of the average long-term price elasticity value as the parameter. Concretely, this means that for every 1% increase in energy prices, energy consumption falls by 0.525%.

Results

Consumption changes due to price variations

First and foremost, the total energy bills for an average industrial consumer in each specific sector were computed. To do so, the distribution of companies per profile and per sector, the proportion of energy they consume in the total volume of energy consumed per sector and the associated cost per unit per profile were used. Table 140 indicates average energy bills that were identified both in absolute and proportional terms. For high range consumers, foreign prices are compared to Belgium's average bill as we evaluate Belgium's attractivity towards foreign consumers (i.e. a positive percentage indicates financial incentive to move to Belgium because of higher foreign prices). Conversely, we evaluate the risk for Belgian low range consumers to relocate due to lower foreign prices (i.e. a negative percentage indicates financial incentive to leave Belgium because of lower foreign prices compared to Belgium's). Colour codes are used to ease the reading of the table. Green highlights positive situations for Belgium – either a price-based interest to come to or remain in Belgium - whereas red depicts negative cases for Belgium – either a price-based interest to leave Belgium or to remain abroad.

Table 140: Total energy (electricity and natural gas) bills in absolute and relative terms (compared to Belgium average)[485]

Sector	Consumer range	Belgium (average)	Germany		France		The Netherlands		The UK	
		(EUR)	(EUR)	%	(EUR)	%	(EUR)	%	(EUR)	%
Nace 10-12	High	10,239,414	14,164,802	38%	11,382,021	11%	11,939,480	17%	12,113,037	18%
	Low	9,833,397	11,720,301	18%	8,939,866	-9%	11,491,401	17%	9,880,319	0%
Nace 19	High	60,650,564	83,893,298	38%	47,174,048	-22%	60,510,454	0%	74,384,208	23%
	Low	59,748,141	56,027,074	-6%	34,469,512	-42%	58,794,808	-2%	57,290,863	-4%
Nace 20	High	133,502,593	183,306,986	37%	159,630,580	20%	143,919,915	8%	163,397,945	22%
	Low	131,090,917	159,312,494	21%	118,243,234	-10%	130,823,342	0%	135,366,534	3%
Nace 21	High	11,774,334	16,167,477	37%	12,381,000	5%	13,455,863	14%	14,006,139	19%
	Low	11,322,328	12,958,808	14%	9,625,371	-15%	12,968,164	15%	11,326,695	0%
Nace 23	High	91,375,820	125,112,562	37%	116,758,143	28%	100,570,734	10%	111,528,203	22%
	Low	89,477,833	113,821,541	27%	86,873,008	-3%	90,544,077	1%	93,707,651	5%
Nace 24	High	123,667,760	169,966,146	37%	141,139,232	14%	131,926,775	7%	151,426,119	22%
	Low	121,500,796	143,233,201	18%	104,382,163	-14%	120,887,824	-1%	124,296,976	2%

Overall, Belgium appears to offer lower energy prices for high range consumers across all sectors (with the exception of NACE code 19, where France is more affordable by 22%). This competitive advantage is particularly pronounced in comparison to Germany, where energy prices are consistently about 37-38% higher than those in Belgium for high range consumers, regardless of the NACE code. Other countries fall within a price range of 0% to 28% higher than Belgium, depending on the specific NACE code and country considered.

In terms of low range consumers, the overall situation is similar (except for France and NACE code 19), although the price differences with other countries are less pronounced. Belgium provides lower energy prices compared to its neighbouring countries, with the difference ranging from 0% in the UK for NACE codes 10-12 or for the Netherlands in the case of NACE 20, to 27% in Germany for NACE code 23. However, Belgian prices are higher than those in France across all sectors, with increases ranging from 3% to 42%.

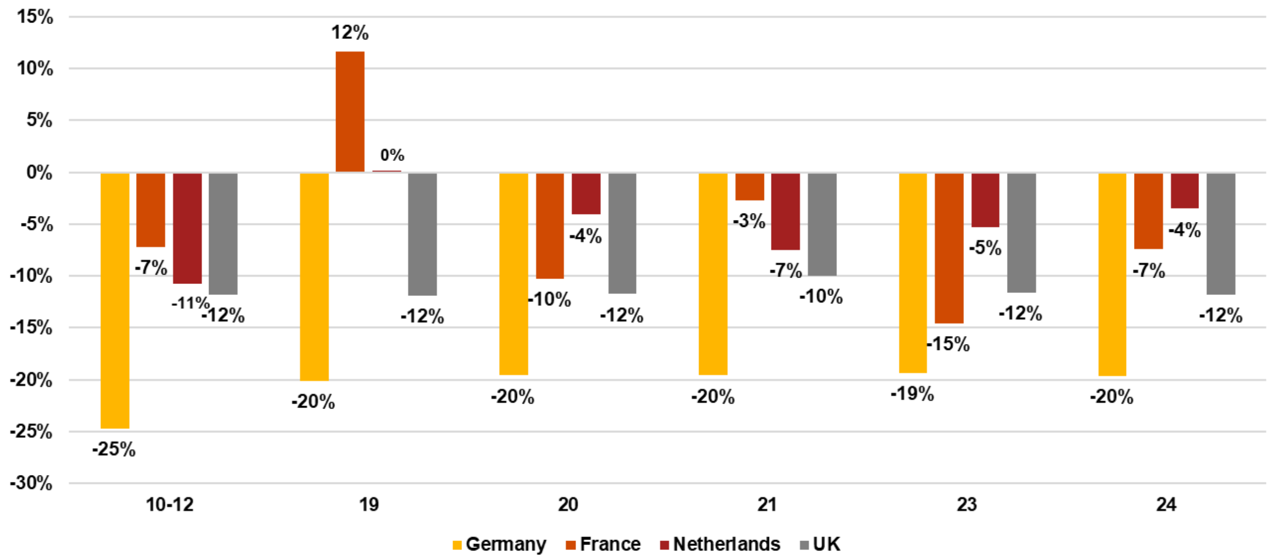
Compared to 2024, Belgium now appears somewhat less attractive for low-demand consumers, particularly in comparison to France, and increasingly so against all countries for NACE code 19. As was observed last year, Germany continues to be the least competitive option for low-demand consumers, regardless of their NACE code.

[485] As reminder, high range consumers are composed of non-electro intensive and natural gas consumers for which we use the maximum applying prices. Low range consumers are composed of electro intensive and natural gas consumers for which we use the minimum applying prices.

It is important to note that while the decrease in commodity costs for electricity across the regions and countries under review contributes to a more convergent overall picture, the trend for natural gas is quite the opposite, with prices on the rise.

From these price differences, we can derive consumption variation given the assumed price elasticity of demand of -0,525 (see Literature review from the elasticity section). Figure 110 attests for these variations (in %) for high range consumers (i.e., the maximum applicable price range for non-electro intensive and natural gas consumers) whereas Figure 111 details consumption changes for low range consumers (i.e., the minimum applicable price range for electro intensive and natural gas consumers) compared to Belgium average.

Figure 110: Change in energy (electricity and natural gas) consumption for "high range" consumers in the neighbouring countries compared to Belgium (i.e. maximum applicable prices for non-electro intensive and natural gas consumers)



The results presented above indicate a general decline in Belgium's competitiveness for high range foreign consumers. While prices in Belgium remain lower overall – albeit to a lesser extent – foreign companies still observe price disparities when comparing costs with Belgium across all analysed countries. Given that the previously mentioned elasticity term is negative, a reduction in consumption is anticipated among foreign high-demand consumers, regardless of the sector involved. France is an exception, exhibiting a positive 12% increase in consumption within the NACE 19 sector.

In January 2025, UK and German consumers are the ones that may experience the most significant impacts from elevated prices, with a theoretical demand reduction ranging from 19% to 25% in Germany, and approximately 10% to 12% in the UK. In contrast, France and the Netherlands appear to be the least affected, depending on the specific industry.

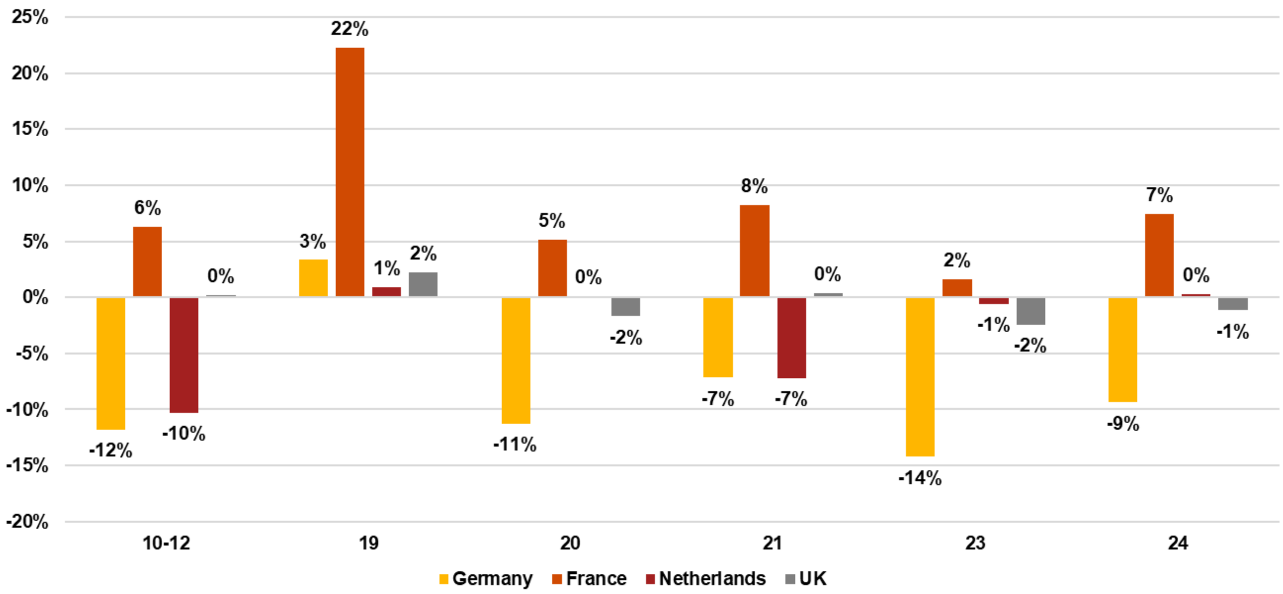
Figure 110 illustrates that high-demand consumers would generally be better off in Belgium. With the exception of France's NACE 19 sector, it can be concluded that consumption levels are lower abroad compared to what is achievable in Belgium. The analysis of sectors reveals a stable trend overall, though certain sectors, such as NACE 10-12, NACE 21, and NACE 23, demonstrate varying levels of resilience depending on the country. Notably, the coke and refined petroleum sector (NACE 19) is relatively less affected, particularly in France and the Netherlands.

In contrast to the high range results, the findings for low range consumers present a more fragmented picture. Belgian consumers could either see lower or higher prices depending on their chosen destination country and the respective NACE sector. While France continues to be more competitive than Belgium across all sectors, the price gap is narrowing with the UK and, to a lesser extent, the Netherlands (excluding NACE sectors 10-12 and 21 in the Netherlands, where the country is not competitive). Conversely, Germany once again demonstrates limited competitiveness in this context, with slight advantages only for industries classified under NACE code 19.

The graph below illustrates the situation for low range consumers. It reveals a convergence of energy bills across the regions and countries under review, with two notable outliers. France consistently would show higher consumption across all sectors (up to 22% for NACE code 19), while Germany demonstrates the opposite trend with lower consumption of energy for most sectors under review (up to -14% for NACE code 23), though this not the case for the NACE 19.

The below graph depicts the situation with regards to the low range of consumers. We observe for this figure a convergence of energy bills among the regions/countries under review, with two outliers: France being leading to higher consumptions for all sectors while the opposite is observed for Germany (up to 14% for NACE code 23) – except for NACE sector 19 which behaves differently.

Figure 111: Change in energy (electricity and natural gas) consumption for "low range" consumers in the neighbouring countries compared to Belgium (i.e., the applicable minimum price for energy-intensive and natural gas consumers)



The potential relocation of high/low range consumers

So far, we have derived potential consumption change because of price variations. This was estimated through the price differences in energy bills across countries and the application of the elasticity term based on the elasticity formula previously detailed. The opposite exercise is now conducted.

From a determined change in consumption, we estimate the maximum prices that are acceptable for one consumer prior to deciding to leave their country. In addition to short-term and long-term adjustments of consumption, it is considered that a demand reduction limit applies, above which we assume that the industry will start considering shutting down activities or relocating, provided that a location with lower prices exists. Therefore, we identify the maximum acceptable demand reduction limit, from which a bigger reduction in demand would imply more than energy efficiency measures and output adaptation changes. As Figure 110 and Figure 111 identify the resulting change in consumption from the currently estimated energy bills, we assume that it also indicates the maximum acceptable change in consumption. Taking the average from values displayed in Figure 110 and Figure 111 we obtain -5.8%. (i.e. a consumer is ready to accept a 5.8% reduction in consumption before deciding to leave the country)

Since we intend to determine structural price differences resulting from reductions granted by public authorities on taxes or transmission tariffs as observed in this study, the applicable elasticity for this exercise is the long-term price elasticity of demand.

Consequently, both Belgian and foreign companies are expected not to relocate when the maximum acceptable prices reach an increase up to 6.1% of current prices:

$$Elasticity\ of\ demand = \frac{\%\ change\ in\ quantity\ demand}{\%\ change\ in\ price\ demand}$$

$$-0.525 = \frac{-5.8\%}{\%\ change\ in\ price\ demand}$$

$$\%\ change\ in\ price\ demand = \frac{-5.8\%}{-0.525} = 11\%$$

High range foreign consumers may find it economically advantageous to relocate to Belgium due to its lower energy prices. According to the analysis, foreign prices would need to exceed Belgian prices by more than 11% for consumers to consider remaining in their current locations. Table 140 (referenced above) illustrates the existing price disparities between countries, while Table 141 below summarises the countries where high-demand consumers are likely to be inclined to relocate to Belgium. Table 142 summarises countries where electro intensive consumers are likely to be inclined to relocate from Belgium to neighbouring countries. Countries where relocation is deemed feasible are highlighted in green, while those where Belgium does not present a viable option – based on the 11% maximum acceptable price – are marked in red.

Table 141: Relocation possibilities for high range consumers

Sector	Germany	France	Netherlands	The UK
10-12				
19				
20				
21				
23				
24				

Consistent with findings from 2024, Belgium remains a theoretically attractive option for industries across all sectors looking to relocate from Germany and the UK, provided that such a move is not hindered by other constraints. With the exception of companies in sectors NACE 19 and NACE 21, French businesses may also find Belgium appealing for relocation. In the Netherlands, the situation is somewhat different; companies might not find Belgium appealing for relocation, except in sectors NACE 10 - 12 and 21.

In contrast, the landscape looks considerably less favourable for low range consumers in 2025. While all German companies (excluding those in sector NACE 19) could theoretically benefit from Belgium's lower prices, the same cannot be said for companies in the other countries under consideration. Regardless of their NACE sector, French and UK companies are generally better off remaining in their current locations, while only Dutch companies in NACE sectors 10-12 and 21 would stand to gain from relocating to Belgium.

Table 142: Relocation possibilities for low range consumers

Sector	Germany	France	Netherlands	The UK
10-12				
19				
20				
21				
23				
24				

These conclusions, and their significance, can largely be attributed to the convergence of electricity prices observed at the European level in 2025, resulting from a general decrease in commodity costs. However, the trend for natural gas has been somewhat different, as prices have increased across all countries since last year, which has somewhat balanced the overall picture.

Key findings

It results from this analysis that we can answer to our first two questions originally set:

1. **Is Belgium attractive to foreign high range industrial consumers?**

   In January 2025, Belgium continues to be, on average, a more attractive option for non-energy-intensive industries compared to other countries, with the exception of France for NACE code 19 and 21. This is particularly true in comparison to Germany and the UK. However, the price differences observed compared to last year are diminishing on average. With the exception of the UK and Germany, these differences may not be significant enough to incentivise industry relocation to Belgium based solely on electricity and natural gas prices, disregarding other potential decision-making factors. While high range consumers across all countries and sectors are likely to find lower energy prices in Belgium (except for NACE code 19, 21 and 23 depending on the country).

2. **Are other countries attractive for Belgian low range industrial consumers?**

   In January 2025 Belgium may offer more attractive energy prices for energy-intensive industries, particularly compared to Germany (except in sector NACE 19), and in the Netherlands for some industries (NACE 10-12 and 21). However, energy costs may be perceived as too high for electro intensive companies to relocate in Belgium, especially when comparing them to France or the UK, for all sectors under review. This also holds true for the majority of sectors analysed in the Netherlands, and only the NACE 19 in Germany. While it would not be enough to justify a complete industry relocation from Belgium to a neighbouring country due to the many parameters being factoring in when making a relocation decision, low-demand industrial consumers could lack sufficient energy-related financial incentives to remain in Belgium based on what can be observed in January 2025. This does not hold true for Germany, which is not seen as financially attractive enough to justify, solely based on energy prices, a relocation.

Conclusions and recommendations

Conclusions on the competitiveness of the economy

While caution is necessary when assessing the impact of the results in that chapter – owing to the diversified macro-level data – some conclusions can be drawn:

(1) **Electricity competitiveness:** A notable finding is the advantageous position for Belgium's key industrial sectors when competing with non-electro intensive consumers in neighbouring countries, compared to competing against electro intensive consumers. However, it's crucial to mention that the electricity price differential between Belgium and other reviewed countries shifted from a competitive disadvantage in 2024 to a mixed competitive advantage in 2025. The conclusions vary for non-electro and electro intensive consumers, depending on the region.

- **Non-electro intensive consumers:** Industrial consumers in Belgium competing with non-electro intensive counterparts in neighbouring countries enjoy a competitive edge by operating in Flanders. They are on par with other countries when located in Wallonia in terms of electricity consumption only. Brussels faces a competitive disadvantage in electricity prices. Even when excluding the UK (a statistical outlier), all regions experience a marked competitive disadvantage. Although the UK inclusion positively impacts Belgium's industrial competitiveness in certain areas, the overall competitiveness has still decreased for non-electro intensive consumers compared to 2024.

- **Electro intensive consumers:** The trend for electro intensive consumers that benefit from reductions/exemptions shows Belgium facing a significant competitive disadvantage in 2025, worse than in 2024. Flanders emerges as the region with the least competitive disadvantage overall. NACE activity sectors 10 – 12 and 21 have a low variability of competitiveness between non-electro intensity and electro-intensity and the closest to a neutral competitive position.

(2) **Natural gas competitiveness:** In 2025, Belgium retains its status as the most competitive country for industrial natural gas consumers across studied sectors (NACE 10–12, 19, 20, 21, 23, 24), driven by low network and other costs. Competitiveness varies for G2 consumers based on federal reductions and equal reductions abroad. Industrial gas prices are converging across Europe, notably for larger consumer profiles under tax reductions, indicating heightened competitive pressure.

(3) **Regional disparities in Belgium:** In terms of total sectoral weighted energy costs, Brussels remains less favourable compared to Flanders and, to a lesser extent, Wallonia. This disparity is particularly evident in the industrial sectors focused on non-metallic mineral products, chemicals, coke and petroleum products, and basic metals (NACE 19, 20, 23 & 24). Although Brussels retains a slight competitive edge for non-electro intensive consumption within these sectors, it shifts to a roughly 5% competitive disadvantage for electro intensive consumers. Similarly, Wallonia encounters a minor competitive disadvantage in sectors NACE 20 & 24 for electro intensive consumption. In contrast, Flanders consistently maintains a competitive advantage across all industrial sectors, catering effectively to both electro intensive and non-electro intensive consumers.

(4) **Combining gas and electricity costs:** Using a weighted average of gas and electricity costs provides macro-economic insights but fails to capture the precise energy cost situation faced by individual sectors (NACE 10–12, 20, 21, 23, 24). Due to different energy reliance – such as gas for chemical plants and electricity for metals producers – conclusions drawn from weighted averages should be carefully interpreted and ideally supplemented by sector-specific analyses.

Recommendations

While Belgium demonstrates a competitive edge in most industrial sectors based on weighted energy costs, especially for non-electro intensive consumers, substantial variations in actual competitiveness can occur depending on the significance of natural gas or electricity in a business's energy mix.

Energy pricing trends

A notable finding is the advantageous position for Belgium's key industrial sectors when competing with non-electro intensive consumers in neighbouring countries, compared to competing against electro intensive consumers. However, it's crucial to mention that the electricity price differential between Belgium and other reviewed countries shifted from a competitive disadvantage in 2024 to a mixed competitive advantage in 2025. The conclusions vary for non-electro and electro intensive consumers, depending on the region.

- **Natural gas competitiveness:** natural gas prices remain highly competitive across all Belgian regions, mirroring the favourable conditions observed in 2024.

- **Electricity pricing challenges:** electricity prices present challenges, particularly for electro intensive consumers, who now face a notable competitive disadvantage compared to 2024. Despite some sectors maintaining competitiveness for non-electro intensive profiles, electro intensive sectors struggle in all regions.

Strategic approach

As already mentioned, more detailed sector-specific evaluations are essential to accurately assess the competitive position of Belgian industries, accounting separately for the impacts of natural gas and electricity costs. Previous recommendations emphasise focusing on taxes, charges, and certificate systems:

- **Tax and levy adjustments:** significant efforts across regions aim to mitigate the impact of taxes and levies on competitiveness through reduced levies, support mechanisms, and controlled cost growth (profile-dependant). Unlike France, Germany, and the Netherlands, these efforts largely overlook the electro intensity of industrial consumers, with exceptions such as the federal excise duty for gas and electricity which bases its eligibility criteria on specific industrial activities(metallurgic or chemical industrial process) which are by definition electro-intensive. In 2025, the quantity of electricity taken off the grid remained the overriding criterion that has been used at the federal level and at regional level (quota of green certificates, public service obligations) to protect the competitiveness of the cost of electricity for industrial consumers. New measures in Flanders have enhanced industry resilience by introducing a 'relocation risk' criterion, capping costs related to renewable energy financing for electro intensive consumers.

- **Regional tax strategies:** fiscal strategies primarily grant tax reductions based on electricity offtake rather than electro-intensity. This approach offers competitive advantages to companies facing non-electro intensive consumers in France and Germany but falls short for electro intensive sectors in Wallonia and Brussels needing to compete internationally.

- **Network cost management:** Belgian regions confront higher network costs compared to countries like France and Germany. Addressing this involves considering reductions for companies based on annual offtake, hours of consumption, or distance to the nearest power station. However, reductions must be balanced with initiatives promoting energy efficiency and demand management to protect grid integrity.

Sector-specific recommendations

Consumers that are not particularly affected by a lack of competitiveness of electricity prices are somewhat protected in Belgium given the tax schemes designed in Flanders, Brussels and Wallonia (also valid for federal taxes), while electro-intensive consumers are more at risk and they could suffer in Wallonia and Brussels from a disadvantage compared to their electro-intensive counterparts in neighbouring countries.

A general objective should be to generate a move towards more competitive total energy prices for industrial electro-intensive consumers, while (partly) preserving the current competitive advantage for non-electro-intensive consumers. Considering the downward trend of electricity and natural gas prices, this objective should be further pursued as electro-intensive consumers are likely to be more impacted by other countries competitivity measures.

- **Focus on electricity Intensity:** for professional customers, prioritising electricity intensity over general energy intensity yields strategic benefits.

- **Introduce electro intensity criteria**: combining electro intensity with minimum offtake conditions can enhance consumer criteria where they are not yet implemented. Given their increase over the past few years, network costs (and the reduction mechanisms applied to it), play an increasing role in the countries' competitiveness. Granting access to certain reductions depending on the load profile (as is the case for reductions in network charges in Germany and France) should avoid discouraging the development of demand response and/or energy efficiency

- **Differentiate network costs**: explore reductions in network costs based on proximity to power stations or economies of scale, as applied in Germany, ensuring grid safety through complementary energy efficiency measures.

- **Simplify access criteria**: avoid excessively complex access criteria and reduction levels, which can hinder the effectiveness and predictability of fiscal measures.

Conclusion

While Belgium has maintained its strong competitive position for natural gas prices in 2025, the situation for electricity has deteriorated. Belgium faces a mitigated competitive situation with the electricity costs compared to neighbouring countries, particularly impacting electro intensive industries. Moving forward, Belgium should place significant emphasis on reducing its electricity cost disadvantage and work towards re-establishing a competitive advantage. The earlier recommendations will be essential to achieve this. At the same time, it is crucial to safeguard and consolidate Belgium's current natural gas competitiveness, which remains a vital strength for the industrial sectors under review.

It is crucial to adopt a more nuanced perspective when evaluating Belgium's competitive landscape. While the current focus is largely on traditional natural gas, the growing importance of alternative gases such as hydrogen and biogas introduce new dynamics that must be considered. Incorporating these evolving energy sources is essential for a comprehensive and future-proof assessment of Belgium's energy market competitiveness on the long-term.

Similarly, the increasing adoption of self-produced renewable energy and the development of industrial energy communities are expected to significantly reshape overall energy costs for industrial consumers. For example, as of 30 June 2025, the installation of photovoltaic (PV) solar panels will become mandatory on rooftops of buildings in Flanders with an annual electricity offtake exceeding 1 GWh[486] — directly impacting the larger industrial consumers covered by this study. These developments underline the need to broaden the scope of competitiveness assessments beyond conventional energy supply and pricing.

Moreover, amidst the backdrop of Europe's declining competitive edge in the global industry, it is imperative to remain vigilant. The potential ramifications of industrial relocation outside of Europe underscore the need for strategic planning and proactive measures to maintain competitiveness in an increasingly globalized environment.

In essence, achieving a robust competitive position requires a multifaceted approach that considers not only traditional energy sources but also emerging alternatives and global market dynamics.

[486] (Vlaamse Overheid, n.d.)

10. APPENDIX

10. APPENDIX

APPENDIX I

The European Union's Emissions Trading System (EU ETS)

This section focuses on the European Union's Emissions Trading System (EU ETS), a critical component of the EU's climate policy aimed at reducing greenhouse gas emissions. As the EU continues to strengthen its commitment to achieving net-zero emissions by 2050, the EU ETS is expected to undergo significant changes that could directly influence energy prices across member states, including Belgium.

The EU ETS scheme was established in 2005 as the first mandatory carbon market aimed at reducing emissions in high-intensity carbon-emitting industries. The current objective of the EU ETS is to achieve a 62% reduction in EU emissions from 2005 levels by 2030[487].

Factors such as tightening emissions caps, expanding the scope of covered sectors, and the potential introduction of carbon border adjustments may lead to increased compliance costs for energy producers. Consequently, these costs are likely to be passed on to consumers, particularly affecting large industrial consumers who have substantial energy needs and will bear a significant portion of these costs. This discussion has been included in this chapter, which is dedicated to large industrial consumers, to provide a timely analysis of these developments, as they hold profound implications for the energy market and pricing structures in the coming years. Understanding the evolving landscape of the EU ETS is crucial for stakeholders to navigate the interplay between regulatory frameworks and energy costs effectively.

Definition

The EU ETS is a carbon emission trading scheme. The EU ETS operates as a "cap & trade system" where the cap is defined in annual emission allowances, with each allowance granting the right to emit one tonne of CO_2 equivalent. Registered operators on the EU ETS are restricted from generating more greenhouse gas emissions than the number of allowances they hold. If additional allowances are needed, they can be acquired through auctions and secondary markets. This system ensures that emissions are limited while providing flexibility for companies to meet their targets cost-effectively.

Purpose

The primary purpose of the EU ETS is to combat climate change by reducing greenhouse gas emissions in a cost-effective and economically efficient manner. By putting a price on carbon, the system incentivizes companies to invest in cleaner technologies and reduce their emissions. The EU ETS aims to help the EU meet its climate goals, including the targets set under the Paris Agreement.

Scope

Companies, including installations and airlines, under the EU ETS account for approximately 40% of greenhouse gas emissions in Europe. The European Commission is currently tightening the EU ETS while also extending emissions trading to additional sectors such as the built environment, road transport, and the maritime sector. Since 2024, the EU ETS also covers emissions from maritime transport, further broadening its scope and impact.[488]

[487] (European Commission, 2025)
[488] (European Commission, 2025)

The EU Emissions Trading System applies to various entities across multiple sectors. Specifically, it covers:

- EU Member States: All countries within the European Union are required to participate in the EU ETS.
- European Free Trade Association (EFTA) countries: Iceland, Liechtenstein, and Norway are also part of the EU ETS.
- Northern Ireland: For electricity generation, Northern Ireland participates under the Protocol of Ireland and Northern Ireland.

In terms of sectors, participation to the EU ETS is mandatory for the following sectors:

- Electricity and heat generation;
- Energy-intensive industries: This includes power generation, steel production, cement manufacturing, and other industries with high carbon emissions;
- Aviation: Airlines operating flights within the European Economic Area and departing flights to the United Kingdom and Switzerland;
- Maritime transport: Since 2024, emissions from maritime transport are covered. More specifically, 100% of emissions for journey between two EU ports and 50% of emissions from journeys starting or ending outside of the EU;
- Buildings and road transport: Starting in 2027, these sectors will be included under the new ETS2 system.

The system encompasses a wide range of greenhouse gases, primarily focusing on carbon dioxide (CO_2), but also covering other gases such as nitrous oxide (N_2O) from the production of nitric, adipic, and glyoxylic acids, and glyoxal and perfluorocarbons (PFCs) from aluminium production.

Note : *The UK no longer participates in the EU ETS as not part of the EU anymore. Instead, the UK has established its own emissions trading scheme, known as the UK Emissions Trading Scheme (UK ETS), which came into effect on January 1, 2021*[489]*. The UK ETS operates similarly to the EU ETS but is tailored to the UK's specific climate goals and regulatory framework.*

The UK ETS covers domestic flights, flights between the UK and Gibraltar, flights from the UK to Switzerland, and flights from the UK to the European Economic Area (EEA). It also covers regulated activities that produce greenhouse gas emissions, including fuel combustion at sites with combustion units having a total rated thermal input above 20MW (excluding installations primarily used for incineration of hazardous or municipal waste).

Historical Background

The EU ETS was launched in 2005 as the world's first international emissions trading system. It has undergone several phases of development:

- Phase 1 (2005-2007): This initial phase was a learning period, with allowances primarily allocated for free.
- Phase 2 (2008-2012): Coinciding with the first commitment period of the Kyoto Protocol, this phase saw more stringent caps and the introduction of auctioning.
- Phase 3 (2013-2020): Significant reforms were implemented, including a single EU-wide cap on emissions and increased auctioning of allowances.
- Phase 4 (2021-2030): The current phase focuses on further tightening the cap and expanding the system to cover more sectors.

Legislative framework

The legislative framework of the EU ETS is detailed in the ETS Directive, which has been revised multiple times to ensure it aligns with the EU climate targets. The latest revision was undertaken in 2023 to better align with the European Green Deal and the European Climate Law. One the one hand, the Green Deal gave birth to the 'Fit for 55' proposals that presented the reform of EU climate and energy policy, including EU ETS.

[489] (GOV.UK, 2025)

On the other hand, the European Climate Law involved a revision to align the ETS with its target, such as:

- Including emissions from maritime transport, which have been included in the EU ETS from 2024, to tighten the cap to bring emissions down by 62% by 2030 compared to 2005 levels.
- Scaling down the free allocation of allowances to companies, in line with the tighter cap, and making it conditional on the companies' decarbonisation efforts. For the aviation sector, free allocation will be removed as of 2026.
- Revising the Market Stability Reserve to foster balance in the reformed EU carbon market.
- Mobilising more resources to support people and businesses in the green transition. Member States have committed to using all EU ETS revenues (or financial equivalent) towards climate action and a just, green transition. The Innovation Fund and Modernisation Fund budgets have been increased accordingly.
- Creating a new emissions trading system, called ETS2, to cover emissions from buildings, road transport, and additional sectors. The new system will become operational in 2027 and complement other European Green Deal policies in these sectors. Establishing the Social Climate Fund (SCF) to address the social impact of carbon pricing in the sectors covered by ETS2, ensuring that vulnerable citizens are not left behind in the green transition.

Key features

The EU ETS has several key features that define its operation:

- Cap and Trade: A cap is set on the total amount of greenhouse gases that can be emitted by installations covered by the system. Companies can trade emission allowances to meet their individual needs.
- Auctioning of Allowances: A significant portion of allowances is auctioned, ensuring that companies pay for their emissions and adhere to the "polluter pays" principle.
- Market Stability Reserve: This mechanism helps stabilize the market by adjusting the supply of allowances based on predefined rules.
- Monitoring, Reporting, and Verification (MRV): Companies must accurately monitor and report their emissions, ensuring transparency and compliance.
- Free Allocation: Some allowances are allocated for free to mitigate the risk of carbon leakage, where companies might relocate to regions with less stringent emission constraints.
- Expansion to New Sectors: The system is being expanded to cover additional sectors, such as buildings and road transport, through the introduction of ETS2.

The EU ETS is a key component of the EU's broader climate strategy, which aims to make Europe the first climate-neutral continent by 2050. It supports the 'polluter pays' principle, ensuring that those responsible for emissions bear the costs of their environmental impact.

Impact on the electricity and gas prices

Studying the EU ETS is crucial for understanding its impact on electricity and natural gas prices in Europe. The cost of carbon allowances directly influences the pricing of electricity and natural gas, encouraging a shift towards renewable energy sources and low-carbon alternatives. This transition affects both producers and consumers, shaping market dynamics and operational costs. By examining the EU ETS, we can gain insights into how carbon pricing drives decarbonization efforts, impacts energy bills, and supports the EU's climate goals.

History

Phase 1

The first phase of the EU Emissions Trading System (EU ETS), running from 1 January 2005 to 31 December 2007, served primarily as a pilot period to test the operational framework of the system ahead of full-scale implementation. The objective was twofold: to validate the infrastructure and administrative procedures for both the initial allocation of allowances and secondary market trading, and to establish an early price signal for EU Allowances (EUAs).

Coverage during this phase was limited to electricity generation units and energy-intensive industrial installations. These entities were subject to emissions caps set at both national and EU levels, via Member State-defined National Allocation Plans (NAPs). However, the emissions caps were relatively generous, and the vast majority of allowances were allocated for free. As a result, the market experienced a structural oversupply of EUAs, which led to a sharp decline in EUA prices—falling to nearly €0 per tonne by the end of 2007.[490]

Phase 2

The second phase of the EU Emissions Trading System (EU ETS), launched on 1 January 2008, marked the first full-scale operational period of the mechanism. Although National Allocation Plans (NAPs) continued to be determined at the Member State level and subject to European Commission approval, the overall emissions cap was significantly reduced compared to Phase 1, reinforcing the system's environmental ambition.

The geographical scope of the EU ETS was also expanded during this phase to include European Free Trade Association (EFTA) countries—namely Norway, Iceland, and Liechtenstein. While most allowances continued to be allocated for free, several Member States initiated EUA auctions for the first time, signalling a gradual move toward market-based allocation.

Key structural changes were introduced:

- The penalty for non-compliance increased substantially, from €40/tCO_2 in Phase 1 to €100/tCO_2.
- The scope of the system was broadened to include nitrous oxide (N_2O) emissions from specific industrial processes.
- The aviation sector was incorporated into the ETS framework from 2012 onward, although limited initially to intra-European flights.

Despite these enhancements (tighter caps, higher non-compliance penalties, and partial auctioning) the market price of EUAs remained generally low. This was primarily due to the steep and unexpected decline in greenhouse gas emissions during the 2008 global financial crisis, which led to a surplus of allowances. Furthermore, the banking of unused EUAs for use in future compliance periods exacerbated the oversupply, dampening EUA price signals throughout the remainder of Phase 2.

Phase 3

Phase 3 of the EU Emissions Trading System (EU ETS), commencing on 1 January 2013, introduced substantial structural reforms aimed at enhancing the system's efficiency and credibility. The most significant change was the shift from individual Member State National Allocation Plans (NAPs) to a single, EU-wide emissions cap, thereby increasing harmonisation across the Union. This unified cap was subject to an annual linear reduction factor of 1.74%, ensuring a consistent year-on-year decrease in greenhouse gas (GHG) emissions.Auctioning became the default mechanism for the allocation of EU Allowances (EUAs), replacing the predominantly free allocation approach of earlier phases. While electricity generation installations were immediately required to obtain 100% of their allowances through auctions, a transitional arrangement was applied to certain industrial sectors, particularly those at risk of carbon leakage – i.e., sectors likely to relocate production outside the EU due to the cost of carbon compliance. These sectors received a portion of their allowances for free, with the share of

[490] (CREG, 2022)

auctioned allowances increasing gradually over time: from 80% free allocation in 2013 to 30% by 2020, averaging approximately 57% across Phase 3.

In response to persistent oversupply in the EUA market—exacerbated by lower-than-expected emissions post-financial crisis—a series of market correction mechanisms were introduced:

- Backloading of 900 million EUAs: Originally scheduled for auction between 2014 and 2016, these allowances were withheld and reintroduced in 2019–2020 to temporarily reduce market supply.
- Market Stability Reserve (MSR): Established as a long-term solution, the MSR began operating in 2019 to automatically adjust the supply of allowances in response to market imbalances. It enhances the system's resilience by absorbing surplus EUAs during periods of excess and releasing them when needed.

These reforms laid the groundwork for a more robust and market-responsive emissions trading system, improving both price signals and environmental outcomes.

Functioning (under Phase 4)

Phase 4 of the EU Emissions Trading System (EU ETS), which began in 2021 and extends through 2030, further consolidates the system's role as the EU's flagship policy tool for reducing greenhouse gas emissions in a cost-effective manner. The scope of the EU ETS now encompasses emissions of carbon dioxide (CO_2), nitrous oxide (N_2O), and perfluorocarbons (PFCs) from major sectors including power generation, energy-intensive industry, and aviation.

A key feature of Phase 4 is the continuation of a Union-wide emissions cap, applicable to both stationary installations and the aviation sector. This cap is subject to an annual linear reduction factor of 2.2%, reflecting the EU's increased climate ambition under the European Green Deal and the "Fit for 55" legislative package.

Auctioning remains the primary allocation method for EU Allowances (EUAs), administered by Member States through centrally coordinated auction platforms. However, targeted exemptions persist for sectors considered at risk of carbon leakage, such as certain manufacturing activities and aviation. In these cases, installations may still receive a portion of their allowances free of charge, in accordance with benchmarks and eligibility criteria established by the European Commission.

The integrity of the system is safeguarded through the ETS Compliance Cycle, a rigorous annual process ensuring that all participating installations comply with their emissions obligations. This cycle includes:

- Continuous monitoring of emissions by each installation,
- Submission of annual emissions reports verified by independent, accredited verifiers,
- Surrender of EUAs equivalent to the verified emissions by 30 April of the following year.

How does the EU ETS work?

The European Union Emissions Trading System (EU ETS)[491] is a cornerstone of the EU's climate policy and operates on a "cap and trade" principle. It is particularly relevant to the power sector—encompassing electricity generation and gas-fired installations—given their significant contribution to greenhouse gas (GHG) emissions. Under this system, a cap is set on the total volume of emissions permitted across the EU for installations covered by the scheme. This cap is reduced annually in line with the EU's climate targets, ensuring a progressive decline in overall emissions.

Since its launch in 2005, the EU ETS has driven substantial emissions reductions, particularly in the power and industrial sectors. By 2023, emissions from electricity generation and industry had fallen by approximately 47% compared to 2005 levels—a clear demonstration of the system's effectiveness.

[491] (European Commission, n.d.)

Emission Allowances and Market Functioning

The emissions cap [492]is translated into a fixed number of emission allowances, with each allowance permitting the emission of one tonne of CO_2 equivalent. These allowances are distributed primarily through auctions and can be traded on the carbon market. As the cap decreases over time, the supply of allowances becomes more limited, contributing to upward pressure on prices and reinforcing the economic signal to decarbonise.

In the power sector, most allowances are obtained through auctions, which reinforces the "polluter pays" principle. Companies must monitor their annual emissions and surrender a corresponding number of allowances. Non-compliance results in significant penalties, making accurate reporting and effective emissions management essential.

Decarbonisation Incentives and Revenue Use

The carbon price set by the market plays a critical role in guiding investment decisions in the energy sector. A higher carbon price encourages a shift away from high-emission electricity generation (e.g. coal and gas without carbon capture) toward cleaner technologies such as renewables and low-carbon electricity sources. Since 2013, the EU ETS has generated more than EUR 175 billion in revenue.

These revenues primarily flow into national budgets, with Member States obliged to allocate a significant share to support climate and energy-related investments. This includes funding for renewable energy infrastructure, improvements in energy efficiency, and innovation in low-carbon electricity generation and storage. Such investments are crucial for reducing the carbon footprint of the power sector and enhancing energy security.

At the EU level, portions of the ETS revenue are directed to the Innovation Fund and Modernisation Fund, both of which provide financial support for next-generation clean energy technologies and upgrades to energy systems in lower-income Member States.

Strengthening the Cap and Sectoral Implications

Since 2013, the EU ETS has applied a single EU-wide cap for emissions from power plants and industrial installations. This cap is adjusted annually using a reduction factor, which increased from 1.74% (pre-2020) to 2.2% from 2021 onward. Following the 2023 revision of the EU ETS Directive, the cap trajectory was further tightened to align with the EU's target of a 62% emissions reduction by 2030 compared to 2005.

To achieve this, the annual reduction factor has been increased to 4.3% for the period 2024–2027 and 4.4% from 2028 onwards. In addition, two one-off cap reductions (rebasing) are planned—90 million allowances in 2024 and 27 million in 2026—further accelerating the emissions reduction pathway.

These tighter caps are particularly relevant for the power sector, which must now operate within a more constrained carbon budget. This provides a strong incentive to accelerate the shift toward renewable energy, improve grid efficiency, and invest in carbon abatement technologies such as carbon capture and storage (CCS).

Allowance Distribution and Flexibility

Within the cap, the majority of allowances in the power sector are auctioned, although a share is reserved for free allocation in certain industrial sectors considered at risk of carbon leakage. Between 2021 and 2030, portions of the cap are also set aside to support:

- The free allocation buffer,
- The Innovation Fund, Modernisation Fund, and the Social Climate Fund,
- New entrants to the market, through a reserve carried over from the 2013-2020 trading phase.

This structure ensures that electricity producers—particularly gas-fired installations and utilities—face strong carbon pricing signals, while also enabling the EU to invest in the long-term transformation of the energy system.

[492] (European Commission, n.d.)

How are the allowances allocated [493]?

The EU Emissions Trading System (EU ETS) has undergone significant reforms since its inception. A notable change occurred in the allocation of allowances, which was decentralized and primarily based on free allocation during Phase I (2005-2007) and Phase II (2008-2012). Starting with Phase III (2013-2020), the total volume of emission allowances is determined at the EU level, and a unified set of rules governs their allocation, with auctioning becoming the predominant mechanism. The allocation rules for Phase IV (2021-2030) have been further revised to reflect the evolving needs of the system.

Under Phase IV, the allocation of free allowances is primarily based on the risk of carbon leakage, which refers to the potential for businesses to relocate production to countries with less stringent environmental regulations. Free allowances are allocated to the sectors deemed most at risk of carbon leakage, as identified by the European Commission. Only the sectors with the highest risk of relocating production outside the EU will receive the full allocation of free allowances. Sectors with a lower risk of carbon leakage will receive a progressively smaller share of free allowances, starting in 2026, with a complete phase-out by 2030.

For the power sector, since Phase III, all allowances must be purchased through auctioning, except for three lower-income Member States—Bulgaria, Hungary, and Romania—which are granted derogations. In the industrial sector, free allowances are allocated based on each installation's efficiency relative to 54 product-specific benchmarks outlined by the European Commission, which include 52 product-based benchmarks and two fallback approaches (based on heat and fuel). These benchmarks are calculated based on 1) process emissions, 2) heat consumption, or 3) fuel consumption. The benchmark corresponds to the performance of the 10% most efficient installations. The benchmarked emissions for an installation are determined by multiplying the relevant benchmark by the installation's recent output level. Given the EU's maximum cap on freely allocated allowances, a cross-sectoral correction factor is applied to all installations to ensure that the final allocation does not exceed the total available allowances.

For the 2021-2030 period[494], the allocation of allowances is balanced between **auctioning** and **free allocation**:

- Up to **57%** of allowances will be auctioned, with **90%** of these distributed among all Member States based on their historical emissions at the start of the system.
- The remaining 10% of allowances will be allocated to 16 specific Member States to promote solidarity.

From July 2023 to August 2026, a portion of allowances from the Member States' auctioning share and the Innovation Fund will be redirected to the Recovery and Resilience Facility, contributing to the REPowerEU Plan. This effort aims to raise EUR 20 billion to support the EU's transition to a more sustainable energy system.

How does the UK ETS works ?

Operating on a "cap and trade" principle, the UK ETS [495]sets a limit on the total greenhouse gas (GHG) emissions permitted from sectors within its scope, including power generation. This cap is designed to decrease over time, ensuring a progressive reduction in emissions. Entities receive or purchase emission allowances, each representing permission to emit one tonne of CO_2 equivalent. Companies that reduce their emissions can trade surplus allowances, promoting cost-effective decarbonisation.

Applicability to the Power Generation Sector

The UK ETS applies to energy-intensive industries, the power generation sector, and aviation. Specifically, it covers activities resulting in GHG emissions, including the combustion of fuels in installations with a total rated thermal input exceeding 20 MW, except in installations for the incineration of hazardous or municipal waste.
Given the significant contribution of the power generation sector to national emissions, its inclusion in the UK ETS is pivotal. By capping emissions and facilitating the trading of allowances, the scheme incentivises power producers to adopt cleaner technologies and improve operational efficiencies.

[493] (Florence school of regulation, 2024)
[494] (European Commission, n.d.)
[495] (GOV.UK, 2025)

Compliance Obligations

Operators within the power generation sector are required to:

- **Monitor and Report Emissions**: Accurately monitor and report annual GHG emissions in accordance with UK ETS regulations.
- **Surrender Allowances**: Surrender a number of allowances equivalent to their reported emissions annually.

Failure to comply with these obligations can result in substantial penalties, underscoring the importance of adherence to the scheme's requirements.

Allocation of Allowances

The UK ETS provides for the allocation of allowances through:

- **Auctions**: The primary method for distributing allowances, encouraging market-driven pricing.
- **Free Allocation**: Certain sectors receive free allowances to mitigate the risk of carbon leakage and maintain international competitiveness.

While the power generation sector predominantly acquires allowances through auctions, the system is designed to balance economic efficiency with protections against competitive disadvantages.

State aid

The aid aims to preserve the competitiveness of companies exposed to international competition, while avoiding excessive distortions of the internal market. The main elements are:

Eligible sectors: only sectors identified as being at high risk of carbon leakage are concerned (e.g.: aluminum, paper, steel, chemicals, etc.).

Calculation method: The aid is calculated on the basis of actual or reference electricity consumption. A compensation factor applies, which varies depending on the year (80% in 2021-2025, reduced to 75% in 2026, 70% in 2027, up to 65% in 2030).

Climate conditionality: to strengthen incentives to reduce emissions, beneficiaries must: Implement an energy efficiency plan (e.g.: ISO 50001 or equivalent); Justify that they have implemented energy performance measures in their facilities.

Aid ceiling: Member States may set a national ceiling for total aid, ensuring transparency and proportionality.

Belgium

The EU Emissions Trading System (EU ETS) Directive[496], along with its various amendments, has been primarily transposed into regional legislation through the following standards:

- **Walloon Region**: The *Décret du 10 novembre 2004 instaurant un système d'échange de quotas d'émission de gaz à effet de serre*, which also established the Walloon Kyoto Fund and governs the flexibility mechanisms of the Kyoto Protocol.
- **Flemish Region**: The *Decreet van 5 april 1999 houdende algemene bepalingen inzake milieubeleid* (Title VIII).

[496] (CREG, 2022)

- **Brussels-Capital Region**: The *Ordonnance du 2 mai 2013 portant le Code bruxellois de l'Air, du Climat et de la Maîtrise de l'Énergie*.

Additionally, there are cooperation agreements between the federal government and the regions, including:

- **Cooperation Agreement of 2 September 2013** between the Federal State, the Flemish Region, the Walloon Region, and the Brussels-Capital Region, concerning the integration of aviation activities into the EU ETS in accordance with Directive 2008/101/EC of the European Parliament and Council, amending Directive 2003/87/EC to include aviation activities.
- **Cooperation Agreement of 20 January 2017** between the Federal State, the Flemish Region, the Walloon Region, and the Brussels-Capital Region, outlining the organization and management of Belgium's national greenhouse gas registry, in line with Directive 2003/87/EC, Regulation (EU) No. 525/2013, and aspects of auctioning in accordance with Regulation (EU) No. 1031/2010.
- **Cooperation Agreement of 12 February 2018** between the Federal State, the Flemish Region, and the Walloon Region.

These legal frameworks and agreements ensure the proper integration and functioning of the EU ETS in Belgium, including the management of emissions and allowances at both the regional and federal levels.

Wallonia[497]

To this end, the "Indirect Cost Compensation" measure, which has been approved by the European Commission, was included in the Walloon Government Decree of 21 December 2022 granting aid to companies to compensate for the costs of indirect emissions.

This system will partially offset the cost of the European Union's carbon quota system incorporated into the price of electricity. The measure therefore serves a threefold purpose:

- reduce the risk of carbon leakage by relocating industrial activities outside the European Union;
- maintain the objective of the European carbon emission trading system to promote decarbonisation, while ensuring that it is cost-effective;
- minimise distortions of competition in the internal market.

Flanders[498]

To address this risk of carbon leakage, the Flemish Government has established a state aid mechanism to compensate for indirect costs under the EU Emissions Trading System (EU ETS) which compensates companies in a select number of electricity-intensive sectors for these indirect emission costs. The objective of this scheme is to partially neutralize the increase in electricity prices due to the pass-through of carbon costs under the EU ETS, while remaining in line with European Commission state aid guidelines.

The compensation is available to companies whose activities fall within one of 16 specific NACE codes, primarily in the metal, paper, and chemical sectors. These codes are listed in full on the website of the Flemish Agency for Innovation and Entrepreneurship (VLAIO), which also provides detailed information on the eligibility criteria. In addition to operating within an eligible sector, companies must demonstrate sufficient exposure to indirect carbon costs and meet a set of predefined conditions regarding their electricity consumption and activity level.

The financial support is granted in the form of a subsidy with a declining aid intensity, consistent with the phase-out trajectory encouraged by EU rules. The calculation of the subsidy amount is based on a standardised methodology, which takes into account the electricity consumption, the passed through CO_2 cost in the electricity

[497] (Wallonia, 2025)
[498] (Vlaanderen, n.d.)

price, and applicable aid intensity rates. More details on the calculation methodology and the exact aid levels are available on the VLAIO platform.

The application process is annual, with a submission deadline by the end of March of the year following the relevant emission year. For instance, for electricity consumption in 2023, companies must submit their application by 31 March 2024. VLAIO provides all necessary templates, guidelines, and procedural information to facilitate the submission and the subsidy is awarded ex-post and based on verified data. This scheme is adjusted annually, in line with ETS market prices or emission factors.

France[499]

The scheme notified by France, with a total estimated budget of €13.5 billion, will cover part of the higher electricity prices arising from the impact of carbon prices on electricity generation costs (so-called 'indirect emission costs') incurred between 2021 and 2030. The support measure is aimed at reducing the risk of 'carbon leakage', where companies relocate their production to countries outside the EU with less ambitious climate policies, resulting in increased greenhouse gas emissions globally.

The compensation will be granted to eligible companies through a partial refund of the indirect emission costs incurred in the previous year. Beneficiaries will receive a partial advance payment each year, which will be completed in the following year. The final payment will be made in 2031. In view of the necessary time to prepare the measure and the exceptional circumstances related to the current energy crisis, the deadline for the aid payments for year 2021 is 28 April 2023.

The maximum aid amount per beneficiary will be equal to 75 % of the indirect emission costs incurred. However, in some instances, the maximum aid amount can be higher to limit the remaining indirect emission costs incurred to 1.5 % of the company's gross value added. The aid amount is calculated based on electricity consumption efficiency benchmarks, which ensure that the beneficiaries are encouraged to save energy.

The measure applies a market-based CO2 emission factor of 0.51 tCO2/MWh. This factor is calculated based on a study of the CO2 content of the marginal technology setting electricity prices. This study was prepared by the French transmission system operator (RTE) and approved by the French regulator (CRE). This CO2 emission factor applies for the period 2021-2025. France will notify an updated value for the period 2026-2030 following the mid-term update of the ETS State aid Guidelines foreseen in 2025.

In order to qualify for compensation, beneficiaries have to implement certain energy audit recommendations based on an energy performance plan of four years.

Netherlands[500]

The state aid implemented in the Netherlands to limit the impact of carbon pricing focuses on compensating certain undertakings for their indirect emission costs, which are the costs resulting from the EU Emission Trading System (ETS) passed on in electricity prices. This measure covers the period from 2021 to 2025 and is financed by the general State budget, with an estimated maximum total budget of EUR 834.6 million.

The beneficiaries of this measure are undertakings active in sectors or sub-sectors listed in Annex I to the ETS Guidelines post-2021, excluding those producing energy carriers with more than 50% of feedstock from fossil origin. The aid is provided in the form of direct grants paid in year t+1 for costs incurred in year t. To qualify for this aid, beneficiaries must comply with energy audit obligations and implement emission reduction measures that lead to an annual CO_2 emission reduction of 3% compared to 2020. The Rijksdienst voor Ondernemend Nederland (RVO) is responsible for verifying compliance with the CO_2 reduction plan and energy audit requirements. The maximum aid intensity is set at 75% of the indirect emission costs incurred.

This measure aims to prevent carbon leakage by supporting sectors exposed to significant risks due to indirect emission costs, thereby contributing to the development of these sectors while aligning with the Netherlands' decarbonisation objectives.

[499] (European Commission, 2022)
[500] (European Commission, 2022)

Germany[501]

Germany has notified the European Commission of a state aid scheme with an estimated budget of €27.5 billion, designed to address the higher electricity prices caused by the impact of carbon pricing on electricity generation costs. This measure, aimed at reducing the risk of "carbon leakage" (where companies relocate production to countries outside the EU with less stringent climate policies, leading to increased global greenhouse gas emissions), will support energy-intensive sectors between 2021 and 2030. The scheme targets sectors identified in Annex I of the ETS State Aid Guidelines, which face high electricity costs and are exposed to significant international competition.

The scheme offers compensation to eligible companies through a partial refund of the indirect emission costs they incur. The maximum aid granted will generally cover 75% of these costs, although in certain cases, the aid can be higher to ensure that the remaining indirect emission costs do not exceed 1.5% of the company’s gross value added. The aid is calculated based on electricity consumption efficiency benchmarks, encouraging beneficiaries to improve energy efficiency. Companies are required to bear a portion of their indirect emission costs corresponding to 1 GWh of electricity consumption per year, for which no aid will be provided. Additionally, no support will be available for the consumption of self-generated electricity from installations that were operational before January 1, 2021, if the beneficiary is entitled to remuneration under the German Renewable Energy Act.

To qualify for compensation, companies must either implement specific measures as part of their energy management system, which outlines their energy efficiency goals and strategies for achieving them, or source at least 30% of their electricity consumption from renewable sources, such as on-site renewable energy generation, power purchase agreements, or guarantees of origin. Furthermore, starting in 2023, companies are required to invest at least 50% of the aid they receive into economically viable measures to improve energy efficiency or decarbonize their production processes, as identified in their energy management system.

The European Commission assessed the scheme under EU state aid rules, particularly the ETS State Aid Guidelines, and found that it is both necessary and appropriate to support energy-intensive companies facing higher electricity prices. The Commission concluded that the scheme effectively mitigates the risk of carbon leakage by preventing companies from relocating to non-EU countries with less ambitious climate policies, which could lead to increased global emissions. The scheme also complies with the energy audit and management system requirements of the ETS State Aid Guidelines, contributing to the EU's climate and environmental objectives in line with the European Green Deal. The Commission confirmed that the aid granted is limited to the minimum required to achieve the scheme's objectives, ensuring no undue negative impact on competition or trade within the EU. Based on this assessment, the Commission approved the scheme under EU state aid rules.

UK[502]

A Carbon pricing is a key driver for investment in low-carbon technologies, including electricity generation. Following the UK's exit from the European Union, the UK introduced the UK Emissions Trading Scheme (UK ETS) to replace its participation in the EU Emissions Trading System (EU ETS). In addition to the UK ETS, the UK government introduced a Carbon Price Support (CPS) mechanism in 2013 to further strengthen its carbon pricing framework.

The government acknowledges that carbon pricing through the UK ETS and CPS will impact wholesale electricity prices, ultimately leading to higher retail electricity prices in the short to medium term. To mitigate the impact of these increased costs on businesses, a compensation scheme has been established. There are two key steps businesses must follow to assess their eligibility for compensation for the indirect costs incurred through the UK ETS and CPS.

First, the business must manufacture a product within an eligible sector, which is determined by reference to the 4-digit Standard Industrial Classification (SIC) code. A list of eligible sectors for both the UK ETS and CPS is provided, and businesses must ensure that the product they manufacture falls within one of these eligible SIC

[501] (European Commission, 2022)

[502] Compensation for the indirect costs of the UK ETS and the CPS mechanism: guidance for applicants. (2025, March 25). GOV.UK. https://www.gov.uk/government/publications/uk-emissions-trading-scheme-and-carbon-price-support-apply-for-compensation/compensation-for-the-indirect-costs-of-the-uk-ets-and-the-cps-mechanism-guidance-for-applicants

codes. Businesses that sell or resell eligible products but do not manufacture them will not qualify for compensation. Importantly, the scheme applies only to businesses operating in Great Britain (England, Scotland, and Wales), and does not include Northern Ireland.

The second step involves passing a “5% test,” which requires businesses to demonstrate that their indirect carbon costs amount to at least 5% of their Gross Value Added (GVA). This test is designed to ensure that compensation is appropriately targeted to businesses that are significantly impacted by carbon pricing.

While the 5% test is calculated at the aggregate business level, the compensation amount is determined using installation-level data. Businesses with multiple installations must provide information for each eligible installation to receive compensation. In this context, an "installation" is defined as a stationary technical unit where manufacturing activities associated with an eligible product take place, including any directly related activities at the same site.

The scheme sets a maximum subsidy intensity for compensation, limiting a company’s total indirect carbon costs to either 1.5% of their GVA or 75% of their total indirect emission costs, whichever is greater, for the period from April 2023 to March 2025. This subsidy intensity level currently applies, but the government has also set an overall budget for the scheme. If there is a risk of overspending the budget, the subsidy intensity may be reduced. If this occurs, the guidance will be updated, and businesses receiving compensation under the UK ETS or CPS will be notified.

Country comparison

Since the start of auctioning in 2013 under Phase 3, the EU Emissions Trading System (EU ETS) has generated over EUR 200 billion in auction revenues. The Commission’s annual Carbon Market Reports provide more detailed figures on these revenues. In 2023 alone, the EU ETS generated EUR 43.6 billion in auction revenues, with EUR 33 billion distributed directly to Member States, while the remainder was allocated to EU-level funds such as the Innovation and Modernisation Funds.

The EU ETS Directive (Article 10(3)) requires Member States to use at least 50% of their auction revenues, including all revenues from aviation allowances, towards climate and energy-related initiatives. During the 2013-2020 period, Member States reported spending an average of 75% of these funds on projects that focus primarily on renewable energy, energy efficiency improvements, and low-emission transport.

As of mid-2023, following the revision of the EU ETS Directive, Member States must allocate all revenues (or an equivalent amount) to climate-related purposes, with particular emphasis on addressing the social impacts of the transition, partly through instruments such as the Social Climate Fund. Additionally, following the expansion of the EU ETS, Member States are encouraged to use these funds to support the decarbonisation of maritime transport and the protection of marine biodiversity.[503]

Belgium

Belgium’s electricity sector, particularly fossil gas-fired generation, is fully exposed to the EU ETS. All power plants must purchase allowances via auctions, as no free allocation is granted for power generation. In 2022, Belgium auctioned over 17 million EUAs, yielding over €1.4 billion in revenues, with proceeds largely reinvested into the Energy Transition Fund .

Industrial gas use in sectors such as chemicals and metallurgy also falls under the EU ETS, with partial free allocations based on benchmarks.

[503] (European Commission, n.d.)

France

France shares the same structure as Belgium: electricity producers are not eligible for free *allowances. However, France compensates electro intensive industries via the "compensation for indirect ETS costs," as allowed under EU State aid rules. EDF also benefits from France's nuclear-heavy mix, which reduces overall exposure to carbon pricing.*

France raised nearly €5 billion from EUA auctions in 2022. Part of this revenue funds the "Fonds Chaleur" and supports low-carbon innovation projects .

The Netherlands

The Dutch power sector is fully auction-based for EU ETS allowances. The Netherlands also operates a national carbon price floor in the electricity sector, which tops up the EU ETS price to ensure a stronger decarbonisation signal.

The government raised around €2.6 billion in 2022 from auctions. Key industrial players (e.g. Shell, Tata Steel) receive free allowances but remain partially exposed to EUA prices. Revenues feed into the Dutch Climate Fund.

Germany

Germany is among the largest EUA auction participants, generating over €6 billion in revenues in 2022. While electricity producers must *purchase all allowances, industrial sectors receive substantial free allocations, including indirect cost compensation.*

Germany operates a national ETS (nEHS) for sectors not covered by the EU ETS, including heating and transport. This overlapping carbon pricing system increases the total carbon cost burden for energy consumers.

United Kingdom

Post-Brexit, the UK launched its own UK ETS in 2021, structurally similar to the EU system. The UK cap is slightly tighter than the EU's, and UK allowances (UKAs) have traded at a discount relative to EUAs in 2023 and 2024.

All power producers must acquire UKAs through auctions. The UK government has paused the expansion of the ETS to waste incineration and energy-from-waste sectors due to public consultation feedback .

UK ETS revenues feed into general government spending but are under review for targeted climate reinvestment.

Impact

Belgium[504]:

Higher EUA prices increase the variable costs of coal and gas-fired power plants, leading to higher electricity prices. This effect is more pronounced for coal-fired plants due to their higher carbon intensity compared to gas-fired plants, prompting a coal-to-gas switch when EUA prices rise. Consequently, the increased cost of EUAs is passed on to consumers through higher retail electricity prices, which are indexed to wholesale market prices.

For industries, the impact is also substantial as they face higher operational costs due to the need to purchase additional allowances if their emissions exceed allocated quotas. This can affect their competitiveness, especially for energy-intensive sectors. The overall effect is a push towards more efficient and lower-carbon technologies, as the cost of pollution becomes a significant factor in operational and investment decisions.

In summary, carbon pricing under the EU ETS leads to higher electricity prices in Belgium, influencing both industrial and consumer costs, and drives a shift towards cleaner energy sources and technologies.

[504] (CREG, 2022)

Netherlands[505]:

The EU ETS has led to relatively low direct carbon tax rates in the Netherlands compared to other countries. This system covers industrial corporations, including power plants, which are significant contributors to carbon emissions. The Dutch corporate sector benefits from lower electricity prices compared to other European countries, which is advantageous for bulk consumers but less so for smaller corporations due to higher energy taxes. The EU ETS has not yet fully internalized the social costs of carbon emissions, leading to lower carbon prices paid by the manufacturing industry.

The impact of the EU ETS on the gas and electricity market in the Netherlands includes:

- Lower electricity prices for industrial sectors compared to Germany and France, but higher for smaller consumers due to energy taxation.
- Relatively low carbon prices paid by Dutch corporations, which are still below the social costs of carbon emissions.
- Limited direct carbon taxation apart from the EU ETS, with large corporations paying less for their emissions compared to their European counterparts.

Germany[506]:

The European Emissions Trading System (EU ETS) has significantly influenced the German electricity market. Carbon pricing has led to a notable pass-through of carbon costs to wholesale electricity prices, with a strong correlation observed between EUA (European Union Allowance) prices and wholesale electricity prices. This pass-through ensures that carbon costs are integrated into the bids of electricity generators, thereby affecting the overall market prices.

For industries, the impact is more pronounced as they face wholesale market prices directly. The correlation between wholesale prices and industry energy prices is relatively high, indicating that industries receive a clear carbon price signal. However, large electricity consumers at risk of carbon leakage receive compensation for indirect carbon costs, which reduces the incentive for energy efficiency investments.

For consumers, the pass-through of carbon costs to retail electricity prices is limited. Household electricity prices are less correlated with wholesale prices due to high taxes and levies, which constitute a significant portion of the retail price. This results in a delayed and less direct impact of carbon pricing on household electricity bills.

Overall, while carbon pricing through the EU ETS has effectively integrated carbon costs into the electricity market, the impact varies between industries and consumers, with industries experiencing a more direct effect compared to households.

Conclusion

In conclusion, the impact of the EU ETS on electricity producers and gas consumers varies across Belgium, France, the Netherlands, Germany, and the UK. Electricity producers in all these countries face the challenge of acquiring allowances via auction, which ultimately raises production costs and leads to higher electricity prices for consumers. However, some countries, such as France, mitigate this through regulated tariffs and a low-carbon energy mix, while others, like Germany, contribute auction revenues to national climate funds.

For gas consumers, the EU ETS primarily affects industrial users, with free allocations available depending on sector and emissions benchmarks. Residential gas use remains largely outside the scope of the EU ETS, though additional national climate-related levies, such as in France and Germany, continue to influence consumer prices. The evolving inclusion of sectors such as buildings under the ETS2 could alter the landscape further, impacting both industrial and residential consumers in the future. As each country adapts its approach to carbon pricing and auctions, the wider energy transition goals remain central to shaping the future of the EU ETS.

505 (DeNederlandscheBank, 2018)
506 (Abrell, 2020)

APPENDIX 2

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