ACER
European Union Agency for the Cooperation of Energy Regulators

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Energy Retail and Consumer Protection

2023 Market Monitoring Report

September 2023

Legal notice

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(1 December 2023 - Corrigendum of report incorporating updated data in figures 60 and 63)

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Energy Community

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Executive Summary

1 This Market Monitoring Report (MMR) outlines the state of play of the retail energy market and consumer protection in the European Union and the Energy Community Contracting Parties ("EnC Contracting Parties') in 2022.

2 2022 will be remembered as a very difficult year for energy consumers. Large increases in wholesale energy prices led to increases in the retail price of energy on customers' bills. While consumers were shielded to some extent at the beginning of the crisis, they faced a significant increase in energy costs when their contracts came up for renewal. Recognising this, governments stepped in to protect energy customers from wholesale price increases (although the emergency measures taken to mitigate the energy crisis differed between Member States and the EnC Contracting Parties). This support has come at a cost to national budgets. In December 2022, the International Monetary Fund reported that in 2022 the cost of energy crisis support measures in some countries was expected to exceed 1.5 % of their GDP[1]. In total, EU Member States spent up to EUR 646 billion on emergency measures in 2022, based on the Bruegel dataset.

3 Retail electricity prices across the EU-27 peaked in October 2022 following increases in wholesale electricity costs. However, price trends varied significantly across Member States and the EnC Contracting Parties with most recording the highest retail prices between July and November 2022. In most Member States, retail electricity prices rose significantly in response to wholesale price increases. Unusually, day-ahead prices rose above retail prices between July and September 2022. Increases in retail prices were likely dampened by forward hedging and the implementation of emergency measures. Despite the recent wholesale electricity price reductions, end-user prices are falling at slower rates across the EU-27. Member States may benefit from taking a closer look at retailer behaviour and contract clauses imposed on end consumers and may necessitate a comprehensive examination. At national level, trade-offs exist between measures aimed at helping affordability, the security of supply, efficiency, and energy transition, requiring careful consideration by the Member States of the costs, objectives, and impacts of the measures they choose to adopt. The continuation of broader-based support may ultimately drive inflation further, thus compounding the impacts of the crisis faced by the most vulnerable in our societies. In March 2023, Ms Lagarde, President of the European Central Bank, pointed out that government support measures to shield the economy from the impact of high energy prices should be 'temporary, targeted and tailored to preserving incentives to consume less energy'[2]. According to the ECB, measures falling short of these principles are likely to drive up medium-term inflationary pressures, which would call for a stronger monetary policy response.

4 More generally, consideration could be given to incentives for positive behaviour, such as payments for changing consumption patterns to use energy at off-peak times or when renewables are more prevalent, or the use of simple means to improve the energy efficiency of homes. Demand shifts by a portion of consumers could bring a benefit to all through lower peak prices.

5 A certain percentage of consumers still need to be shielded from the impact of high energy prices. In 2022, consumer expenditure on electricity, as a percentage of household income, increased as shown in Figure 3. A key lesson from 2022 is the need for further targeting of support measures (where necessary) and the creation of incentives for further reductions in energy consumption.

6 Incentivising demand reduction while ensuring that support is well targeted. Taking broad-based measures to reduce energy prices for all, such as lowering taxes or levies on energy consumption, tend to benefit high-energy consumers the most. Such supporting measures do not provide incentives to reduce energy demand. On the other hand, there are several good policy measures that incentivise consumers' behaviour. One such example is Austria, where a certain percentage of a standard household's energy consumption is provided at a social rate, while the rest is exposed to market prices (maintaining the price incentive). Where support for vulnerable consumers and the energy poor is needed (beyond the energy crisis), this approach could be fine-tuned over time to include variables such as household composition and the energy efficiency of buildings. Such approaches should be combined with or strengthened by information campaigns to raise consumer awareness. One example mentioned in the

1 https://www.imf.org/en/Publications/fandd/issues/2022/12/helping-europe-households-Celasun-Iakova.

2 https://www.ecb.europa.eu/press/pressconf/2023/html/ecb.is230316~6c10b087b5.en.html.

report is ESB Networks' 'Beat the Peak' campaign, which provided consumers with information on when it is appropriate to use (or not to use) energy. In the future, to improve consumer information about their energy needs, such opt-in services could be applied more widely in EU electricity markets. Financial benefits can also encourage changes in consumer behaviour (in the medium to long term) to reduce and/or shift consumption to times when it is more beneficial to the energy system. A focus on incentivising demand reductions and adjusting consumer behaviour will be key as part of the clean energy transition.

7 The key conclusions and recommendations of the Energy Retail and Consumer Protection 2023 MMR are outlined below.

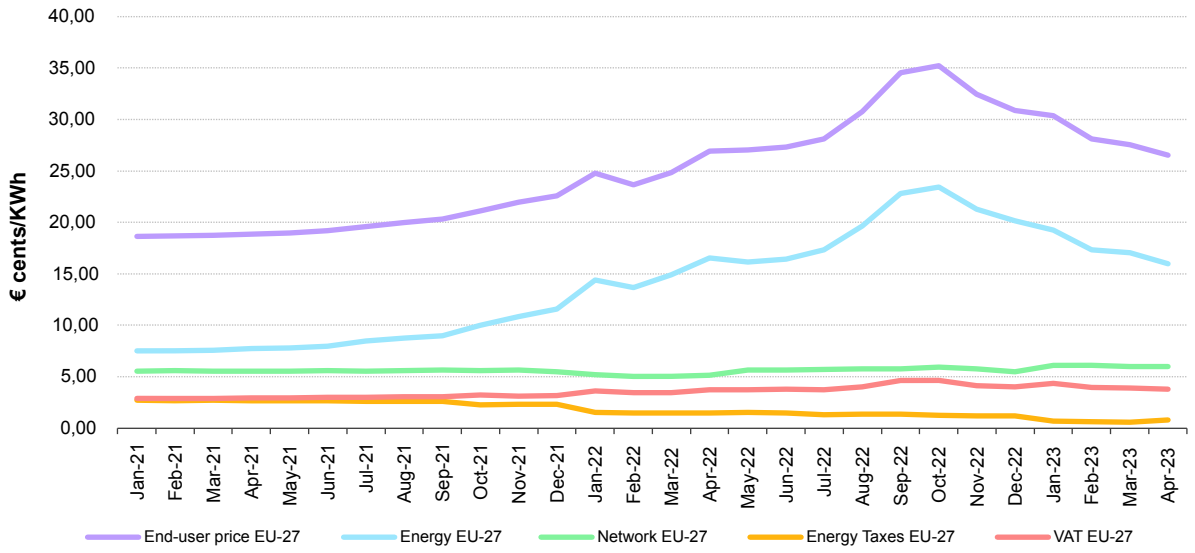
Energy crisis

8 2022 was an unprecedented year for EU and Energy Community consumers, with electricity and gas prices rising as never before. Consumers in most markets paid more for their energy, suppliers faced difficulties in managing their margins due to rising wholesale energy prices, and governments stepped in to provide financial support to households and industrial consumers to manage the increase. The crisis has led to a reduction in demand, with most Member States and the EnC Contracting Parties experiencing lower demand than in previous years for both electricity and gas.

9 EU-27 retail electricity prices peaked in October 2022 following the increase in wholesale electricity costs. However, price trends varied significantly between Member States. Most of them registered the highest retail prices between July 2022 and November 2022. In most Member States, retail electricity prices rose significantly in response to wholesale price increases. Anomalously, day-ahead prices increased more than retail prices between July 2022 and September 2022. Increases in retail prices were likely dampened by forward hedging and the implementation of emergency measures. End-user prices are falling more slowly across the EU-27, despite recent reductions in wholesale electricity prices. Member States may benefit from taking a closer look at retailer behaviour and the contract clauses imposed on final consumers.

10 Figure 1 shows the evolution of EU-27 electricity prices before and during the energy crisis. While average electricity prices are on a downward trend across the EU, they remain above pre-crisis levels.

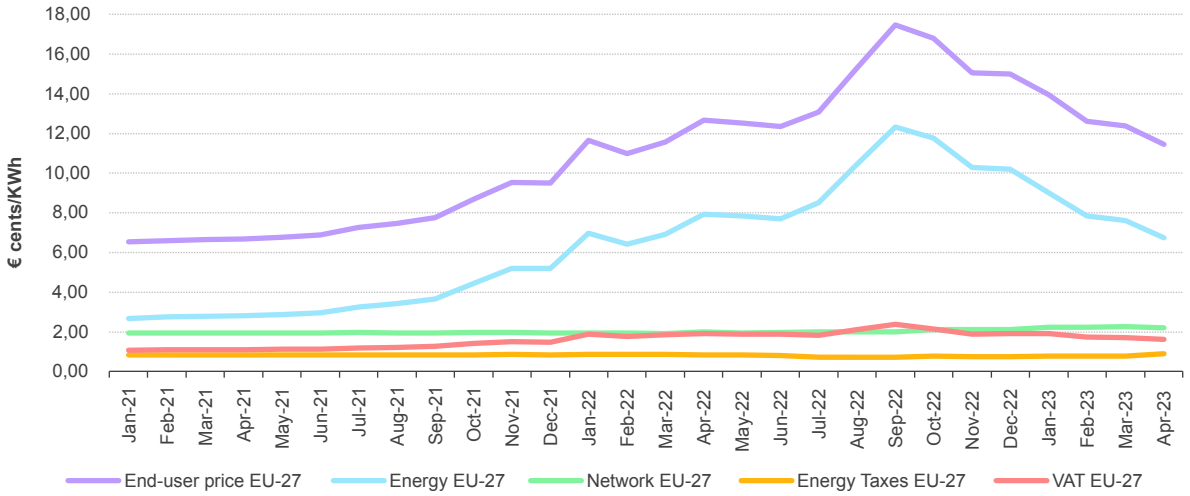
Figure 1: Evolution of the electricity end-user price breakdown, Average EU-27



Source: Based on Vaasa ETT 2023

11 A similar trend emerges for the gas market, as shown in Figure 2, with gas prices peaking on average around September 2022. Gas prices have been declining since. As with electricity, they remain above pre-crisis levels.

Figure 2: Evolution of gas end-user price breakdown, Average EU-27

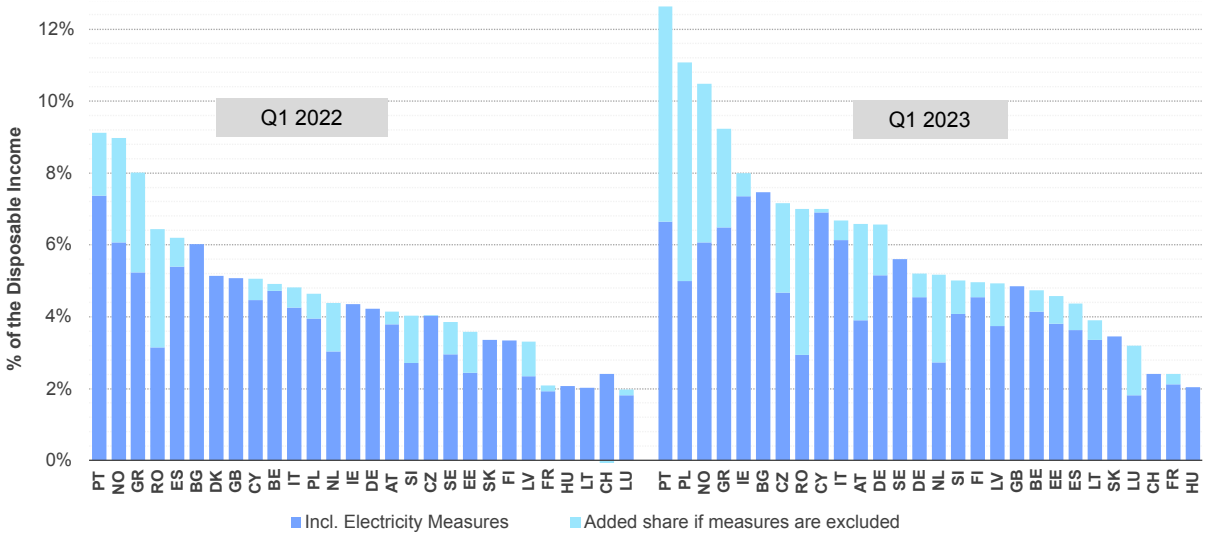


Source: Based on Vaasa ETT 2023

12 The energy crisis resulted in energy support being provided to energy consumers. Estimates have put the cost of these measures at around EUR 646 billion[3]. Member States have implemented a range of measures aimed at reducing the impact of the energy crisis on consumers.

13 Figure 3 shows that consumer expenditure on electricity as a share of their income increased in the first quarter of 2023 compared to the same period in 2022, despite decreasing wholesale prices. In this context, it is likely that over time fewer consumers will continue to need support in order to manage their energy costs. Member States could opt for more precisely targeted support and closely monitor the evolution of household expenditure.

Figure 3: Household electricity bill[4] as a share of disposable income



Source: VaasaETT 2023

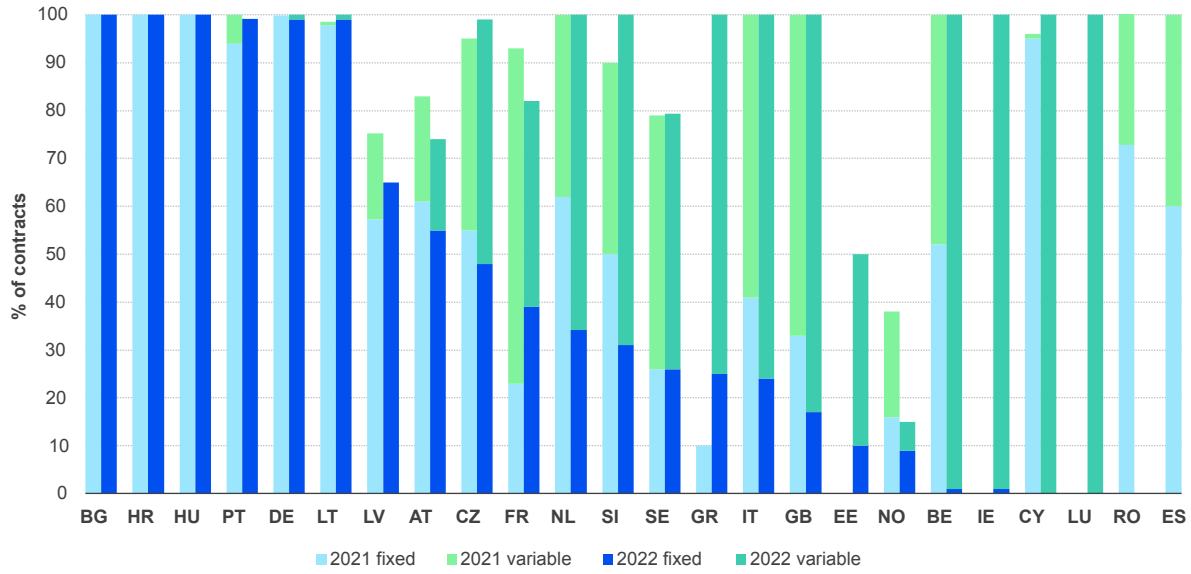
14 Figure 4 shows that in 2022 contract uptake rates varied across the EU. While in some Member States the uptake of fixed-price contracts increased in 2022 compared to 2021, in others it decreased, with

3 Based on the Bruegel dataset - National fiscal policy responses to the energy crisis (bruegel.org).

4 The energy bill as a percentage of disposable income is calculated on the basis of the real adjusted gross disposable income of households per capita in PPS. The latest available PPS value has been used whenever values have not been updated for the corresponding year. Specifically, the PPS values have not been updated for 2023 and thus the latest available values have been used in the calculations. The real adjusted gross disposable income's latest figures correspond to the year 2021 and thus have been selected as the latest available updates. Source of disposable income data: Eurostat.

customers switching to variable or other types of contracts. Some markets stand out with regard to switching, such as Belgium, where most consumers had variable price contracts in 2022. Such significant contract fluctuations may warrant an investigation into supplier behaviour. Regarding consumer switching rates, in some Member States a decrease was observed in 2022, which may be attributed to a range of factors, such as lower availability of offers, low consumer confidence in alternative suppliers following supplier bankruptcies and, potentially, the reluctance of suppliers to take on new customers due to the increase in wholesale prices and price volatility. At the same time, in other Member States, such as Spain and Lithuania, the switching rate increased.

Figure 4: Contract uptake of household consumers – Electricity market



Source: CEER 2023

15 In response to increased prices, consumer complaints increased in 2022. Where data is available, it shows that consumers mostly submitted complaints regarding invoicing/billing and debt-collection. For electricity, in 2022 complaints about invoicing/billing and debt collection and about prices/tariffs increased by 47 % and 100 % respectively compared to 2021. Similar trends have been observed for gas complaints. However, disaggregated data is limited as energy complaints are not collected separately for electricity and gas in many Member States. Consumer organisations noted that consumers faced difficulties in gaining access to customer support. Conversely, suppliers reported being inundated with consumer contacts, which may have put a strain on customer support teams.

16 Access to information is vital for consumers. However, in many markets the provision and availability of information can be improved. The report takes note of the successful roll-out of smart meters in thirteen Member States and mentions that, regretfully, eleven Member States have barely started the process, with five countries reporting no roll-out at all. This limits the availability of accurate and real-time information to consumers to support the need to reduce demand or shift consumption to times when it is more beneficial to the energy system.

17 Regarding consumer bills, these continue to fail to meet the criteria set out in Directive 2019/944 in almost all Member States. This lack of compliance has a negative impact on the ability of consumers to make informed decisions about their energy needs.

18 In general, although comparison tools are while widely available in the Member States, they do not meet all the criteria set out in Directive 2019/944. In order to be well informed, consumers must have access to high-quality comparison tools that meet the criteria set out in the above-mentioned Directive.

Recommendations

Support measures could be targeted in the future

19 ACER, CEER and the EnC Secretariat reiterate their recommendation from last year's Energy Retail and Consumer Protection MMR[5] that Member States should ensure that financial support measures are targeted and aimed at those most in need. In considering how to best target this group of consumers, ACER, CEER and the EnC Contracting Parties reiterate their previous recommendations and additionally recommend the following:

a. Member States and the EnC Contracting Parties, and the relevant public authorities should take into account household expenditure on electricity and gas, and household income.

b. To enable such targeted support, Member States and EnC Contracting Parties should adopt detailed definitions and criteria for both vulnerable consumers and energy poverty in line with Directive 2019/944.

c. Member States, EnC Contracting Parties and the relevant competent bodies should track and closely monitor the share of energy consumers defined as vulnerable and experiencing energy poverty. Broad-based support measures for all energy consumers may not be necessary in the event of a future crisis.

d. Where a Member State and EnC Contracting Party decide that support is necessary, such support should not impede the formation of market prices and should include an incentive to reduce demand whilst the crisis lasts.

Need for more tracking and monitoring of the uptake by consumers of different types of contracts

20 As stated in the recommendations set out in last year's Retail MMR, ACER, CEER and the EnC Secretariat recommend that NRAs track and monitor the uptake of all types of retail energy contracts (fixed, flexible, dynamic) in their retail energy markets. Greater visibility of the contracts chosen by consumers can contribute to a better understanding of how suppliers follow the trends and developments in the market alongside consumers' preferences.

Independent, market-wide comparison tools should fully meet the criteria set out in Directive 2019/944

21 Comparison tools do not yet fully meet the requirements set out in Article 14 of Directive 2019/944. For this reason, ACER and CEER reiterate their recommendation that NRAs review the compliance of the independent, market-wide comparison tools available in their Member States. The features of publicly operated comparison tools should also be reviewed to ensure that it fully complies with applicable requirements.

22 Where this is not the case, such incompleteness often indicates that no dynamic offers are embedded in the comparison. However, it is important to note that dynamic offers are not yet available in all markets. In addition, where a Member State does not have a publicly operated comparison tool and has not yet appointed a body responsible for its certification, such a body should be appointed. The certification of the tool aims to raise consumers' trust and improve their engagement with the energy market.

23 In line with last year's recommendation, ACER and CEER recommend that NRAs and the Member States ensure the promotion of publicly available or trust-marked comparison tools and set targets for their use so that consumers become more aware of existing tools and thus better informed about the alternative energy offers available to them.

Consumers should receive complete and clear bills that are easy to understand

24 ACER and CEER reiterate that energy bills do not yet fully meet the criteria set out in Directive 2019/944.

5 https://www.acer.europa.eu/sites/default/files/documents/Publications/MMR_2021_Energy_Retail_Consumer_Protection_Volume.pdf.

Suppliers should undertake a review of the bills issued to consumers in their markets and take steps to ensure compliance without delay. It is essential that consumer bills meet the requirements of Directive 2019/944 while being clear and easy for the consumer to understand.

Well targeted consumer information campaigns should help consumers engage with rapidly evolving market situations

25 In response to the energy crisis, innovative campaigns have emerged to enable consumers to respond to calls to change their consumption behaviour in response to the real-time energy mix. Targeted campaigns, such as the ESBN's 'Beat the Peak' initiative, can help to educate and engage consumers, while significantly increasing consumer participation in demand management.

26 ACER and CEER reiterate their recommendation that NRAs, Member States and the EnC Contracting Parties, energy suppliers and network operators regularly inform energy consumers of the best times to consume energy, with the aim of levelling the demand curve, which can reduce prices for all consumers.

Better management of the increasing number of consumer complaints through enhanced monitoring of complaints to obtain valuable insights on necessary improvements

27 Complaint data is organised, categorised, and analysed differently between Member States. The varying degrees of data depth and disaggregation can impact the ability of NRAs to represent the interests of consumers and understand where retail markets can be improved. To address this, ACER and NRAs will work together to explore common ways to define, register, categorise and monitor complaints, taking account of the NRAs' duties as outlined in Directive 2019/944.

Suppliers to inform consumers of their monthly consumption and energy expenditure on a monthly basis to enhance consumer awareness

28 Retail energy prices, while currently on a downward trend, are on average still higher than pre-crisis levels. Such prices can create difficulties for some consumers. ACER and CEER believe that annual billing, although permitted under Directive 2019/944, may not represent an adequate level of consumer service and provision of information. As a minimum, suppliers should offer to provide consumers with monthly consumption data (which could be estimated on the basis of previous readings) to inform them of both their consumption and their energy costs. This would allow consumers to choose how to manage their energy expenditure, for example by opting for accurate monthly billing, or by spreading their annual energy costs over twelve 'averaged' individual months, with an annual settlement bill. Regulators point out that frequent, accurate billing can potentially encourage consumers to reduce their demand in response to necessary price signals. Meanwhile, averaged billing periods can be helpful for consumers who want to avoid receiving higher bills during periods of high prices.

1. Introduction

1 This market monitoring report (MMR), which covers 2022, is published at a key juncture in the energy transition. The energy transition is focused mainly, but not exclusively, on wholesale energy markets, the generation of energy, or how system operators manage the balance between supply and demand. The Clean Energy Package (CEP) places an additional focus on the role the consumer plays in the transition. This role will open up new opportunities for consumers in terms of their commercial presence in the market — a role that was not previously available or foreseen. Regarding retail markets and consumer protection, Directive (EU) 2019/944[6] is one of the key pieces of legislation introduced as part of the Clean Energy Package, and has yet to be transposed and implemented in all EU Member States. The deadline for implementation of the Directive in the Energy Community Contracting Parties[7] is the end of 2023. Given its importance for retail and consumer protection, it is referenced throughout this report.

2 The year 2022 and the end of 2021 saw a significant increase in wholesale energy prices. This has resulted in negative outcomes for consumers, energy suppliers and business users. An increase in the number of energy suppliers declaring bankruptcy increased in 2021 — a trend that continued into 2022, with some suppliers finding themselves unable to meet their consumer contract obligations following unprecedented wholesale price increases and imperfect supplier hedging strategies. Larger energy users saw a significant increase in their energy costs, which were ultimately passed on to end users. Retail energy prices, while somewhat shielded in 2021, became more exposed to price increases in 2022. As such, Member States and the EnC Contracting Parties implemented a range of measures aimed at assisting energy consumers with their energy bills in 2022. These measures have remained in place in 2023.

3 The impact on retail energy consumers varied across the EU and EnC Contracting Parties. For example, in markets where retail prices were directly linked to wholesale prices, retail consumers saw a sudden and significant increase in their energy costs. Consumers in markets with a predominance of fixed prices were to some extent protected from such increases in the early stages. While energy prices are currently still high across the EU, both gas and electricity prices have been falling since the third quarter of 2022.

4 The report has the following structure:

a. Section 2 addresses countries' responses to the energy crisis in 2022 and the impact of the implemented measures on government budgets. Information is provided on the number of measures, the allocated budget in each country, and its evolution during the year.

b. Section 3 is dedicated to energy consumption, energy prices, consumer information and consumer complaint handling. It examines the consumption of electricity and gas in the context of the energy crisis. It then provides information on electricity and gas retail prices, energy bill breakdown and mark-ups. It examines available information on consumers' energy bills and the status of available comparison tools, and delves into complaints handling and monitoring.

c. Section 4 deals with consumer protection and the treatment of energy poor and vulnerable consumers.

d. Sections 5 outlines the state of play of retail market structures across the EU, EEA Member Norway and Great Britain in 2022. In this section, readers will find information on suppliers' entries, exits and energy offers, and touch on future structural changes towards RES production and consumption with the involvement of end users.

e. Section 6 addresses consumer engagement. It highlights the role which consumers play in the energy market via switching and energy communities. It also provides information on the roll-out of smart meters, an essential tool to facilitate consumer engagement by providing access to information.

6 DIRECTIVE (EU) 2019/944 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (recast).

7 The Energy Community is an international organisation consisting of the EU, represented by the European Commission, Albania, Bosnia and Herzegovina, Georgia, the Republic of North Macedonia and Kosovo*. Moldova, Montenegro, Serbia, and Ukraine are known as the contracting parties.
*In line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.

2. The energy crisis

5 In 2021, gas prices increased due to a combination of factors, including an increase in global demand for energy as the world economy recovered from the COVID-19 pandemic.

6 In 2022, other factors also played a role in price increases, such as unfavourable weather hampering renewable and hydro generation and a growing uncertainty about the availability of natural gas from Russia. The Russian invasion of Ukraine led to a series of significant gas price increases that also affected electricity prices in 2022. Consumers and businesses faced higher energy costs. As a result, EU Member States and the Parties to the Energy Charter Treaty took emergency measures to protect consumers and their economies from the effects of high energy prices. Emergency laws were introduced, and the European Commission worked on regulatory measures tackling the energy crisis.

7 Before the crisis, but already in the context of high prices, the European Commission's toolbox unveiled in October 2021 set out measures that Member States could introduce in line with the legislative framework. However, the Russian invasion of Ukraine further exacerbated price spikes; Member States introduced measures to mitigate security of supply risks, and the REPowerEU plan outlined actions for Europe to become energy independent of Russian fossil fuels. The Council Regulation on an emergency intervention to address high energy prices, published in October 2022, lists additional measures that Member States may take in response to the energy crisis.

8 Following the development of the energy crisis, EU's next response was the REPowerEU plan[8], launched in May 2022. The European Commission aimed at diversifying energy sources, saving energy and accelerating the energy transition in order to overcome the supply crisis and secure affordable energy supplies for Europe, while promoting the green transition. The EU also moved to increase the 2030 targets for renewables and energy efficiency under the 'Fit for 55' package.

9 In August 2022, Member States agreed to use measures of their choice to reduce their gas demand by 15 % between 1 August 2022 and 31 March 2023 compared to their average consumption over the last five years[9]. By the end of 2022, additional measures[10] focused on electricity market interventions and demand reduction. More specifically, the European Commission set targets for the Member States to cut their peak electricity demand and introduced a temporary revenue cap on infra-marginal power producers (e.g. RES, nuclear and lignite), providing each Member State with flexibility to apply the measures at national level as best aligned to local circumstances.

10 Finally, the EU agreed on a common price ceiling mechanism for natural gas, essentially a market correction mechanism, which was launched on 15 February 2023. The price cap can be activated whenever the month-ahead price at the Dutch Title Transfer Facility gas hub exceeds 180 EUR/MWh for three working days while, at the same time, the month-ahead price exceeds an LNG reference price basket, as specified in the Regulation, by 35 EUR/MWh[11]. To date, the mechanism has not been activated, as prices continue to decrease owing to favourable market conditions.

11 In line with the above-mentioned regulations, European countries took action to ensure their energy security through market interventions tackling the price increase. In many cases, governments launched initiatives before these guidelines were approved, realising the magnitude of the energy crisis and its potential impact on household consumers.

12 ACER published an inventory of 400+ measures adopted by the Member States in order to cope with the energy crisis[12]. Following an initial appraisal, ACER published[13] an assessment of the measures.

8 European Commission: 'REPowerEU', 18 May 2022.

9 Council Regulation (EU) No 2022/1369 of 5 August 2022 on coordinated demand-reduction measures for gas.

10 European Commission: 'Energy prices: Commission proposes emergency market intervention to reduce bills for Europeans', 14 September 2022.

11 Council Regulation (EU) No 2022/2578 of 22 December on Establishing a market correction mechanism to protect citizens and the economy against excessively high prices.

12 https://www.acer.europa.eu/news-and-events/news/acers-inventory-400-energy-emergency-measures-seeks-aid-policy-makers-going-forward.

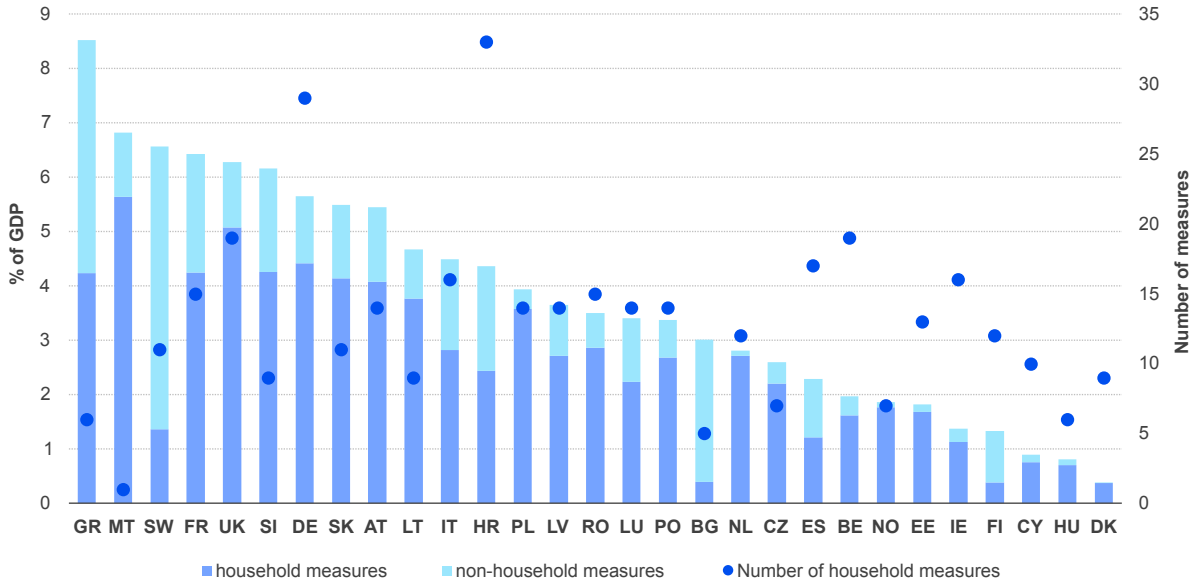
13 https://acer.europa.eu/news-and-events/news/acers-assessment-400-energy-emergency-measures-seeks-inform-policy-makers-going-forward.

The report on the assessment provides a more comprehensive analysis of the implemented measures, focusing on the lessons learned. In April 2022[14], the ECRB published a similar inventory of the measures put in place by EnC Contracting Parties and will publish an updated version in 2023.

13 In addition to the ACER Assessment of the emergency measures affecting electricity markets in 2023, ACER received an analysis from VaasaETT that examines the impact of the crisis on electricity and gas consumers[15]. Where references are made to VaasaETT, specific terminology is used[16].

14 Figure 5 and Figure 6 set out a summary of the total fiscal cost of support adopted by each country during the energy crisis, as a percentage of their GDP. Figure 5 shows the split of the total amount between household and non-household support, and Figure 6 shows the allocation between measures with a direct effect on retail (end-user) energy prices or energy bills (e.g. subsidies/compensations, price caps, energy discounts or other reduction/abolishment of energy related taxes, network fees, VAT, etc.) and other measures that do not directly impact end-user energy prices, and are provided to customers via various alternative routes (e.g. vouchers, income tax returns)[17].

Figure 5: Countries' response to the energy crisis. Number of measures and allocated budget (as % of GDP), per segment in 2022 and 2023.



Source: VaasaETT 2023

14 ECRB Impact of the electricity price surge in Energy Community Contracting Parties and measures undertaken, https://www.energy-community.org/dam/jcr:1388d596-0ce8-432f-a615-aa3d67d6238e/ECRB_EWG_EL_pricesurge_042022.pdf.

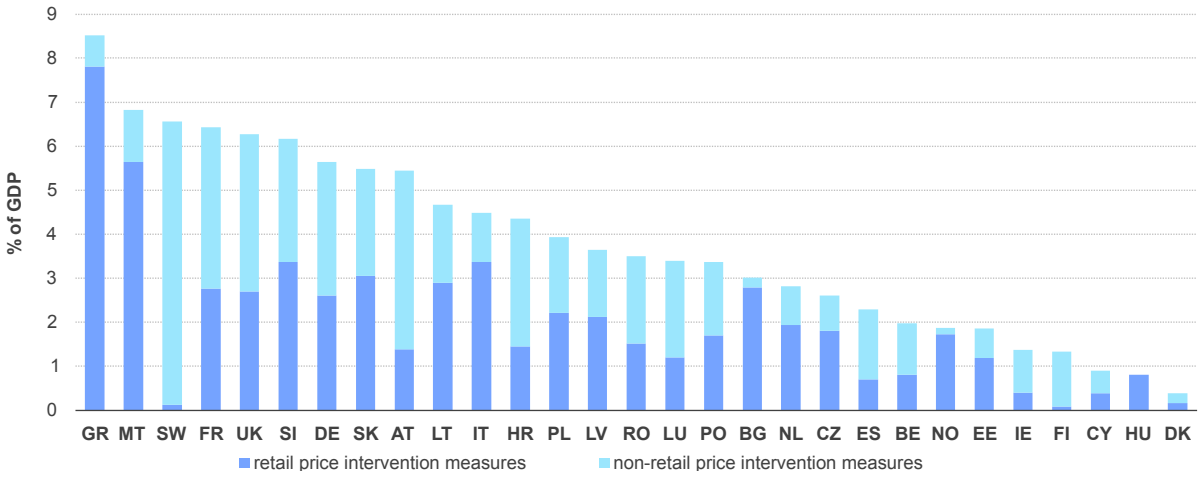
15 VaasaETT, 'The impact of the energy crisis on European electricity and gas consumers and the impacts of the policy measures implemented in relation to the crisis for the European Union Agency for the Cooperation of Energy Regulators', 18 June 2023 (VaasaETT 2023).

16 Where in the text, tables or figures references are made to the VaasaETT assessment 2023, the following terminologies are used:
- Typical residential consumer: Households with a typical consumption profile living in the capital city; typical consumption profile varies per country and is defined by national regulatory authorities.
- Untargeted measures: Support measures that apply for the typical consumer.
- Targeted measures: Support measures that target specific consumer types other than the typical (e.g. households consuming above the typical consumption threshold, vulnerable consumers, regional measures, other specific groups based on socioeconomic criteria, etc.).
- Retail price interventions: Measures with a direct effect on the retail (end-user) energy prices or energy bills (e.g. subsidies/compensations, price caps, energy discounts or other reduction/abolishment of energy related taxes, network fees, VAT, etc.). Only energy price interventions clearly stated as support measures and measures that are directly affecting the end-user energy bills are classified into this category.
- Wholesale price interventions: Measures focusing on national wholesale market mechanisms in order to stabilise the wholesale price; their impact on retail prices is only indirect.
- Non-price interventions: Vouchers, one-time support schemes that correspond to a longer period of increased prices; other refunds that do not directly impact the end-user energy price and are provided to customers via different alternative routes, e.g. income tax returns.
- Energy efficiency measures: Support measures adopted by governments to promote energy efficient appliances or optimization of building efficiency (e.g. financing appliances replacement, installation of heat pumps, buildings renovation/reconstruction, etc.).
- Energy savings measures: Energy campaigns by governments and energy regulatory authorities to enhance energy savings through behavioural advice.

17 Note that the category 'retail price intervention' in the Vaasa ETT assessment differs from the terminology used in section 3.2.5, where 'price intervention' refers, at minimum, to the energy component of the energy customer's bill, which is a price subject to regulation or controlled/ intervened by a public authority such as a government, an NRA, etc. (see footnote 50).

15 Regarding expenditure, Greece was the country that spent the highest share of its GDP (about 8.5 %) to respond to the crisis. The support is split evenly between household and non-household consumers, but Greece is one of the countries with the lowest number of household measures, the most important being the electricity subsidy, which compensates consumers according to their level of consumption. The measure has been in place since September 2021. Greece was also among the first countries to adopt retail price interventions, i.e. measures with a direct effect on the retail price of electricity in their market. The cost of price interventions was covered by the government and by windfall profits collected from the generators through the Energy Transition Fund. At the other end of the scale, Denmark, together with Finland and Sweden, spent the least on retail price interventions as a percentage of their respective GDP.

Figure 6: Countries' response to the energy crisis. Budget (as % of GDP) allocated to retail prices vs. non-retail prices, per country

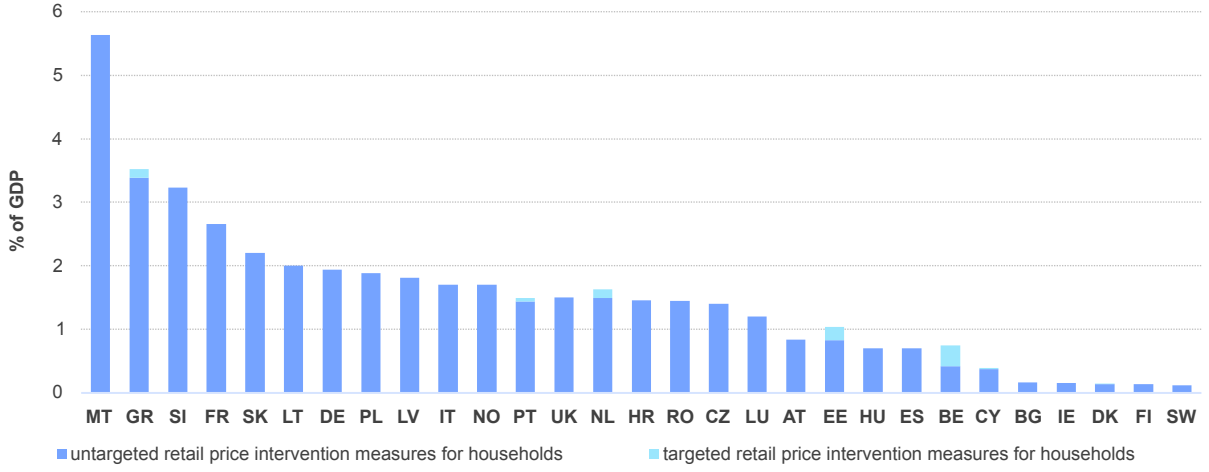


Source: VaasaETT 2023

16 Focusing exclusively on household retail price interventions (i.e. measures with a direct effect on the retail price such as energy subsidies, price caps, energy discounts or other reduction/abolishment of energy related taxes, network fees, VAT, etc.), Figure 7 shows that most countries provided general support to all household customers in their markets instead of targeting only highly vulnerable consumer groups.

17 While this approach may be understandable given the severity and sudden onset of the energy crisis, ACER and CEER believe that going forward and in the event of a future crisis, support should be targeted to those most in need of financial assistance.

Figure 7: Countries' response to the energy crisis. Allocated budget (as % of GDP), per country, targeted vs. untargeted retail price interventions



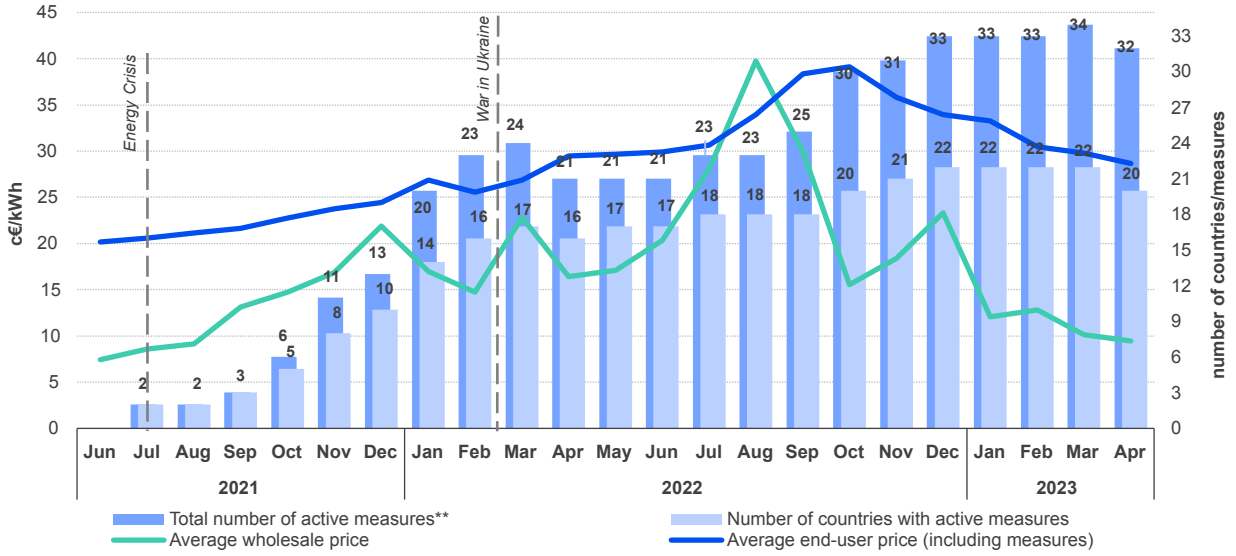
Source: VaasaETT 2023

18 The ultimate objective of retail price interventions (i.e. measures with a direct impact on the retail price) was to substantially and immediately halt the increase in retail prices, which was mainly driven by price increases in the wholesale market. As shown in Figure 8, the steep rise in wholesale prices drove governments to adopt support measures, in some cases starting from July 2021. The first countries to intervene were Italy and Spain, followed by Greece in September 2021. Given the upward trend in wholesale prices, an increasing number of countries gradually followed the same path, with a total of 14 countries implementing some form of retail price interventions by January 2022.

19 Following the outbreak of the war in Ukraine and the subsequent increase in wholesale prices, even more measures were announced, either by countries with existing measures adopting new ones or by countries deciding that the prolonged energy crisis was becoming unbearable for household consumers. This can also be explained by looking at the difference in absolute terms between the number of countries with active measures and the total number of active measures in Figure 8 below.

20 After the highest peak in wholesale prices during the crisis, registered in August 2022, measures continued to be adopted. Retail prices have been steadily declining since April 2023, after several months of consecutive drops in wholesale prices. This suggests that governments have been cautious in phasing out support to consumers, possibly taking into account the uncertainty of future developments in the energy markets. In addition, it is important to note that retail prices tend to lag behind wholesale markets, so such a continuation may be regarded as reasonable. Ultimately, as prices continue to decrease, providing widespread consumer support may cease to be appropriate.

Figure 8: Adoption of retail price interventions for typical household consumers across European electricity markets,[18] per total number of measures and countries with active measures.



Source: VaasaETT 2023

***Multiple measures that apply in the same retail price intervention category (i.e. energy component related subsidy or price cap, energy tax cut, network fee cut or VAT reduction), are considered a single measure per country.*

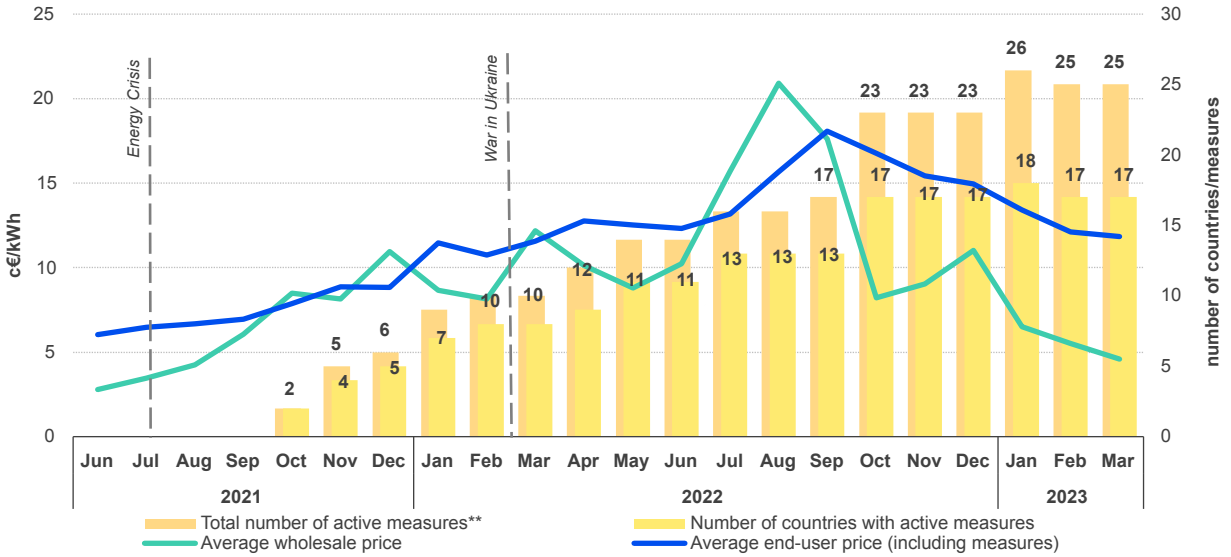
21 Figure 9 shows the evolution of the adoption of measures in the natural gas markets in Europe, which started several months after measures were first adopted in the electricity market. In particular, Greece and Italy were two of the first countries to implement such measures for their household gas customers. By the peak of wholesale prices in August 2022, thirteen European markets had already adopted at least one measure affecting the relative price of household bills. The response was even stronger in the period that followed, resulting in a total of eighteen countries having measures in place by January 2023, when the adoption of measures peaked out.

22 As with electricity, the adoption of measures increased following wholesale price increases, including a considerable lag. On the one hand, the data shows that it took several months for countries to react to the increase in wholesale prices before they decided to mitigate the pass-through of rising prices to consumers. On the other hand, during the downward trend in wholesale prices after the price peak

18 The data compiled for the analysis only consider markets that have adopted at least one measure during the energy crisis. The markets included in the figure are AT, BE, CZ, CY, DK, EE, FI, FR, DE, GR, IE, IT, LV, LU, LT, NL, NO, PL, PT, RO, SI, ES, SE.

in August 2022, governments appeared willing to continue to protect consumers by extending support measures and adopting new schemes. The lag between wholesale and retail price developments can partly explain why governments continued to act. As the downward trend continues, it is expected that the measures will be gradually phased out as wholesale price decreases are reflected in retail price reductions.

Figure 9: Adoption of retail price interventions for typical residential consumers across European natural gas markets,[19] per total number of measures and countries with active measures.



Source: VaasaETT 2023

***Multiple measures in the same retail price intervention category (i.e., energy component related subsidy or price cap, energy tax cut, network fee cut or VAT reduction) are considered a single measure per country.*

23 For both electricity and gas, national governments appeared to respond more quickly to wholesale price spikes by adopting additional support measures than to wholesale price reductions by abolishing measures. As highlighted above, this is partly due to the slower rate of decrease in retail prices. Despite this, governments should consider how to better target support measures and further improve their timeliness.

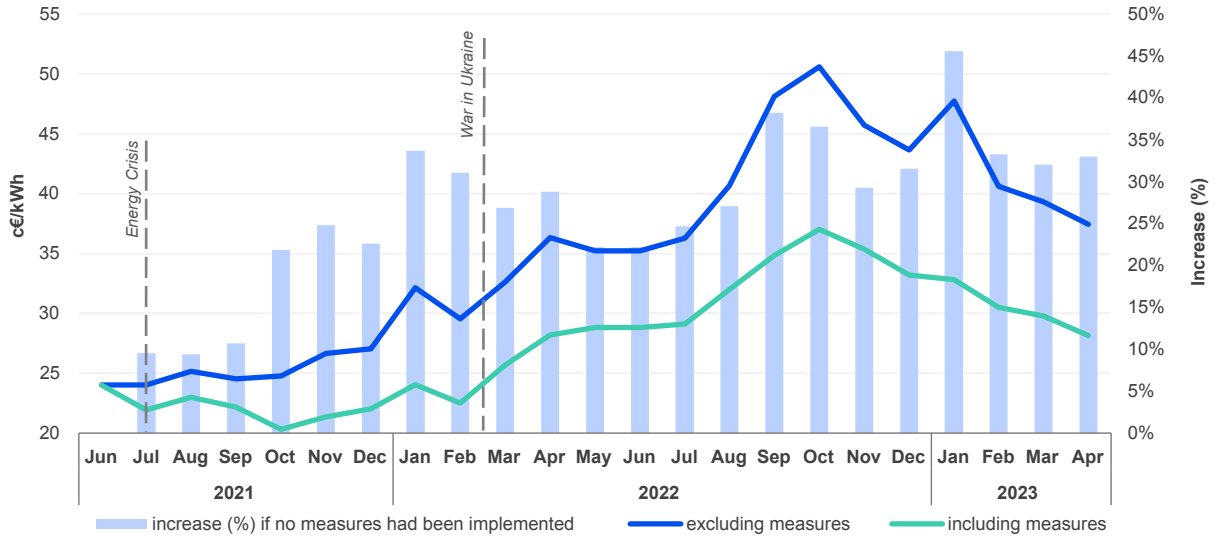
24 Figure 10 shows that after the pandemic, the first signs of the energy crisis became apparent in the autumn of 2021, when European retail electricity prices exceed 20 euro cents/kWh on average. The reasons for this are varied and can mainly be attributed to the economic recovery following the resumption of global economic activity, the increase in the price of raw materials (record high prices of natural gas) combined with empty gas storage facilities, low nuclear generation in France and the mild winter, which affected hydro generation and put even more pressure on natural gas prices, and finally the record high level of CO2 emission allowances.

25 Given the circumstances, European governments decided to act and implemented support measures with an immediate effect for end-user prices. Figure 10 shows the impact of retail price interventions on household electricity prices and their evolution over time, as the number of countries with active measures continued to increase. In order to illustrate the impact of the measures, the end-user price and the corresponding price increase without any measures are shown.

26 In October 2022, the retail price in countries with active measures would have been around 50 euro cents/kWh without measures, while the price actually paid by consumers (with measures) was 37 euro cents/kWh. In January 2023, the price increase would have been the highest (46 % higher) in the absence measures. This outcome is associated with the application of major retail interventions, notably price caps that drastically reduce the price, such as those introduced in the Netherlands, Germany, Poland and Czechia. The latest price levels, as of April 2023, show that support measures are still prevalent. While this is to be expected given that retail prices tend to fall at slower rates than wholesale prices, it is expected that the need for such measures will start to gradually diminish as prices continue to fall.

19 The data compiled for the analysis covers only markets that have adopted at least one measure during the energy crisis. The markets included in the figure are AT, BE, BG, HR, CZ, EE, DE, GR, IE, IT, LV, LU, LT, NL, PL, RO, SK, SI, ES.

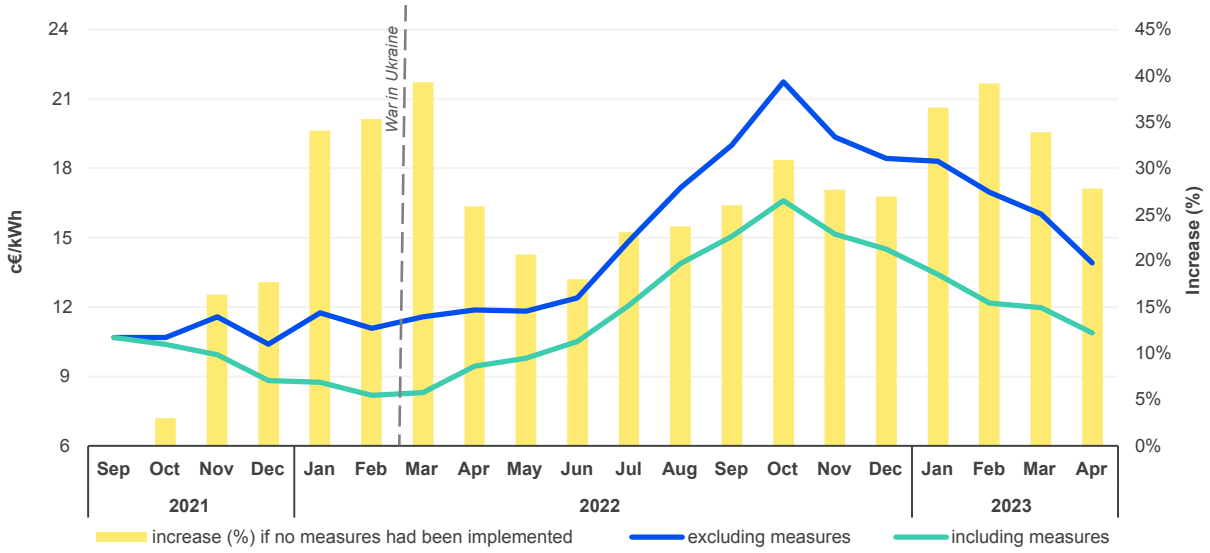
Figure 10: Impact of retail price interventions on the price of electricity paid by end-users[20]



Source: VaasaETT 2023

27 Figure 11 shows the impact of government measures in the natural gas sector and the corresponding impact without measures. End-user prices would have been 39 % higher had no measures been taken in March 2022, when the newly adopted retail price caps started showing their effect. Although wholesale prices and subsequently some retail prices have been falling since the last quarter of 2022, the figures clearly indicate that the existing measures continue to place downward pressure on retail prices.

Figure 11: Impact of retail price interventions on the price of natural gas paid by end-users 21



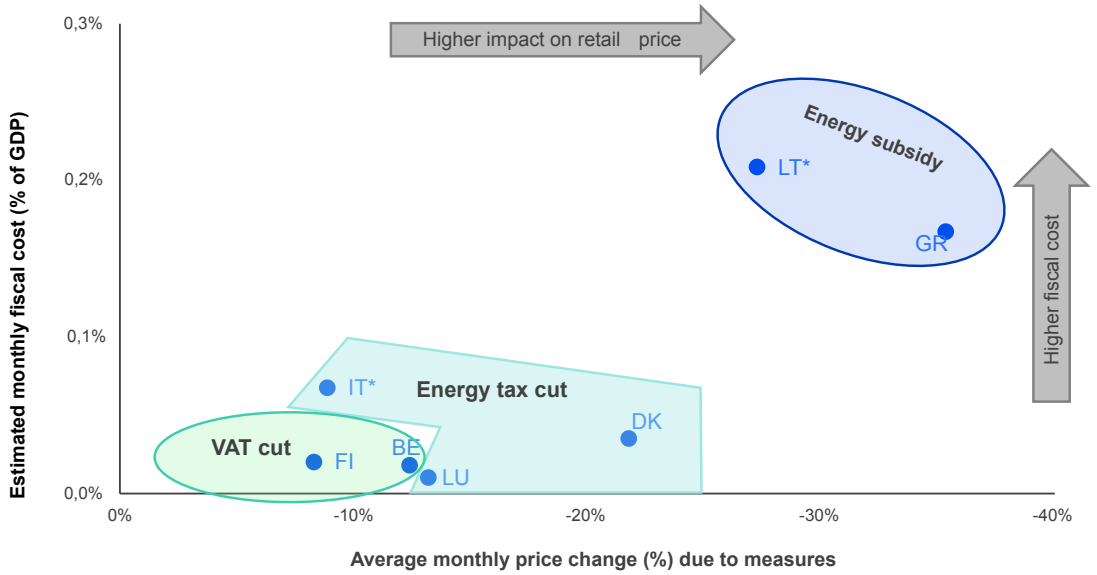
Source: VaasaETT 2023

20 Figure 10 shows the average all-in retail price of countries that have intervened in the retail electricity price to reduce household bills, compared to the price without these measures, together with the corresponding percentage increase if the measures had not been taken into account. Each market is only included in the graph for the period during which its measures were implemented. The analysis only considers support measures applicable to the typical household customer living in the capital city of the countries analysed. Targeted measures (e.g. for vulnerable customers, businesses, other specific consumer groups), which have been applied in many countries, are not included in this analysis. Additional measures applied directly to the wholesale market in some countries (e.g. price ceilings in ES, PT, GB, and GR) are not depicted in this analysis. Markets included: AT, BE, CZ, CY, DK, EE, FI, FR, DE, GR, IE, IT, LV, LU, LT, NL, NO, PL, PT, RO, SI, ES, SE.

21 Figure 11 shows the average all-in retail price of countries that have intervened in the retail price of natural gas to reduce household bills compared to the price without these measures, together with the corresponding percentage increase if the measures had not been taken into account. Each market is only included in the graph for the period during which its measures were implemented. The analysis only considers support measures applicable to the typical household customer living in the capital city of the countries analysed. Targeted measures (e.g. for vulnerable customers, businesses, other specific consumer groups), which have been applied in many countries, are not included in this analysis. Additional measures applied directly to the wholesale market in some countries are not included in this analysis. The following markets are included: AT, BE, BG, HR, CZ, EE, DE, GR, IE, IT, LV, LU, LT, NL, PL, RO, SK, SI, ES.

28 Figure 12 shows the impact on electricity retail bills and their corresponding fiscal cost. Energy subsidies tend to have the highest impact on retail prices (along with price caps that are not depicted in this analysis), while having the highest fiscal cost, on a monthly basis. On the contrary, compensatory measures implemented through energy taxes and VAT tend to have a weaker impact on retail prices, while at the same time entailing lower fiscal costs for the government.

Figure 12: Impact of different type of retail price interventions on electricity prices and fiscal costs, for selected[22] markets.



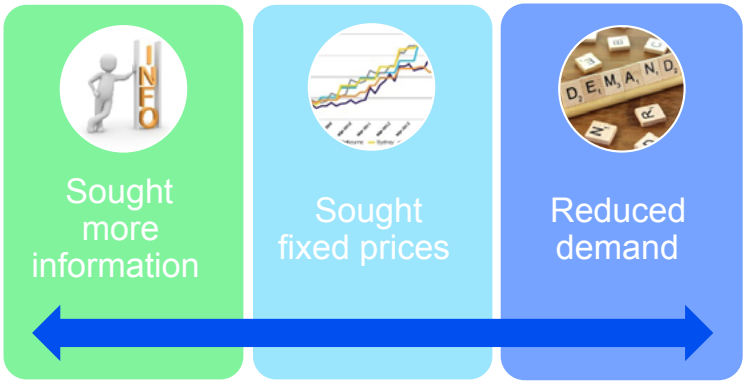
Source: VaasaETT 2023

Case study: BEUC - Consumer perspective on the energy crisis

1 In 2022, some European energy consumers faced unprecedented increases in their energy bills. Many energy consumers took action and responded to this new situation in various ways. From the consumers' side, lack of communication between suppliers and consumers can hinder consumer engagement and the ability of consumers to respond to the crisis. This being the case, communication should become more meaningful and dynamic in the sense that consumers should receive actionable information. This will improve their ability to respond to new challenges such as the current high energy prices.

How did consumers respond to the energy crisis?

2 Consumers expressed anxiety about their energy bills. Some started using alternative products for heating.



22 The analysis includes only selected countries that introduced retail price interventions (i.e. measures with a direct effect on the retail price), which can be clearly linked to the reduction in prices paid by consumers. The analysis is limited to part of the total collection of European measures and is seen as an indication of the assessment of measures to prompt discussions around different approaches adopted by countries.
* In Italy and Lithuania, the available fiscal costs do not reflect the full period of implementation of the measure and therefore the 'average monthly price reduction' and 'months of measure validity' have been adjusted accordingly to reflect the corresponding fiscal cost period.

3 Energy consumers were actively trying to understand how to respond to the energy crisis. More than in a normal situation, they were looking for answers on how to find a better deal on the market, how to improve energy efficiency, or how to use solar panels. Consumer organisations in the European Union saw a significant increase in requests for advice on energy issues. For example, the number of requests on energy issues almost tripled in the United Kingdom. In Germany, some 290 000 consultations were provided in 2022, an increase by approximately 100 000 compared to 2021.

4 Another prominent response to the energy crisis was the significant increase in the demand for fixed-price contracts by energy consumers who wanted more certainty about their energy bills. While such products were available in some (but not all) markets, they tended to be very expensive compared to previous years. In Estonia, for example, where consumers experienced extreme price increases, fixed-price contracts were offered for the first time ever. In Belgium, more than 15 000 people signed a petition launched by the Belgium consumer organisation Testachats calling for affordable fixed-price contracts[23]. In Spain, the consumer organisation OCU launched a collective supplier switching campaign with the aim of delivering fixed-price contracts to consumers. The first week of the campaign appeared to be the most successful OCU campaign ever. More than 60 000 consumers expressed interest in joining the initiative[24].

5 It is uncertain whether these behavioural changes are of a temporary nature or whether they will become more deeply embedded after the crisis. The shift towards the use of renewable energy, solar panels and heat pumps is likely to continue. Consumer engagement will therefore be both key and central to the energy transition. At the same time, the high energy bills made energy consumers more aware of their own behaviour and the possible benefits of adjusting their energy consumption. The government's specific campaigns to reduce heating temperatures could be effective in the future, making people aware that lower heating temperatures can still provide adequate heat comfort. Such campaigns should be combined with more direct messages to consumers and aim to reduce peak demand.

Typical difficulties consumers experienced in responding to high prices

6 Although energy suppliers did make an effort, energy consumers found difficulties in speaking to their energy supplier. Suppliers' customer services became flooded with an increase in consumer requests and in turn became difficult to reach. In many cases, suppliers regularly failed to respond at times of need. However, there are also examples of good practices of energy suppliers proactively communicating with their customers[25]. For example, the Italian electricity supplier Plenitude launched a media campaign to announce that if consumers needed help with the payment of their bills, the supplier would engage with the consumer find a satisfactory solution (i.e. payment in instalments or deferred payment schemes).

7 Governments, network operators and the general media launched campaigns to inform and guide consumers' response to high energy prices. For example, in Belgium RTBF (a media company) developed a dashboard, helping consumers find more information on the evolution of their energy contracts and the options available to them. In Finland, Fingrid, the Finnish TSO, proactively launched a new customer portal to advise consumers on money-saving actions[26]. In the United Kingdom, the National Grid started a demand response programme[27].

8 While these campaigns helped raise awareness of what consumers can do to reduce their energy bills, awareness may still be low. Government campaigns were partially perceived as 'lots of noise, as advice to consumers was not always particularly clear or was too generic to match the specific situation of individual consumers. For example, consumers seeking price stability and asking for fixed price contracts were not made aware that at the time a fixed-price contract would most likely have locked them in at high prices.

9 Campaigns with messages such as 'with a dynamic contract you will save 15 %' (in Belgium) or 'show us your bill, we will tell you what to do' (in Austria) would not have provided meaningful guidance either. Indeed what is needed is a better understanding of which offer is best for consumers with different

23 Petitie voor een betaalbare stroomfactuur - Test Aankoop (test-aankoop.be).
24 Quiero pagar menos luz OCU 2023 | quieropagarmenosluz OCU.
25 www.ilsole24ore.com/art/plenitude-bollette-rate-primo-semestre-le-famiglie-difficolta-ecco-come-funziona-AEZS3raC.
26 www.fingrid.fi/en/electricity-market/datahub/sign-in-to-datahub-customer-portal/.
27 www.nationalgridus.com/Upstate-NY-Business/Energy-Saving-Programs/Demand-Response.

profiles. Consumers with a heat pump, solar panels or an electric vehicle will benefit from a different advice compared to those who do not have such equipment. First, the underlying assessment for the advice needs to be sound. Second, the communication with customers on such advice can improve. Good examples are portals where customers are guided to advice that is applicable to their specific situation via a questionnaire.

10 Overall, from the consumer perspective there are several ways to improve consumer response to high energy prices. The BEUC[28] has mentioned at least the following, of which the first three focus on better and more meaningful communication between suppliers and consumers:

a. Creating and improving information portals for consumers on energy offers and consumption patterns. Making information and advice concrete and actionable.

b. Promoting the installation and use of smart meters. Where no smart meters are available, suppliers should push consumers to send over self-readings to avoid accumulating energy debt until the next reading.

c. Promoting good and reliable comparison tools and ensuring that these are readily available to consumers.

d. Pushing for the implementation of Article 11 of the Electricity Directive on offers for dynamic price contracts.

e. Source: ACER (2023), based on interview with the BEUC, the umbrella group for 46 independent consumer organisations from 32 countries (www.beuc.eu)

2.1. Conclusions on the energy crisis

29 The measures implemented across the EU were a necessary response to the energy crisis. They have come at a significant cost, with estimates placed at approximately EUR 646 billion[29]. To place this figure in context, the Covid-19 response cost the EU approximately EUR 1.2 trillion. Such expenditure places a significant strain on the finances of the Member States. As many of the implemented measures (subsidies, caps, network tariff reductions, VAT reductions) applied to all consumers, ACER and CEER take the view that in the future, assistance could be targeted with greater precision at those most in need of support to avoid supporting those who can afford to manage their own energy costs.

30 The measures also seem to have a dampening effect on the decline in household demand. However, it is important to note that households may be less able to reduce their demand, particularly as overall demand has decreased (see Section 3.1 on energy demand). It appears that most demand reductions came from the industrial sector. Therefore, the provision of untargeted support in the future may be inappropriate as it may affect the incentives to reduce both total and peak demand. Support for those providing demand response to benefit the wider energy system and, in turn, consumers, could be considered.

31 During the crisis innovative campaigns were launched to enable energy consumers to respond to requests to change their consumption behaviour in response to the real-time energy mix. Targeted campaigns, such as ESBN's Beat the Peak Initiative, can help to educate and engage consumers, while significantly improving consumer participation in demand management. NRAs, Member States, energy suppliers, and network operators should regularly inform energy consumers of the best times to use energy with the aim of levelling the demand curve, which can reduce prices for all consumers.

28 BEUC is the umbrella group for 45 independent consumer organisations from 31 countries.

29 www.bruegel.org/dataset/national-policies-shield-consumers-rising-energy-prices.

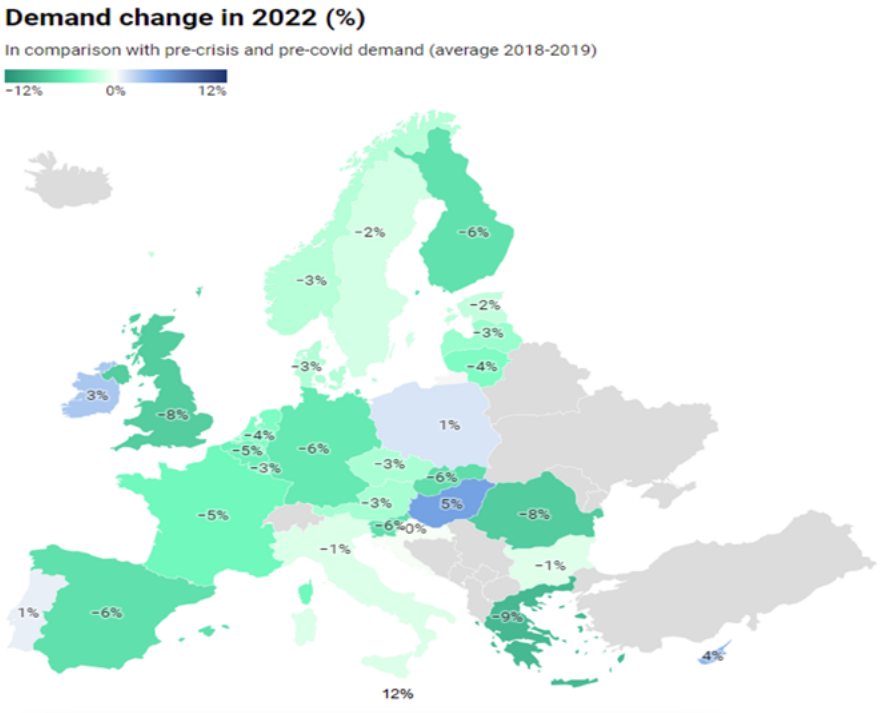
3. Energy consumption, prices, information and complaints

3.1. Consumption of electricity and gas

32 In response to the energy crisis, the importance of reducing energy demand became a key consideration for Member States and electricity and gas consumers. This section provides an overview of energy demand for both electricity and gas. Where data was provided, ACER, in cooperation with VaasaETT, carried out an analysis of the demand response of households and industry. Demand figures were obtained from VaasaETT and, where data was provided with a monthly level of granularity, it has been analysed. However, some markets were unable to provide such data. Despite this, where data was available, it provided valuable insights into the demand response of both household and non-household consumers in 2022. The availability of more granular data will be beneficial going forward.

33 Figure 13 shows that in 2022 total electricity demand generally decreased across Europe. Demand increases were only registered in Malta, Hungary, Cyprus, Ireland, Portugal and Poland. The reduction in demand ranged between -1 % and -9 %, with the highest reduction (-9 %) registered in Greece. In general, where demand growth has been observed, markets have operated under a regulated regime that has kept prices low, giving end users limited incentive to respond to demand. The only exception is Ireland, where the increase in demand is understood to be driven by an increase in data centre connections. As regards markets with regulated prices, these can be a barrier to market participants wishing to offer demand response services to both final consumers and system operators.

Figure 13: . Electricity demand change in 2022 compared to pre-crisis and pre-Covid modelled demand[30]



Source: VaasaETT 2023 based on Eurostat data

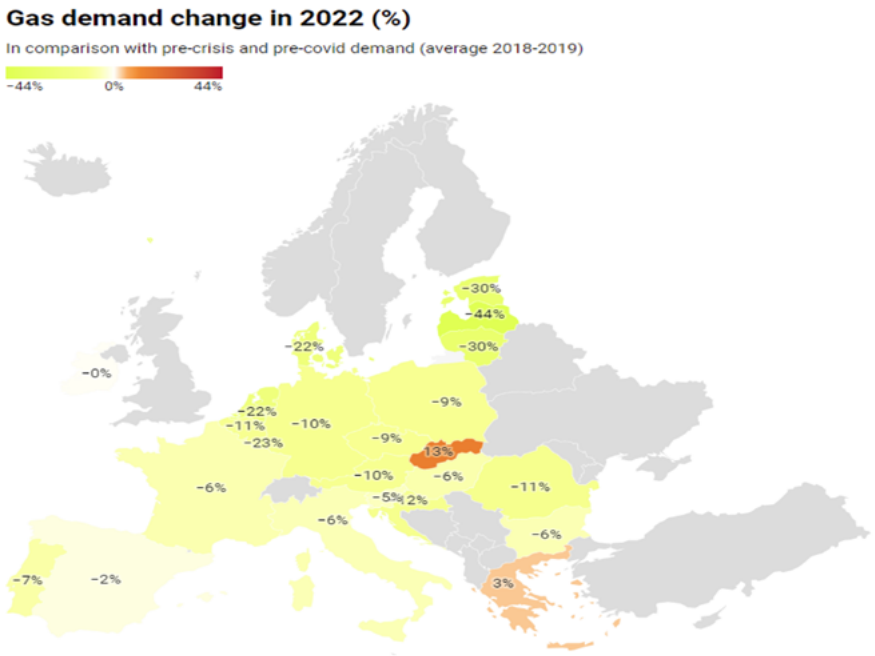
34 Figure 14 shows that overall gas demand also decreased across Europe. The decrease in demand was in some cases more significant than for electricity, with decreases ranging from 2 % to 44 %.

35 In general, northern European countries appear to have achieved the largest reductions in demand, in particular Latvia (44 %), Lithuania (30 %) and Estonia (30 %), which have the highest heating

30 The analyses on electricity and gas demand (Figure 13 and Figure 14) are based on Eurostat data. The analyses on residential and industry electricity and gas demand (Figure 15 – Figure 18) are based on data collected by VaasaETT. The Eurostat data includes more elements than residential and industry demand like e.g. generation, system losses etc.

demand and are among the most dependent on Russian gas. At the same time, demand increases were registered in Slovakia (13 %) and Greece (3 %). The demand evolution of each Member State is influenced by various factors, including demand elasticity in response to price changes, which is affected by wholesale sourcing costs and government interventions aimed at reducing final prices. In addition, the importance of gas in power generation, the prevalence of gas-intensive industries and weather conditions also play a role in shaping demand trends. As noted for electricity markets in which a price increase was registered, some of the markets in which demand rose were those operating under a regulated regime, which kept prices relatively low, limiting the effectiveness of demand response incentives for end-consumers.

Figure 14: Gas demand change in 2022 compared to pre-crisis and pre-Covid demand and modelled demand



Source: VaasaETT 2023 based on Eurostat data

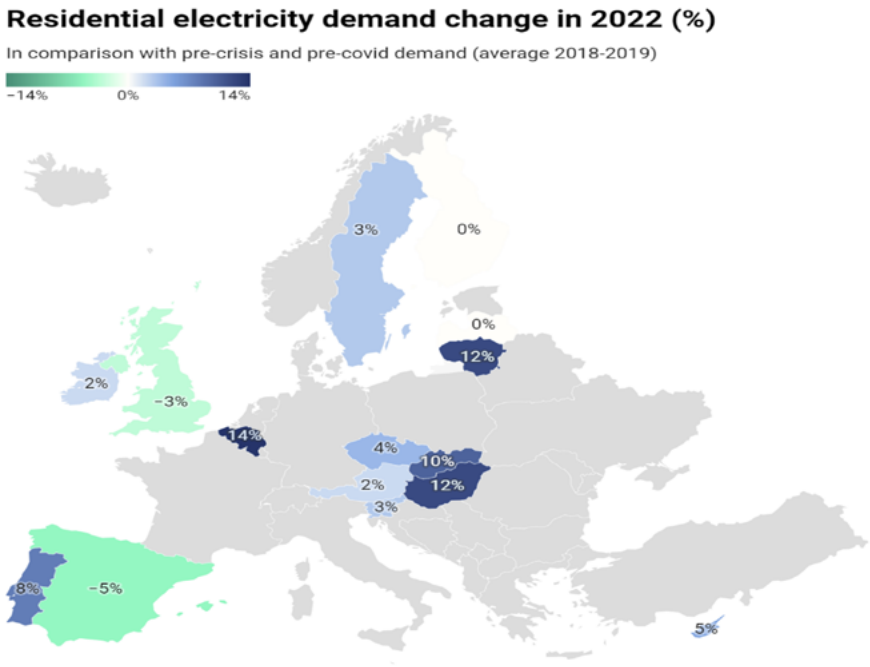
3.1.1. Household demand

36 Where data was available, it became clear that energy demand in the residential sector was not affected significantly by the energy crisis, at least when looking at the 2022 demand[31]. Although there were some decreases in demand for both electricity (Great Britain, Spain) and gas (Austria, Belgium, Czechia, Germany, Ireland, Latvia, Netherlands, Slovakia), there were several countries that either remained at the same level or increased their energy demand in 2022[32].

31 Demand data: Sectoral data is not always national and may correspond to sub-samples of national consumers that represent selected DSOs or suppliers. Nevertheless, the sub-samples analysed are large enough to support the scope of the analysis, which is to investigate how demand pattern have been affected by the energy crisis but may differ from annual data collected by NRAs.

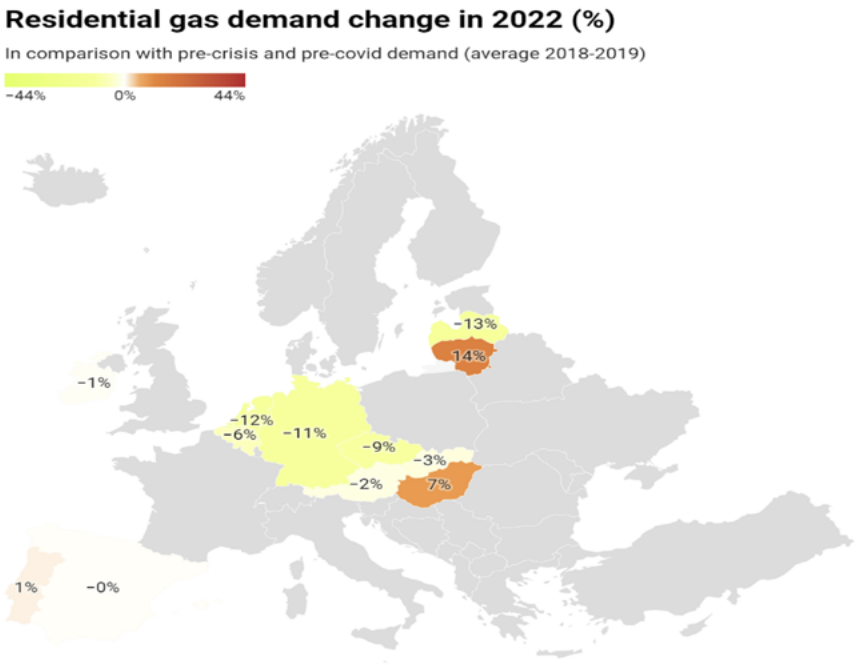
32

Figure 15: Residential electricity demand change in 2022 compared to pre-crisis/pre-covid demand[33]



Source: VaasaETT 2023

Figure 16: Residential gas demand change in 2022 compared to pre-crisis/pre-Covid demand[34].



Source: VaasaETT 2023

37 These findings were not unexpected, given the smaller potential for consumption reduction in the residential sector as a result of behavioural changes in the short term. Larger demand reductions can be achieved with energy efficiency investment, e.g. home insulation, installation of solar panels for

33 As noted in paragraph 32 not all markets could provide the relevant data in this case to make a distinguishing between household and industry demand. Despite this, where such data was available, it provides a valuable insight into the demand reaction of both groups of consumers in 2022.

34 In Belgium and the Netherlands, 2019 demand was used for calculating the 2022 demand change, due to unavailability of 2018 demand data. In Austria, no temperature correction could be applied as only annual sectoral data were available.

auto-production or water heating, appliance upgrades, etc. However, such actions tend to take longer to decide and plan, and therefore have a longer-term impact on household consumption levels, especially given the costs involved.

38 In addition, before the crisis a large share of household customers had few incentives and limited awareness of energy efficiency, meaning that they needed some time to properly appraise the situation and understand how to respond. Many countries have launched energy saving campaigns to raise consumer awareness and implement local energy efficiency action, which partly cover the costs of energy efficiency measures and aim to encourage and support household consumers to reduce their demand. However, given the limited decrease in household demand, such campaigns, while beneficial in terms of raising consumer awareness, may not always enable consumers to respond. A full roll-out of smart meters, along with automated solutions and benefits to consumers, will drive the creation of a more active and flexible market. Measures entailing the regular and active provision of information to consumers about their energy consumption also act as a driver for the provision of flexibility services and activate consumers. The continuation of such initiatives could lead to a greater decrease in demand when analysing the future months of 2023.

39 Annex 7.4 shows the annual household electricity and gas demand pattern of selected countries, comparing demand in 2022 to average historical demand and range.

40 The annual pattern is similar in all countries for both electricity and gas demand, showing an increased consumption during the first months of the year (January-March), a gradual decrease in the spring and summer, and an increase in late autumn and winter (November-December). Some countries also show a smooth electricity demand peak during the summer (e.g. Hungary, Portugal), which may be related to the use of air-conditioning.

41 When looking at electricity and gas demand in 2022 compared to the historical range, some countries show an electricity demand decrease during the second half of 2022, including Great Britain but also Latvia and Slovenia. This pattern is more pronounced for gas demand, where seven of the nine markets analysed show a decline in demand in the second half of 2022 compared to last year's average and the pattern for the first half of 2022. It should be noted that in August 2022 Member States agreed to reduce their gas demand by 15 % between 1 August 2022 and 31 March 2023 with measures of their choice[35]. In March 2023, this agreement was extended for a further year. Many measures, including financial support for energy efficiency investment, public attention campaigns, public transport discounts, and lower heating temperatures in public buildings, were introduced in different Member States. Interestingly, the list includes even countries that did not reduce their demand in 2022, such as Portugal and Spain. One of the reasons for the decrease is the mild weather during the last months of 2022. However, this can also be seen as an indication of the efforts of households to save energy. The only way to confirm this is to wait and analyse 2023 data once it becomes available. Nevertheless, if this assumption is correct, the household market in more countries is expected to reduce demand in 2023.

3.1.2. Industrial demand

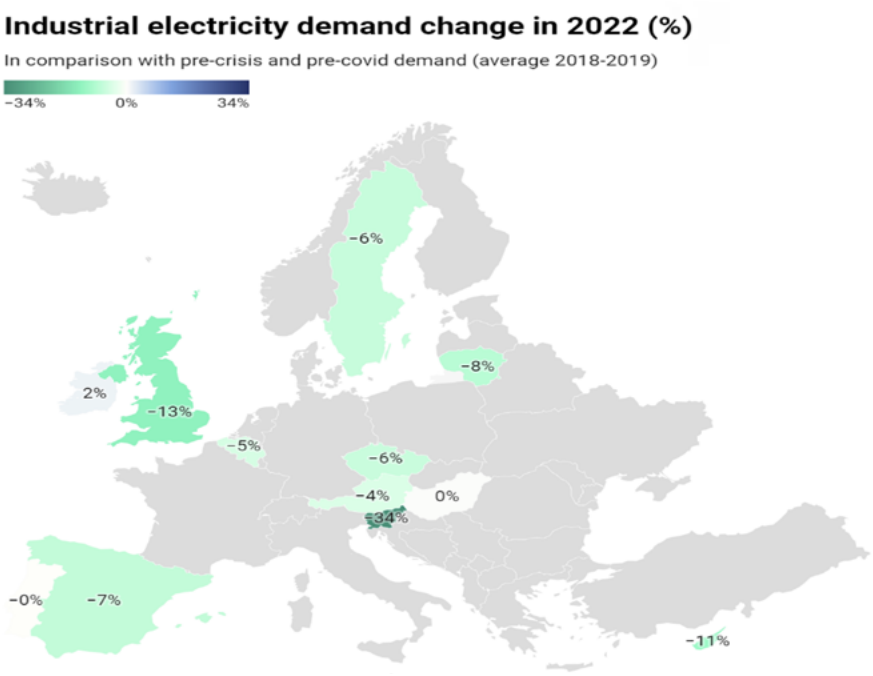
42 In contrast to households, industrial consumers appear to have more incentives to adjust their demand in periods of higher prices. Figure 17 shows that most of the countries in the analysis maintained or reduced their industrial electricity demand in 2022. The highest decreases were registered in Slovenia (34 %), Great Britain (13 %) and Cyprus (11 %). In contrast, Ireland registered a 2 % increase in demand in 2022. This was driven by the increased needs of the ICT-sector, and more specifically the electrification of data centres, which in 2022 accounted for up to 18 % of Ireland's total electricity consumption.

43 Figure 18 shows that a decrease in gas demand was also registered in the industrial sector in 2022, with the demand reduction ranging between 2 % and 42 %. The countries with the highest demand reduction are Great Britain (42 %), Spain (40 %) and Luxembourg (38 %).

44 Nine out of the thirteen countries analysed have reduced their demand by more than 10 %. This can be partially explained by changes in industrial gas demand as a direct response to the high energy prices. However, as detailed demand data is limited, further analysis is needed.

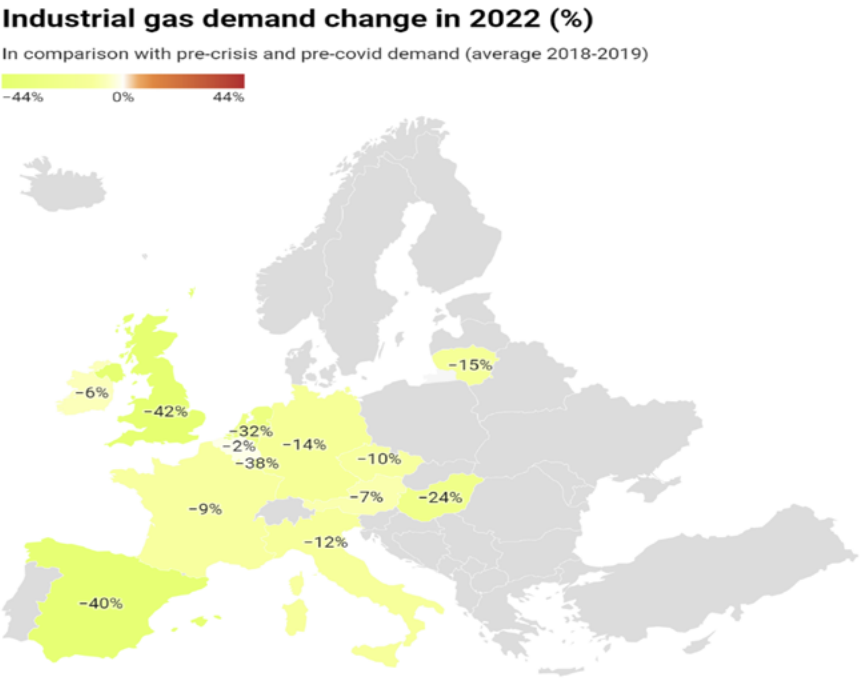
35 Council Regulation (EU) No 2022/1369 of 5 August 2022 on coordinated demand-reduction measures for gas.

Figure 17: Industrial electricity demand change in 2022 compared to pre-crisis / pre-Covid demand[36]



Source: VaasaETT 2023

Figure 18: Industrial gas demand change in 2022 compared to pre-crisis / pre-Covid demand[37]



Source: VaasaETT 2023

45 A closer look at the annual electricity and gas industrial demand pattern of the countries analysed is set out in Annex 7.5. In contrast to household demand, no common pattern can be identified when looking at the electricity demand patterns of the different countries.

46 However, for gas, some consistency in the demand pattern can be observed between some of the countries (i.e. Czechia, France, Germany, Ireland and Lithuania), probably singling out those that tend to use mainly gas for heating in industrial installations.

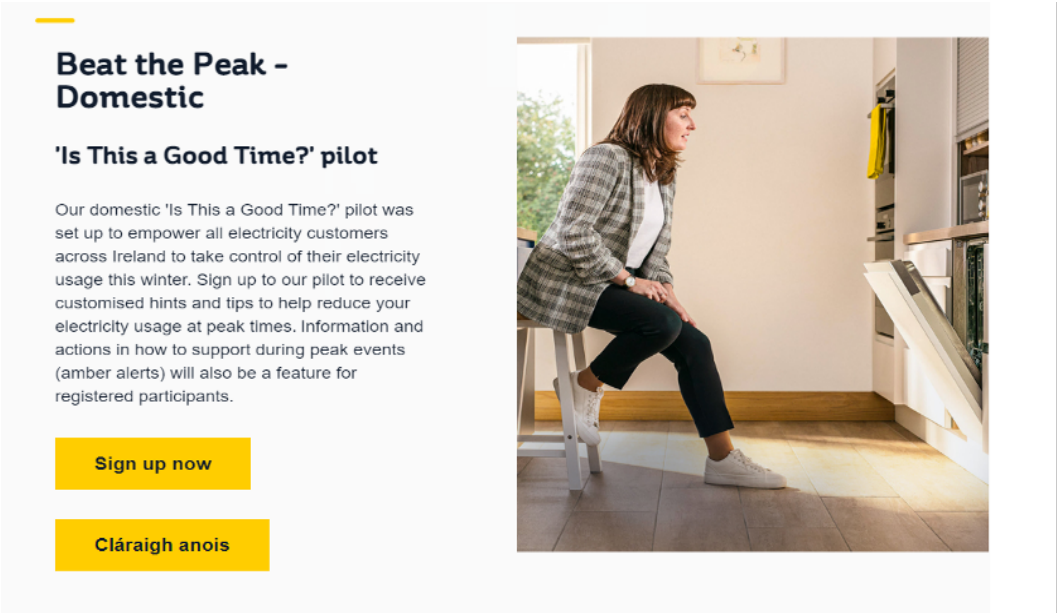
36 In Belgium and Netherlands, 2019 demand was used for calculating the change in demand in 2022 as no demand data for 2018 was available.

37 In Belgium, 2019 demand was used for calculating the change in demand in 2022 as no demand data for 2018 was available.

Case study: Best the Peak Domestic Initiative: Innovation during the crisis

1 The Best the Peak Domestic Initiative[38] is an example of the energy crisis driving new innovative approaches that can benefit both the energy system and its users. Despite the difficulties in managing the energy crisis, ESB Networks[39], in cooperation with the Commission for Regulation of Utilities (CRU), launched the initiative over a period of 14 weeks. In the winter of 2022, ESB Networks launched the Best the Peak Domestic Initiative to help customers regardless of their supplier in Ireland take control of their electricity use and reduce electricity demand at peak times.

2 The initiative was a response to the increased risk of electricity supply failing to keep pace with demand during the winter. As Ireland is now more reliant on renewable energy generation, the electricity system would be under pressure. This risk of disruption is the highest at peak times between 5 pm and 7pm Monday to Friday. ESB Networks set up different initiatives to work with customers across homes and businesses to help reduce peak energy demand during periods of high pressure[40].



3 A total of 18 000 household customers registered for the 'Is This a Good Time?' pilot. They received customised hints and tips by email and SMS to help them reduce their electricity use during peak hours and optimise when and how they use electricity at home. 'Energy events' were used to inform consumers if it was a good time to charge a laptop or do the laundry. The messages provided simple but effective advice to help consumers shift their electricity consumption to optimal times without changing how they live their lives. In addition to seeking demand reduction, the initiative sought to drive a consumer behaviour change by prompting consumers to increase their consumption during periods of high renewable generation. Consumers were encouraged to change their behaviour when prompted by being proposed alternative options for when and how to use household appliances. Finally, people were asked to self-report within 48 hours if they had done anything differently. With six self-reports, registered customers could be eligible for a voucher worth around EUR 30[41] or a charity donation on their behalf.

4 In the first five months, 82 % of registered customers actually participated in the pilot. In around 24 000 cases, energy consumers reduced their electricity consumption during peak hours.

5 With a large team but within only 14 weeks the Beat the Peak Domestic pilot was launched. The

38 www.esbnetworks.ie/who-we-are/beat-the-peak/overview#:~:text=Beat%20the%20Peak%20%2D%20Commercial%20Daily,-This%20pilot%20has&text=Eligible%20commercial%20electricity%20customers%20will,the%20end%20of%20September%202023.

39 ESB Networks is the distribution network operator licensed to build, operate, maintain and develop the electricity network in the Republic of Ireland. ESB Networks is part of ESB Group.

40 There were different targeted pilot projects, amongst which Beat the Peak – Domestic (Is This a Good Time?), Beat the Peak - Commercial Pledge, Beat the Peak - Commercial Daily, Beat the Peak - Commercial Active.

41 Since 'Is This a Good Time?' is set up as a trial, participant experiences may differ. Some customers who register for 'Is This a Good Time?' were randomly selected and given the option to opt in to support with further activities, should these customers choose to do so they were provided with a reward.

cooperation of other parties to make the pilot work, such as CRU (the Irish NRA), was proactive and beneficial to the success of the pilot.

6 At the start, a great effort was made to better understand the incentives that would encourage consumers to change their behaviour. ESB Networks directly engaged with customers to gain more information about consumers' electricity use patterns. For example, their cooking and laundry habits and the times when they turn on the television. One of the revealing insights was that most people do not understand the concept of 'peak time' and did not know what appliances in their homes use a lot of electricity. As a first step, creating awareness among customers on these issues was crucial for the pilot. In addition, it became clear that customers are more likely to adjust their behaviour when given positive educated choices instead of being told what to do.

7 Challenges for the project were that ESB Networks could not use smart metering data and had to rely on self-reporting by customers and on aggregated data. Another challenge was, that there was no way of advertising how much money customers could save. The benefits of adjusting electricity consumption were expressed in comparative terms). Advertising the amount of money consumers could save would have made the pilot more effective. Another aspect that could have improved the results of the pilot was to tailor the advice to customers. People with solar panels might have wanted to know how many GWh they could save, while those for whom energy use had not previously been an issue would have been satisfied with a tip on the best time to turn on the dishwasher. So how could the content be made more meaningful to customers at different levels?

8 Once approved by the CRU, ESB Networks aims to apply the learnings, scale up and run the Beat the Peak Domestic pilot again over the coming winters continuing to focus on the best times to use electricity, outside of peak hours and during times when adequate renewable energy is available. A message that might be unanticipated for customers after many campaigns focusing on energy savings

9 ESB Networks would like to continue these pilots until suppliers are ready to take over. It is looking to cooperate with energy suppliers to roll out other such pilots, especially with energy companies that are at the forefront of engaging with their customers to use energy smartly, such as Octopus Energy (Join Saving Sessions | Octopus Energy).

Source: ACER (2023), based on interview with ESB Network and website of ESB networks

Energy Community (EnC) Contracting Parties

47 In 2022, total electricity consumption decreased as compared to 2021 in most Contracting Parties to the Energy Community Treaty (EnC Contracting Parties). However, this was not the case in Bosnia and Herzegovina and Georgia, where slight increases were registered. The highest decrease in demand was unsurprisingly registered in Ukraine (by approximately 30 %), followed by drops of 12 % and 11 % in Montenegro and North Macedonia, respectively. Compared to the period before the energy crisis (2020), electricity demand will decrease less or even increase in most EnC Contracting Parties. This can be attributed to the increases in electricity consumption in 2020 and 2021. The table below shows that, in most cases, the decrease in industrial demand was much higher than that registered for households, clearly reflecting the greater elasticity of demand and the fact that the level of price restriction was not as high as for households. Nevertheless, in some EnC Contracting Parties, notably Kosovo*[42], Montenegro and Serbia, discounts to the electricity bills were offered to households, if they decreased their monthly consumption compared to the same month in the previous year by a percentage determined in advance. In North Macedonia and one entity of Bosnia and Herzegovina, block tariffs[43] were introduced to encourage electricity savings by consumers.

42 Throughout this document, this designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Advisory Opinion on the Kosovo* declaration of independence.

43 Application of higher tariffs for consumption levels that exceeded the predetermined threshold.

Table 1: Electricity demand change in the EnC Contracting Parties (%)

	Demand change 2022/2021			Demand change 2022/2020		
	total	HH	Non-HH	total	HH	non-HH
Albania	-5.07 %	-0.32 %	-9.24 %	5.15 %	3.89 %	6.40 %
Bosnia and Herzegovina	0.62 %	0.34 %	0.85 %	7.71 %	2.78 %	12.25 %
Georgia	0.36 %	1.55 %	-0.43 %	2.21 %	4.57 %	0.67 %
Kosovo*	-3.76 %	-0.48 %	-8.93 %	8.57 %	12.18 %	2.87 %
Moldova	-2.55 %	-4.99 %	-0.57 %	4.76 %	0.41 %	8.34 %
Montenegro	-11.94 %	2.98 %	-24.07 %	-8.02 %	10.90 %	-22.59 %
North Macedonia	-10.65 %	-7.12 %	-13.95 %	-5.28 %	3.45 %	-7.06 %
Serbia	-0.71 %	-3.60 %	1.69 %	3.50 %	-2.49 %	8.78 %
Ukraine	-30.42 %	-14.79 %	-37.43 %	-25.95 %	-10.09 %	-33.15 %

48 Between 2021 and 2022, gas demand decreased in all EnC Contracting Parties, with the exception of Georgia. In comparison to the pre-crisis period, both Georgia and Serbia registered increases. This can be explained by the increases in gas consumption in 2020 and 2021, but also by the much lower gas prices in these two EnC Contracting Parties compared to the other markets. As with the electricity sector, the decrease in consumption was more substantial for the industry compared to the residential sector, mostly due to the differences in the pricing regime — regulated prices for households (except in North Macedonia) and liberalised for the industry.

Table 2: Gas demand change in the EnC Contracting Parties (%)

	Demand change 2022/2021			Demand change 2022/2020		
	total	HH	Non-HH	total	HH	non-HH
Georgia	7.80 %	9.42 %	29.51 %	6.57 %	5.51 %	7.43 %
Moldova	-31.46 %	-27.38 %	-33.99 %	-22.46 %	-7.81 %	-25.23 %
North Macedonia	-33.22 %	-55.59 %	-33.20 %	-15.88 %	-44.15 %	-15.86 %
Serbia	-3.37 %	2.98 %	-4.39 %	14.20 %	24.67 %	12.53 %
Ukraine	-31.92 %	-12.50 %	-44.53 %	-37.34 %	-10.28 %	-50.54 %

Note: data for Bosnia and Herzegovina not available; Albania, Kosovo and Montenegro do not have gas markets*

3.2. Energy prices

49 Retail energy prices are an important part of household and industrial consumers' expenditure. This section examines retail energy prices in 2022 and their trends over the period 2008-2022 at the level of the European Union (EU), the EnC Contracting Parties (CP), and individual countries. In addition, electricity and gas offer price trends are also included to show the monthly evolution of energy prices between 2021 and April 2023. When this is the case, data has been provided by VaasaETT.

50 Retail energy prices have been sourced from Eurostat, with electricity price data reported by National Statistical Institutes, Ministries, Energy Agencies, or, in case of monopolies, by single electricity companies. As mentioned above, where 2022 prices are indicated, such data has been provided by VaasaETT.

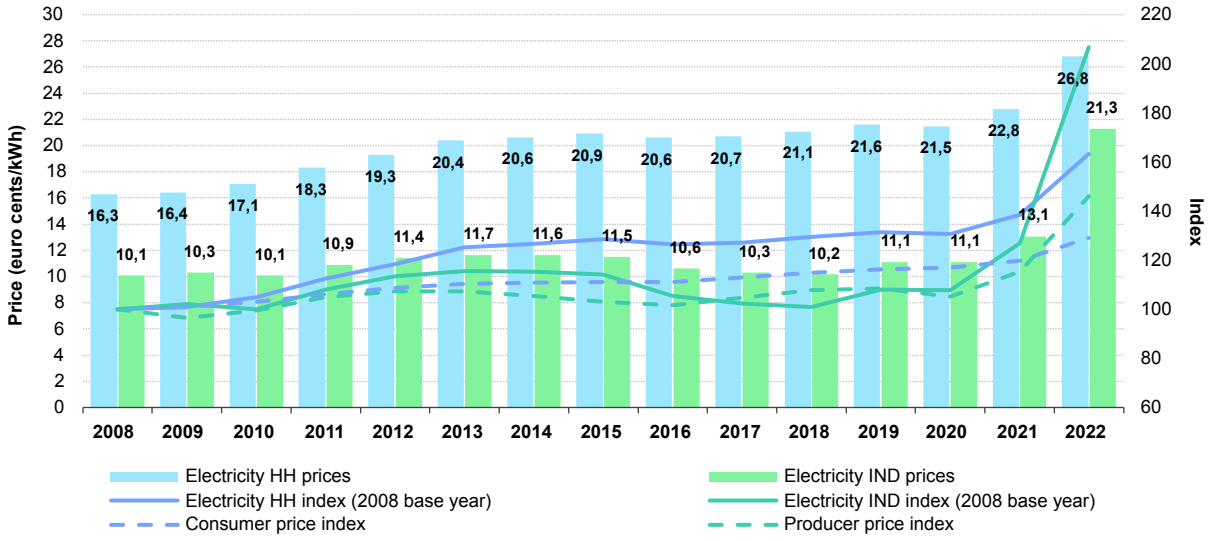
51 The price includes the basic electricity price, transmission fees, system services and distribution fees, taxes and levies, and VAT. EU aggregates are calculated by Eurostat by weighting the national prices by the latest available national consumption data for either the household sector or the industrial sector[44]. Similarly, in the case of gas, data is sourced from Eurostat, with gas price data being reported by National Statistical Institutes, Ministries, Energy Agencies, or, in the case of monopolies, single gas companies[45].

3.2.1. Electricity prices

52 As shown in Figure 19, electricity prices for EU households increased in 2022. On average, household electricity prices increased by a significant 17.8 % to 26.9 euro cents/kWh in comparison to 2021. For industrial consumers, in 2022 average electricity prices increased by 62.7 % to 21.3 euro cents/kWh compared to 2021 prices.

53 Figure 19 also shows that since 2009 electricity prices in the EU increased on average by 63.3 % in nominal terms for household consumers, and by 106.5 % for industrial consumers. Until 2020 the price increase for electricity consumers reflected the increase in non-contestable charges like network costs, taxes and renewable energy-related (RES) charges, whereas in 2022, as was the case in 2021, the increase was driven by the energy component of the price.

Figure 19: Trends in final electricity prices for household and industrial consumers in the EU 2008–2022 (euro cents/kWh and index change, 2008 = 100)[46]



Source: ACER calculations based on Eurostat, Band DC: 2 500–5 000 kWh (household (HH) electricity consumption) and Band IE: 20 000–70 000 MWh (industrial (IND) electricity consumption) (May 2023).

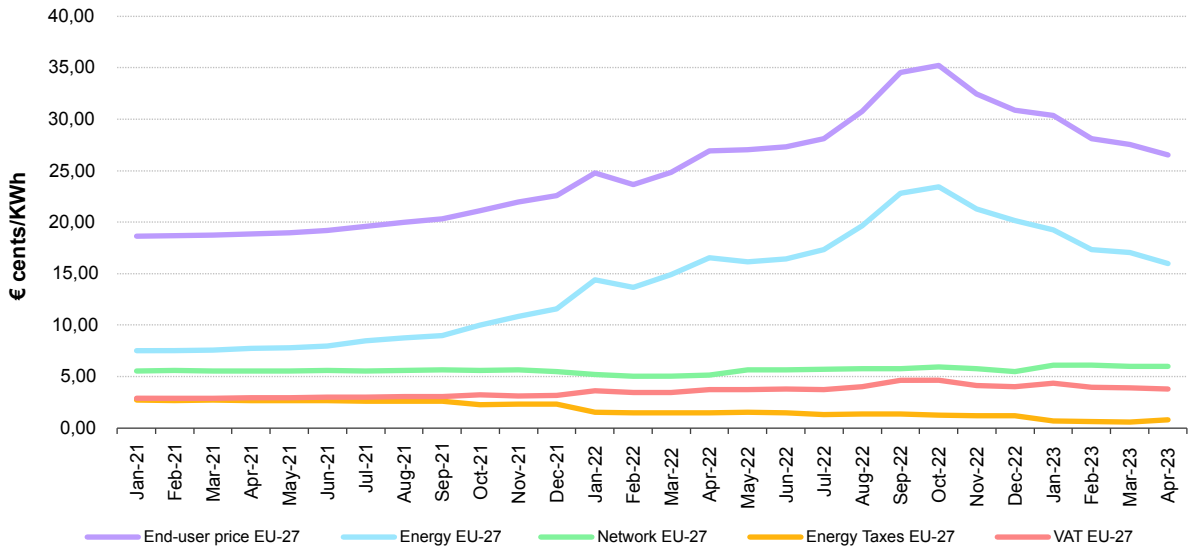
54 Figure 20 shows the offer price trend across EU Member States. It indicates that in general, retail energy prices have been decreasing since October 2022. Prices are still higher than pre-crisis levels.

44 https://ec.europa.eu/eurostat/databrowser//product/view/NRG_PC_204.

45 https://ec.europa.eu/eurostat/databrowser/view/NRG_PC_202/default/table?lang=en.

46 In Figure 19, prices are shown in nominal terms. The consumer price index is the Harmonised Index of Consumer Prices; the producer price index covers the producer prices in industry. Both indexes are weighted according to the size of individual Member States.

Figure 20: Evolution of Electricity end-user price breakdown, Average EU-27



Source: Based on VaasaETT – 2023

55 Large differences in retail electricity prices have persisted across the EU, with significant increases when compared to 2021. Figure 21 shows that households in Denmark, Belgium and Ireland recorded the most expensive electricity prices in 2022 (58.71, 44.89, and 41.99 euro cents/kWh, respectively). The Netherlands[47], Hungary and Bulgaria recorded the lowest prices in 2022 (9.0, 10.2, and 12.9 euro cents/kWh, respectively). Industrial electricity prices also varied, albeit to a lesser extent compared to those paid by household consumers. Industrial consumers in Denmark, Cyprus and Italy recorded the highest industrial prices in 2022. Prices in Denmark (36.8 euro cents/kWh) were just under four times higher than those in Malta, which had the lowest prices (9.62 euro cents/kWh).). In the EU as a whole, electricity prices for the industry showed a slight year-on-year decrease until 2018. However, 2022 was the fourth consecutive year in which the prices for industrial users registered an increase. This is lowering competitiveness in some sectors, especially those more exposed to international competition[48].

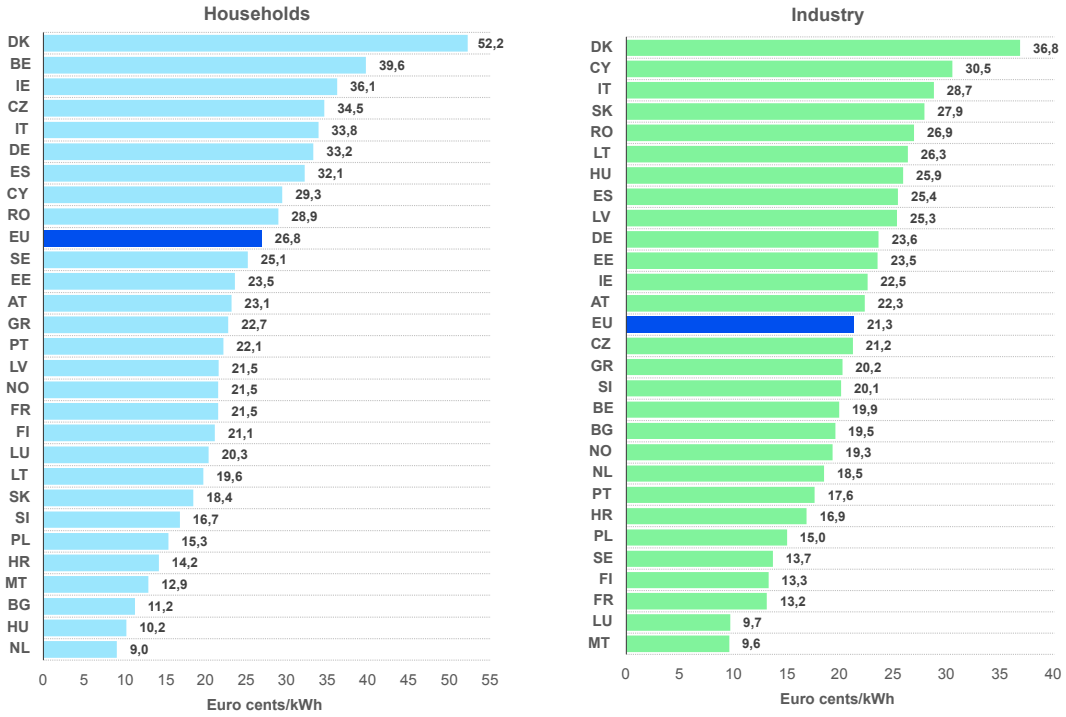
56 In comparison to prices in 2021 the largest electricity price increases for household consumers were registered in Czechia (+46.6 %) and Romania (+45.6 %). However, decreases were registered in some Member States (the Netherlands, Poland, Malta, Slovenia). It is important to note that Member States' responses to the energy crisis had different effects on price developments in the different countries, with governments implementing those responses that they considered most appropriate for their markets. Despite declining retail prices since October 2022, challenges may continue for some consumers and in turn for governments in assisting these consumers[49].

47 The tax reduction subcomponent (tax credit) that applies to electricity customers in the Netherlands is currently higher than the annual energy tax amount that corresponds to a typical household customer in Amsterdam. Even in cases when the tax credit is higher than the tax amount, the customers still receive the full credit as a discount from their overall annual bill. In practice, this has resulted in a negative value of the Dutch tax component in the price breakdown.

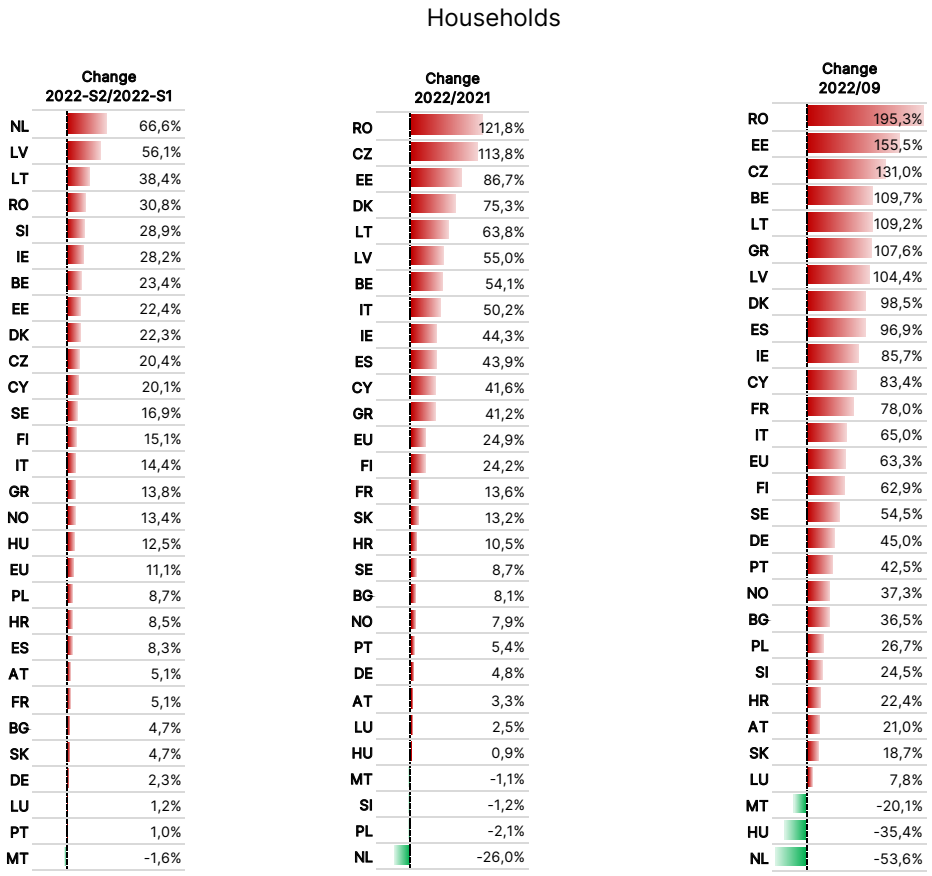
48 As an example, one of the key EU industrial gas consumers, BASF, referred that it would have to downsize permanently in Europe in view of the high energy costs making the region increasingly uncompetitive.

49 For Hungary, the price fluctuation is due to the devaluation of the national currency (HUF). The price did not decrease when expressed in HUF.

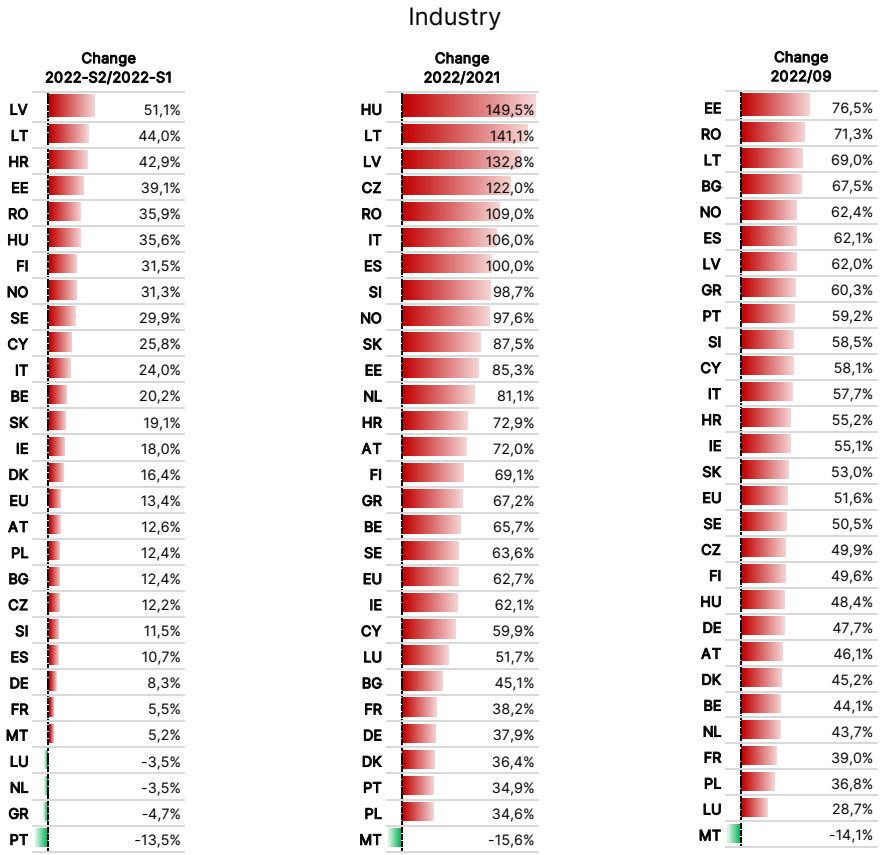
Figure 21: Final electricity prices for households and industrial consumers in the EU MSs and EEA Member Norway in 2022 (euro cents/kWh) and changes compared to 2021 and 2022 (%)[50]



Source: ACER calculations based on Eurostat, Band DC: 2 500–5 000 kWh (household (HH) electricity consumption) and Band IE: 20 000–70 000 MWh (industrial (IND) electricity consumption) (May 2023)



50 Eurostat methodology explanation - See 3.1 of https://ec.europa.eu/eurostat/cache/metadata/en/nrg_pc_204_esms.htm

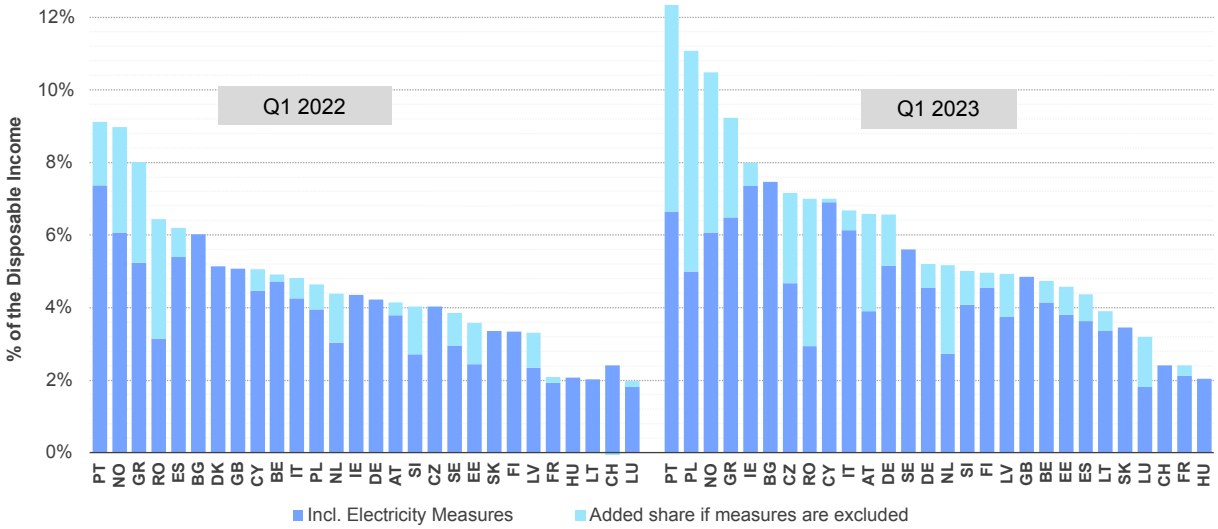


Source: Eurostat, Band DC: 2 500–5 000 kWh (household electricity consumption) and Band IE: 20 000–70 000 MWh (industrial electricity consumption) (May 2023)
Note: Prices in nominal terms.

57 The energy crisis has had a significant impact on energy consumers, with the share of household expenditure on energy increasing significantly. The average electricity bill for residential consumers in Europe was 3.9 % of total household disposable income in the first quarter of 2022, as shown in Figure 22, with Portugal exceeding the 6 % mark.

58 The percentage in the first quarter of 2023 was even more notable, constituting about 4.5 % of total household disposable income in Europe on average. If the impact of retail price interventions is excluded from the calculations, households would have been expected to spend about 6 % of their disposable income on electricity bills, on average. Consumers in Portugal, which is ranking first in this list, would have paid more than 12 % of their disposable income only for electricity had there not been state intervention in retail prices.

Figure 22: Electricity bill as a share of the disposable income. Households.



Source: VaasaETT 2023

Note: The energy bill as a share of disposable income is calculated on the basis of the real adjusted gross disposable income of households per capita in PPS. The latest available PPS value has been used whenever values have not been updated for the corresponding year. Specifically, the PPS values have not been updated for 2022 and thus the latest available values have been used in the calculations.

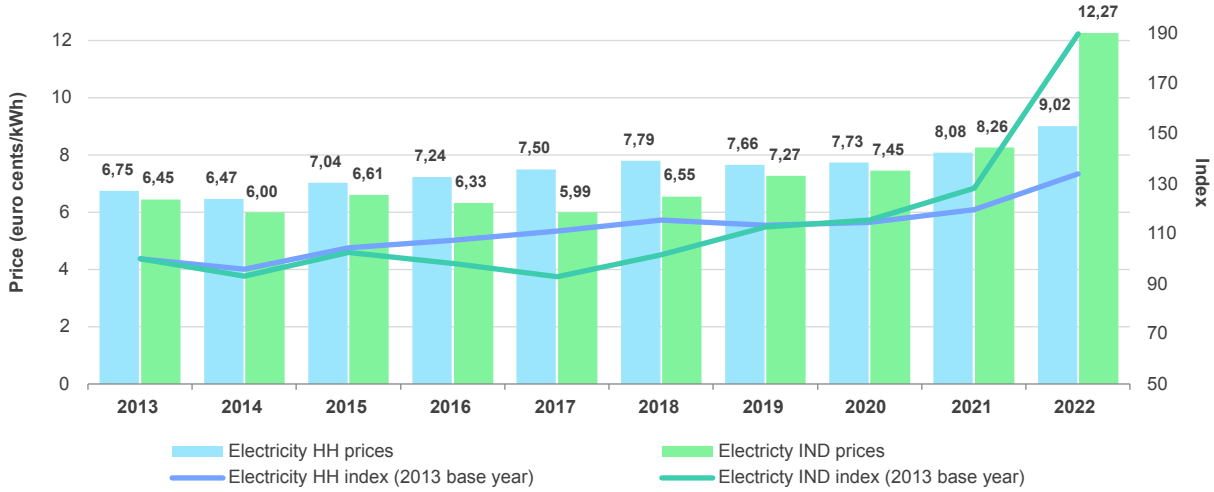
Energy Community (EnC) electricity prices

59 In the EnC Contracting Parties, final average household electricity prices increased by 12 % to 9.02 euro cents/kWh in 2022 compared to prices in 2021. In the same period, industry prices increased by 49 % to 12.2 euro cents/kWh. For a second year in a row, the average price for the industry is higher than the average price for households. Bearing in mind that household prices are regulated in most of the ENC Contracting Parties, this difference indicates an increase in cross-subsidisation between the prices of these3 two price categories during the crisis.

60 Between 2013 and 2022, the electricity prices for households in the EnC Contracting Parties, with the exception of Ukraine, increased by 34 % on average, while prices for the industry increased by 90 % on average, as shown on Figure 23. The unwinding of cross-subsidisation over the period explains the price dynamics in these two consumer segments.

61 Both average household and industrial prices in the EU in 2022 are more than twice as high as in the EC Contracting Parties.

Figure 23: Trends in final electricity prices for household and industrial consumers in the EnC CPs, with the exception of Ukraine, 2013-2022 (euro cents/kWh and index change 2013=100)



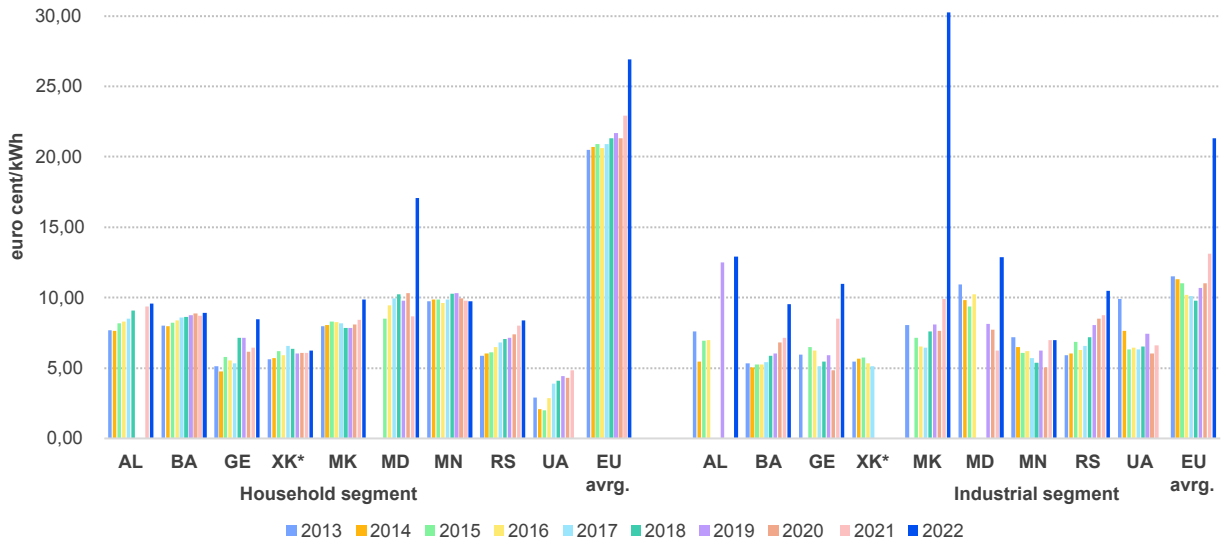
Source: EnC Secretariat calculations based on Eurostat, Band DC:2 500-5 000 kWh (household electricity consumption) and Band IE: 20 000-70 000 MWh (industrial electricity consumption) (June 2023) and NRAs

62 In 2022, there were still significant differences in electricity prices between the ENC Contracting Parties. Figure 24 shows that Moldova registered the highest household electricity prices (17.09 euro cents/kWh), while Kosovo* registered the lowest average household price (6.24 euro cents/kWh). On the other side, the highest average industrial price was registered in North Macedonia (30.24 euro cents/kWh) and the lowest price was registered in Montenegro (6.89 euro cents/kWh). A record increase in household electricity prices between 2021 and 2022 was registered in Moldova (97 %), followed by a 30 % increase in Georgia, while other EnC Contracting Parties registered increases of less than 5 %. In the industry segment, the highest increases were registered in North Macedonia, where prices tripled on average, and in Moldova, which registered an increase by 200 %. Montenegro is the only EnC Contracting Party with the almost unchanged electricity prices in 2022 compared to 2021, for both household and industry consumer categories[51].

63 No data on electricity prices for Ukraine for 2022 are available, however informal data indicate that there was no increase in household prices in 2022 and that industry prices increased.

51 Although Eurostat data for Albania shows a small increase in household electricity price, this was probably the result of a change in calculation because household electricity prices did not change in 2022.

Figure 24: Final electricity prices in nominal terms for household and industrial consumers in the EnC CPs — 2013-2022 (euro cents/kWh)



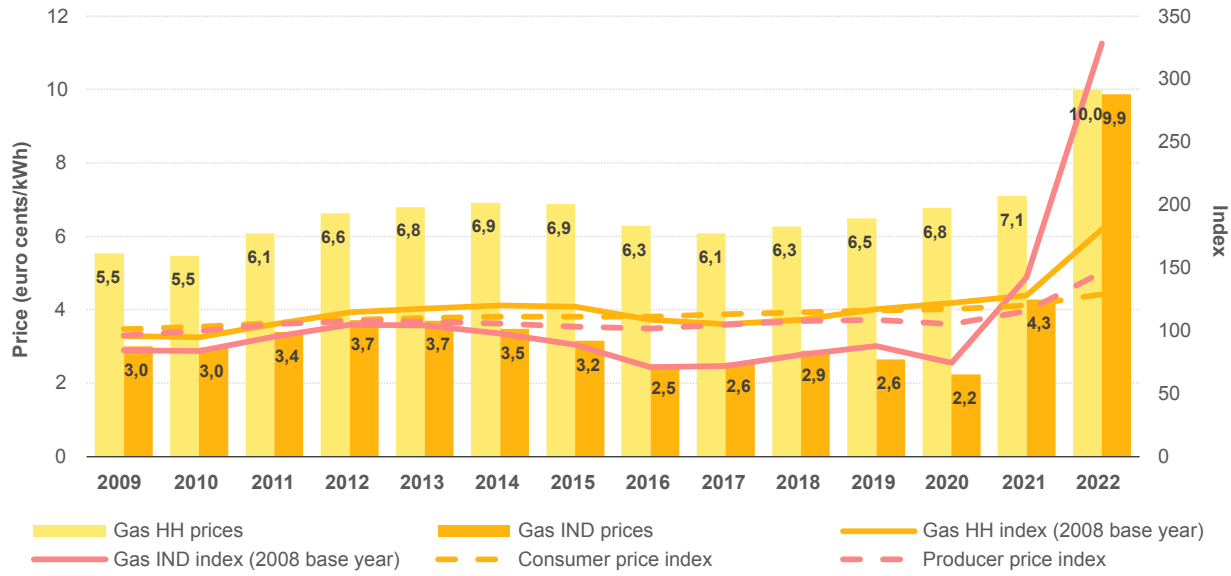
Source: EnC Secretariat calculations based on Eurostat and NRAs, June 2023

3.2.2. Gas prices

64 In 2022, average gas prices across the EU increased by 40.7 % to 10.0 euro cents/kWh for household consumers and by 130.8 % to 9.9 cents/kWh for industrial consumers compared to 2021. These unprecedented increases were driven by the significant increase in wholesale gas prices, which commenced in the second half of 2021.

65 Since 2009, the average final gas price increased by 79.8 % for household consumers and by 228.3 % for industrial consumers. Figure 25 shows that in 2022 household gas prices increased and reached their highest registered value since 2009. Industrial gas prices also increased significantly in 2021, reaching their highest level since 2009.

Figure 25: Trends in final gas prices for household and industrial consumers in EU MSs — 2009-2022 (euro cents/kWh and index change, 2008 = 100)

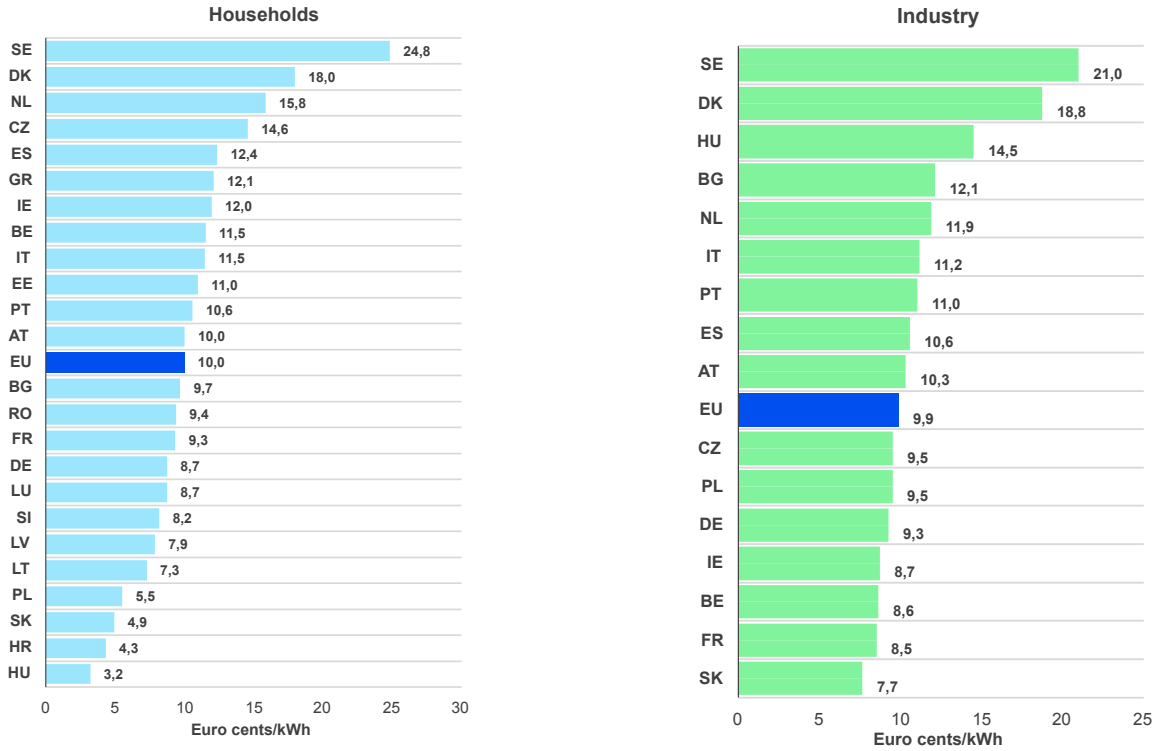


Source: EnC Secretariat calculations based on Eurostat and NRAs, June 2023

Source: ACER calculations based on Eurostat, Band D2: 20–200 GJ (household gas consumption) and Band I5: 1 000 000–4 000 000 GJ (industrial gas consumption), (May 2023)

66 As with the retail electricity market, there are significant discrepancies across the EU in the gas retail market. Figure 26 shows that the final price paid by household gas consumers in Sweden (24.8 euro cents/kWh) was approximately eight times higher than the 3.2 euro cents/kWh paid by Hungarian household gas consumers. In the industry market, consumers in Sweden paid almost three times (21 euro cents/kWh) the price paid by consumers in Slovakia (7.7 euro cents/kWh). In comparison to 2021 prices, the largest price increases for household consumers were registered in Czechia (161.1 %) and Romania (136.9 %). Hungary was the only Member State to register a price decrease during the energy crisis, with household consumers paying 4.6 % less than in 2021. In contrast, industrial consumers in Hungary paid 253 % more compared to 2021. The lowest industrial gas price increase was registered in Denmark, with industrial consumers paying 74 % more than they did in 2021.

Figure 26: Average final gas prices for households and industrial consumers in the EU MSs in 2022 (euro cents/kWh)

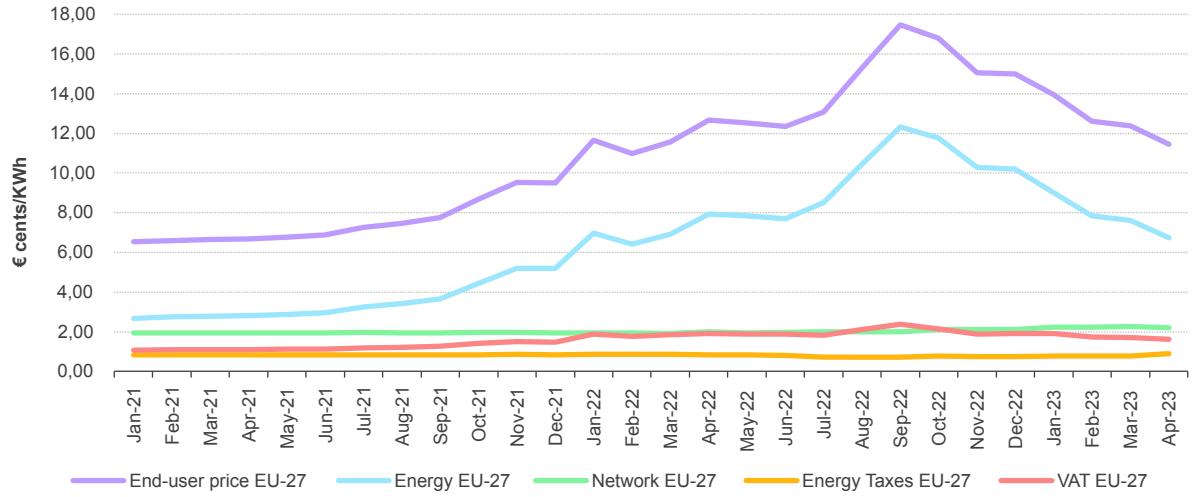


Source: ACER calculations based on Eurostat, Band D2: 20–200 GJ (household gas consumption) and Band I5: 1 000 000–4 000 000 GJ (industrial gas consumption), May 2023

Note: Prices in nominal terms. Prices comparison to be updated to compare with 2012 as broader data available.

67 As with electricity, gas prices have started to decrease following recent price shocks. Figure 27 shows the evolution gas prices across the EU since January 2021. As can be seen, prices peaked in September 2022. The reduction in the energy component of gas had a direct impact on the final price offered to consumers. As with electricity, prices have remained significantly higher compared to their pre-crisis levels.

Figure 27: Evolution of gas end-user price breakdown, Average EU-27

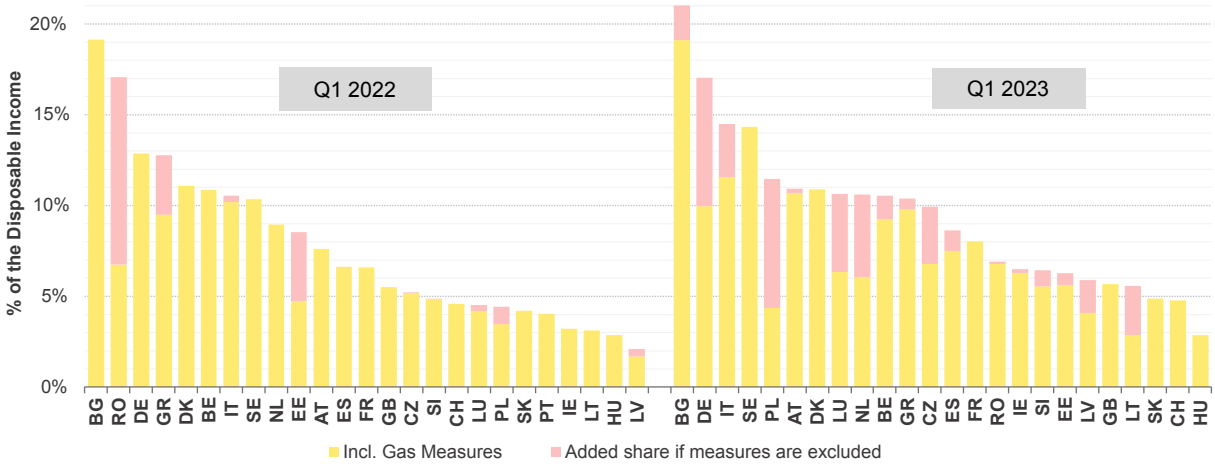


Source: Based on VaasaETT – 2023

68 As shown in Figure 28, the share of disposable income spent on gas is even more pronounced in the natural gas market, reaching its highest value in 2022, at the peak of the energy crisis. The share of disposable income spent on gas is almost double that of electricity.

69 The gas bill in the first quarter of 2022 constituted about 6.8 % of the total disposable income of households on average. This figure would have been even higher (7.5 % on average) if the support measures taken were not taken into account. In 2023, the corresponding share of disposable income reached 7.5 % for gas bills, including support measures, and more than 9 % without any measures to compensate consumers. In Bulgaria, household consumers felt the impact of the crisis more keenly through their gas bills, as they were forced to spend around one fifth of their disposable income on gas alone.

Figure 28: Gas bills as a share of household disposable income



Source: VaasaETT - 2023

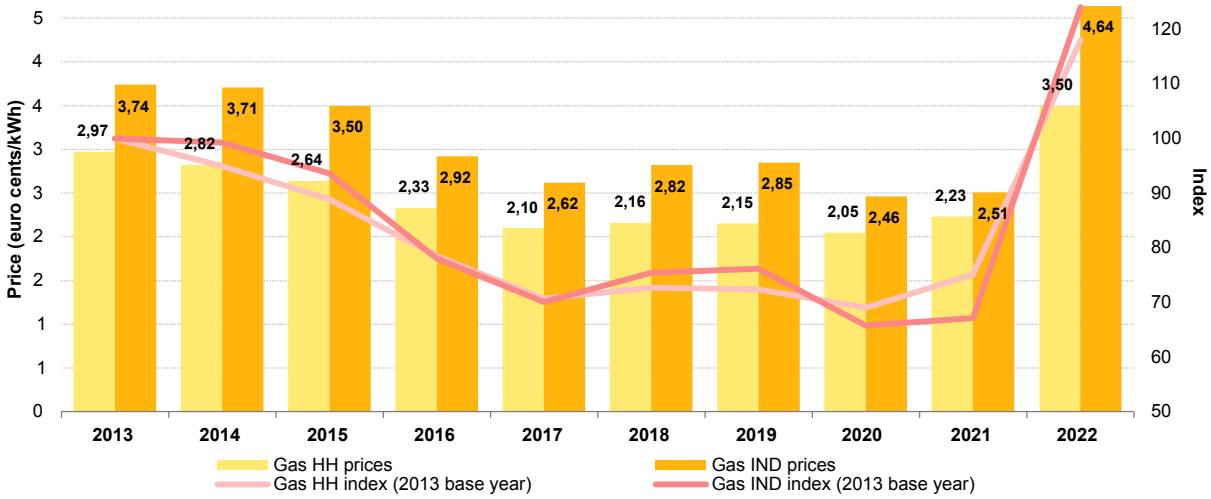
Note: The energy bill as a share of disposable income is calculated based on the real adjusted gross disposable income of households per capita in PPS. The latest available PPS value has been used whenever values have not been updated for the corresponding year. Specifically, the PPS values have not been updated for 2022 and thus the latest available values have been used in the calculations. In reality, it is expected that the shares in 2022 would have been even higher.

Energy Community (EnC) gas prices

70 In 2022, average gas household prices in the EnC Contracting Parties increased by 57 % to 3.5 euro cents/kWh, while average prices for the industry increased by 85 % to 6.64 euro cents/kWh. Over the period 2013-2022, average gas prices increased by 18 % for the household segment and 24 % for the

industry segment. As in the EU, the increases were driven by the significant increase in wholesale gas prices in 2022.

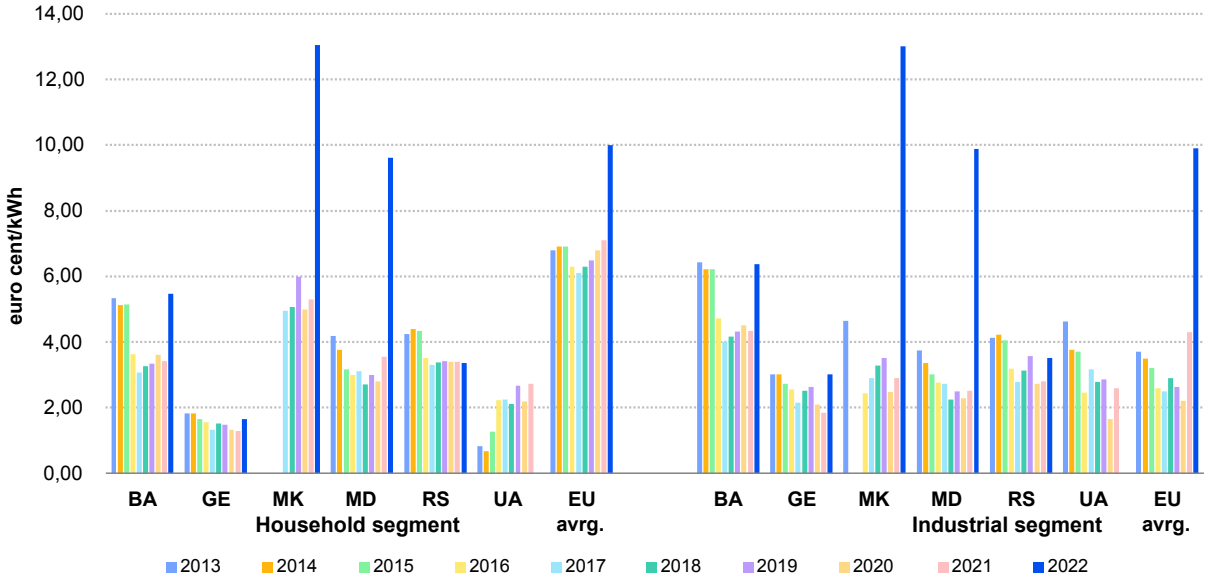
Figure 29: Trends in final gas prices for household and industrial consumers in the EnC CPs, with the exception of Ukraine-2013-2022 (euro cents/kWh and index change 2013=100)



Source: EnC Secretariat calculations based on Eurostat (Band D2: 20-200 GJ (household gas consumption) and Band I5: 1 000 000-4 000 000 GJ for Bosnia and Herzegovina, Georgia, Moldova and Serbia, Band I4: 100 000-1 000 000 GJ for North Macedonia (industry gas consumption)) (June 2023) and NRAs

71 There are major differences in gas prices among the EnC Contracting Parties, as shown in Figure 30. More specifically, in 2022 household gas prices ranged between 1.66 euro cents/kWh in Georgia and 13.05 cents/kWh in North Macedonia. This difference is explained by the existence of long-term gas supply contracts and price regulation in Georgia, on the one side, and the non-regulated gas prices in North Macedonia. The highest increase in the household segment between 2021 and 2022 was registered in Moldova, where prices increased by 170 % on average. In 2022, the increase in prices was even higher for the industrial segment of gas consumers, with prices soaring by 300 % in Moldova and 350 % in North Macedonia.

Figure 30: Gas prices in nominal terms for household and industrial consumers in the EnC CPs 2013 - 2022 (euro cents/kWh)



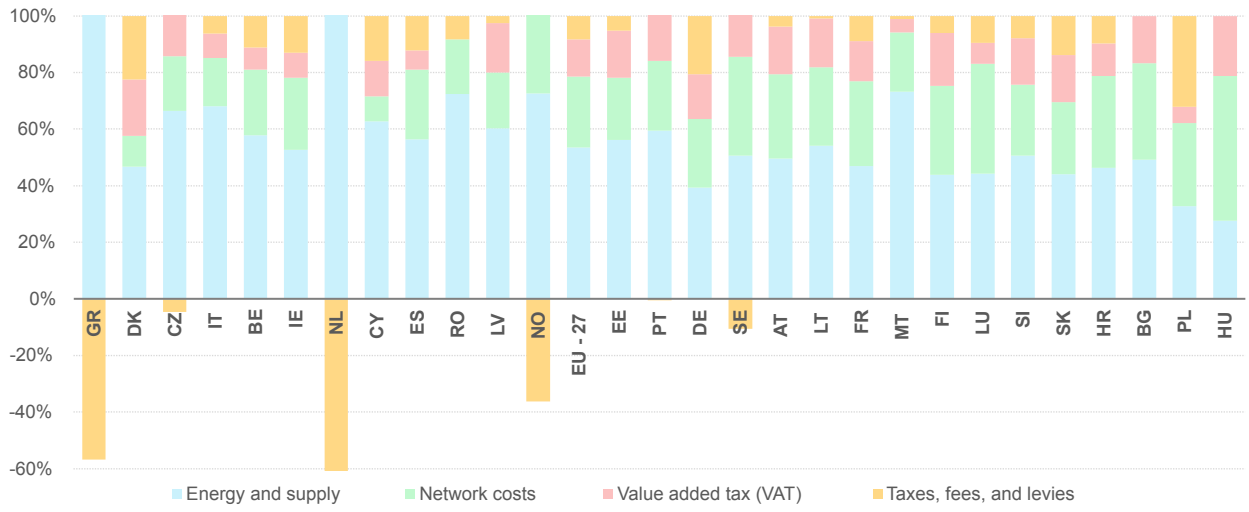
Source: EnC Secretariat calculations based on Eurostat data

3.2.3. Bill breakdown

72 Electricity and gas prices depend on their constituent components, which include energy costs, network charges, charges for renewable energy (RES charges), other taxes and charges, and value added tax (VAT). Information in this section has been obtained from Eurostat[52]. As outlined by Eurostat, Member States must report national prices that are representative for the whole country. These represent weighted average prices that use the market shares of the gas supply undertakings surveyed as weighting factors[53].

73 Figure 31 shows that the composition of the final electricity bill for household consumers varies greatly across countries and ranks electricity costs in each Member State. As shown in Figure 32, in comparison to 2021, the energy component has on average increased in response to wholesale energy price increases[54]. As a result of the increase in the energy component, the network component decreased compared to 2021. VAT and tax cuts were also implemented in response to the energy crisis in an attempt to ease the burden on energy consumers. See section 7.6 in the Annex for an overview of Member State prices and the evolution of the components prior to and during the energy crisis.

Figure 31: Breakdown of the electricity price for households in 2022 (%)[55]



Source: Eurostat electricity price components (nrg_pc_204_c) (June 2023)

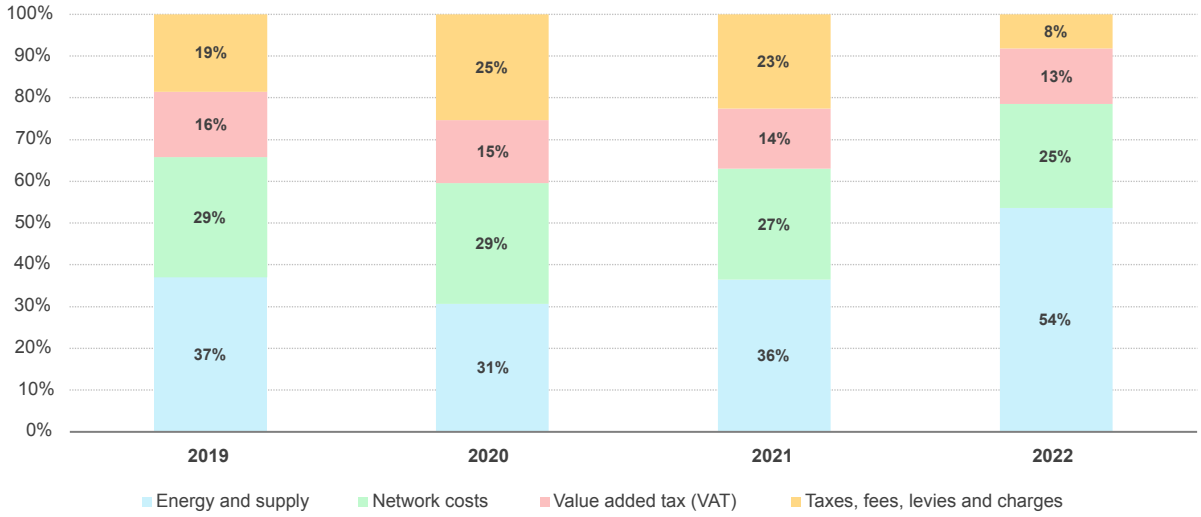
52 For household electricity, Eurostat Band-DC and Band-D2 for gas are utilised https://ec.europa.eu/eurostat/cache/metadata/en/nrg_pc_202_esms.htm

53 https://ec.europa.eu/eurostat/cache/metadata/en/nrg_pc_202_sims.htm

54 Greece and the Netherlands implemented negative taxes which is highlighted in the data.

55 Figures are rounded to the nearest whole number.

Figure 32: Breakdown of the average electricity price for households 2019—2022 (%)

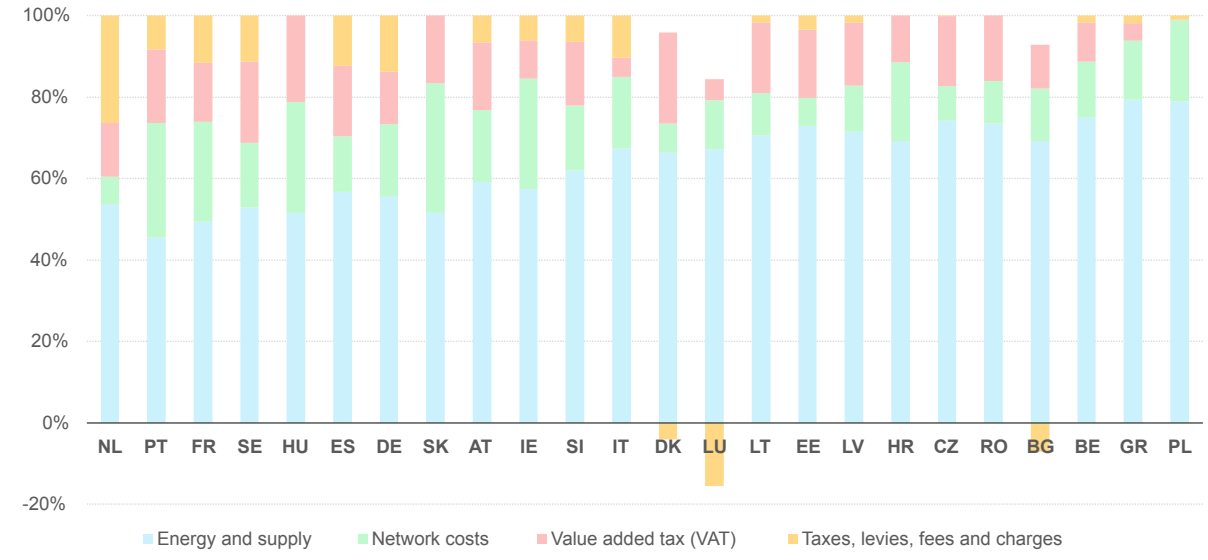


Source: Eurostat electricity price components (nrg_pc_204_c) (June 2023)

74 Figure 33 shows the breakdown of final gas prices, where data was available, and a gas retail market exists. It shows that the composition of the final gas bill for household consumers continues to vary greatly across Member States.

75 Network costs, range from 7 % to 27 % across countries for which data is available. However, decreases in other components as a result of the emergency response measures implemented across the EU have skewed the proportion of the energy components as can be seen below, with energy components ranging from 45 % to 81 %. In 2022, Member States also implemented tax cuts and charge reductions, with some Member States implementing negative charges.

Figure 33: Breakdown of the gas price for households in 2022 (%)[56]



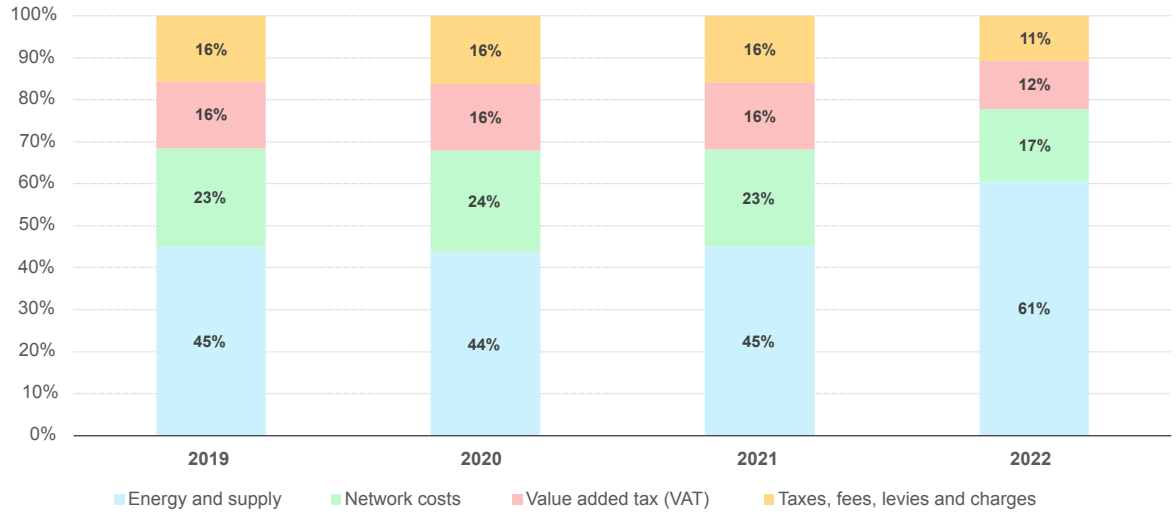
Source: Eurostat, Band D2: 20–200 GJ Gas prices components for household consumers — annual data (nrg_pc_202_c) - (June 2023)

76 As shown in Figure 34, on average, almost half of the final gas price paid by consumers in 2022 covered the energy component of their annual gas bill, and the rest covered the sum of network costs, taxes, levies and other charges.

77 The energy component increased significantly in 2022 in comparison to 2021 due to the increase in wholesale energy prices. In response to the crisis, reductions in energy taxes and levies were applied to reduce the impact of higher energy costs on consumers.

56 Figures are rounded to the nearest whole number.

Figure 34: Breakdown of the average gas price for households — 2019-2022 (%)



Source: Eurostat, Band D2: 20–200 GJ Gas prices components for household consumers - annual data (nrg_pc_202_c) - (June 2023)

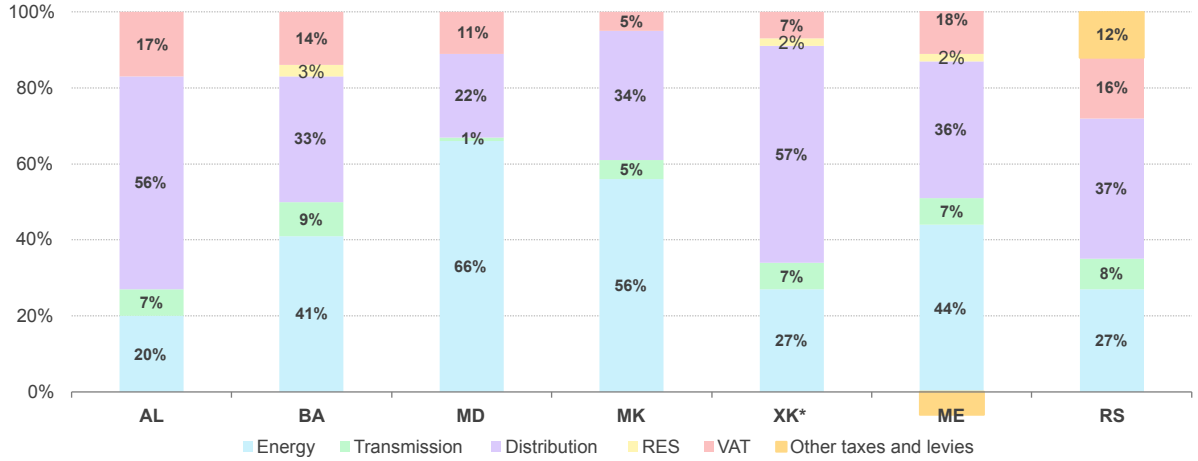
Energy Community (EnC) Contracting Parties

78 Figure 35 shows the breakdown of the final electricity price for households in the EnC Contracting Parties in 2022. The composition of final household electricity price varies greatly across the EnC Contracting Parties. The share of the energy component in final electricity bills was the highest in Moldova (66 %) and the lowest in Albania (20 %). The share of network costs in the total electricity price for households ranged between 23 % in Moldova and 64 % in Kosovo*.

79 For three EnC Contracting Parties, Bosnia and Herzegovina, Kosovo* and Montenegro, RES support is shown separately in the structure of the electricity price for households. In North Macedonia, the RES charge is included in the energy component. In Serbia, the category 'other taxes and levies' includes RES support, energy efficiency support and excise duty. The component 'other taxes and levies' for Montenegro (-7 %) refers to the electricity price discount applied by the incumbent supplier.

80 In comparison to the previous year, there were no substantial changes in the breakdown of electricity price for households in the EnC Contracting Parties. In contrast to most EU Member States, there were no significant increases in the share of the energy component, and in two cases, Kosovo* and North Macedonia, this share even decreased.

Figure 35: Breakdown of electricity prices for households in the EnC Contracting Parties in 2022 (%)[57]

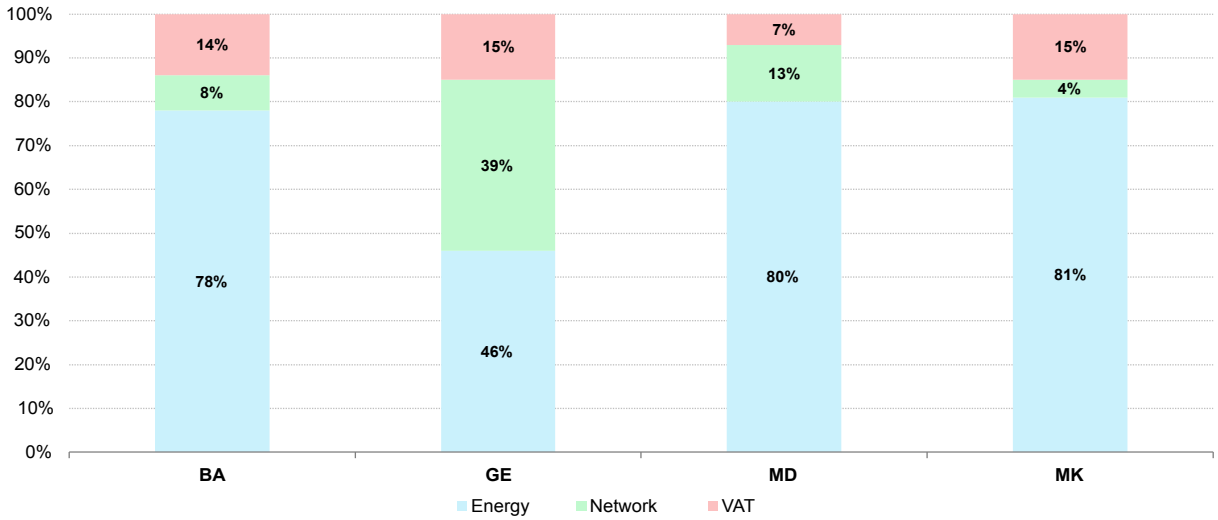


Source: EnC Secretariat calculations based on Eurostat, Band DC (June 2023)

57 The information on the breakdown of the household electricity price in Georgia is not presented in this figure as the relevant Eurostat data need to be checked (the VAT share is presented as much higher than the energy price, i.e. almost at the level of the final price). Information on the breakdown of electricity prices is not available for Ukraine.

81 Figure 36 shows the breakdown of the gas price for households in the EnC Contracting Parties, where data was available, and a gas market exists. The share of the energy component in the final gas price in 2022 ranged from 46 % in Georgia to 81 % in North Macedonia and increased compared to the previous year, reflecting the increase in wholesale gas prices. The share of network costs, including both transmission and distribution costs, was in the range from 4 % in North Macedonia to 39 % in Georgia.

Figure 36: Breakdown of gas prices for households in the EnC Contracting Parties — 2022 (%)



Source: EnC Secretariat calculations based on Eurostat data, Band D2 (June 2023)

3.2.4. Mark-ups

82 This section assesses the evolution of mark-ups and the responsiveness of the energy component of retail prices to changes in wholesale prices between 2008 and 2022 for electricity, and 2012 and 2022 for gas. The analysis focuses on household markets only.

83 The mark-up is an indicator of the theoretical gross 'profitability' of suppliers and the degree of responsiveness of retail energy prices to changes in wholesale prices. Gross 'profitability' is the difference between the prices charged to consumers and the estimated cost of supplying them with energy. The analysis assumes that suppliers are rational and follow a 'near-optimal' procurement strategy, as detailed in the methodology and data underlying retail mark-ups[58]. Therefore, the mark-ups below provide a single view, with the aim of making the Member States comparable. When looking only at individual Member States, it is best to complement the results with additional data. To be clear, mark-ups are not the same as profits because suppliers have additional operating costs (e.g. marketing, sales, after-sale services, overheads, etc.) in bringing a product to the market.

84 The degree of convergence over time between the evolution of the energy component of retail prices and wholesale prices could be used as an indicator of the effectiveness of competition in retail energy markets. However, the onset of the energy crisis had a significant impact on the relationship between retail and wholesale energy prices.

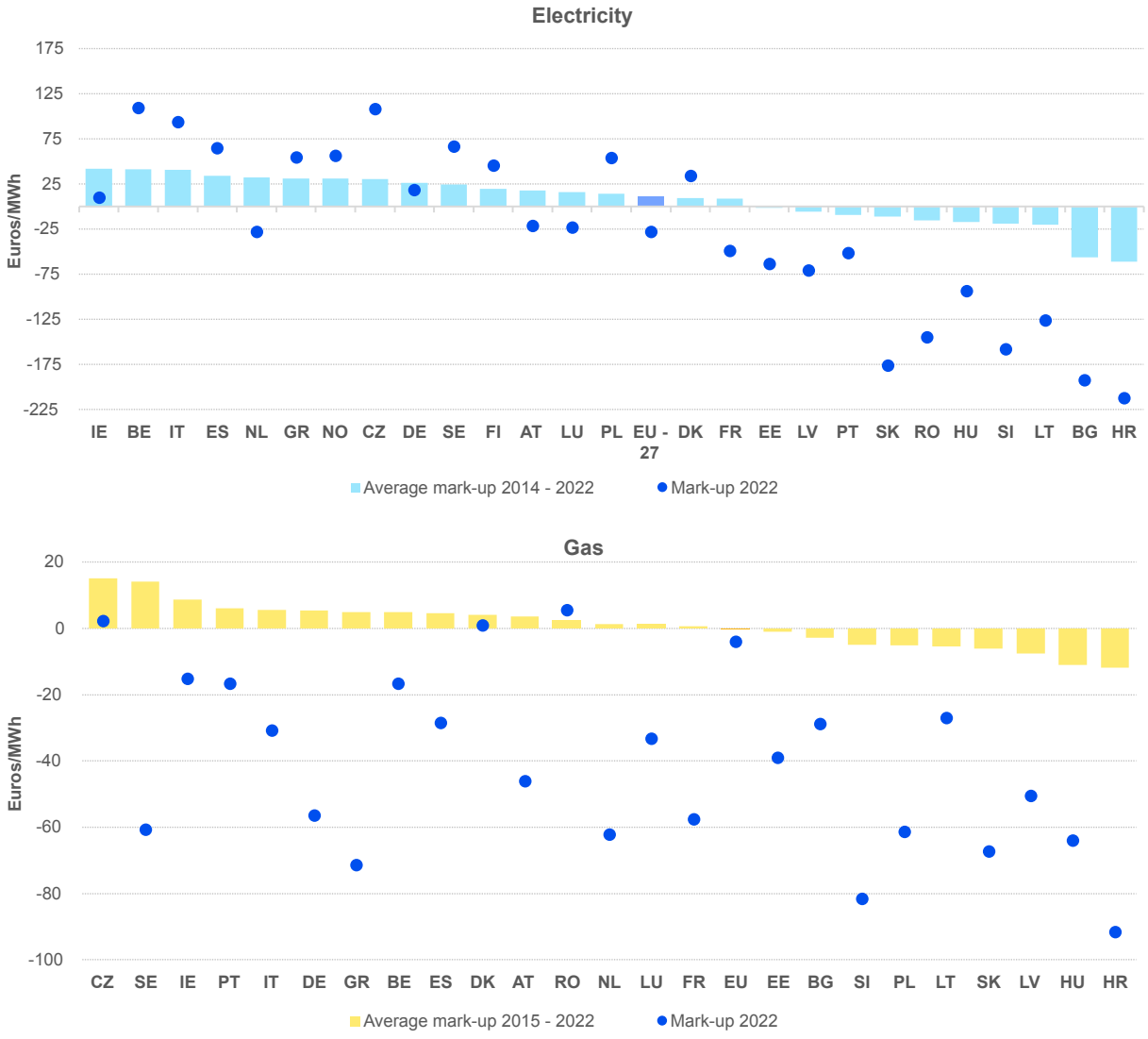
85 Figure 37 shows that the estimated average mark-ups in the household electricity and gas retail markets vary greatly across the EU, with negative mark-ups being common in 2022. Negative mark-ups are not unexpected given the significant increase in wholesale energy prices for both gas and electricity, which continued in 2022.

86 Figure 37 also shows that, on average, the electricity mark-up in the EU is about twice as high as the gas mark-up when expressed in euros/MWh. However, as one of the main factors determining the level of the mark-up is the difference in average consumption (i.e. 3 500 kWh for electricity and 11 000 kWh for gas), the average mark-up per consumer would actually be higher for gas than for electricity. Electricity

58 https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER_Market_Monitoring_Report_2015.pdf - Annex 6.

production costs are generally higher compared to gas, which explains the relatively higher prices of electricity in terms of energy[59]. While this difference does not necessarily affect the mark-up (which is more influenced by competition and the number of units sold in order to generate sufficient revenue to cover operational costs and provide some profit), it may partly contribute to the higher mark-up of electricity compared to gas. This is because the overheads of electricity suppliers can be higher than those of gas suppliers and have to be passed on in the final electricity price. But also because the price sensitivity of gas prices could be higher than that of electricity. Similarly, the average national consumption levels are also a relevant factor, as there are significant differences in consumption between Member States.

Figure 37: Average annual mark-up in retail electricity and gas markets for household consumers in EU MSs and EEA Member Norway from 2014–2022 and annual mark-up in 2022 (euros/MWh)[60]



Source: ACER calculations based on Eurostat (July 2023), NRAs, European power exchanges data, Eurostat Comext and ICIS Heren

Note: This figure includes the average annual mark-ups in the retail electricity and gas markets for household consumers for the 2014–2022 period.

87 While in previous years countries with regulated prices[61] tended to show negative mark-ups, with retail energy costs set below wholesale costs, in 2022 negative mark-ups were more common for both electricity and gas. As noted above, the key driver was the unprecedented increase in wholesale energy

59 Gas-fired power plants have an approximate efficiency of 50 %, meaning that for every MWh of electricity sold, the electricity price must cover the cost of two MWh of gas. Gas-fired power plants tend to set the marginal electricity prices in many EU power markets.

60

61 The distinction between countries with regulated and non-regulated prices is based on the CEER Retail Markets Monitoring Report, December 2018 (Chapter 3): https://www.ceer.eu/documents/104400/-/-/31863077-08ab-d166-b611-2d862b039d79.

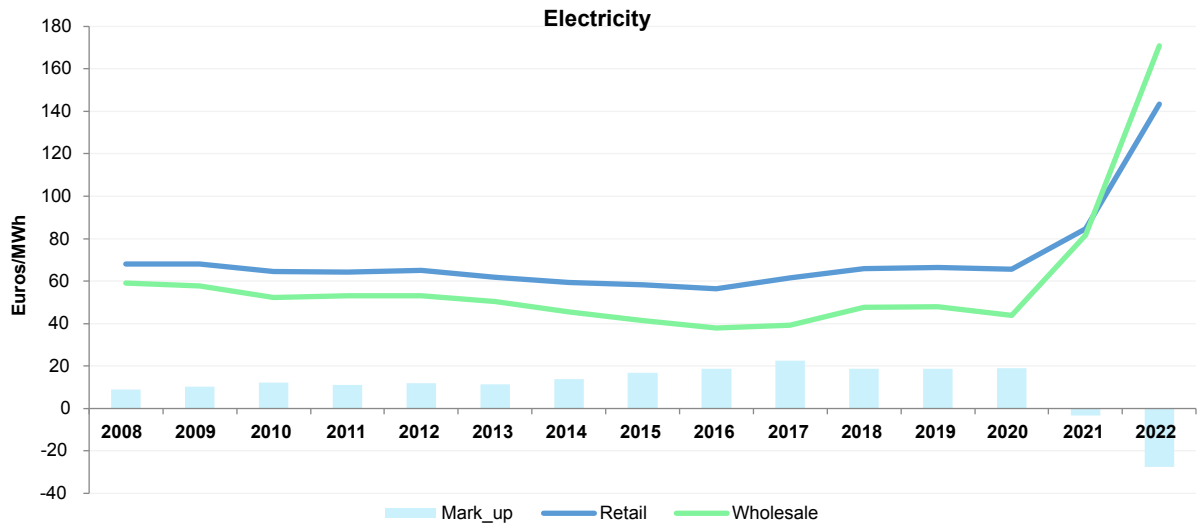
costs combined with the hedging strategies of retail energy suppliers which will have shielded energy consumers to some extent. In addition, the support measures implemented by various Member States would in many cases have bridged the delta between the wholesale and retail prices, helping both consumers and energy suppliers. See Section 2 for more information on Member States' emergency response.

88 Setting of end-user prices below the cost of procuring energy may seem appropriate to consumers, especially in light of the current energy crisis, which has put consumers under considerable financial strain. However, such a policy is an absolute barrier to the market entry for new suppliers and thus to competition. In markets with persistent negative mark-ups, market participants do not receive the appropriate signals, which can lead to inefficiencies and may be detrimental to consumers in the medium term as investment in innovation and efficiency may be lower than necessary.

89 When prices are set below actual costs, consumers do not receive the "correct" price signals[62] regarding their consumption. This can also lead to wasteful consumption or consumption at times of peak demand, which can strain on energy systems and result in older, more expensive, and more carbon-intensive generators being called upon to meet demand. In addition, negative mark-ups can hinder product and service innovation, deter new suppliers from entering the market and remove the incentive for consumers to be active in energy markets.

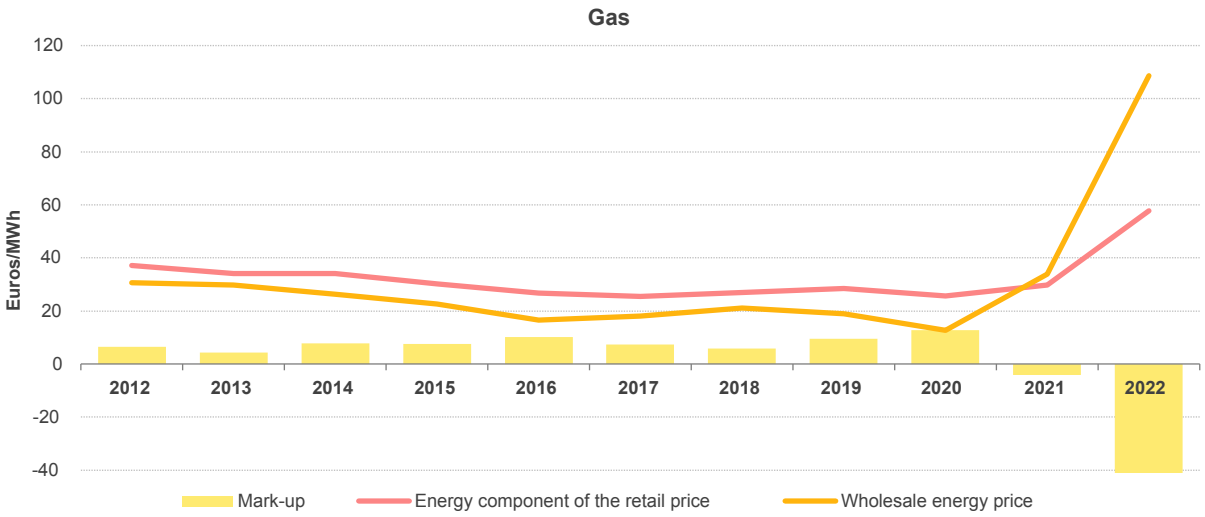
90 Figure 38 shows the responsiveness of the energy component of retail prices to changes in the wholesale energy price and the evolution of the mark-up in the period 2008–2022 for electricity and the period 2012–2022 for gas at EU level[63]. It is clear that 2021 and 2022 are outliers for both electricity and gas across the EU, with the cost of the retail energy component below the wholesale energy price.

Figure 38: Responsiveness of the energy component of the retail prices to changes in wholesale prices and evaluation of mark-ups in the household markets from 2008 to 2022 for electricity and from 2012 to 2022 for gas (EUR/MWh)



62 Correct prices relate to input cost of energy.

63 Based on 25 countries for electricity and gas for which data is available. Great Britain prices have not been considered since 2020.



Source: ACER Retail Database, Eurostat, NRAs, European power exchanges data, Eurostat Comext, ICIS Heren and ACER calculations[64]
May 2023

91 As can be seen in Figure 38, for electricity, there is a correlation between the cost of the energy component of retail prices and wholesale prices from 2008 to 2013 and for 2017. However, a divergence is observed between 2013 and 2016, and again in 2020, where reductions in wholesale price were not followed by similar reductions in the energy component of the retail prices. Overall, the energy component of retail electricity prices decreased by -9.2 % on average over the period 2008–2020, while wholesale prices decreased by -28.3 %. As mentioned above, significant wholesale prices have been recorded since 2021. Compared to 2008, wholesale prices increased by 189 % and retail prices by 111 %. Comparing the wholesale and retail values in 2022 to 2017, wholesale prices have increased by an unprecedented 334 %, while the retail energy component values have increased by 132 %.

92 The downward slope of the average wholesale gas price and of the average energy component of the retail gas price diverged in 2015, 2016 and then, significantly, in 2020, when the average price of the retail energy component did not follow the average decrease in wholesale gas prices. In 2017, the average retail energy component finally decreased, despite higher wholesale prices, indicating a lag in retail price following or a more strategic behaviour in setting wholesale prices under different market circumstances. After reaching record lows due to the lockdown measures taken during the Covid-19 pandemic, wholesale energy prices in the household gas market skyrocketed and finally exceeded retail gas prices in the first quarter of 2021. From 2022 onwards, negative mark-ups have been recorded. As mentioned above, this is due to the unprecedented magnitude of the increase in wholesale energy prices which, for the reasons already discussed, have not been fully passed on to household energy consumers.

3.2.5. Implementation of regulated prices

93 This section sets out the status of public price interventions in 2022. It provides information on the interventions[65] in the price setting for household and non-household customers in the electricity and gas markets.[66]

94 Under Directive 2019/944 Member States may apply price interventions, including below cost, for the supply of electricity to energy-poor and vulnerable customers. In order to establish effective competition, Member States may also apply price interventions for the supply of electricity to household customers and small and medium-sized enterprises for a transitional period. Both interventions are allowed within

64 Note: The EU average mark-up is assessed as the arithmetic average of Member States mark-ups. Gas data is available only from 2012 onwards. Data about the energy component of gas retail prices are obtained from the ACER Retail Database up to the year 2016 and from Eurostat for 2017, 2018, 2019, 2020 except for Finland, due to unavailability in Eurostat. Prices are expressed in nominal terms.

65 'Price intervention' refers at least to the energy component of the energy customer's bill, which is a price subject to regulation or controlled/ intervened by a public authority like a government, an NRA, etc.

66 This section is based on information reported by the NRAs (CEER 2023), Dashboard emergency measures ACER, European Commission Country reports as part of the 2023 European Semester Spring Package published on 24 May 2023, European Commission report on 'Emergency energy measures facilitated market improvement' published on 5 June 2023, and information published on the websites of the NRAs of Belgium, Germany, France, the Netherlands, Portugal and Italy.

the limits set out in Directive 2019/944, on the condition that the interventions are subject to certain conditions and are accompanied by a number of measures.[67]

95 In response to the energy crisis, as outlined in the REPowerEU Communication, the European Commission confirmed that in exceptional circumstances, such as periods of significantly higher energy prices, Member States may set retail prices for households and micro-enterprises[68]. Regulation 2022/1854 allows Member States to temporarily extend public interventions in price setting for the supply of electricity to small and medium-sized enterprises (Article 12) and set retail prices below cost, exceptionally and temporarily, for both households and small and medium-sized enterprises (Article 13)[69]. In order to maintain incentives for energy efficiency and an efficient market, regulatory measures should maintain an incentive to reduce demand, be temporary and include a well-defined roadmap for their gradual removal.

96 The main reasons for price interventions in retail electricity and gas markets, as reported by some NRAs, are the same for households and non-households and can be grouped as either protecting consumers from unreasonably high prices or protecting consumers from excessive price increases linked to the current energy crisis. At the end of 2021 and in 2022 new price interventions were introduced in response to the energy crisis.

97 Table 3 sets out an overview of the price interventions in electricity in the different Member States, EEA Member Norway and Great Britain, introduced in response to the energy crisis. Table 4 sets out price interventions that had already been put in place. There were no interventions in price setting for electricity in Denmark, Finland, Ireland, Norway and Sweden.

Table 3: Price interventions for electricity in 2022 in response to the energy crisis[70]

Country	Price intervention	Households	Non-households	Concrete Intend to remove
BE	Extension of the social energy tariff introduced during the pandemic	Vulnerable households (18.7%)		Extended until end of March 2023
BG	Freeze of regulated prices at levels of July 2021	All		Until end of March 2022
BG	Compensation of 75% of the price increase above a threshold		Businesses	Until 31 December 2022
CZ	Price cap (only energy) component	All	All	Until end December 2023
DE	Price cap for 80% (70% for industrial companies) of electricity consumption of last year	All	SMEs and industries companies	Until end of 2023. Extension possible until April 2024
EE	Price cap for consumption up to 650 kW/h per month (excluding network costs, excise duty or renewable energy fees)	All	Small companies, NGOs, local governments	Until March 2022
EE	Universal service to buy electricity at a pre-determined fixed price	All	Small businesses	"Until April 2026 For small businesses until December 2023"
ES	Additional reduction of the standard price offer for vulnerable consumers	Vulnerable customers (4.5%)		31 December 2023
FR	Price cap on regulated electricity prices	100% (all consumers who subscribed to a regulated price offer)	Small businesses (< 10 employees, < 36kVA) (28,5%)	Until December 2023

67 Article 5(3) - 5(7) of Directive 2019/944.

68 Communication from the Commission: REPower EU: Joint European Action for more affordable, secure and sustainable energy, 8 March 2022 (EUR-Lex - 52022DC0108 - EN - EUR-Lex (europa.eu)).

69 These temporary interventions are allowed until 31 December 2023 (Article 22 Regulation 2022/1854).

70 In Austria, a compensation of the difference between the contract price of electricity and a pre-defined price up to 2 900 kWh per year was introduced for all consumers. It will last until June 2024.

Country	Price intervention	Households	Non-households	Concrete Intend to remove
GB	Price cap on electricity	83% (consumers on default (or standard variable) tariffs		Until 2023 at the latest
HR	Price cap (only energy portion) for a certain consumption level	All	All	Until 30 September 2023
HU	Entitlement to request services from Supplier of Last Resort for consumers not eligible for Universal Service		Micro-enterprices with connection capacity not greater than 3*63 Amper (14%)	Until end of 2022
LT	Reimbursement of electricty costs above certain price thresholds (50% reimbursment in case of businesses)	All	All	Until 30 June 2023
LU	Freeze of electricity prices at 2022 levels	Households with annual consumption of less than 25,000 kWh	Non-households with annual consumption of less than 25,000 kWh	Until 31 December 2024
LV	Fixed tariff for households for the first 100 kWh of electricity per month	All		Until second half of 2023
LV	Reimbursement of 50% of electricty costs above certain price level		All	Until second half of 2023
NL	Price cap on electricity for a consumption level up to 2900 kWh	All	All	For year 2023
PL	Freeze of regulated prices at 2022 levels	All households with electricity consumption up to defined threshold		From January 2023 until December 2023
PL	Price cap	All households with electricity consumption exceeding threshold	Small and medium-sized enterprises, schools, nurseries, hospitals, social cooperatives, associations	From December 2022 (non-households) and from January 2023 until December 2023
RO	Price caps on electricity (different caps for groups of households and for sectors)	All (caps differ based on consumption level, special needs and number of children)	All (caps differ per sectors)	Extended until 31 March 2025
SI	Price caps on electricty	All	Small businesses, incl. apartment buildings	Until 31 August 2023
SI	Maximum tariff rate on electricty applied to 90% of past consumption for end-users not eligible for other price measures		Small and medium enterprises	Until 30 June 2023
SI	Maximum tariff rate on electricty applied to contracts for supply in 2023		Large businesses	Until December 2023
SK	Price cap for part of regulated supply of electricity within the final price for the supply of electricity	Selected vulnerable consumers (e. g. social service facilities)	Small regulated enterprises with consumption below 30 MWh/y	For year 2023
SK	Electricity provided from the major electricity producer in Slovakia (Slovenské elektrárne, a.s.) at a set price	All		For year 2023

Source: CEER 2023. Dashboard emergency measures ACER, 2023 European Semester Spring Package, country reports, European Commission[71]

71 European Commission Country reports as part of the 2023 European Semester Spring Package, published on 24 May 2023.

Colour codes: column 'Intend to abolish': green - defined end date; orange - intend to abolish, but extension possible or date is beyond end of 2023; red – no intention to abolish or no clear end date. Colour code for column households/non-households: green – targeted at vulnerable customers; orange – applicable to par of customers (not targeted); red – targeted at all households/non-households.

98 All measures in Table 3 are temporary and time limited, which is in line with the grounds for these interventions. At the same time, while it is uncertain how long the current energy crisis will last, in several Member States (Germany, Estonia, Luxembourg, Romania) the measures have already been extended beyond 2023 or can be extended until 2024.

99 Temporary price interventions can be divided into price caps, freezes of regulated prices and compensation or reimbursement of costs above a certain price level. Some interventions are limited to a predetermined level of consumption (interventions for households in, Germany, Croatia, the Netherlands, and Romania), which to some extent preserves the price signal for consumers to adjust their consumption and reduce demand.

100 With the exception of the intervention in Belgium, Spain and Slovakia, which were targeted at vulnerable customers[72], the price interventions benefit all or certain pre-defined groups of household or non-household consumers. On the basis of the descriptions used it is not always clear whether and to what extent these groups are consumers who actually need additional protection against high energy prices.

Table 4: Price interventions for electricity in 2022[73]

Country	Price intervention	Households	Non-households	Concrete Intend to remove
BG	Regulated prices	All		No
CY	Regulated prices	All	All	No
ES	Standard price offer (reduction on standard price for vulnerable consumers)	28.8% (4.5% vulnerable customers)		No
FR	Regulated prices offered by main electricity supplier for residential consumers	60% (not targeted)	Small businesses (< 10 employees, < 36kVA) (28,5%)	No
GR	"Regulated prices for consumers supplied by Universal Service Supplier and Supplier of Last Resort. % discount to energy bill component for vulnerable consumers"	All (7.37% is a vulnerable customer)	All	No
HU	Regulated prices	All	Microenterprises with connection capacity not greater than 3*63 Amper (14%)	No
IT	Regulated prices of Last Resort Supply Scheme ("maggior tutela" or standard offer regime)	All		To be phased out as of 2024
LT	Regulated prices (only energy component)	All - excluding HHs with consumption > 5000 KWh per year (51%)	"Farmers with certain annual income from agricultural activities Community organisations connected to low-voltage grid"	Extended until 2026 for households with consumption < 1000 KWh
MT	Regulated prices	All	All	No

72 See section 4.2 for definitions on Vulnerable customers

73 The colour codes are the same as in Table 3.

Country	Price intervention	Households	Non-households	Concrete Intend to remove
NL	Ex-post check whether supplier's profit margin as part of the price is not too high	All	All	Under discussion of new energy laws
PL	Regulated prices for default supplier	All		No
PT	Transitory end-user tariff for electricity	All consumers in the regulated market		Until December 2025
PT	Discount to social tariff	Vulnerable consumers - with a contracted power up to 6.9 kVA		No
PT	Regulated supletive tariff		Consumers connected to BTE, MT, AT and MAT levels	No
SK	Regulated prices for vulnerable customers	Vulnerable customers defined by law no. 250/2012		New changes introduced in law no. 250/2012 (§ 11, paragraph 6)", effective from 1 January 2023

Source: CEER 2023. Dashboard emergency measures ACER, (websites), 2023 European Semester Spring Package, country reports, European Commission

101 The price interventions listed in Table 4 predate the crisis and have been in place for many years. Although there are plans to phase out the price intervention in Italy (2024), Portugal (2025) and Lithuania (2026), there is no concrete intention to remove the price regulation in the other Member States[74]. In Slovakia, the law has recently changed[75], and in the Netherlands the abolishing of the ex-ante price check is under discussion.

102 Article 5 of Directive 2019/944 requires that in case of price interventions in the electricity sector, prices should be set above cost. For price interventions that predate the energy crisis, NRAs reported that this was not the case for the price intervention in Hungary.

103 For gas, the nature of the price interventions, the target groups addressed and the intention to discontinue gas price interventions are similar to those for electricity. Table 5 sets out an overview of the gas price interventions introduced in response to the energy crisis. The price interventions that had already been put in place are listed in Table 6 Price interventions for gas in 2022 Table 5.

104 There were no interventions in price setting for gas in Austria, Denmark, Finland, Ireland, Norway and Sweden.[76]

74 It should be noted that the provisions of Article 5 of Directive 2019/944 are not fully applicable to Malta due to its derogation from Article 4 of Directive 2019/944.

75 In brief, the NRA can limit the scope of the price regulation to the supply of electricity or gas by suppliers providing a universal service to more than 100 000 supply points, or the NRA can establish that price regulation is not carried out once the reasons for price regulation ceased to apply (especially if the market operates sufficiently to ensure the availability of electricity or gas at reasonable and competitive prices in a transparent and non-discriminatory manner).

76 Cyprus does not use gas in its energy mix.

Table 5: Price interventions for gas in 2022 in response to the energy crisis[77]

Country	Price intervention	Households	Non-households	Concrete Intend to remove
BE	Extension of the social energy tariff introduced during the pandemic	Vulnerable households (18.7%)		Extended until end of March 2023
CZ	Price cap on gas (only energy component)	All	All	Until end December 2023
DE	Price cap for 80% (70% for industrial companies) of gas consumption of last year	All	All	Until end of 2023. Extension possible until April 2024
EE	Price cap on gas for consumption up to 2.75 MWh per month	All		Until March 2022
FR	Cap on the regulated price of gas	50% (not targeted)		Extended to cover 2023
GB	Price cap on gas	83% (consumers on default (or standard variable) tariffs		Until 2023 at the latest
LT	Reimbursement of costs of gas above certain price thresholds	All		Until 31 December 2023
LU	Price cap on gas (+15% above average price level in September 2022)	All		Until 31 December 2024
NL	Price cap on gas for a consumption level up to 1,200 m3	All	All	For year 2023
PL	Freeze on regulated prices at 2021 level	All	Vulnerable entities (i.e. hospitals, schools, churches)	Extended to 2023
PT	Discount on price for gas (energy component) for up to 80% of consumption in 2021		End customers with annual consumptions of more than 10. 000 m3	To be carried out in 2023
PT	Option to return to the regulated market with the Transitory end-user tariff	Consumers with a consumption below th 10 000 m3		To be carried out in 2023
RO	Price caps on gas	All	Non-households with an annual consumption of less than 50,000 MWh and thermal energy producers	Extended to 31 March 2025
SI	Price caps on gas	All	Small businesses multi-apartment buildings, basic social services (50%)	Until to August 2023
SK	Price cap for part of regulated supply of gas within the final price for the supply of gas increased by a maximum of 15% compared to 2022 prices	All (incl. selected vulnerable consumers (e. g. social service facilities))	Small regulated enterprises with consumption below 100 MWh/y	For year 2023

Source: CEER 2023. Dashboard emergency measures ACER, 2023 European Semester Spring Package, country reports, European Commission[78]

77 The colour codes are the same as in Table 3.

78 European Commission Country reports as part of the 2023 European Semester Spring Package, published on 24 May 2023.

Table 6: Price interventions for gas in 2022[79]

Country	Price intervention	Households	Non-households	Concrete Intend to remove
BG	Regulated prices	All	98% (not targeted)	No
ES	Last Resort Tariff for gas	25% (not targeted)		No
FR	Regulated gas prices offered by Incumbent supplier	24% (not targeted)		Until July 2023 (extended to cover 2023)
GR	Regulated tariffs for consumers supplied by Universal Service Supplier and Supplier of Last Resort	97% (not targeted)	54% (not targeted)	No
HR	Regulated prices	99% (not targeted)		No defined date for deregulation of gas prices
HU	Regulated prices	All	micro-enterprices (3,9%)	No
IT	Regulated prices of Last Resort Supply Scheme ("maggior tutela" or standard offer regime)	All		To be phased out as of 2024
LT	Regulated prices	All		No
LV	Regulated prices for gas supplied by public gas supplier	94% (not targeted		Gas market fully open as of May 2023
NL	Ex-post check whether supplier's profit margin as part of the price is not too high	All	All	Under discussion of new energy laws
PL	Regulated prices for gas	All	Vulnerable entities (i.e. hospitals, schools, churches)	Extended tot 2027 (initially 2023)
PT	Transitory end user tariff for gas	All consumers in the regulated market - low pressure, with annual gas consumption <= 10 000 m3 (23%)		Until December 2025
PT	Discount to social tariff	Vulnerable consumers - low pressure, with annual gas consumption <= 500 m3(4%)		No
PT	Regulated Supletive Tariff		All consumers with annual gas consumption > 10 000 m3	No
SK	Regulated prices for vulnerable customers	Vulnerable customers defined by law no. 250/2012		New changes introduced in law no. 250/2012 (§ 11, paragraph 6)", effective from 1 January 2023

Source: CEER 2023. Dashboard emergency measures ACER, 2023 European Semester Spring Package, country reports, European Commission[80]

79 The colour codes are the same as in Table 3.

80 European Commission Country reports as part of the 2023 European Semester Spring Package, published on 24 May 2023.

105 In all EnC Contracting Parties, electricity price interventions for households and small and medium-sized enterprises predate the crisis. In these countries, household customers are entitled to regulated end-user prices. The only exception is Montenegro where the public supplier is entitled to change prices for households and small sized non-household customers under certain restrictions[81]. In practice, however, the public supplier did not change the prices for households and small and medium enterprises in 2022. In 2022, end-user gas prices for household customers were regulated in Bosnia and Herzegovina, Georgia, Moldova and Serbia, but not in North Macedonia and Ukraine. The price regulation was also in place before the crisis.

106 Overall, it should be noted that in 2022 some Member States still applied regulated prices in their retail electricity and gas markets. Although, in some of them these measures were introduced on a temporary basis in order to protect consumers from the high energy prices resulting from the energy crisis, there are still price interventions in place with a wider scope and without a clear roadmap for their removal. Moreover, even among the temporary measures, several interventions are either not targeted at the energy poor or vulnerable customers or are not well targeted in principle. Even where this is partially allowed in specific circumstances, a good balance needs to be struck between targeted price protection for consumers and the need to avoid triggering an increase in consumption. Further attention is needed, particularly where prices are not set above cost.

107 As regards the targeting of future energy support measures, the Member States and EnC Contracting Parties should be aware of the potential impact of broad-based support measures. As wholesale energy prices fall, the need for support to consumers will decrease. However, there will always be a cohort of consumers in need of support. In line with Directive 2019/944, it is the most vulnerable customer that must be protected.

3.3. Consumer information

3.3.1. Consumer bills

108 In twelve Member States, most electricity consumers receive monthly bills. There are only six Member States (Austria, Belgium, Czechia, Germany, the Netherlands and Slovakia) where the typical and most common billing interval is still one year. In other Member States, consumers receive electricity bills every two months (Cyprus, France, Greece, Ireland and Italy), quarterly or bi-annually (Denmark and Great Britain, and Croatia and Poland, respectively). For gas, monthly bills are the most common (Bulgaria, Estonia, Hungary, Lithuania, Portugal, Romania, Slovenia and Sweden), although annual gas bills (Austria, Czechia, Germany, Latvia, the Netherlands, Poland and Slovakia[82]) are still relatively common, as reported by NRAs.

109 There are significant differences in the information provided on invoices, and therefore in the length and, arguably, the complexity of invoices. While bills in all Member States provide information on the actual price to be paid and the volume of consumption, only ten and eight (seven and five for gas) invoices provide comparisons with the average consumer or information on the benefits of switching. This is around a third or less of all EU Member States, and a result that is too low for the purpose of consumer engagement.

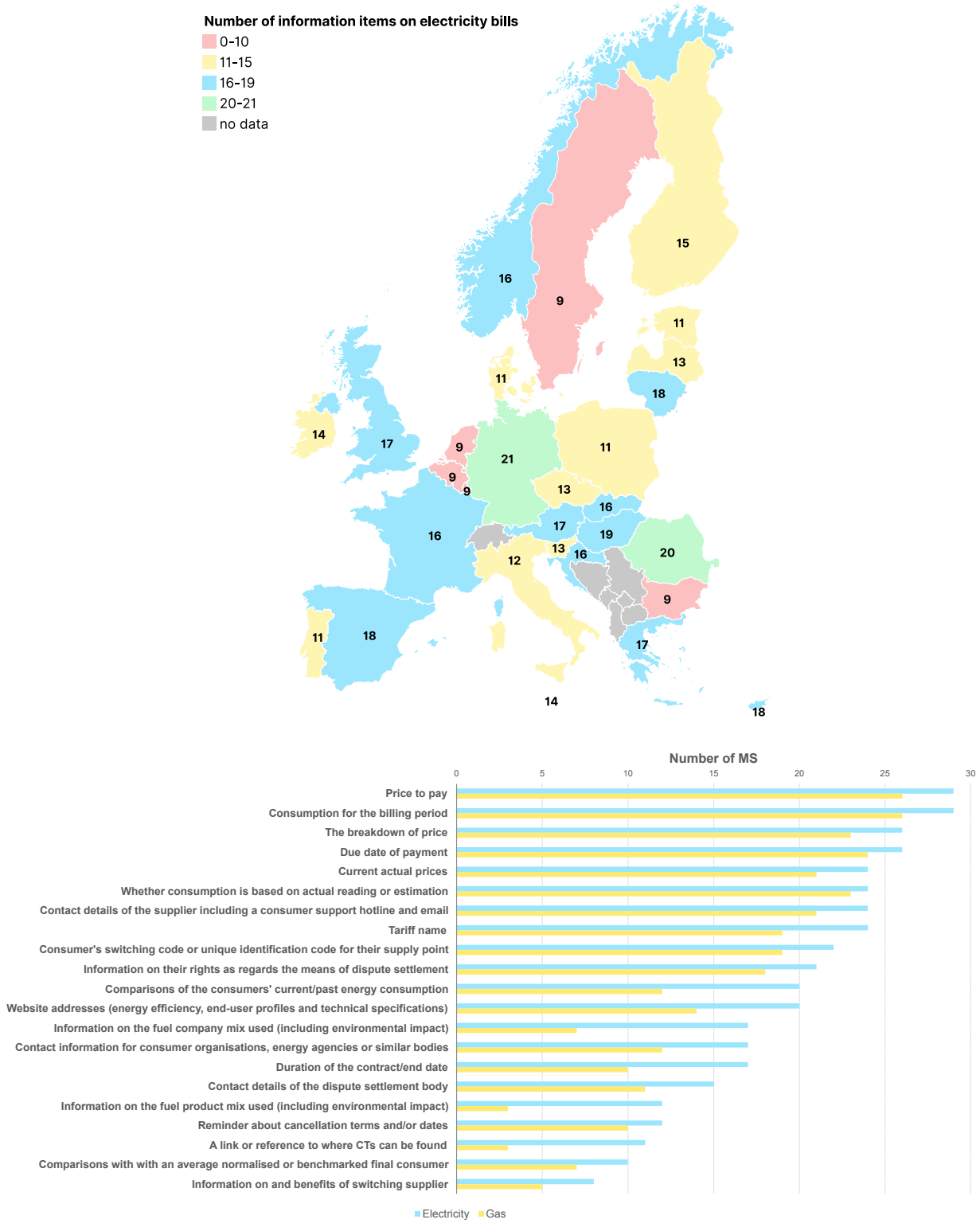
110 Likewise, typical bills in the Member States also contain a different number of items of information. While a higher number of items included in the bill goes a long way towards improving the information available to consumers, it may also create greater complexity for the consumer. To address this, bills could be structured in a clear and easy to understand format. Electricity bills in Germany and Romania, which contain 21 and 20 out of 21 information items, respectively, are in the lead, followed by eleven Member States with bills containing between sixteen and nineteen items and eleven Member States with bills containing between eleven and fifteen items. Luxembourg and Sweden (both nine items), Belgium and Bulgaria (both eight items) and the Netherlands (seven items) have the lowest number of items. Gas bills follow a similar pattern, with bills in Germany also containing the full list of 21 items,

81 These restrictions are that the prices for this category of customers cannot be increased beyond the weighted electricity price realized in the previous year and futures for the following year on a reference energy exchange nominated by the regulator. The restrictions may be extended for a period of three years if the NRA considers that conditions for a liquid market are not met. The NRA decided to extend the restrictions for the period 2020 -2022 and the price increase did not exceed 6 %.

82 Consumers pay monthly instalment payments and receive a correction bill once a year.

followed by bills in Slovakia (seventeen items) and Spain, Great Britain and Romania (sixteen items each). Similarly, gas bills in Italy, Lithuania and Sweden (nine items each), Poland (eight), Estonia and the Netherlands (seven each) and Luxembourg (six) contain the smallest number of information items according to this list. For more details see Figure 39.

Figure 39: Number of information items on electricity bills in the EU (2022)



Source: CEER 2023

111 In all EnC Contracting Parties, both electricity and gas are billed monthly on the basis of actual consumption. All electricity and gas bills include information on actual consumption, the billing period and supplier details. Information on the energy/fuel mix is available in electricity bills in all EnC

Contracting Parties, except Albania, Kosovo* and Bosnia and Herzegovina. Compared to the previous year, a substantial improvement in transparency has been achieved in many EnC Contracting Parties with the inclusion of price breakdowns in the bills. Finally, there is still room for improvement in the provision of information on switching, as this is not the case in all EnC Parties.

3.3.2. Comparison tools

112 While there is a large number of comparison tools available to energy consumers, when focusing on Directive 2019/944, it is clear that very few consumers have access to a comparison tool that meets the requirements of Article 14 of Directive 2019/944 and can therefore be considered reliable.

113 In order to assist consumers, comparison tools need to be able to compare the cost differences between contracts. Given that very few markets offer dynamic price contracts to consumers, the comparison tools in the markets where such offers do not exist cannot be considered to fulfil the criteria set out in the Directive.

114 According to Directive 2019/944, electricity consumers must have the opportunity to enter into flexible or dynamic price contracts if they have access to smart meters, and suppliers must offer such contracts where they have more than 200 000 consumers. However, as shown below where data was provided, consumers can only do this in Austria, Belgium, Denmark, Estonia, Spain, Finland, Latvia, Norway and Sweden. Despite the lack of ability to use comparison tools to compare such contracts, many NRAs have stated that their tools meet the criteria set out in Directive 2019/944, which cannot be considered to be the case.

Table 7: Availability of comparison tools in EU MSs and EEA Member Norway

Country	How many price comparison tools are operated by public authorities?	Household consumers and micro enterprises with access to a comparison tool that meets the requirements of Article 14 Directive 2019/944?	Number of comparison tools comparing dynamic price contracts according to Art 11 of Directive 2019/944	Is there a minimum of one tool covering the entire market?	Number of trust marks have been issued in your Member State?
AT	1	Yes	1	Yes	0
BE	4	Yes	1	Yes	2
BG		yes	No response	Yes	
CY	0	N/A	0	No	0
CZ	1	No response	No response	Cannot say	
DE	0	No	No response		0
DK	1	YES	1	Yes	
EE	0	Yes	2	Cannot say	1
ES	1	YES	1	Yes	0
FI	1	Yes	1	Yes	0
FR	1	Yes	0	Yes	0
GR	1	Yes	0	Yes	0
HR	1	yes	0	Yes	1

Country	How many price comparison tools are operated by public authorities?	Household consumers and micro enterprises with access to a comparison tool that meets the requirements of Article 14 Directive 2019/944?	Number of comparison tools comparing dynamic price contracts according to Art 11 of Directive 2019/944	Is there a minimum of one tool covering the entire market?	Number of trust marks have been issued in your Member State?
HU	1	Yes	1	Yes	0
IE	0	No	0	Yes	3
IT	1	Yes	No response	Yes	0
LT[83]	1	No	0	No	0
LU	1	Yes	0	Yes	0
LV	2	Yes.	2	Yes	0
MT	N/A	N/A	N/A		0
NL	0			Cannot say	0
NO	1	No	1	No	
PL	0	No	0	No	0
PT	2	Yes	0	Yes	0
RO	2	Yes	0	No	0
SE	1	Yes	1	Yes	0
SI	1	Yes.	0	Yes	0
SK	1	Yes	0	Yes	0

Source: CEER 2023

115 Focusing on Directive 2019/944, it is clear that although a large number of comparison tools is available to energy consumers, very few consumers have access to a comparison tool that meets the requirements of Article 14 of Directive 2019/944 and can therefore be considered reliable.

116 In the EnC Contracting Parties, price comparison tools were developed for electricity in Bosnia and Herzegovina, Georgia, North Macedonia and Ukraine. Price comparison tools for gas are still not available. It is expected that the NRAs of the EnC Contracting Parties will finalise their work on the design of the necessary price comparison tools in the context of the forthcoming transposition and implementation of Directive 2019/944.

3.4. Complaints

117 This section sets out an analysis of available complaint data from the Member States across Europe. It also describes the parties responsible for complaint handling, consumer access to information about making a complaint, and the maximum statutory period available to energy companies, NRAs, Alternative Dispute Resolution bodies (ADRs), and Ombudsmen to respond to complaints.

83 The NRA comparison tool is in the process of being upgraded to ensure that it complies with the requirements of Articles 11 and 14 of Directive 2019/944 and provides full market coverage.

118 According to Article 59(1)(o) of Directive 944/2019, NRAs are responsible for monitoring the complaints lodged by household customers. The scope of this task has not been defined in detail, but ACER and CEER consider that NRAs should at least monitor the development of a number of general categories of complaints[84] which could provide a more meaningful insight into the problems faced by consumers. Electricity and gas market complaints should be separated, and where applicable, supplier and DSO complaints should be registered and analysed separately. In 2022, twenty NRAs did not monitor complaint data in this manner[85].

119 Among the ten NRAs that have fulfilled their legal obligations under Article 59(1)(o) of Directive 944/2019, the most common reason for submitting complaints against both electricity and gas suppliers is 'invoicing/billing and debt collection. Most complaints against electricity DSOs concern 'connection to the grid'. The most common complaint that DSOs receive from gas customers concern 'invoicing/billing' and 'debt collection'.

120 In both the electricity and gas markets, complaints about 'invoicing/billing and debt collection' and 'price/tariff' increased dramatically in 2022 compared to the previous year.

3.4.1. Complaint handling bodies and procedures

121 Directive 2019/944 requires that Member States introduce speedy and effective complaint-handling procedures. Member States must assign roles and responsibilities in handling consumer complaints and design a dedicated process for handling consumer complaints. Under Article 10 of Directive 2019/944 final consumers have the right to a good standard of service and complaint handling by their suppliers.

122 NRAs (25 for electricity and 20 for gas) report that the role of dealing with final consumer complaints has been assigned to them. In some Member States (eighteen for electricity and fifteen for gas), NRAs are also responsible for forwarding complaints to other competent bodies.

123 Information on the nature and frequency of consumer complaints is widely available. In many Member States (nineteen for electricity and sixteen for gas) NRAs are required to publish information on complaints made by household consumers. In a handful of Member States (Greece, Croatia, Portugal and Romania for electricity and Croatia and Portugal for gas), distribution companies are also required to publish information on complaints. In five other Member States (Great Britain, Greece, Croatia, Portugal and Romania) electricity suppliers publish information on complaints (Great Britain, Croatia, Portugal and Romania for gas). In twelve Member States the date is published by the alternative dispute resolution body or the ombudsman. However, in six Member States (Bulgaria, Estonia, Finland, Malta, Norway and Poland) the reporting of data on consumer complaints is not mandatory for any of the above parties.

124 In most Member States, information on where and how to lodge complaints is mandatory in contracts and bills. In eleven countries[86] for electricity and four for gas (Great Britain, Hungary, Malta and Slovenia), consumers must be provided with the contact details of the relevant complaint services on advertising/ information material such as leaflets, flyers, etc.

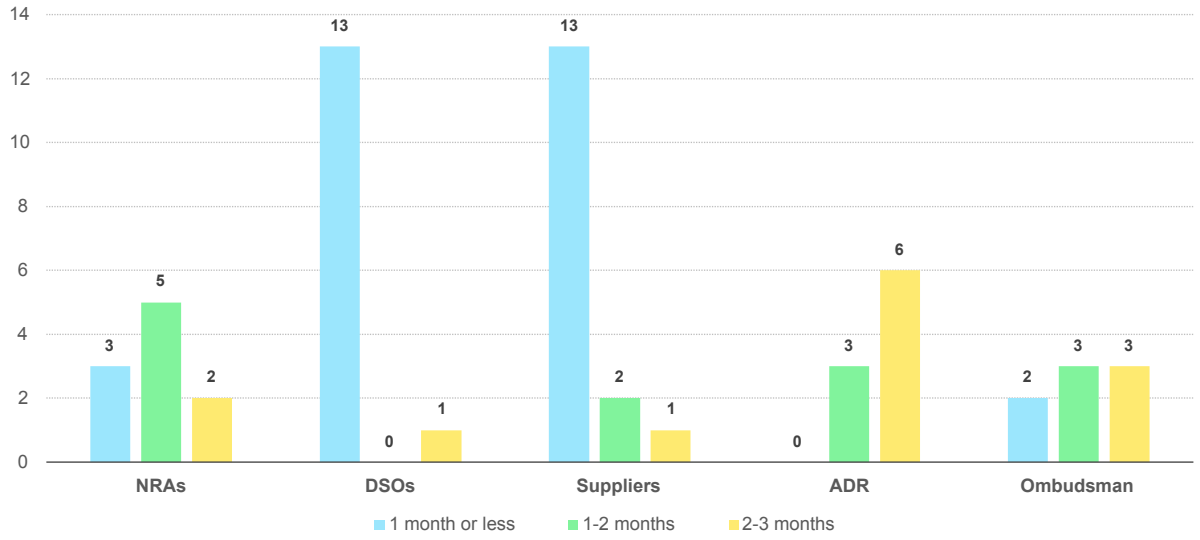
125 In order to speed up the complaints service, a short maximum legal handling time is set for the different market players, as shown in Figure 40. For example, in thirteen Member States for electricity, DSOs and suppliers are required to respond to consumer complaints within one month or less. NRAs, ADRs and Ombudsmen are given more time to handle complaints due to their role and responsibility in acting as a balanced and neutral party between energy service companies and consumers.

84 Connection to the grid, metering, quality of supply, unfair commercial practices, contracts and sales, activation, disconnection for late payment or non-payment, invoicing/billing and debt collection, price/tariff, redress, change of supplier/switching, service provision to consumers and micro-enterprises/provision.

85 Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, France, Germany, Great Britain, Greece, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Romania.

86 Belgium, Cyprus, Denmark, Great Britain, Greece, Croatia, Hungary, Malta, Romania, Slovakia and Slovenia.

Figure 40: Legal maximum processing time to handle electricity market complaints in EU MS and EEA Member Norway in 2022 (number of MS)



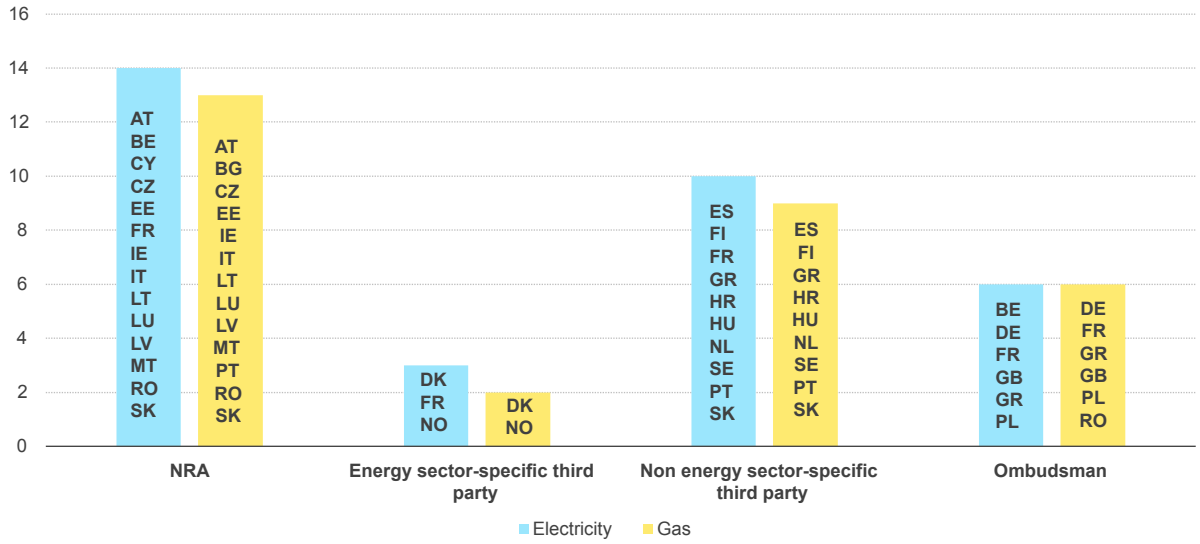
Source: CEER 2023

3.4.2. Alternative Dispute Resolution (ADR)

126 In 2022, most Member States had implemented an ADR mechanism for electricity and gas that is free of charge, with the exception of Czechia and Sweden.

127 Figure 41 shows that fourteen NRAs have been assigned the role of ADR in electricity and thirteen NRAs in gas. Non-energy specific third parties, such as non-sector specific consumer organisations, come in second place.

Figure 41: Entities responsible for ADR in the EU Member States and the EEA Member Norway - 2022 (number of MS)



Source: CEER 2023

3.4.3. Complaint data

128 Article 59 of Directive EU 2019/944 requires EU Member States to designate a single NRA responsible for the monitoring of complaints lodged by household customers. The responsibility for handling complaints can be given to other public bodies, such as ADRs or Ombudsmen, but the NRA has a responsibility for monitoring complaints.

129 The ACER and CEER assessment of reported complaint data shows that in 2022 there were many Member States in which this function was not yet in place. Twenty out of 29 NRAs registered complaints made directly to the NRA separately for the electricity market and the gas market. Ten NRAs[87] registered complaints separately for suppliers and DSOs.

130 Member States that aim to use complaint statistics in a meaningful way should consider the separate registration of electricity and gas market complaints. In the absence of structured data on analysis and monitoring, it is unlikely that substantial improvements will be successfully implemented, as the key issues will not have been properly understood.

131 The number of final household complaints received by NRAs, suppliers, DSOs, ADRs or energy ombudsmen varies between Member States due to the different definitions used and the differences in population size. In addition, differences in the way complaints are handled and reported in the Member States mean that the absolute number of complaints is not a straightforward indicator of the quality of service in a country. It is therefore difficult to compare the number of complaints across countries and draw robust conclusions about consumer protection and market functioning from such comparisons.

132 According to available NRA data, approximately 3 million complaints in electricity and 1.6 million complaints in gas were lodged with suppliers, DSOs, ADR bodies, ombudsmen or NRAs in 2022.

133 Suppliers received the most complaints in both the electricity and gas markets. However, data on complaints received by electricity suppliers is only reported by eleven NRAs[88], of which a few stands for most complaints[89]. Ten NRAs were aware of complaints received by DSOs[90].

134 In most countries, only a small portion of all complaints is sent directly to NRAs, ADRs and energy Ombudsmen (3 % of all complaints in the electricity market and 13 % in the gas market[91]). However, statistics on complaints lodged directly with these public bodies appear to be more comparable than data on complaints lodged with suppliers or DSOs due to better reporting in Member States. These complaints may include those that have not been resolved by energy companies and have therefore been "passed on" to NRAs, ADRs and ombudsmen, and may represent the most contentious cases.

135 The following sections comment on the final household consumer complaints submitted directly to NRAs, ADR bodies and/or ombudsmen in countries where these public bodies register complaints separately for the electricity and gas markets, and countries where these public bodies register complaints separately for suppliers and DSOs.

3.4.4. Electricity market complaints

136 Figure 42 shows that in the twenty[92] Member States that register complaints on the electricity and gas markets separately, on average 27 % of all complaints against electricity companies (suppliers and distribution companies) concerned invoicing/billing and debt collection. An additional 15 % concerned prices and tariffs and 13 % concerned connection to the grid.

137 Complaints about invoicing/billing/debt collection and prices/tariffs appear to have risen dramatically compared to the previous year. The number of complaints on invoicing/billing and debt collection increased from 19 % in 2021 to 28 % in 2022, and prices and tariffs from 9 % in 2021 to 18 % in 2022.

87 Belgium, Spain, Finland, Hungary, Ireland, Poland, Portugal, Sweden, Slovenia and Slovakia.

88 Austria, Cyprus, Spain, Great Britain, Hungary, Ireland, Italy, Malta, Poland, Portugal and Slovenia.

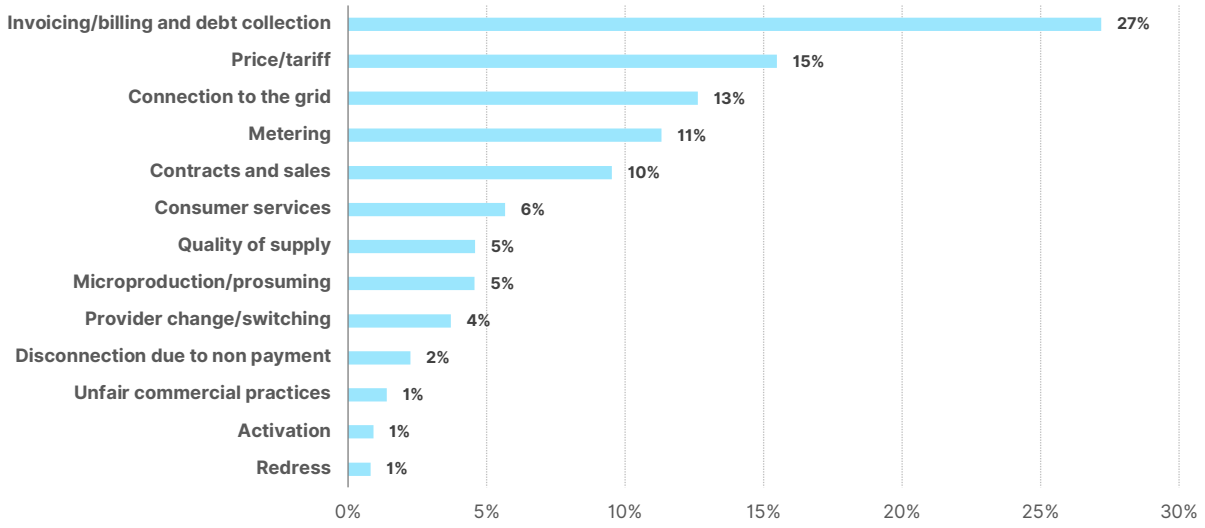
89 In Spain (1 353 012 complaints), Malta (311 914) and Italy (337 863) complaints received by suppliers were reported to the NRA.

90 Austria, Cyprus, Spain, France, Hungary, Latvia, Malta, Poland, Portugal and Slovenia.

91 The higher percentage in the gas market is explained by the fact that the Spanish NRA registered 600 670 gas markets complaints.

92 Austria, Belgium, Bulgaria, Cyprus, Estonia, Spain, Finland, France, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Poland, Portugal, Romania, Slovenia, Slovakia and Sweden.

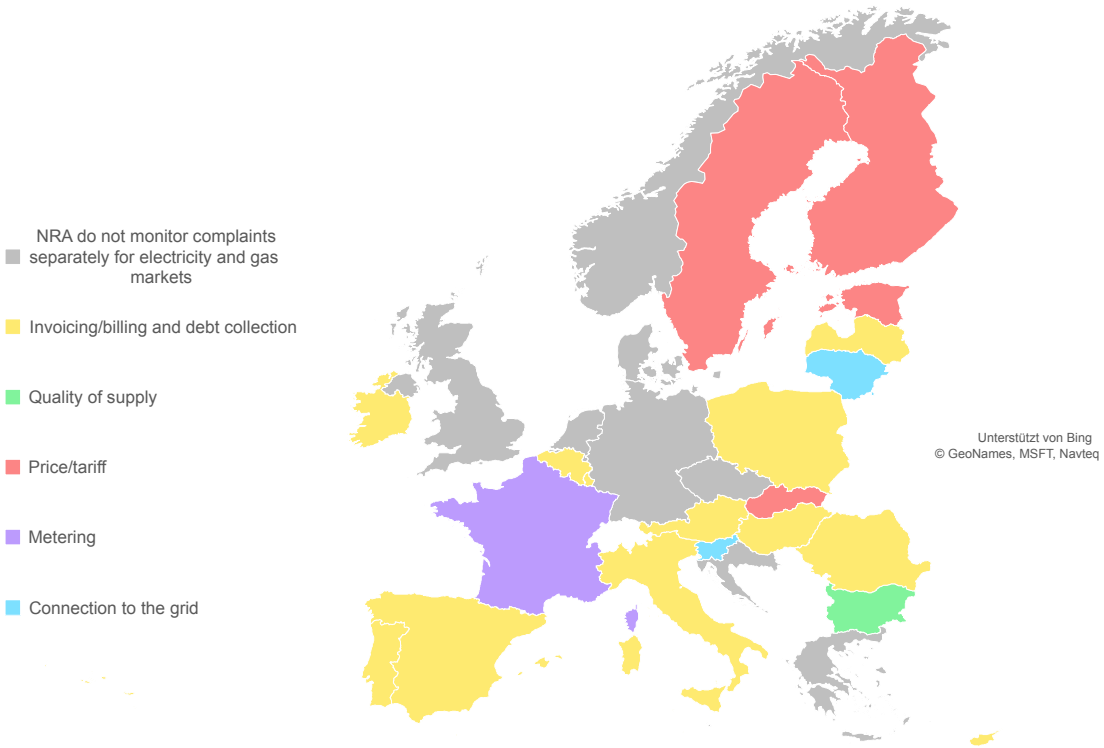
Figure 42: Average national shares of all types of final household consumer complaints in the electricity market made directly to NRAs, ADRs or ombudsmen in 20 EU Member States that register complaints separately for the electricity and gas markets in 2022 (%)



Source: CEER 2023

138 Figure 43 shows the most common complaint category in the twenty countries that were able to provide disaggregated complaint data for their electricity and gas markets. For example, in Austria, Belgium, Cyprus, Hungary, Ireland, Italy, Latvia, Luxembourg, Poland, Portugal, Romania and Spain[93], problems related to invoicing/billing and debt collection were the most common reason to complain to NRAs, ADRs or ombudsmen.

Figure 43: Most common reason to complain regarding electricity market in EU MSs– 2022



Source: CEER 2023

93 In Spain, the most common complaint reported directly to the NRA is 'switching', due to the specific competence of the CNMC in this area. In contrast, the most common reason for complaint reported by suppliers was 'invoicing/billing and debt collection', which is more representative of the market and therefore the reason ultimately reported to the CEER.

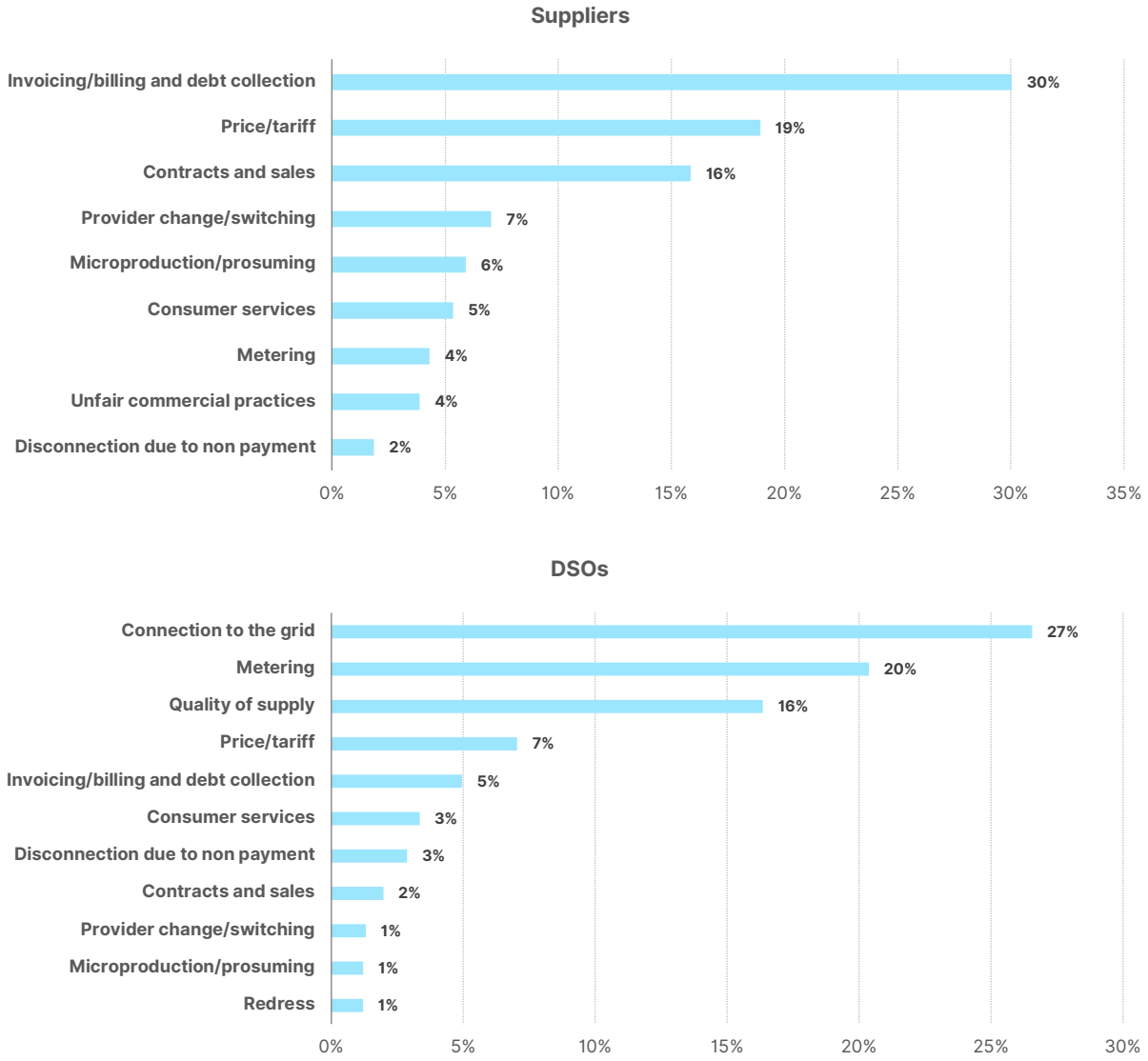
139 ACER and CEER consider that, in order to improve the understanding of complaints, NRAs and designated bodies should consider registering complaints separately, not only for the electricity and gas markets, but also for suppliers and DSOs. This would enable the NRA or the ADR body to identify the root cause of consumer problems and thus implement policy changes to improve the quality of service consumers receive, thereby reducing the number of complaints.

140 Only ten Member States[94] have reported complaints data to NRAs, ADRs, and ombudsmen separately for suppliers and DSOs. The conclusions in this section are based on data from these Member States.

141 Figure 44 shows that problems with invoicing/billing and debt collection are the most common reason for complaining to electricity suppliers (30 % of all complaints on average). Problems with prices/tariffs are the second most common reason for complaints (on average 19 % of all complaints).

142 With regard to electricity DSOs, the most common reason for complaints is connection to the grid (on average 27 % of all complaints), followed by metering (on average 20 % of all complaints).

Figure 44: Average national shares of the types of the complaints by final household consumers in the electricity market lodged directly with NRAs, ADR bodies or ombudsmen in ten EU Member States that register complaints about suppliers and DSOs separately in 2022 (%)



Source: CEER 2023

Note: For the presentation of the types of consumer complaints, the population weighting and the number of complaints reported by each NRA are not considered. Resulting figures thus refer to MS-level average percentages of complaints in the various categories.

94 Belgium, Spain, Finland, Hungary, Ireland, Sweden, Poland, Portugal, Slovenia and Slovakia.

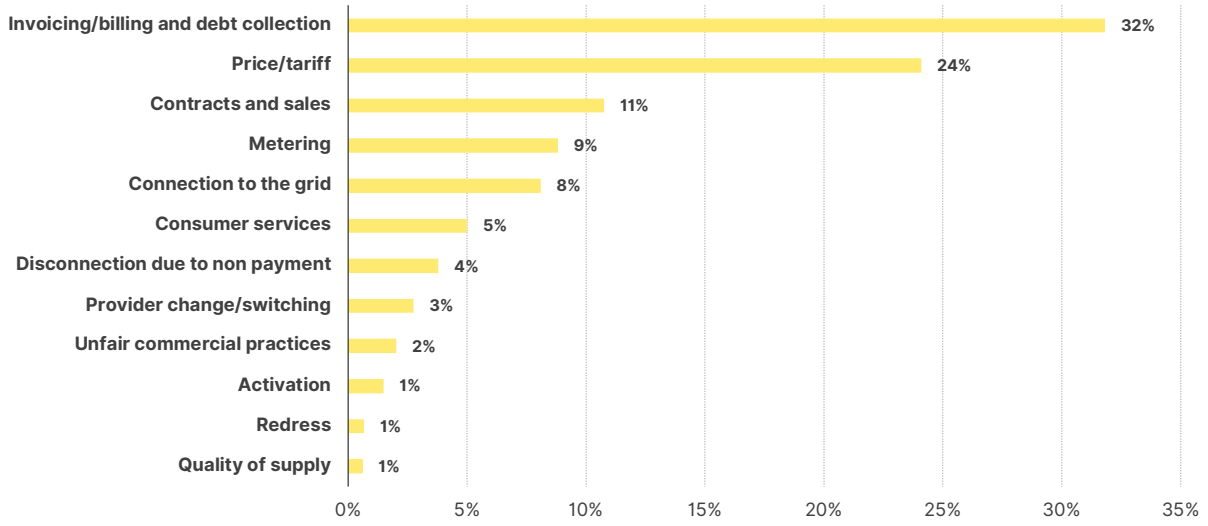
143 Electricity customers in the EU complain about different things. In Portugal, 45 % of complaints about suppliers concerned invoicing/billing and debt collection In Sweden, most complaints about electricity suppliers concerned contracts and sales. For distribution companies, all complaints in Slovenia concerned connection to the grid and 36 % of complaints in Belgium concerned metering.

3.4.5. Gas market complaints

144 Figure 45 shows that, on average, 32 % of all complaints against gas companies (suppliers and DSOs) related to invoicing, billing and debt collection, followed by price/tariff complaints (24 %).

145 Compared to 2021, complaints about both invoicing/billing and debt collection and prices and tariffs appear to have increased dramatically: invoicing/billing and debt collection from 19 % in 2021 to 32 % in 2012, and prices and tariffs from 17 % in 2021 to 24 % in 2012.

Figure 45: Average national shares of the types of complaints by final household consumer in the gas market lodged directly with NRAs, ADR bodies or ombudsmen in nineteen[95] EU Member States that register electricity and gas market complaints separately in 2022 (%)

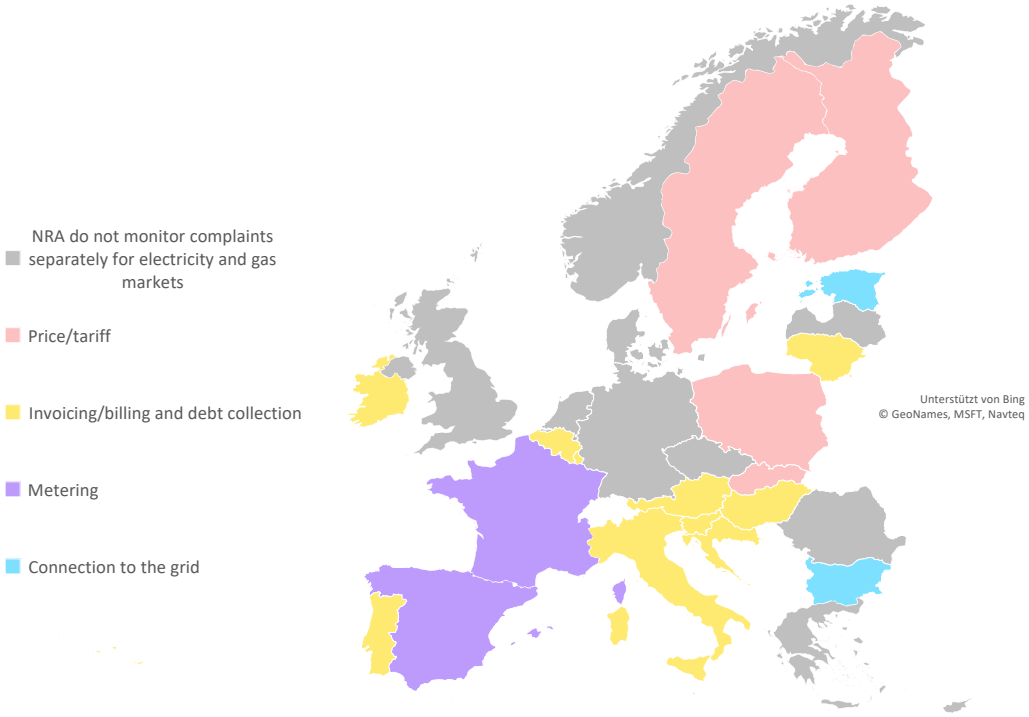


Source: CEER 2023

146 Figure 46 shows the most common categories of complaint in those countries that register complaints separately for the electricity and gas markets. In Portugal, Ireland, Belgium, Luxembourg, Italy, Austria, Slovenia, Hungary, Croatia and Lithuania, problems related to invoicing/billing and debt collection are the most common reason for lodging complaints with NRAs, ADRs or ombudsmen. In Sweden, Finland, Poland and Slovakia prices/tariffs are the most common reason for lodging complaints.

95 Same countries as listed in 93 with the exception of Cyprus where there is no gas used by households.

Figure 46: Most common reason for gas market complaints received by NRAs, ADRs and ombudsmen in EU MSs– 2022

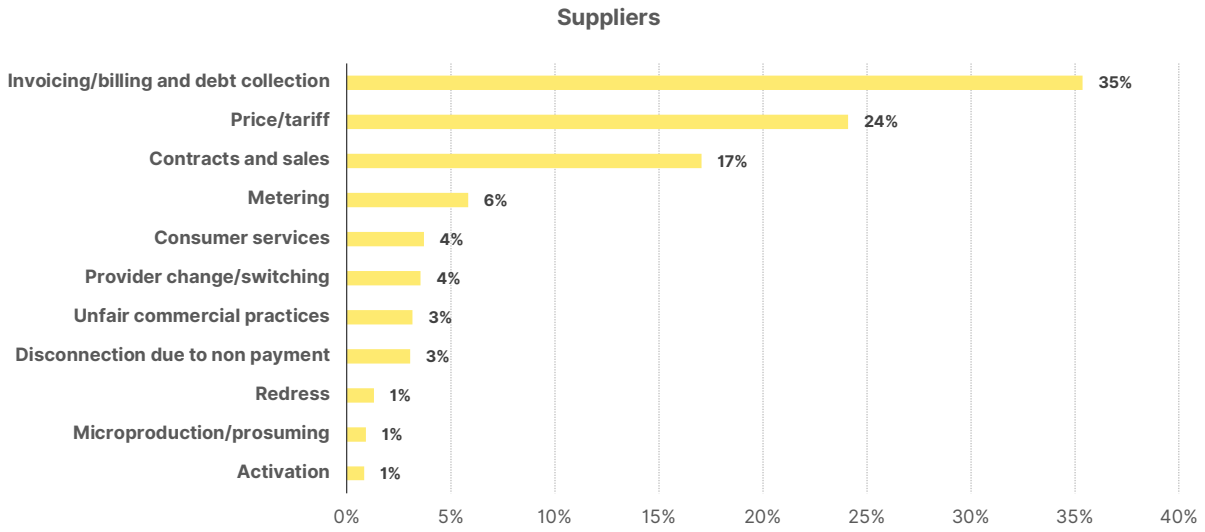


Source: CEER 2023

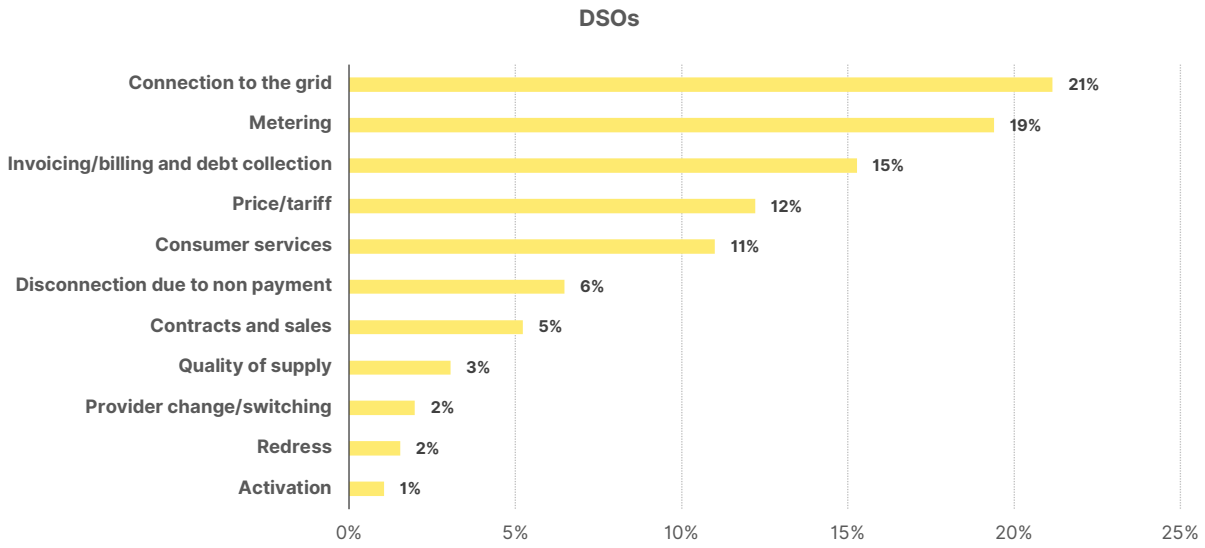
147 In ten Member States[96], the NRA, ADR, Ombudsman or some other public entity registers complaints separately for suppliers and DSOs in the gas market. The conclusions in this section are based on data from these countries.

148 In general, suppliers attract more complaints than DSOs. Figure 47 shows that problems with invoicing/billing and debt collection are the most common reason for complaining about gas suppliers (on average 35 % of all complaints). For gas distribution companies, connection to the network was the most common reason for lodging complaints (21 % of all complaints).

Figure 47: Average national shares of the types of final household consumer complaints in the gas market lodged directly with NRAs, ADR or ombudsmen in five EU Member States that register supplier and DSO complaints separately in 2021 (%)



96 Belgium, Bulgaria, Spain, Hungary, Ireland, Portugal, Poland, Sweden, Slovenia and Slovakia.



Source: CEER 2023

Note: The presentation of the types of consumer complaints does not take into account the population weighting and the number of complaints reported by each NRA. The resulting figures therefore refer to the average percentage of complaints in the different categories at Member State level.

149 Figure 47 shows the dominant complaint category for suppliers and DSOs. The content of the complaints varies between Member States. For example, in Spain[97], 32 % of complaints against gas suppliers concern metering, and in Hungary, 47 % of complaints against gas suppliers concern invoicing/billing and debt collection. For gas DSOs in Slovakia, 40 % of complaints concern consumer services.

3.5. Conclusions on energy consumption, prices, information and complaints

150 With regard to consumption, the report shows that in 2022 overall electricity and gas demand decreased across Europe. Where data was provided, it is apparent that energy demand in the household sector was not highly affected by the energy crisis, at least when looking at the 2022 demand. Although some decrease in demand has been registered for both electricity and gas, there are several countries that have either stayed at the same level or increased their energy demand levels in 2022. In contrast, industrial consumers appear to be more incentivised to adjust their demand in periods of higher prices. Most of the countries analysed either maintained or decreased their industrial demand in 2022.

151 In 2022, both electricity and gas prices increased to unprecedented levels . While on average electricity prices peaked in October 2022 and have generally been falling across the EU, they remain higher compared to pre-crisis levels. The gas market shows similar trends. Average gas prices have been on a downward trend after peaking around September 2022. As with electricity, gas prices remain higher than pre-crisis levels.

152 Such high prices may create difficulties for some consumers. Although annual billing is allowed under Directive 2019/944, it may not represent an adequate level of consumer service and information provision for consumers to act. As a minimum, suppliers should provide consumers with monthly consumption data (which could be estimated based on previous consumption data) to inform them of both their consumption and energy expenditure. This would give consumers the opportunity to choose how to manage their energy spending, for example by opting for accurate monthly billing, or by spreading their annual energy costs over twelve 'averaged' individual months with a yearly settlement bill. Regulators recall that frequent and accurate billing can potentially incentivise consumers to reduce their demand in response to real price signals. Meanwhile, averaged billing periods can be helpful to consumers who want to avoid receiving heftier bills during periods of high prices.

97 In Spain, the most common complaint reported directly to the NRA concerns 'switching', due to the specific powers of the CNMC in this area. In contrast, the most common reason for complaint reported by suppliers is 'metering', which is more representative of the market and is therefore the reason ultimately reported to the CEER.

153 For both electricity and gas, the composition of the final bill for household consumers varies greatly across countries. In 2022, in most Member States the energy component increased compared to the previous year in response to increases in wholesale energy prices. On average, more than half of the final price paid by end-consumers in 2022 covered the energy component of their annual gas bill, while the rest covered network costs, taxes, levies and other charges.

154 The estimated average mark-ups in the household electricity and gas retail markets vary widely across the EU, with negative mark-ups being common in 2022. While in general, negative mark-ups were previously limited to a small number of markets, their prevalence increased in both 2021 and 2022.

155 As in last year's monitoring report, the current report concludes that energy bills do not yet fully meet the criteria set out in Directive 2019/944. It is vital that consumers can find all required information on their bills in a clear and easy to understand manner. Suppliers should undertake a review of the bills issued to energy consumers in their markets without delay and take steps to ensure compliance with the criteria set out in Directive 2019/944.

156 As regards comparison tools, the report notes that in several Member States the available tools do not yet fully meet the requirements set out in Article 14 of Directive 2019/944. This being the case, ACER and CEER reiterate their recommendation that NRAs review the compliance of the independent, market-wide comparison tools available in their Member States.

157 The features of publicly operated comparison tools should also be reviewed to ensure that they fully comply with applicable requirements. Often, such incompleteness relates to the absence of dynamic price offers being embedded in the comparison. However, it is important to note that dynamic price contract offers are not yet available in all markets.

158 Where a Member State does not have a publicly available comparison tool and has not appointed a body to certify it, such a body should be appointed. The certification of the tool aims to raise consumers' trust and improve their engagement with the energy market.

159 Monitoring the use of comparison tools can help determine the level of activity among retail energy customers. Where a comparison tool has been awarded a trust mark, its operator should provide an annual report on the use of the tool and make recommendations to improve traffic. In line with last year's recommendation, ACER and CEER recommend that NRAs and Member States should ensure the promotion of the available public or trust-marked comparison tools and set targets for their use by consumers, so that consumers become more aware of the tools concerned and thus better informed about the alternative energy offers available to them.

160 Finally, this section examines energy complaint handling and monitoring. Many EU Member States do not yet meet the legal obligation for NRAs to monitor the complaints lodged by household customers. Consumer complaints are either not monitored at all or they are not measured in a consistent manner across the Member States. In some Member States, complaints are recorded in more detail, while in others they are grouped together for DSOs and suppliers or for the electricity and gas markets.

161 Grouping market actors or markets together can complicate the identification of the true source of a consumer complaint. This makes it difficult to identify consumer issues and can therefore affect the ability of NRAs to represent the interests of consumers and understand where retail markets can be improved. In light of this, ACER and NRAs will work together to explore commons ways to define, register, categorise and monitor complaints, taking account of the NRAs' duties as outlined in Directive 2019/944.

4. Consumer protection

162 The concepts of vulnerable consumers and energy poverty enable policy makers to define target groups for specific measures beyond the social welfare system. The European Union Energy Poverty Observatory has compiled an impressive collection of material, especially comparative cross-country data, on expressions of energy poverty. A number of questions need to be answered in order to make progress with modern consumer protection tools, both in the context of the energy crisis and the energy transition. They are as follows:

a. How are the different types of consumers defined and how is their prevalence measured in Europe today? Who is involved in supporting these populations and by what means? Will a selection be made from the entire range of Energy Poverty Observatory indicators used at national level to define energy poverty in the Member States of the European Union? And, once identified, how will these groups be further supported in order to ensure that they are able to meet their energy needs?

b. Is intervention in energy price setting a successful means to alleviate or mitigate energy poverty?

c. Do the measures ensure that the implementation of Articles 4 and 5 of Directive 2019/944 is not impeded?

4.1. Supplier(s) of last resort

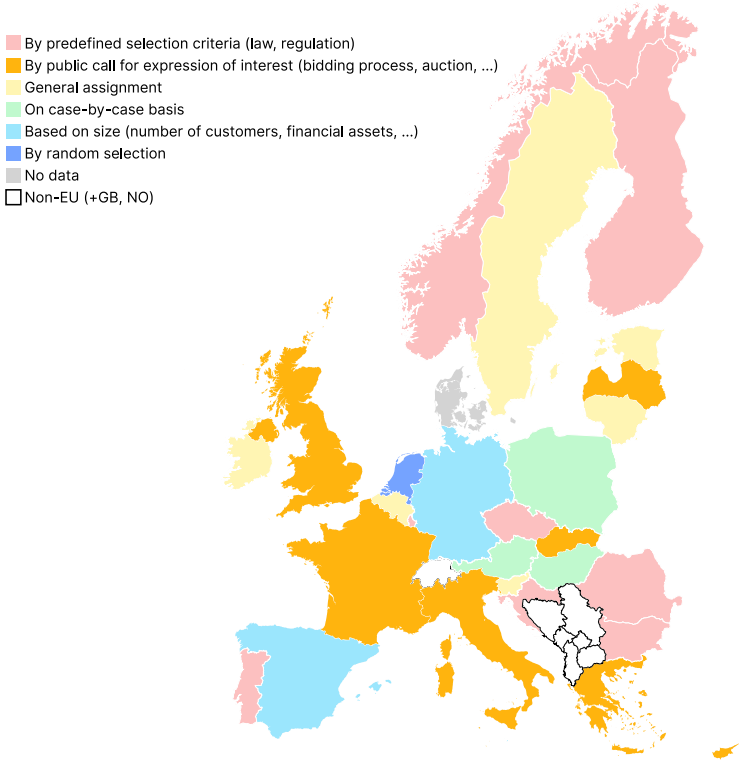
163 According to available CEER data, in 2022 the Supplier of Last Resort (SOLR) procedure was invoked 34 times in eleven different Member States for electricity and 22 times in eight Member States for gas, although SOLRs exist in all Member States except Bulgaria. In most Member States (25 for electricity, 22 for gas), SOLRs are a safeguard against supplier and/or DSO failure. In addition, there are two similar mechanisms subsumed under SOLRs. The first one, known as the 'default supply mechanism', protects inactive consumers in twelve Member States (five for gas). The second one, known as the 'individual or basic supply mechanism', protects consumers with payment difficulties in five Member States (one for gas). This means that some Member States have provisions in place for several SOLRs. In Finland, the SOLRs ensure that consumers can find an electricity or gas supplier regardless of where they live, their financial situation or other similar considerations.

164 The available data on the share of final household consumers supplied by SOLRs varies considerably between Member States, depending on the different functions performed by the SOLR. Some NRAs report very low shares of electricity SOLRs, such as Austria (0.2 %), Czechia (0.1 %), France (0.06 %), Slovenia (0.01 %) and Slovakia (0.06 %), and even lower shares for gas. In Austria, for example, 0.2 % of electricity household consumers are supplied by a SOLR on an individual default supply basis, while figures for SOLR supply in the event of business failure are not available due to their fast-changing nature (supplier or product) switching takes place shortly after SOLR transfer). In other Member States, SOLR figures are as high as 10 % or more. This is the case for the electricity SOLR in Portugal (15.2 %), Estonia (20.5 %), Spain (29.7 %) and Ireland (54.0 %). The percentages are similar high for gas. The only exception is Estonia, where only 1 % of households are supplied with gas.

165 As shown in Figure 48, SOLRs are designated in very different ways in the different Member States. While seven NRAs assign this role, another seven NRAs monitor the process of SOLR designation. In twelve Member States, where SOLRs are determined by other government bodies or are designated directly by law, NRAs do not have any role. Figure 48 shows the different ways in which SOLRs are designated. In five Member States, the designated SOLR can refuse to take on this function. NRAs have not reported any significant problems with SOLR designation in 2022. The figures below are for the electricity sector, but the reported procedures for the gas sector are similar[98].

98 In Slovakia, in September 2022, the NRA introduced a price cap for SOLR in order to reduce the impact on final customers in SOLR.

Figure 48: SOLR designation procedures in the EU Member States, EEA Member Norway and Great Britain –in 2022



Assignment of SOLR procedure	Number of MS	
	E	G
General assignment	6	3
On case-by-case basis	3	3
By random selection	1	1
Based on size (number of customer, financial assets,...)	2	2
By predefined selection criteria (law, regulation)	8	6
By public call for expression of interest (bidding process, auction, ...)	7	7

Source: CEER 2023

166 In eleven countries[99] (ten for gas[100]) SOLRs set their electricity prices themselves. Often, but not always, this process is subject to control by the government (on the basis of specific guidelines or the legal framework), market reference prices or similar. In ten countries[101] (eight for gas[102]), prices are set by the NRA. In most cases (eighteen for electricity[103], fifteen for gas[104]), SOLR prices are generally higher than those of other suppliers. In five Member States[105] (three for gas[106]) the SOLR prices are more or less the same. In other Member States, SOLR prices depend on the case, especially where SOLRs are designated on a case-by-case basis. Importantly, consumers can switch to a different supplier either immediately (fourteen countries for electricity[107], twelve for gas[108]) or immediately after the SOLR switching process itself is complete (twelve for electricity[109], ten for gas[110]).

99 Austria, Cyprus, Germany, France, Great Britain, Ireland, Lithuania, Netherlands, Romania, Slovenia and Finland.

100 Austria, Germany, Estonia, France, Great Britain, Ireland, Netherlands, Romania, Sweden and Slovenia.

101 Bulgaria, Cyprus, Czech Republic, France, Great Britain, Croatia, Italy, Luxembourg, Portugal and Slovakia.

102 Czech Republic, France, Greece, Croatia, Hungary, Luxembourg, Portugal, Slovakia.

103 Austria, Belgium, Bulgaria, Germany, Estonia, France, Great Britain, Croatia, Ireland, Lithuania, Luxembourg, Latvia, Norway, Poland, Portugal, Sweden, Slovakia and Slovenia.

104 Austria, Germany, France, Greece, Croatia, Ireland, Italy, Latvia, Luxembourg, Lithuania, Poland, Romania, Sweden, Slovenia and Slovakia.

105 Cyprus, Denmark, Hungary, Italy and Romania.

106 Denmark, Estonia and Hungary.

107 Belgium, Bulgaria, Cyprus, Germany, Estonia, Spain, France, Greece, Lithuania, Luxembourg, Norway, Portugal, Sweden and Slovenia.

108 Czech Republic, Germany, Estonia, Spain, France, Greece, Croatia, Luxembourg, Portugal, Romania, Sweden and Slovenia.

109 Austria, Belgium, Czech Republic, Great Britain, Croatia, Hungary, Ireland, Netherlands, Poland, Romania, Sweden and Slovakia.

110 Austria, Czech Republic, Spain, Great Britain, Hungary, Ireland, Netherlands, Poland, Sweden and Slovakia.

Case Study: Process and timeline for the electricity SOLR in Spain in 2022

When a supplier is suspended for failing to meet its supplier requirements obligations, a notice is published in Spain's Official State Gazette and DSOs inform the designated SOLR of the transfer of the affected customers within eight days. The SOLR retail price is indexed to the wholesale price plus a margin (known as the PVPC). As a result, SOLR offers are sometimes higher and sometimes lower for consumers, depending on the timing of the SOLR event and the market offers of alternative suppliers.

The customers affected by the exit/failure of their supplier will be informed by both the exiting/failing supplier and the designated SOLR, with the latter also providing information on the schedule for the SOLR transfer. In the meantime, the affected customers may switch to a supplier of their choice. After the transfer, the affected customers will still be able to switch to another supplier without any penalty.

In 2022, the SOLR procedure was invoked nine times in Spain, with a total of 1 200 affected customers.

Energy Community (EnC) Contracting Parties

167 A supplier of last resort for electricity has been designated in all EnC Contracting Parties[111]. For gas, a supplier of last resort exists in all EnC Contracting Parties, with the exception of Georgia. SOLR prices are approved or designated by NRAs in all EnC Contracting Parties, with the exception of North Macedonia and Serbia, where their prices depend on the outcome of tenders organised by the government. In Montenegro and Ukraine, the NRAs approve a methodology for the calculation SOLR prices. The NRAs of Bosnia and Herzegovina (Federation BIH entity), Georgia, Kosovo* and Ukraine reported higher SOLR prices compared to non-SOLR prices[112].

4.2. Vulnerable consumers

168 Directive 944/2019 (and, very similarly Directive 73/2009 for gas) requires Member States to define the concept of vulnerable customers, which may refer to energy poverty and, inter alia, to the prohibition of disconnection of electricity to such customers at critical times. Nineteen NRAs[113] (seventeen for gas[114]) report that an explicit definition of the concept of vulnerable consumers exists for the electricity market. However, not all NRAs have provided detailed information on the wording of such definitions).

Table 8: Explicit definitions of the concept of vulnerable consumers in EU MSs and Great Britain (2022)

Country	Explicit definition of the concept of vulnerable consumers
BE	Any end customer who can prove that (s)he or anyone living under the same roof benefits from a decision granting an allowance.
BG	No definition provided
CY	No definition provided
EE	No definition provided
ES	Vulnerable consumers are individuals in their usual residence who, having a power capacity of 10 kW or less, meet a series of socio-economic criteria: i) pure income criteria, ii) being a large family, iii) being a pensioner in the Social Security System due to retirement or permanent disability receiving a minimum amount, or iv) income criteria in combination with certain social conditions of vulnerability. In addition, a higher social voucher is established for highly vulnerable consumers, who are defined by reference to lower income thresholds.

111 In Serbia, households and small customers turn to a guaranteed supplier for electricity and to a public supplier for gas, while other consumers are entitled to a reserve supplier. All these suppliers practically have the role of SOLR.

112 In Ukraine, the higher SOLR price applies for electricity, but not for gas.

113 Belgium, Cyprus, Spain, France, Great Britain, Greece, Croatia, Hungary, Ireland, Italy, Lithuania, Latvia, Malta, Netherlands, Poland, Portugal, Romania, Slovakia and Slovenia.

114 Bulgaria, Estonia, Spain, France, Great Britain, Greece, Croatia, Hungary, Ireland, Italy, Lithuania, Netherlands, Poland, Portugal, Romania, Slovakia and Slovenia.

Country	Explicit definition of the concept of vulnerable consumers
FR	No definition provided
GB	Vulnerability refers to the personal circumstances and characteristics of each household customer combined with aspects of the market to create situations where he or she is: (a) significantly less able than a typical household customer to protect or represent his or her interests; and/or (b) significantly more likely than a typical household customer to suffer detriment or that detriment is likely to be more substantial.
GR	Vulnerable consumers are the consumers that can be classified in any of the below categories: (a) financially weak household customers suffering from energy poverty; (b) customers or their wives or persons of whom they have care and control under the law and who are living with them and depend to a large extent on a constant and uninterrupted energy supply. This class includes customers who use mechanical aids, especially persons who need a constant power supply in order to operate appliances to support or monitor vital functions, such as breathing apparatus or heart support machinery, dialysis machines and any similar appliances; (c) elderly customers at least seventy (70) years old, provided that they are not living with another person who is under that age; (d) customers with serious health problems, especially persons with a serious physical or mental disability or who are mentally retarded or have serious audio-visual or mobility problems or multiple disabilities or a chronic illness, who are therefore unable to manage or negotiate their contract with the supplier; (e) customers in remote areas, especially non-interconnected islands, who are entitled to special services both in terms of price and in terms of quality and security of supply and transparency of contractual terms and conditions compared with other customers.
HR	Vulnerable customers are end-customers from the household category who are entitled to gas supply within the framework of public service and choose or use this method of supply automatically and have obtained a decision from the competent social welfare body on the status of a vulnerable customer.
HU	Vulnerable customers are household customers who require special attention in terms of supplying them with electricity and/or natural gas due to their social disposition (having financial difficulties and receive social allowances, for example persons in disadvantageous position on the labour market, person receiving housing allowance, person receiving caring support, persons receiving childcare support, persons receiving housing aid, persons needing support for being a foster parent), or some other particular reason (healthcare reasons, for example persons living with disabilities).
IE	No definition provided
IT	Vulnerable consumers are household electricity and/or gas consumers satisfying at least one of the following criteria: are economically disadvantaged (therefore are entitled for a discount, “social bonus”, applied to the energy expenses), have disabilities, are above 75 years old, live in islands with no connection to the national grid; live in emergency housing solutions (e.g., after an earthquake). An addition criterion for electricity consumers is the critical dependency on electricity powered equipment for health conditions.
LT	Vulnerable electricity consumer: a household consumer who himself and/or the persons living with him receive and/or have the right to receive monetary social support according to the Law of the Republic of Lithuania on Monetary Social Support for Indigent Residents and who is subject to this Law and has the right to use the additional guarantees established for vulnerable users in accordance with the procedure established by its implementing legislation.
LV	No definition provided
MT	No definition provided
NL	A vulnerable consumer is an energy consumer for whom termination of transport or supply of electricity or gas would result in serious health risks for the energy consumer or household members of that energy consumer.
PL	A vulnerable electricity consumer is a person who has been granted supplement (a special housing allowance for low-income consumers, i.e. social assistance benefits) and who is a party to a comprehensive contract or a contract for the sale of electricity and resides in the place where electricity is delivered to.
PT	Vulnerable customers are defined as beneficiaries of the solidarity supplement for the elderly, social insertion income, unemployment benefits, family allowance, social disability pension of the special protection regime for disability or the complement of the social benefit for inclusion, and social pension of old age (minor differences exist between to the energy carriers)[115].
RO	A vulnerable consumer is represented by a single person/family who, for reasons of health, age, insufficient income, or isolation from energy sources, require social protection measures and additional services to ensure at least their minimum energy needs.

115 Vulnerable customers are entitled to a social tariff. For electricity, the social tariff is also applicable to economically vulnerable end-customers with an annual income lower than a threshold level even if they do not benefit from any social benefit. It is also required that the consumers who may be entitled to the social tariff are the holders of an electricity contract up to a power of 6.9 kVA. For gas, it is also required that the consumers who may be entitled to the social tariff have an annual consumption below 500m3. See also Table 4 and Table 6.

Country	Explicit definition of the concept of vulnerable consumers
SI	Vulnerable consumers are household customers, who cannot provide themselves with another energy source for household use for equal or lower costs for the most urgent household use because of their financial situation, costs for energy in relation to their income, other social circumstances and living conditions.
SK	Vulnerable consumers are: 1. electricity consumer in a household, 2. gas consumer in a household, 3. non-household electricity consumer with a total annual electricity consumption for the previous year of no more than 30,000 kWh, 4. non-household gas customer with total annual gas consumption for the previous year of no more than 100,000 kWh, 5. non-household electricity consumer except for the consumer of electricity according to point 1., who consumes electricity for the operation of a social service facility registered in the register of social services, for the operation of a facility for the social protection of children and social guardianship, for the operation of an apartment building with rental apartments owned by the municipality or higher territorial unit, which are intended for social housing according to a special regulation, or for the operation of an apartment building with rental apartments as part of state-supported rental housing according to a special regulation, 6. non-household gas customer, except for a gas consumer according to point 2, who purchases gas for the operation of a social service facility entered in the register of social services, for the operation of a facility for the social protection of children and social guardianship, for the operation of an apartment building with rental apartments owned by the municipality or a higher territorial unit, which are intended for social housing according to a special regulation, or for the operation of an apartment building with rental apartments as part of state-supported rental housing according to a special regulation, 7. group of gas consumers, which are the owners of apartments and non-residential spaces in an apartment building, taking gas for the production of heat and heating domestic hot water, legally represented by a natural person or a legal entity administering a common heat source supplying the apartment building with heat and hot water, 8. group of electricity consumer, which are the owners of apartments and non-residential premises in an apartment building, purchasing electricity for the production of heat and heating domestic hot water, legally represented by a natural person or a legal entity administering a common heat source supplying the apartment building with heat and hot domestic water.

Source: CEER 2023

169 Eight NRAs[116] (five for gas[117]) report implicit definitions of vulnerable consumers which, in most cases, are derived from existing (social) protection mechanisms and the eligibility criteria stipulated in the respective legal acts. Three Member States (five for gas) have not yet adopted a definition of vulnerable consumers according to the respective NRAs (Denmark, Finland, and Luxembourg plus Latvia and Malta for gas).

170 The definitions, both explicit or implicit, most often contain references to the income level of consumers (nineteen countries[118]) and critical dependency on electricity for health reasons (twelve countries[119]). The definitions of vulnerable consumers rarely feature high energy expenditure (four Member States[120]) or (low) energy efficiency scores of homes (three Member States[121]). Some of the other criteria mentioned are age, disability and/or location (remoteness). Arguably, the definition of vulnerabilities is important in all energy sectors, especially for electricity, because of its non-replaceable nature. The definitions presented here are therefore mostly applicable to electricity, although in most Member States the concept of vulnerable consumers is sector-independent.

171 As shown in Figure 49, Member States rely on various protection measures to support vulnerable consumers in the electricity and gas markets. The most common safeguard in Europe are the restrictions on disconnection due to non-payment.

116 Austria, Bulgaria, Czech Republic, Germany, Estonia, Great Britain, Norway and Sweden.

117 Austria, Czech Republic, Germany, Great Britain and Sweden.

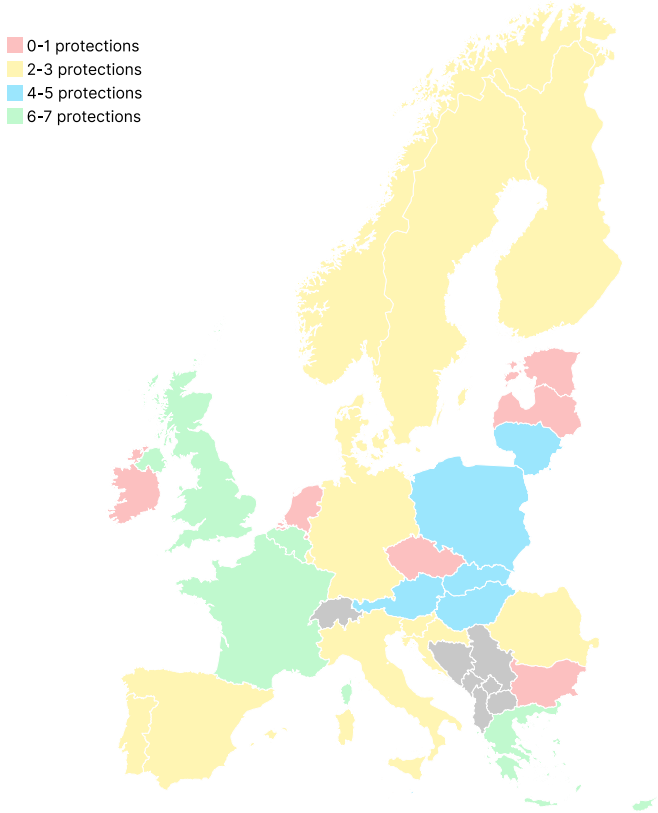
118 Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Germany, Spain, France, Great Britain, Greece, Hungary, Italy, Lithuania, Latvia, Malta, Poland, Portugal, Romania and Slovenia.

119 Belgium, Cyprus, France, Great Britain, Greece, Hungary, Ireland, Italy, Malta, Netherlands, Romania and Slovenia.

120 Cyprus, Great Britain, Malta and Slovakia.

121 Cyprus, Great Britain and Hungary.

Figure 49: Safeguards to protect vulnerable consumers in EU Member States, EEA Member Norway and Great Britain (2022)



Protections	Number of MS	
	E	G
Restrictions to disconnection in case of non-payment	23	14
General price regulation	7	4
Special energy prices for vulnerable consumers only (Social Tariffs)	6	3
Free basic supply with energy	1	0
Exemption from some components of final energy costs (e.g. energy price, network tariffs, taxes, levies…)	7	4
Earmarked social benefits to cover (unpaid) energy expenses	12	7
Free energy saving advice to vulnerable consumers	7	5
Replacement of inefficient basic appliances at no cost for vulnerable consumers	2	1
Financial contribution for replacement of inefficient appliances for vulnerable consumers	5	5
Right to deferred payment	10	5
Other	13	12

Source: CEER 2023

172 In terms of energy consumption, Member States rely on such safeguards to varying degrees. Some NRAs, notably those in Belgium, Cyprus, France, Greece and Great Britain, report six or more different types of safeguards (out of eleven listed in NRA responses), which provide financial or other assistance to help customers cover their electricity and gas needs. In eighteen Member States, only three or fewer safeguards are available to energy consumers, indicating a lower coverage of energy-specific safeguards. It should be noted, however, that other social security schemes, in particular general welfare, may provide equally good or even more comprehensive social support to meet energy needs. In Italy, for example, the NRA implements a system of automatic discount (known as a 'social bonus') applied to the energy expenses for entitled persons with low income (around 12 % of household consumers).

173 In all but two Member States (Czechia and Malta) electricity consumers must receive a warning before physical disconnection from the grid can take place. This is usually in the form of a payment reminder or notification. Depending on the provisions of national law, the minimum time between the first reminder and disconnection is 24 days, ranging from 10 days in four Member States (Bulgaria, Poland, Sweden

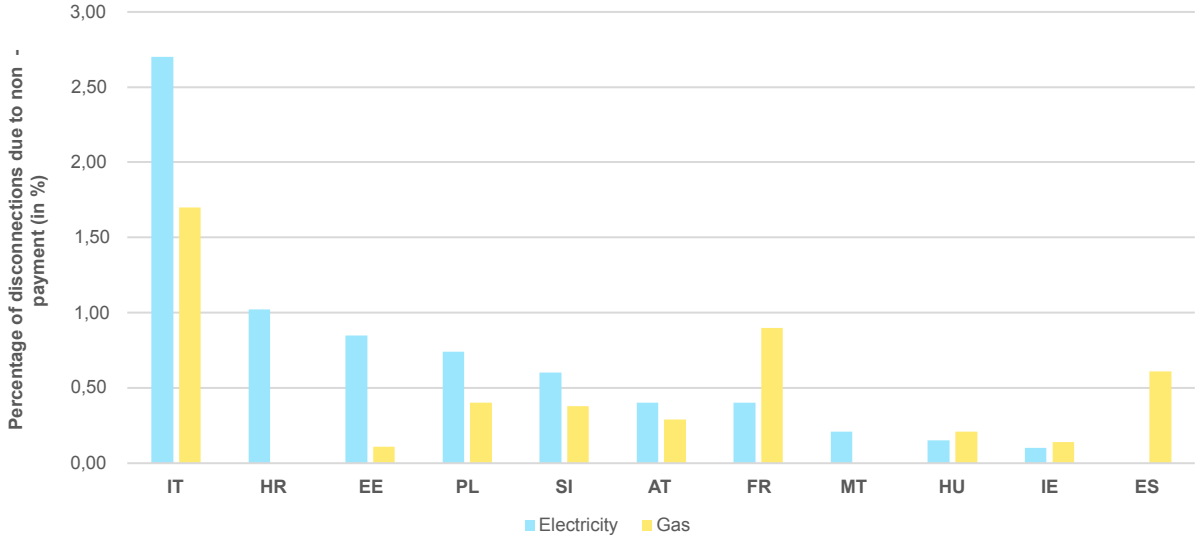
and Slovenia) to 45 days in one Member State (Luxembourg). In sixteen Member States[122], EEA Member Norway and Great Britain, consumers must receive additional warning letters, including a final warning on imminent disconnection 5 to 30 days before disconnection. In practice, 10-80 days pass between the first payment reminder and disconnection.

174 In the case of gas, warning letters prior to disconnection are similar to those for electricity. In all but two Member States (Bulgaria and Czechia), gas consumers receive a first notification 5 to 44 days ahead of disconnection (23 days on average) and, in eighteen Member States[123] and Great Britain, also a final warning closer to the date of disconnection (13 days on average).

175 Nineteen NRAs[124] report that, in the case of a pending disconnection, information is provided to electricity consumers sufficiently in advance on alternatives, such as available prepayment schemes, energy audits, alternative payment plans or debt management advice. In the case of gas, eighteen NRAs report similar arrangements[125].

176 Actual disconnection rates in EU hardly exceed 1 % of final household consumers as shown in Figure 50. There is no indication that disconnection rates increased during the energy crisis in 2022. However, very few NRA report figures on disconnections despite the explicit obligation to do so stipulated in Directives 944/2019 and 73/2009.

Figure 50: Disconnection rates due to non-payment in 2022 (%)



Source: CEER 2023

177 As in previous years, the use of prepayment metering to better control electricity or gas consumption is limited. Electricity prepayment meters constitute a larger share of all metering devices only in Great Britain and Ireland (14.5 % in Great Britain and 12 % in Ireland).

4.3. Energy poverty

178 Eleven NRAs[126] reported that they had energy poverty definitions in place in 2022. Importantly, the same definitions are valid for both the electricity and gas sectors (with the exception of Cyprus where there is no gas in the residential sector). Table 9 provides details on national definitions of energy poverty as reported by NRAs.

122 Bulgaria, Germany, Estonia, Spain, France, Hungary, Ireland, Lithuania, Luxembourg, Latvia, Poland, Portugal, Romania, Sweden, Slovenia and Slovakia.

123 Bulgaria, Germany, Denmark, Estonia, Spain, France, Greece, Croatia, Hungary, Ireland, Lithuania, Luxembourg, Latvia, Poland, Portugal, Romania, Sweden and Slovenia.

124 Austria, Belgium, Germany, Denmark, Spain, Finland, Great Britain, Greece, Croatia, Hungary, Ireland, Latvia, Netherlands, Romania, Portugal, Romania, Sweden, Slovenia and Slovakia.

125 Austria, Bulgaria, Germany, Denmark, Spain, Finland, Great Britain, Greece, Croatia, Hungary, Ireland, Latvia, Netherlands, Portugal, Romania, Sweden, Slovenia and Slovakia.

126 Cyprus, Spain, France, Great Britain, Greece, Ireland, Latvia, Malta, Poland, Romania and Slovenia.

Table 9: Definitions of energy poverty in the EU Member States and Great Britain (2022)

MS	Definition of energy poverty
CY	No clear information provided
ES	Energy poverty is the situation where a household customer cannot satisfy the basic energy supply because of insufficient income level and that, in its situation, it can be worse when having an energy inefficient living place.
FR	Energy poverty definition related to housing right: consumers who are not able to pay their rent, insurance, energy/water/telephone bills
GB	England: a household is considered to be fuel (energy) poor if •they have required fuel costs that are above average (the national median level), were they to spend that amount, they would be left with a residual income below the official poverty line (so called low income – high-cost indicator) Scotland: a household is in fuel poverty if, to maintain a satisfactory heating regime, it would be required to spend more than 10 % of its income on all household fuel use. Wales: A household is in fuel poverty if it needs to spend more than 10 % of its net income on all household fuel use to maintain a satisfactory heating regime.
GR	Energy poverty is the situation of consumers who find it difficult, due to their low income, as declared on their tax returns, in conjunction with their job status, family status and state of health, to meet the cost of reasonable electricity or natural gas requirements, as the cost accounts for a considerable proportion of their disposable income.
IE	Energy poor is any household spending more than 10% of their disposable income on energy.
LV	The inability of a household to maintain a corresponding temperature in a house or to use the services provided by energy supply merchants, or to settle accounts for such services due to low energy efficiency or because the payment for such services forms a high proportion of the household income.
MT	No clear information provided
PL	Energy poverty means a situation in which a household (run by one person or by several persons together) where no economic activity is carried out, cannot ensure a sufficient heat, cooling and electricity to power appliances and lighting, and collectively meets the following conditions: low income; high energy expenses; a dwelling or building with low energy efficiency.
RO	Energy poverty represents the impossibility of the vulnerable consumer to cover the minimum energy needs.
SI	No clear information provided
SK	The Energy Regulation Act includes a short description of the situation of energy poverty, the conditions an energy poor household must meet, and a definition. A law on Energy Poverty is pending.

Source: CEER 2023

179 Many actors are involved in national energy poverty discourses and actions: national governments (all member States), sub-national/federal authorities (twelve Member States[127]), NRAs (eleven[128]), NGOs (eight[129]), ADR bodies (seven[130]), energy companies (six[131]) and others, including academia. Where NRAs are involved, their role in addressing energy poverty is limited. In most cases, NRAs provide expertise and consulting services. Less frequently, they perform functions related to the compliance of energy companies with energy poverty legislation and the monitoring and publication of statistical data based on energy poverty indicators. The NRAs without such functions note that in their Member States the issue of energy poverty is not specific to the energy sector, i.e. it is a general social security issue.

180 High energy expenditure (ten countries[132]) and low income (nine countries[133]) have greater relevance than poor energy efficiency (four Member States[134]) in the assessment of the number of households in energy poverty. Member States use different indicators to measure energy poverty in line with the

127 Austria, Belgium, Germany, Estonia, Spain, Croatia, Italy, Luxembourg, Latvia, Netherlands, Poland and Sweden.

128 Austria, Belgium, Bulgaria, Cyprus, Germany, Great Britain, Greece, Ireland, Italy, Slovenia and Slovakia.

129 Austria, Belgium, Germany, Spain, Croatia, Ireland, Luxembourg and Netherlands.

130 Austria, Belgium, Germany, France, Greece, Luxembourg and Slovakia.

131 Austria, Belgium, Cyprus, Germany, Italy, Slovenia.

132 Spain, France, Great Britain, Greece, Ireland, Latvia, Malta, Poland, Romania, Slovenia.

133 Cyprus, Spain, Great Britain, Greece, Latvia, Malta, Poland, Romania and Slovenia.

134 Spain, Latvia, Malta and Slovenia.

approach proposed by the European Commission[135]. The most common indicators, which compare income and energy expenses, are used in twelve countries[136]. Eight[137] countries rely on indirect indicators and five Member States[138] use indicators based on self-assessment. Latvia is the only country that uses indicators based on direct measurement of energy poverty. Only four Member States (Austria, France, Greece and Spain) rely on three or more different types of indicators.

181 In 2022, the share of energy-poor households varied significantly in the different Members States, although data is not widely available. In Spain, the reported levels of energy poverty are the lowest, with approximately 5 % of households living in energy poverty. In Ireland, almost one in three households (29 %) are considered energy poor according to NRA data. Slovenia (7.2 % energy poor households), France and Great Britain (13 %) are in between.

Energy Community (EnC) Contracting Parties

182 Explicit definitions of vulnerable consumers have been introduced in most EnC Contracting Parties, with the exception of Bosnia and Herzegovina (for electricity). Despite the variety of national approaches to defining the criteria for recognition as a vulnerable consumer, the common criteria are income levels and critical dependence on electricity-powered equipment for health reasons. The most common measures for the protection of vulnerable consumers across the EnC Contracting Parties are restrictions on disconnection due to non-payment and social benefits to cover energy expenses.

183 The only EnC Contracting Party that had a definition of energy poverty in place before 2022 is Moldova, where energy poverty is described as 'a situation characterized by the lack of consumer access to modern energy sources and technologies and/or by the lower purchasing power of consumers in relation to energy resources, in particular fuels for cooking, electricity and/or heat, and/or the lack of heat comfort in the home or building'. Nevertheless, most EnC Contracting Parties engaged in drafting NECPs which, in line with Regulation 2018/1999, have to be submitted to the EnC Secretariat by June 2023. The NECPs of Albania and North Macedonia, which have already been adopted, do not include definitions and assessments of energy poverty levels but indicate these as objectives of the respective plans.

4.4. Conclusions on consumer protection

184 Available data on the share of final household consumers supplied by SOLRs varies strongly across Member States depending on the different functions that SOLRs perform in each country. There are significant differences in the procedures for SOLR designation in the different Member States. It should be noted that the obligation for Member States to establish a SOLR, so that no consumer is left without electricity, is currently under discussion in the context of the European Commission's Electricity Market Design (EMD) proposal.

185 As regards the treatment of energy-poor households and vulnerable consumers, several Member States have a clear definition of energy-poor and vulnerable customers. In other Member States, the (lack of a) definition needs to be improved. This also suggests that in some Member States there is no clear view on which consumers are vulnerable and experiencing energy poverty. Since the concepts of vulnerable consumers and energy poverty enable policy makers to define groups to be targeted by specific measures beyond their social welfare system, clear definitions need to be in place and the share of these energy consumers should be tracked and closely monitored.

186 Reported data shows that the definition of these vulnerable groups often refers to the income level of the consumer and critical dependence on electricity for health reasons. In considering how to best target these groups of consumers, Member States and the relevant public bodies should take into account, in addition to income, household expenditure on electricity and gas, as these are the most direct parameters indicating the impact of the energy costs on the household's financial situation.

135 https://energy.ec.europa.eu/system/files/2020-10/swd_on_the_recommendation_on_energy_poverty_swd2020960_0.pdf; last accessed 3 May 2023.

136 Austria, Belgium, Spain, France, Great Britain, Greece, Latvia, Malta, Poland, Romania, Slovakia and Slovenia.

137 Austria, Spain, France, Great Britain, Greece, Luxembourg, Malta and Slovenia.

138 Austria, Belgium, Spain, France and Greece.

5. Retail market structure

187 This section examines the main developments in market structure in the electricity and gas sectors. This is one of the key elements affecting the level of competition and the overall functioning of retail energy markets.

5.1. Supplier exits and offers

188 The heightened risk environment caused by the energy crisis triggered an increase in the number of retail suppliers exiting the retail energy market in 2021[139].

189 As shown in Table 10, the number of suppliers exiting the retail electricity market in 2022 varied between countries and was relatively high in Czechia, Germany (for households), Estonia, Spain and Norway. In the residential market, eight exits were reported in 2020 due to financial problems[140] of the affected utilities. This number increased to 62 in 2021 and decreased again to 23 in 2022 (13 % of the total exits), many of them in Spain (10)[141]. The number of exits peaked in 2021 when the energy crisis started. Overall, the figures are lower in the non-residential market where similar trends can be observed.

190 Despite the energy crisis, new suppliers entered the retail electricity market in 2022. With the exception of Bulgaria (non-household segment) and Czechia (household segment), it is striking that the number of new suppliers entering the market was relatively high in countries where many suppliers exiting the market.

Table 10: Number of electricity supplier entrants and exits in 2022 (household and non-household segments)

	N° new supplier entrants		N° suppliers exits		N° suppliers exits due to financial problems	
	HH	nHH	HH	nHH	HH	nHH
AT	2	3	7	6	1	1
BE	2	6	5	5	-	-
BG	0	21	0	-	-	-
CY	0	3	0	0	0	0
CZ	0	0	31	0	-	-
DE	32	-	13	-	-	-
EE	0	0	25	47	0	0
ES	34	31	49	51	10	10
FI	0	0	2	2	2	2
FR	1	2	5	1	2	0
GB	0	1	3	3	2	2
GR	0	0	1	1	0	0
HR	0	0	1	0	0	0
HU	0	5	0	3	0	0

139 ACER / CEER, Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2021, Energy Retail and Consumer Protection Volume, October 2022.

140 Examples of financial problems: company declaring bankruptcy, company cancelling contracts and exiting the market to avoid bankruptcy, company activity licenses being revoked due to inability to keep market guarantees or due to non-payments, etc.

141 Source: CEER 2023. Note that the number might deviate from the numbers presented in last year's Retail MMR.

	Nº new supplier entrants		Nº suppliers exits		Nº suppliers exits due to financial problems	
	HH	nHH	HH	nHH	HH	nHH
IE	0	0	3	3	0	2
LT	0	6	1	2	1	2
LU	0	0	0	0	0	0
LV	2	2	2	2	0	0
MT	0	0	0	0	0	0
NL	5	5	1	1	0	0
NO	14	22	14	14	0	0
PL	4	6	8	19	-	-
PT	0	0	2	2	1	1
SE	-	-	1	1	0	-
SI	0	0	6	6	1	1
SK	0	-	3	3	3	3

Source: CEER 2023. Note: No data received from or reported by Belgium, Denmark, Italy, Romania

191 As shown in Table 11, the number of suppliers exiting the gas retail market in 2022 was relatively high in Estonia, France[142], Germany and Poland (for households), Hungary (for the non-household sector) and Spain (both the household and non-household sectors). For households, respectively the non-household sector, only 20 % (15) and 14 % (10) of the exits were reported to be due to financial problems for the energy supplier. Compared to previous years, and similar to the electricity market, the highest number of supplier failures that caused these exits was recorded in 2021.

192 More specifically, in 2022 new suppliers entered the retail gas market in Bulgaria, Lithuania (both non-household), Germany (household) and Spain (household and non-household). In Germany and Spain this coincided with a high number of suppliers exiting the market.

Table 11: Number of gas supplier entrants and exits in 2022 (households and non-household sector)

	Nº new supplier entrants		Nº suppliers exits		Nº suppliers exits due to financial problems	
	HH	nHH	HH	nHH	HH	nHH
	HH	nHH	HH	nHH	HH	nHH
AT	0	1	6	5	0	0
BE	0	0	5	4	-	-
BG	0	10	0	0	0	0
CZ	0	0	0	2	-	-
DE	12	-	10	-	-	-
EE	1	1	12	20	0	0
ES	11	10	14	3	3	0

142 It should be noted that suppliers exiting the market (households and the non-household sector) represent only 0.5 % of sites.

	Nº new supplier entrants		Nº suppliers exits		Nº suppliers exits due to financial problems	
	HH	nHH	HH	nHH	HH	nHH
FI	0	0	0	0	0	0
FR	0	0	9	9	1	1
GB	0	1	3	4	2	3
GR	1	1	0	0	0	0
HR	2	2	3	4	3	3
HU	0	3	0	7	0	0
IE	0	0	2	2	2	2
LT	0	14	0	0	0	0
LU	0	0	0	0	0	0
LV	1	1	1	2	0	0
NL	5	5	1	1	0	0
PL	0	2	7	3	-	-
PT	0	0	1	1	1	1
SE	0	0	0	0	0	0
SI	0	0	3	4	0	0
SK	0	-	3	3	3	-

Source: CEER 2023. Note: No data received from or reported by Belgium, Cyprus, Denmark, Malta, Norway and Romania

193 Despite the energy crisis, the electricity and gas markets in the EnC Contracting Parties did not experience many supplier exits. The exception is Ukraine, where 96 electricity suppliers left the retail market, mainly due to the Russian invasion. There is no precise information on the number of gas suppliers leaving the market, but it can be assumed that the situation is similar. Among the other EnC contracting parties, Moldova and Serbia had the highest number of electricity suppliers leaving the market – five and four, respectively. In the gas markets, there were either no exits or just one exit in 2022.

CASE STUDY: SUPPLIER RESPONSE TO ENERGY CRISIS

1 For most energy suppliers, the year 2022 was hardly 'business as usual'. Faced with low liquidity and high energy prices in wholesale markets, high collateral requirements and little flexibility in providing collateral, and with customers (and politicians) looking for affordable answers to price increases, energy suppliers had no choice but to adapt their regular business.

2 Energy companies responded differently in the different Member States. This is due to the different market conditions and ways in which governments intervened in the markets. In general, while customers were mainly looking for fixed price contracts, there was an increase in variable price offers and a decrease in fixed-price contract offers.

3 From a supplier perspective, a key lesson learned from the energy crisis was to keep open lines of communication with all customers. While some energy companies' customer services struggled to cope with the unexpectedly high volume of contacts, others found that engaging with their customers created opportunities to help consumers through the energy crisis, to the benefit of both the customer and the supplier.

4 In particular, suppliers who had not been able to fully hedge their position on the basis of fixed price

contracts alone, and who therefore remained exposed to some degree to wholesale market prices, saw the benefit of working with consumers to reduce their consumption. Some energy suppliers launched energy saving campaigns. For example, in the Netherlands and France, a number of suppliers started using push notifications in apps to alert consumers of their consumption. In Italy, Czechia and France, for example, some suppliers offered bonuses and rebates to customers who could demonstrate that they had reduced their consumption compared to the previous year (e.g. by showing a photo of their energy meter) or compared to their forecast consumption.

5 During the energy crisis, energy suppliers were more frequently confronted with energy customers who were unable to pay their final energy bill. Those who were able to engage with their customers found that communicating with them in a timely manner meant that customers were less surprised and therefore more likely to pay their final bill. In addition, this approach enabled energy suppliers to intervene in time to limit or even avoid non-payment of bills or customer disconnection. For example, in Italy one supplier set up a specific helpline for customers with questions, made courtesy calls to customers in case of late payment and offered various payment plans. In Belgium, a major energy supplier continued to offer the possibility for payment with a delay of up to one month and payment plans of up to one year, allowing customers to spread their payments over time. In Czechia, the problem of unpaid bills was reduced through a dedicated web portal, the correct setting of instalments and sending timely reminders.

6 Clear and actionable communication between energy suppliers and customers, including on consumption patterns, energy bills and contract terms, appears to have been helpful in overcoming the energy crisis. Engaging with customers will therefore be key to the energy transition. Smart meters are one of the tools to facilitate this communication. Offering dynamic price contracts, in addition to hybrid or fixed price contracts, is another way of encouraging consumer participation from the demand side of the market.

Source: ACER (2023), based on interview with Eurelectric (https://www.eurelectric.org/about-us/about-eurelectric/) and the broad insights in this monitoring report.

5.2. Energy offers

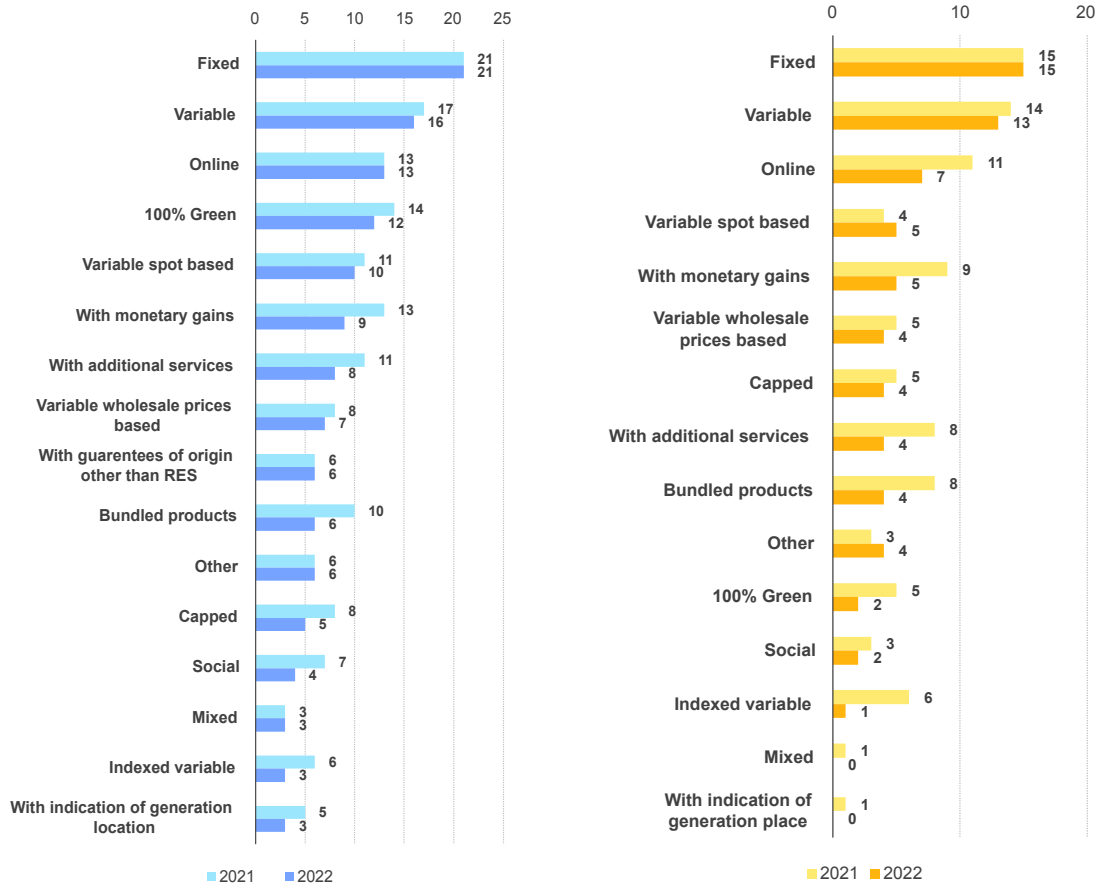
194 This section assesses the variety of offers in the EU in order to find out which products are most widely available and in which countries consumers benefit from a wide variety of offers. To this end, NRAs have been asked to report on the availability of sixteen types of offers for electricity and fifteen types of offers for gas.

195 Consumers should have access to a wide range of offers so that they can choose a contract that suits their needs. In line with the estimates in the previous report, there was a decrease in the number of fixed-price contract offers in 2022. As suppliers faced a significant increase in hedging costs due to the rise in wholesale gas prices and, in turn, electricity price volatility, consumers in many Member States had less access to fixed price contracts.

196 From a consumer protection point of view, it is expected that consumers will have the possibility to opt for fixed-price and fixed-term contracts. Suppliers should not unilaterally change the terms of a contract before the end of the term agreed with the consumer. However, as a last resort, some suppliers have sought to transfer the risk of high and volatile prices to consumers by converting all or some of their consumer contracts to dynamic or indexed schemes in order to ensure their financial stability and avoid insolvency. This being said, it should be emphasized that fixed-price contracts work best when the duration of the contract is binding both for the supplier and the consumer. It is also clear that changing the contract terms during a period of high or volatile prices can harm consumers. In other cases, where consumers terminate their contract before its expiry, the early termination may lead to financial losses for suppliers if there are no compensation mechanisms in the contract for such cases.

197 As a result of the difficulties described in the previous parts of the reports, a general decline in product diversity has been observed in Europe. The following figures show this decline in both the electricity and gas sectors.

Figure 51: Number of Member States where the different types of offers are available for electricity (left) and gas (right)

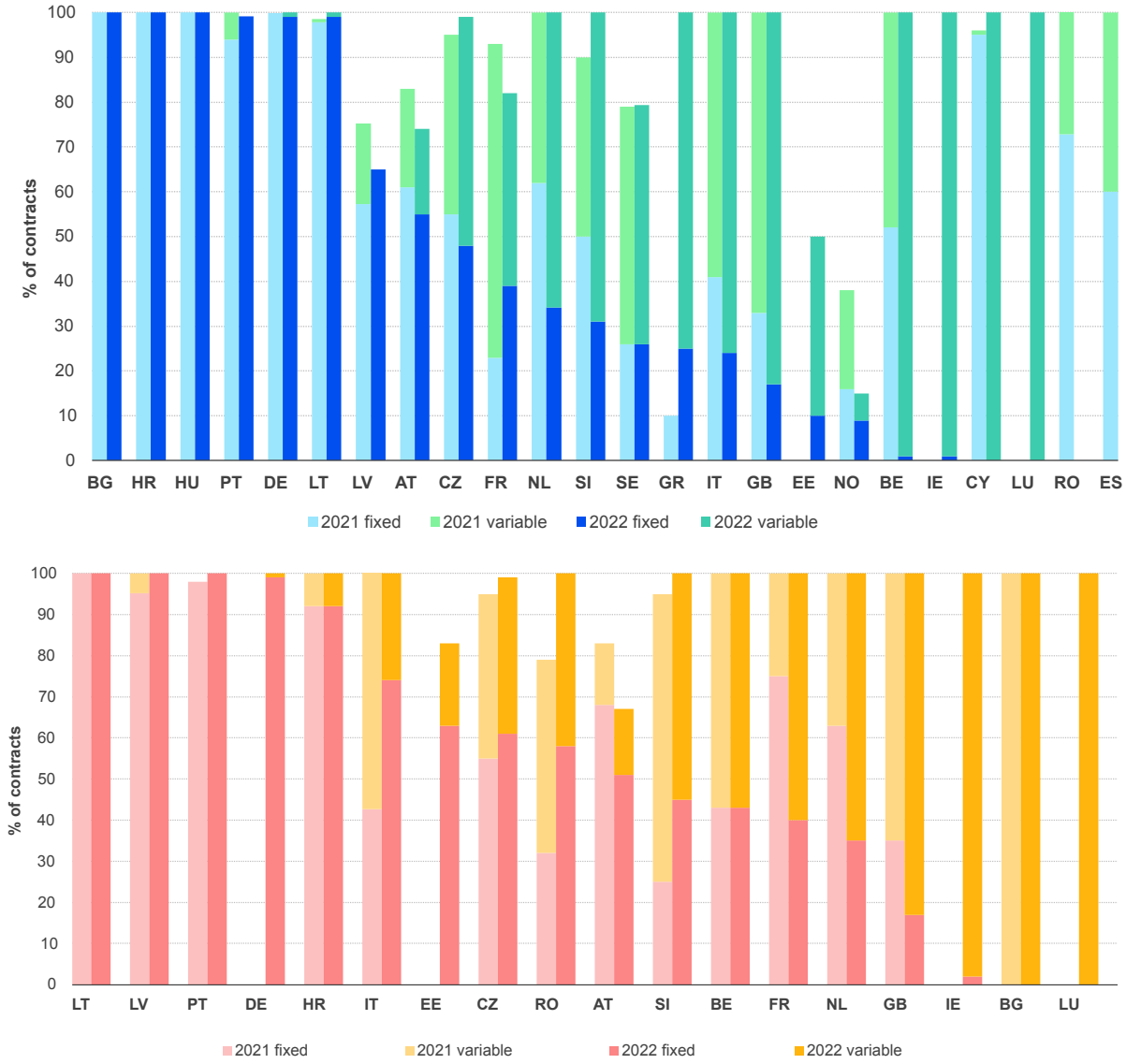


Source: CEER 2023

198 Figure 52 shows the uptake of fixed and variable price options in 2021 and 2022, according to the data reported by NRAs[143]. While in some Member States (e.g. France and Spain) the uptake of fixed-price contracts in the electricity sector increased, in other countries (e.g. Belgium, Czechia, Italy, the Netherlands and Great Britain) it decreased. Customers switched to variable-price contracts or contracts with other types of pricing arrangements. Belgium, Cyprus, Ireland and Luxembourg had (almost) 100 % uptake of variable price contracts in 2022, while Bulgaria, Germany, Croatia, Hungary, Lithuania and Portugal had (almost) 100 % uptake of fixed price contracts. The available data is not sufficiently robust to clearly explain these trends. The increase in the uptake of variable-price contracts in several Member States might be attributed to a lack of attractive fixed-price contract offer. In Austria, for example, there were fewer offers on the market with unusually high prices and no savings potential for customers; especially in the second half of 2022, the variety of offers on the market decreased sharply, while the savings potential from switching was limited. For the gas sector, a similar trend can be observed on the basis of the limited data available. However, the Member States involved are different. While in some Member States (Czechia, Italy and Romania) the uptake of fixed-price contracts increased, in others (e.g. Austria, France, Great Britain and the Netherlands) it decreased in 2022 compared to 2021.

143 Fixed price contracts refer to offers which guarantee that the price paid per unit of gas or electricity used will not change for a given period of time. Variable price contracts are defined as contracts where price paid per unit of gas or electricity used can change at any time. Values for Germany refer to the share of suppliers offering that contract type.

Figure 52: Share of contracts with fixed and variable prices in 2021 and 2022 – electricity (top) and gas (bottom)[144]



Source: CEER 2023

Case study: Smarter use of electricity

1 The energy crisis proved that the innovative retail approach of Tibber[145], offering means to make electricity consumption by their customers smarter, is in the right direction of helping consumers lower their energy consumption and bill. It has played a key role in efforts to overcome the energy crisis and it is at the heart of the energy transition.

2 Tibber is a fully digital energy company operating in Sweden, Norway, Germany and the Netherlands. It uses digital technology to help its customers reduce their energy consumption or shift it to times when electricity is cheaper. Through an app, Tibber sends price alerts to customers, giving them insight into when it is a good time to use electricity, such as tips on when to start the dishwasher. In addition, for greater impact, customers can allow Tibber to schedule big things like charging electric vehicles and

144 The data for Slovenia covers household consumers only. It represents a calculation of the weighted average of offers available in 2022 — the year when all Slovenian household consumers gradually moved to variable pricing by 1 September 2022. Suppliers often changed prices, but national legislation — the Electricity Supply Act (ZOEE) and the Gas Supply Act (ZOP) — required them to give consumers at least one month's notice of the price change. As of 1 September 2022, retail price caps for electricity for households and small businesses (as part of the government's energy crisis measures), including apartment blocks, will come into force. As a result, all Slovenian household consumers will be subject to fixed prices from 1 September 2022. In the retail electricity and gas markets, the situation was essentially the same.

145 https://tibber.com/en.

heating systems, stimulating their consumption or optimising the use of solar panels. Customers set the time they want their car to be fully charged and the app automatically schedules charging to coincide with when electricity prices are lowest.

3 In addition to the challenge of transitioning from fossil fuels to renewables, Tibber focuses on the need to reduce electricity consumption. The innovative feature of this approach is that the supplier is actually trying to sell less electricity. Tibber put its effort into inventing and developing smart technology to help customers further reduce their energy consumption. For this service, it charges a monthly fee in addition to the cost of electricity consumed. The supplier sells electricity at the price at which it buys it on the wholesale spot market. This means that Tibber does not make any money on the electricity it sells, but on the service it provides.

Helping the grid maintain frequency stability

Tibber's technology can also help the electricity grid. For example, in October 2021 the power cable between the Netherlands and Norway, NorNed, was disrupted. The frequency dropped from 50 Hz (ideal operating frequency) to 49.78 Hz (sub-optimal operating frequency). The incident was unusual. However, it allowed 1 000 Tibber customers with electric vehicles to help restore the frequency balance, by having Tibber switch off their charging boxes for a few seconds.

4 The energy crisis was no reason for Tibber to change its offer. On the contrary, Tibber was overwhelmed by the growing interest in its services. Consumers sought advice on how to cope with high energy bills and became more aware of the importance of the time of using electricity. Tibber's approach makes it easier for consumers to actually change their electricity consumption behaviour. Since Tibber customers actually pay the wholesale price, they have a strong incentive to use electricity at times when it is (extremely) cheap. Consumers have become smarter during the energy crisis. Those with an electric car, solar panels and heat pumps that let the Tibber app do the work for them were able to cut their costs by about 20 %. If they had home batteries, they could have saved even more. Customers without batteries still beat the market by 5 %.

5 While Tibber stopped marketing, its customer base doubled during the energy crisis. Tibber is still experiencing high growth rates of 10 % to 15 % per month, demonstrating the readiness of customers to become more involved in managing their own electricity consumption.

6 The energy crisis also presented Tibber with new challenges. Predictability was an issue and so was dealing with high price volatility. The government's responses were also uncertain. More specifically, there was no clarity as to whether and how governments would intervene in the market and what the implications of potential interventions would be for energy suppliers. The high growth rate was another challenge for Tibber. The unavailability of the necessary equipment to install in customers' homes became a bottleneck to the company's growth. In addition, the lack of an independent data hub in some countries, such as Sweden and Germany, and the untimely availability of data (i.e., on the end date of the current contracts of potential new customers), made it more difficult (delayed) for Tibber to win new customers. In markets with an independent data hub, such as Norway and the Netherlands, this information is equally available to all suppliers, so the lack of information is not an obstacle to switching.

7 The energy crisis has shown Tibber that it is on the right track in inventing methods to make consumers aware of how they, as individuals, consume electricity. Consumer education is key. Supported by government campaigns and the general public's interest in energy issues, consumers are becoming more aware of the impact of their consumption behaviour. They are beginning to understand that changing their behaviour can also be good for society. For Tibber, the energy crisis was proof of this. It saw that consumers were ready and willing to contribute, and that other suppliers were starting to follow its approach. The updating of dynamic price contracts by other suppliers will contribute to this awareness and help consumers change their behaviour.

8 Looking forward, Tibber is interested in expanding its activities to other markets. At least three things are important in deciding where to go: the availability of technical infrastructure (e.g. the need for smart meters), the willingness of consumers to change their behaviour, and political stability. The government's response to an energy crisis can deter new investment and make expansion more difficult.

Source: ACER (2023) based on interview with Tibber and website of Tibber

5.3. Structural change towards renewable production and consumption

199 This section briefly outlines the evolution of renewable energy penetration, carbon emissions and the expected uptake of electric vehicles and heat pumps in Europe. As Europe moves towards a more decarbonised system, power generation will become more reliant on intermittent generation while electricity consumption is expected to increase both in the residential and non-residential sectors. For example, the accelerated deployment of heat pumps in buildings and the industry, in combination with the increased use of electric vehicles, is expected to increase the share of electricity in total final consumption in the EU from 21 % in 2021 to between 25 % and 29 % (depending on the scenario) in 2030[146]. Member States may therefore need to consider how to best ensure that such products are appropriately targeted to the use of energy during periods of lower carbon intensity generation. This section aims to illustrate the growing importance of these new developments and to link them to the potential role that consumers could play by adjusting their consumption, which can potentially lower the burden on the electricity grid and even allow for less grid expansion.

5.3.1. Renewable energy and the impact of energy on climate

200 The already available statistics on production and capacity of renewable energy sources in 2022 show a strong increase in the production of wind and solar energy, which provided 22 % of the EU electricity in 2022. At the same time, greenhouse gas emissions from the EU power sector increased by 3.9 %, including due to the comeback of coal (Ember 2023[147]).

201 While still recovering from the COVID-19 pandemic, the energy crisis caused by Russia's aggressive war in Ukraine, the worst drought for centuries and decaying energy infrastructure, notably French nuclear power plants, are responsible for a decline in electricity supply across Europe. Fortunately, this decline was set off by a fall in electricity demand from 2 888 TWh in 2021 to 2 809 TWh (-79 TWh, -2.7 %) due to high prices and affordability concerns despite government support for consumers, household energy conservation in solidarity with Ukraine, and the mild winter in many parts of Europe, including record temperatures on New Year's Eve in many European countries.

202 Renewables, especially wind and solar, played an additional important role in securing Europe's energy supply in 2022, mitigating the negative environmental and climate impacts of increased coal (re) activation. Wind generation increased by 33 TWh and contributed 420 TWh (15 %) to total EU electricity generation. A total of 41 GW of solar power was added, including 25 GW of which on household roofs, giving a total of 209 GW solar capacity EU-wide in 2022 and providing 203 TWh of electricity (7.3 %) — 39 TWh more than the previous year, according to Ember (2023).

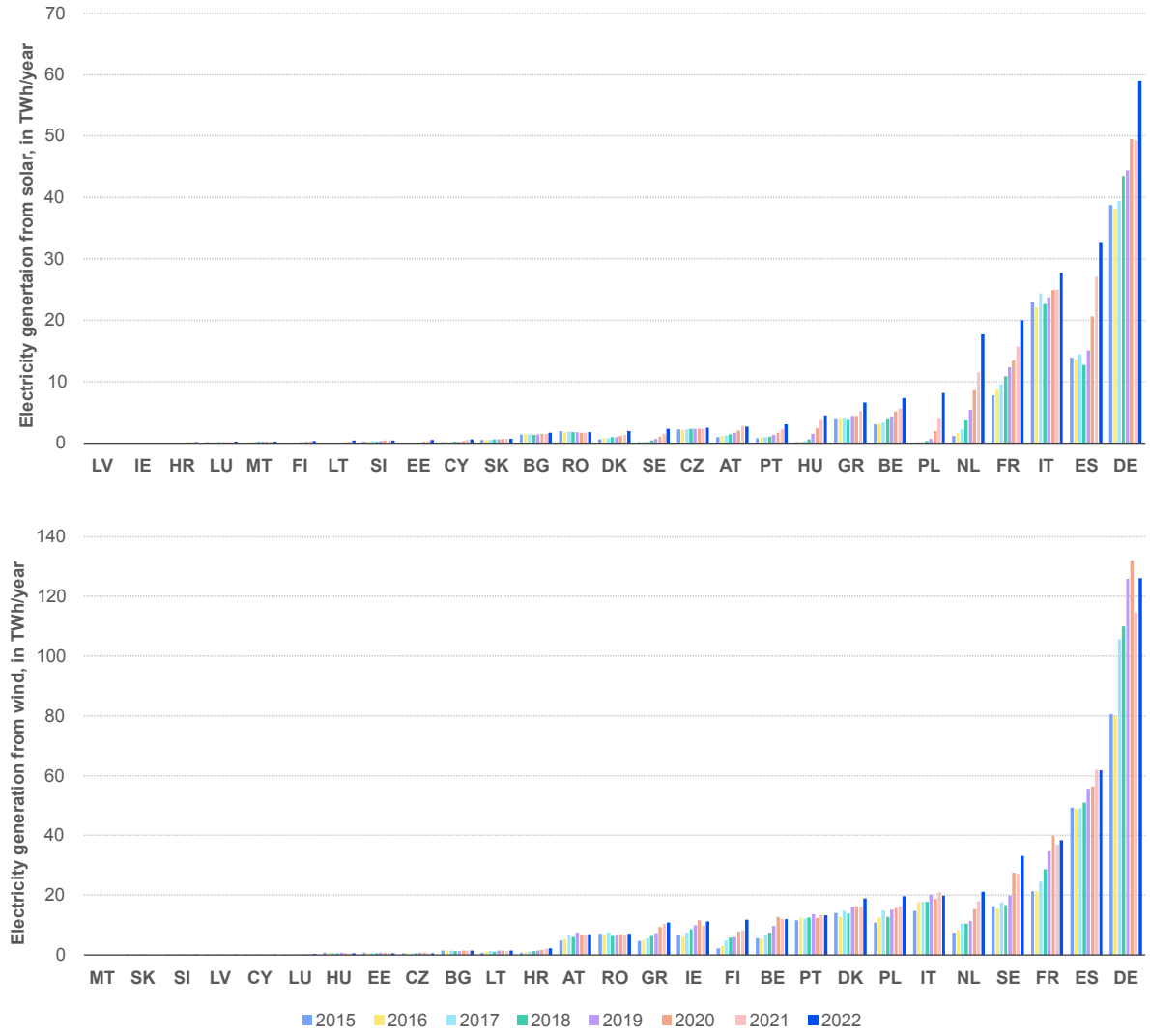
203 Figure 53 shows that Germany, France, Spain and Italy have added the most renewable electricity from wind and solar from 2015 onwards, the year of the Paris Agreement. The Netherlands has added 181 % more wind and 1 491 % more solar electricity generation from 2015 onwards, starting the green transition in the Netherlands (from 2015 onwards) in tune with the green recovery from the COVID-19 pandemic (from 2020 onwards). Sweden (104 % more wind generation over 2019-2022) and Poland (156 % more solar generation over the period 2019-2022) also stand out, although Poland's electricity grid remains the most polluting in the EU, with average GHG emissions of 692g CO2/kWh due to its heavy reliance on coal[148].

146 IEA, World Energy Outlook 2022, Chapter 6, page 285, November 2022 (https://iea.blob.core.windows.net/assets/830fe099-5530-48f2-a7c1-11f35d510983/WorldEnergyOutlook2022.pdf).

147 https://ember-climate.org/insights/research/european-electricity-review-2023/, last accessed 23 March 2023.

148 See footnote 146.

Figure 53: Electricity generation from wind and solar in the EU Member States in TWh/year, 2015 – 2022.



Source: Ember 2023.

5.3.2. Climate impacts: Greenhouse gas emissions from electricity and gas[149]

204 The latest Eurostat data on greenhouse gas (GHG) emissions [150](in CO2 equivalent, CO2-e) supports a strong bounce back of GHG emissions from the COVID-19 lows in 2021. In total, GHG emissions in the EU-27 amounted to 3.47 Gt CO2-e[151] in 2021, which represents an increase by 5.1 % compared to 2020 but is slightly below 2019 emission levels (3.59 Gt CO2-e).

205 The energy sector accounts for a total of 2.66 Gt CO2-e (77 % of total GHG emissions), of which 0.72 Gt CO2-e is emitted from the combustion of (fossil) fuels in public electricity and heat production[152]. This

149 This is a preliminary analysis based on data published on 28 April 2023. Further updates of Eurostat data are scheduled prior to publication of this report and will, time permitting, be considered.

150 https://ec.europa.eu/eurostat/databrowser/view/ENV_AIR_GGE/default/table?lang=en, last accessed 3 May 2023.

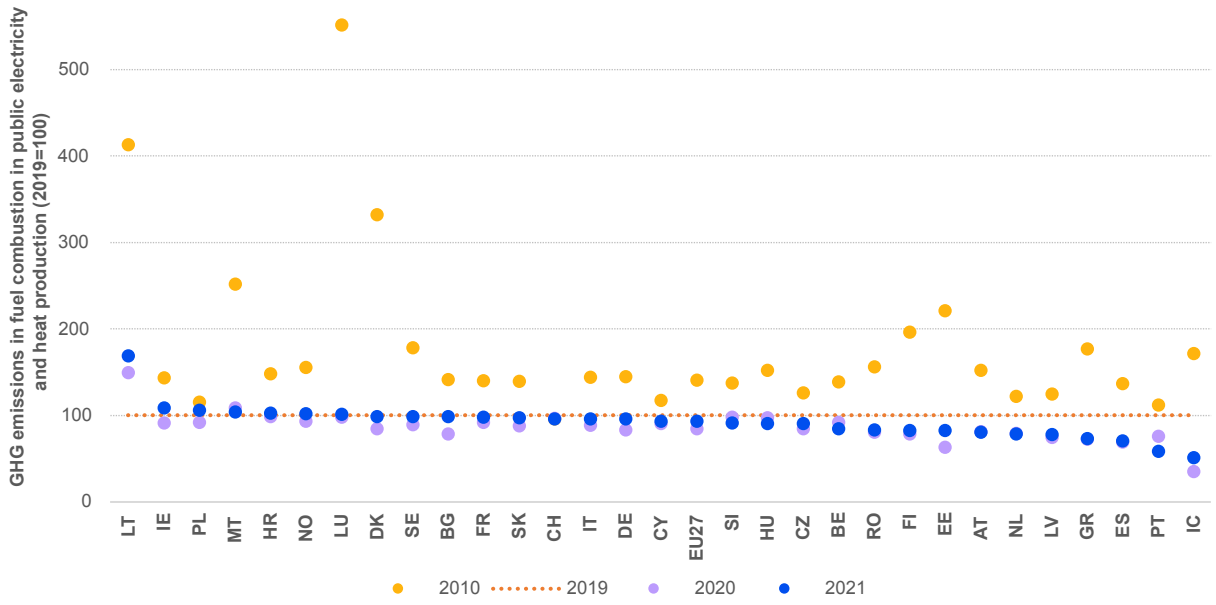
151 This is the gross figure of total GHG emissions, excluding (negative) emissions from the category land use, land use change and forestry (LULUCF). LULUCF deducts 229 Mt CO2-e emissions from total GHG emissions of 3.47 Gt CO2-e which have been (net) sequestered by land use, land use change and forestry in 2021. In this respect, MS with the largest reduction through LULUCF functioning as a "carbon sink" (mainly because of its forests and other land-based mechanisms): RO (-49 Mt CO2-e); ES (-44 Mt) and SE (-42 Mt). In a few Member States, LULUCF is, however, (already) a carbon emitter adding additional CO2-e through land use, land use change and forestry combined: CZ (+8 Mt), IE (+7 Mt) and NL (+4 Mt).

152 Emission from fuel combustion in public electricity and heat production is the closest proxy to assess climate impacts of electricity and gas following Eurostat's classification (based on the UNFCCC/IPCC categorisation of sectoral greenhouse gas emissions).

accounts for 27 % of GHG emissions in the energy sector[153]. The most carbon-intensive public electricity and heat production plants are located in Bulgaria where their combined share of GHG emissions in the energy sector is 53 %, followed by Estonia (52 %) and Cyprus (50 %). At the other end of the scale, Austria and France (both 11 %) and Luxembourg (3 %) already have the most decarbonised public electricity and heat production in the EU (albeit through different technologies). Thus, grid decarbonisation' is an important element of the removal of GHG emissions from the energy sectors in many, but not all, Member States. In other energy-intensive sectors, particularly transport, climate neutral solutions are urgently needed in most Member States.

206 A closer look at GHG emissions from (fossil) fuel combustion in public electricity and heat production over the period 2010–2021 shows an overall strong decrease in emissions in this sector (see Figure 54 below). In five Member States (Luxembourg, Lithuania, Denmark, Malta and Estonia), CO2-e emissions from fuel combustion in public electricity and heat production fell by more than 50 % over the last decade. Concerning the drop in emissions during the pandemic (2020) due to reduced demand for electricity and heat, mainly due to shutdowns and reduced economic activity. Figure 54 shows that emissions have not recovered everywhere and in the same way across Europe. It is important to note that emissions from fuel combustion in public electricity and heat production are generally below 2019 levels, most significantly in Portugal (- 41 %), Spain (-29 %), Greece (-26 %) and Latvia (- 21 %). However, there has been a significant increase in GHG emissions in Latvia (+69 %) and, to a lesser extent, in Ireland (+9 %), Poland (+7 %) and some other Member States.

Figure 54: GHG emissions from fuel combustion in public electricity and heat production in EU-27 over the period 2010–2021 (2019=100, time axis not to scale)



Source: Eurostat 2023

207 Eurostat's first emission estimates for 2022[154] show an overall decrease of -2.8 % in CO2 emissions from fossil fuel combustion for energy use of -2.8 %, with large variations between Member States, ranging from -12.8 % in the Netherlands to +12 % in Bulgaria. Most of the decrease in CO2 emissions was due to a reduction in the use of fossil gas, particularly for public electricity and heat generation, although emissions from solid fossil fuels (coal) actually increased by 3 %, and emissions from liquid fossil fuels (oil, petroleum products) increased by 1 %. The overall decrease in emissions reflects, among other things, the (voluntary) fossil gas demand reduction efforts that will be implemented across the EU from the summer of 2022, according to Eurostat.

153 The share of emissions from (fossil) fuel combustion in public electricity and heat production amounts to 21 % of total GHG emissions (0.72 Gt of 3.47 Gt).

154 https://ec.europa.eu/eurostat/web/products-eurostat-news/w/DDN-20230609-2 (last accessed 12 June 2023).

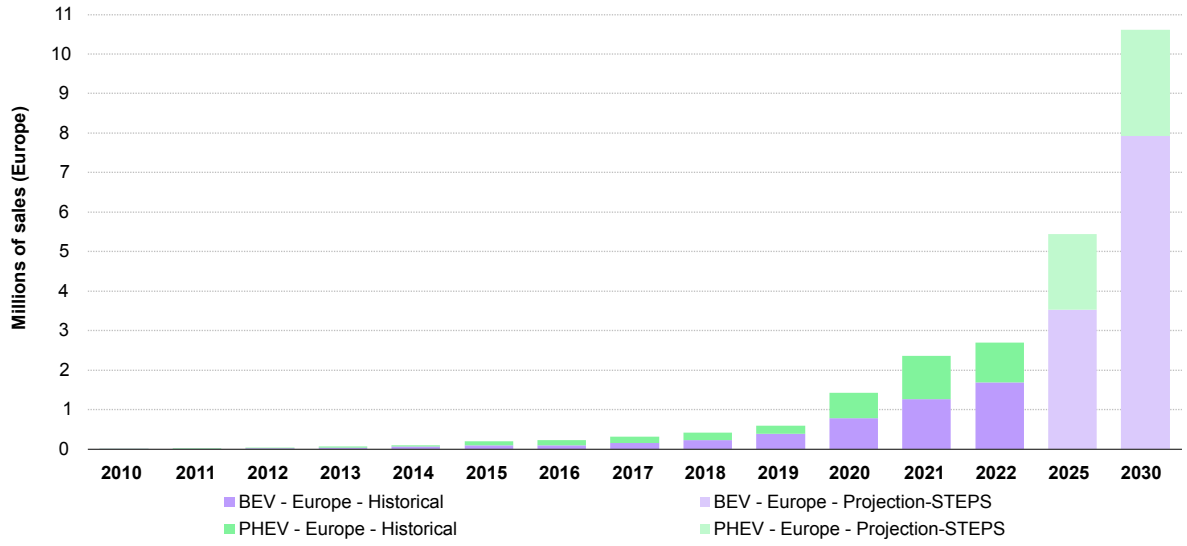
5.3.3. Electric vehicle penetration and heat pumps

208 The charging of electric vehicles is one of the new sources of electricity demand. The use of electric vehicles is seen as key to decarbonising road transport[155]. However, in 2022 only 1.5 % of the total EU car fleet were electric vehicles[156]. The share of electric vehicles was above 2 % only in Norway (over 20 %), Sweden, Denmark and the Netherlands[157].

209 At the same time, as shown in Figure 55, the sales of battery-powered electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs), have increased in recent years. Although the share of electric vehicles in national new car registrations increased in 2021 compared to 2020 in all Member States, the situation differs significantly between Member States, with the highest increases in Norway, Sweden and Denmark (35 %), and the lowest in Cyprus, Slovakia and Czechia[158].

210 Sales of electric vehicles are expected to continue to grow very strongly in the coming years (see Figure 55). This expected growth will be supported by the efforts to meet national climate targets as well as the recently agreed targets for fleet emission reduction targets by 100 % for cars and vans in the European Union by 2035 as part of the 'Fit for 55' legislative package[159].

Figure 55: Electric vehicle sales in Europe until 2022 and sales forecast until 2030



Source: IEA, Global EV Data Explorer – last updated on 26 April 2023

211 In 2022, heat pump sales in Europe increased by nearly 40 % compared to 2021[160]. High gas and electricity prices have encouraged consumers to switch to heat pumps, which are far more efficient than conventional heating technologies.

212 The use of heat pumps will contribute to achieving the national and EU climate targets especially in the building sector. To meet these commitments, heat pump sales are expected to continue to grow. In 2022, as part of the REPowerEU Plan, the European Commission announced its plans to double the deployment rate of individual heat pumps, resulting in a cumulative 10 million units over the next 5

155 Road transport is responsible for about a three quarter of all EU's transport greenhouse gas (GHG) emissions, in 2020. European Environmental Agency, Greenhouse gas emissions from transport in Europe, published 26 October 2022 (https://www.eea.europa.eu/ims/greenhouse-gas-emissions-from-transport.)

156 In this case, battery electric and plug-in hybrid cars.

157 ACEA, Vehicles in use Europe 2023, published 17 January 2023 (https://www.acea.auto/files/ACEA-report-vehicles-in-use-europe-2023.pdf#page=14).

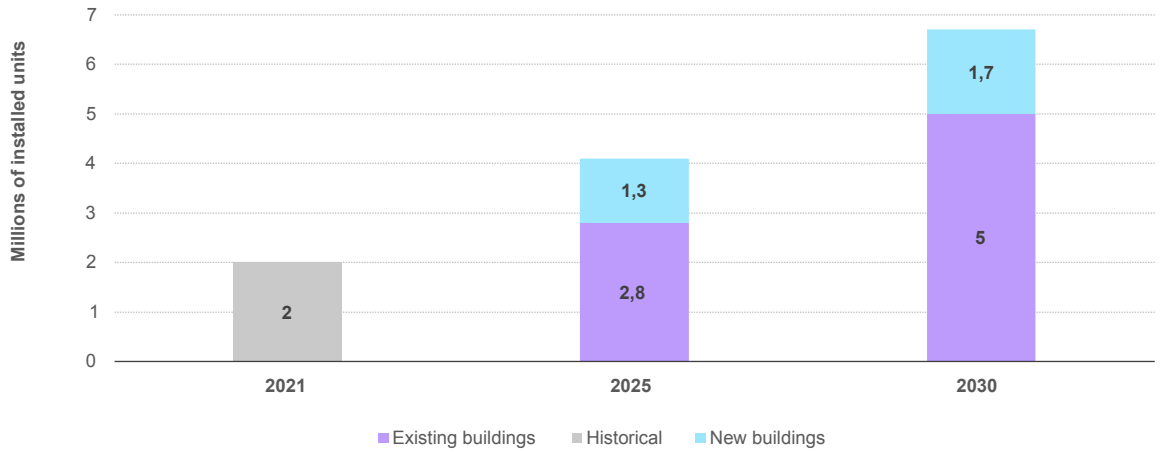
158 European Environment Agency (EEA), New registrations of electric vehicles in Europe, 26 October 2022 (https://www.eea.europa.eu/ims/new-registrations-of-electric-vehicles).

159 The recently adopted Regulation (EU) 2023/851 of the European Parliament and of the Council of 19 April 2023 amending Regulation (EU) 2019/631 as regards strengthening the CO2 emission performance standards for new passenger cars and new light commercial vehicles in line with the Union's increased climate ambition requires fleet emission reductions by 100 % for cars and vans by 2035. This Regulation effectively mandates that all new cars and vans sold from 2035 onward would need to emit zero emissions. As an intermediary step, the new CO2 standards will require average emissions of new cars to come down by 55 % by 2030, and new vans by 50 % by 2030.

160 IEA, Global heat pump sales continue double-digit growth, published 31 March 2023 (https://www.iea.org/commentaries/global-heat-pump-sales-continue-double-digit-growth).

years[161]. In several EU Member States there is strong political support for the use of heat pumps, e.g. France, Italy and Poland, and measures to ban gas and oil boilers provide an incentive for the use of heat pumps[162]. For example, in Germany 500 000 heat pumps are expected to be installed annually until 2024, and the total number of installed heat pumps is expected to increase from the current 1.4 million to 6 million by 2030[163].

Figure 56: Heat pump installation in the EU, 2021–2030



Source: IEA, Annual heat pump installations in the European Union, 2021-2030[164]

213 Although an accelerated deployment of heat pumps increases electricity demand, energy efficiency[165] and demand response measures can reduce the need for distribution grid upgrades and minimise the need for additional flexible generation capacity. Improving the efficiency of a home rating by two grades (e.g. from a D label to a B label) can halve the heating energy demand and reduce the size of the heat pump needed, saving consumers money, and reducing the growth in peak demand by a third[166].

5.4. Conclusions on retail market structure

214 The assessment of retail market structures in the EU, EEA Member Norway and Great Britain in 2022 shows that, for both electricity and gas, a large part of the exit of suppliers had already taken place in 2021, while in 2022 suppliers entered and exited the market at a slower pace. This is most likely due to perceived market risks and suppliers' own negative expectations about market volatility and the possibility of running into financial problems.

215 The reported data shows that there is a link between the decrease in offers in 2022 and the decrease in fixed price contracts. As suppliers faced a significant increase in hedging costs due to rising wholesale gas price and, consequently, electricity price volatility, consumers in many Member States had less access to fixed price contracts. However, consumers should have access to a wide range of offers so that they can choose a contract that suits their needs.

216 At this stage, the visibility of the contracts chosen by consumers could be improved in most Member States. Better data can help to understand how suppliers are following market trends and developments alongside consumer preferences. ACER and CEER therefore recommend that all NRAs track and monitor the take-up of all types of contracts (fixed, flexible, dynamic) in their retail energy markets.

161 REPowerEU (europa.eu).

162 IEA, The Future of Heat Pumps, published December 2022 (The Future of Heat Pumps (windows.net)_, European Heat Pump Association (EPHA), Which countries are scrapping fossil fuel heaters? Update, published 17 April 2023 Which countries are scrapping fossil fuel heaters? Update – European Heat Pump Association (ehpa.org).

163 Bundesverband Warmepumpe (BWP), Branchenstudie 2023: Marktentwicklung – Prognose – Handlungsempfehlungen, 30 January 2023 (https://www.waermepumpe.de/presse/news/details/branchenstudie-2023/#content).

164 Annual heat pump installations in the European Union, 2021-2030 – Charts – Data & Statistics - IEA.

165 The IEA estimates that the demand response potential from heat pumps at times of highest flexibility needs as a share in total demand-side flexibility in the European Union amounts to about 12 %. Figure 2.3 IEA, The Future of Heat Pumps, published in December 2022 (The Future of Heat Pumps (windows.net)).

166 IEA, The Future of Heat Pumps, published in December 2022 (The Future of Heat Pumps (windows.net)).

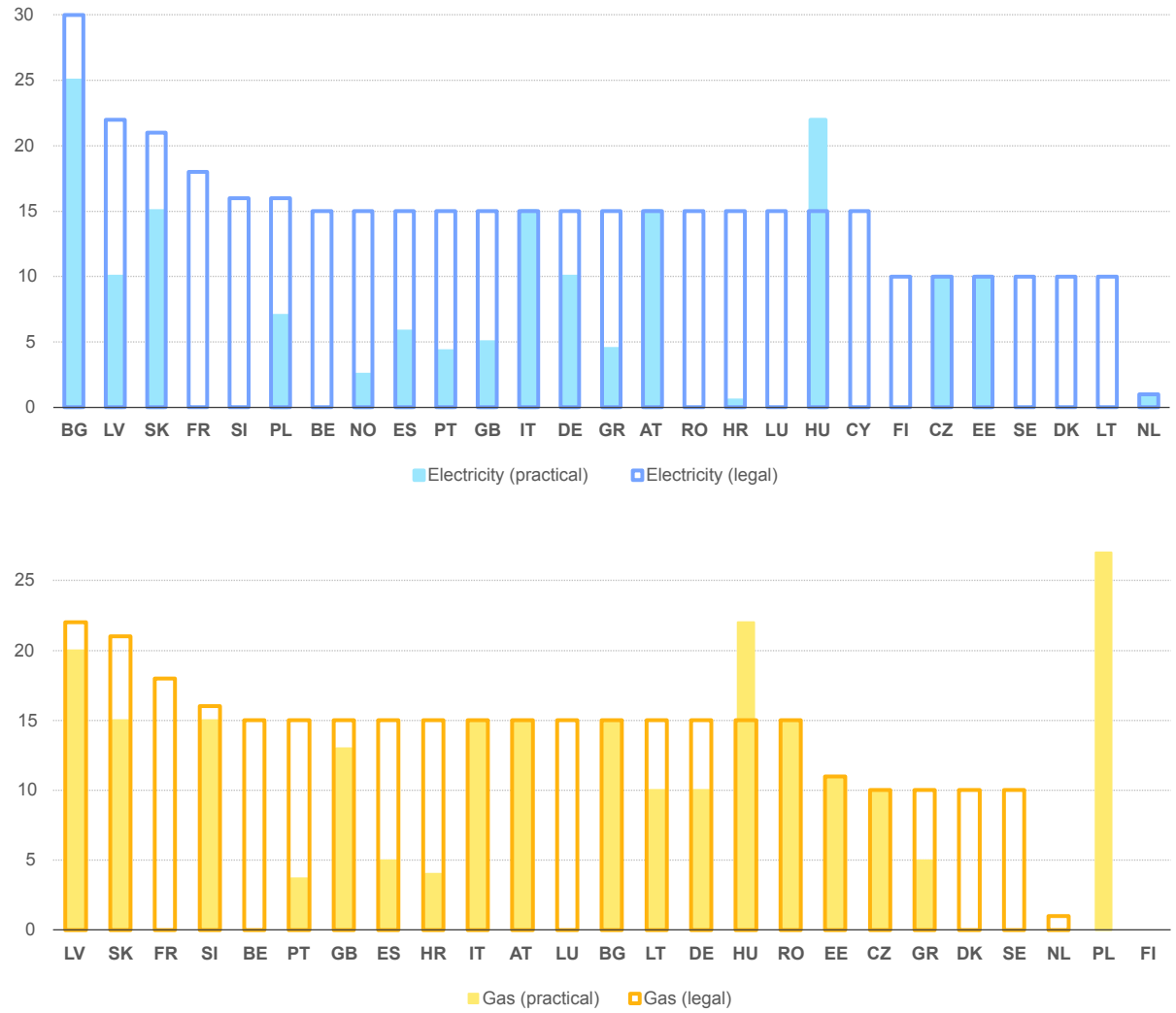
6. Consumer engagement

6.1. Switching Rates and contract negotiation

217 Regulation on switching aims to improve switching behaviour. Shorter switching times encourage consumers to actively search for better energy offers and switch supplier. Article 12 of Directive 2019/944 stipulates that the maximum period for switching suppliers may not exceed three weeks from the date of requesting a switch. By 2026 at the latest, the technical process for switching must take no longer than 24 hours on working days[167].

218 Figure 57 shows that in most Member States the maximum legal time period for switching electricity or gas suppliers is three weeks (or 15/18 working days, as required by the Directive)[168]. With the exception of Bulgaria, Latvia and Slovakia, Member States have already reduced the statutory switching period to less than 18 working days. However, the number of working days required for a switch is still longer in Bulgaria and Hungary for electricity, and in Hungary, Latvia and Poland for gas.

Figure 57: Legal maximum and actual switching time periods in EU Member States, EEA Member Norway and Great Britain– in 2022 (in working days) – Electricity (top) and gas (bottom)



Source: CEER 2023

167 To date, only the Netherlands, Italy and France reported technical switching times of 1 day. Spain (1.4 days), Belgium (2 days), Poland (2 days), Greece (2 days) and Norway (2.5 days) reported times under 3 days. The rest of countries: i) do not know their technical switching times, ii) did not provide an answer, or iii) technical switching is not defined.

168 In Directives 2009/72/EC and 2009/73/EC, Article 3(5) and 3(6), respectively, stipulates as follows: 'where a customer, while respecting the contractual conditions, wishes to change supplier, the change is effected by the operator(s) concerned within three weeks'.

219 In order to empower consumers, most Member States allow both consumers and suppliers to choose a precise switching date according to their individual preferences and circumstances (e.g. the end date of a contract). On the other hand, in six Member States[169] consumers cannot choose the exact date of switching. For gas, the situation is similar in five Member States[170].

220 Although in many Member States switching has been facilitated by regulation and process automation, a large number of energy consumers, particularly household consumers, remain with their incumbent supplier. ACER and CEER believe that very low switching rates should be closely monitored to verify the proper functioning of the market.

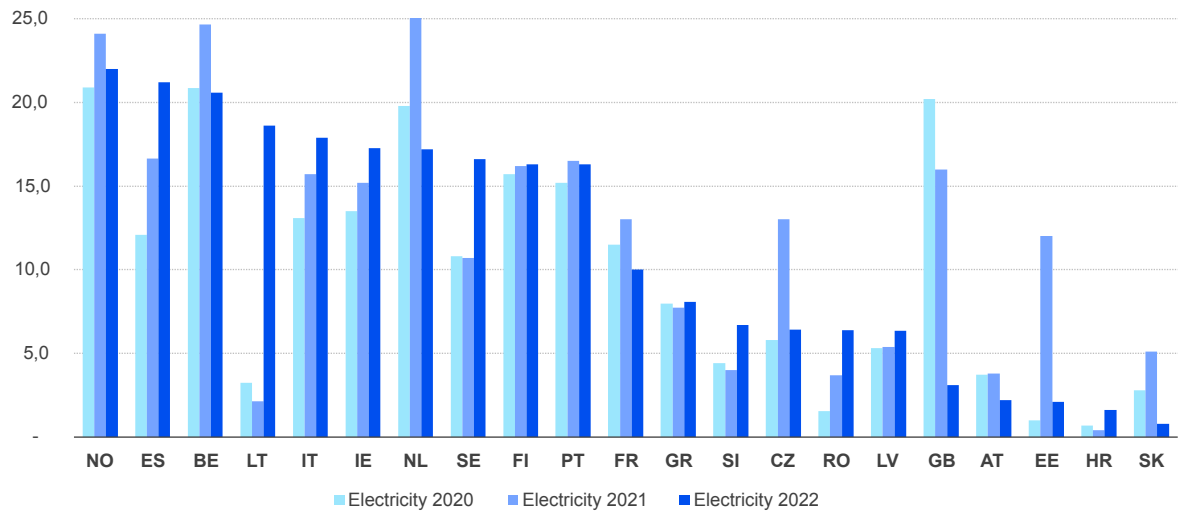
221 Similarly, extremely high switching rates should also be looked at more closely. High switching rates are usually, but not necessarily, an indicator of well-functioning markets. They may also indicate consumer dissatisfaction with suppliers and are not always a sign of willingness to participate in the market. In addition, high switching rates could indicate involuntary switching of household and non-household customers due to bankruptcy of their suppliers, as was the case in the second half of 2021. For example, the average involuntary switching rate in 2022 was 1.4 % for electricity and 0.3 % for gas.

222 External switching is defined as the voluntary action by which consumers change their supplier. Figure 58 shows the switching rates for electricity and gas household consumers by metering point in 2020, 2021 and 2022. It also shows that the external switching rates of household consumers vary significantly between Member States.

223 In 2022, some countries registered a decrease in switching rates in both sectors compared to the previous year (around 60 % of countries reported a decrease in the electricity sector and around 64 % in the gas sector). The overall decrease in switching rates in both the electricity and gas sectors in 2022 can be tentatively attributed to the following reasons:

- Lower prices from the default suppliers with a purchasing strategy based on long-term contracts. Consumers therefore preferred these lower-priced suppliers.
- Emergency measures such as price caps and brakes were put in place in several Member States to deal with high energy prices. These measures might have had an impact on consumers' ability to switch suppliers, depending on how these measures limited their options for switching.
- Bankruptcies first hit the sector in 2021, leading to an average involuntary switching rate of only 0.2 % if the outlier rate of 14 % in Ireland (in the electricity sector) is excluded from this average.

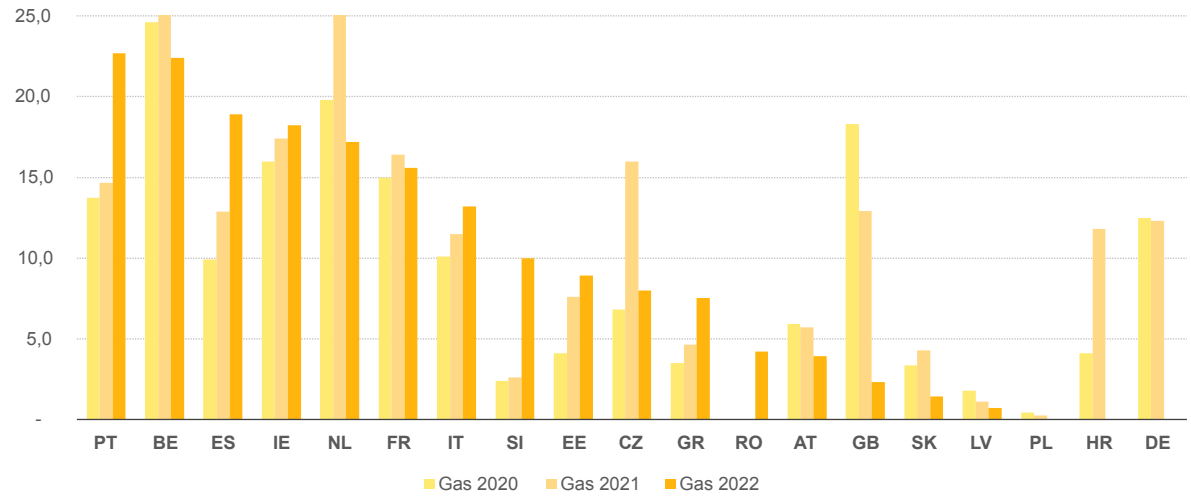
Figure 58: Switching rates[171] of household consumers – electricity market (top) and gas market (bottom)



169 Germany, Greece, Croatia, Latvia, Estonia and Slovakia.

170 Same countries as for electricity, with the exception of Croatia. In the latter case, in the gas sector the consumer can actually choose the precise switching date.

171 Luxembourg removed from figure due to switching rate below 1%.



Source: CEER 2023

224 In other Member States, the switching rate increased. In Spain, for example, the following factors may have contributed to the increase: (i) the regulated electricity price, which is indexed to the spot market prices, was higher than the prices on the unregulated market, which encouraged switching to the liberalised market, and more specifically to fixed-price offers; (ii) the regulated gas price was significantly lower than prices on the unregulated market, which encouraged a reverse migration from the liberalised market to the regulated market; and (iii) in the case of electricity, unhedged independent suppliers were unable to offer competitive prices as hedged suppliers or as vertically integrated companies benefiting from natural hedging.

Energy Community (EnC) Contracting Parties

225 In the electricity sectors of most EnC Contracting Parties, the highest switching rates were registered in North Macedonia and Ukraine[172] (2.5 % and 1.9 %, respectively), followed by Serbia with a switching rate of 0.4 % of the total market. In the other EnC Contracting Parties, only small numbers of household and non-household consumers switched suppliers in 2022[173]. In the gas sector, Ukraine registered a switching rate of 7.3 % of the total market[174], while in Moldova, North Macedonia and Serbia only small numbers of non-household consumers switched suppliers in 2022.

6.2. Energy Communities

226 Energy Community initiatives offer new opportunities for citizens to get actively involved in energy issues. They raise consumer awareness, help increase public acceptance of renewable energy projects, make it easier to attract private investment in the clean energy transition, and can contribute to the flexibility of the electricity system through demand response and storage. At the same time, energy communities have the potential to increase energy efficiency and reduce energy costs for citizens.

227 There is no clear and complete overview of existing energy communities in the EU. The estimated number of citizen-led energy initiatives in the EU Member States, EEA Member Norway and Great Britain is 10 243, with 20 250 projects and almost 2 million people involved[175]. The installed renewable capacity involved in these initiatives is estimated to be between 7.1 and 9.8 GW, with total investment ranging from EUR 5.9 million to EUR 11 billion. Some of these initiatives predate the Clean Energy Package (CEP) and may not fully meet the current EU definitions of Energy Communities (see below).

228 The figures show that the impact of these initiatives is relatively small. The number of people involved is marginal compared to the total population, citizen-owned renewable capacity represents a small percentage of total installed capacity, and the annual investment is about 1 % of the total investment in

172 No information was provided by two DSOs.

173 There is no information on switching in Georgia.

174 No information was provided by four DSOs.

175 'Statistical evidence for the contribution of citizen-led initiatives and projects to the energy transition in Europe', Scientific report (2023)13:1342 (www.nature.com/scientificreports). Based on most data collected between 2000 and 2021.

renewable energy in Europe over the period concerned[176]. At the same time, the interest of citizens to engage in energy communities is still there. After the Covid-19 pandemic and during the energy crisis, participation in an energy community has been largely driven by citizens wanting to have more control over the price that they pay for their energy as a barrier to higher energy prices

229 The CEP formalised the right of all EU citizens to produce and consume their own energy as individuals, groups and as legal entities called them 'energy communities'. EU legislation contains two definitions: the Renewable Energy Community[177] (REC) and the Citizens' Energy Community[178] (CEC). Both are intended to reflect a legal form of collective ownership around various energy-related activities and have a non-commercial purpose. The two definitions are nevertheless different. While the CEC operates only in the electricity sector and does not have a technology-specific focus, the REC builds and manages renewable assets under its control at the local level.

230 The EU framework leaves a large degree of freedom to Member States to transpose these definitions into their national legislation, which has led to very different approaches. Based on a qualitative assessment of the relevant elements for proper transposition, REScoop[179] has identified both good practices (Belgium, Denmark, France, Germany, Ireland and Italy) and approaches with substantial deficiencies[180]. Although the transposition deadline elapsed two years ago[181], there are still Member States (Bulgaria, Czechia, Poland and Sweden) with no legislation on energy communities[182]. This is an obstacle to the establishment and functioning of energy communities. For example, the law needs to clarify who can participate or what legal form an energy community can take.

231 The main obstacle to the operation of energy communities is that they all start small, with few members and low volumes. They are also highly dependent on volunteers, which affects their ability to develop and grow. For energy communities focused on supply, licensing procedures, guarantee requirements (which have increased significantly during the energy crisis), data requirements and IT implementation can be a barrier, as can be establishing an appropriate hedging strategy. Access to finance is a significant barrier for energy communities with energy production facilities. It is difficult to get the community to pay for the upfront sunk costs (such as a feasibility study or legal costs) and loans are difficult to obtain because banks are unfamiliar with energy communities as legal entities. In addition, competitive bidding processes for support schemes can exclude smaller entities such as energy communities that cannot build their bid on a broad portfolio or economies of scale. Their size makes it more difficult to work with distribution system operators, and grid connection may be too expensive for their proposition.

232 Member States are required to provide an enabling framework for RECs and CECs respectively, with a more comprehensive framework for RECs[183]. While Member States are free to decide how to implement the adopted legislation and measures at national level, a simple copy-paste approach is not sufficient as the provisions may require further clarification. Figure 59 shows the quality and progress of the transition of Member States' enabling frameworks as assessed by REScoop[184].

176 Statistical evidence for the contribution of citizen-led initiatives and projects to the energy transition in Europe', Scientific report (2023)13: 1342 (www.nature.com/scientificreports).

177 Directive 2018/201 (RED II).

178 Directive 2019/944.

179 REScoop.eu is the European federation of citizen energy cooperatives.

180 REScoop.eu, Transposition tracker – Definitions (May 20223): REC and CEC definitions - REScoop.

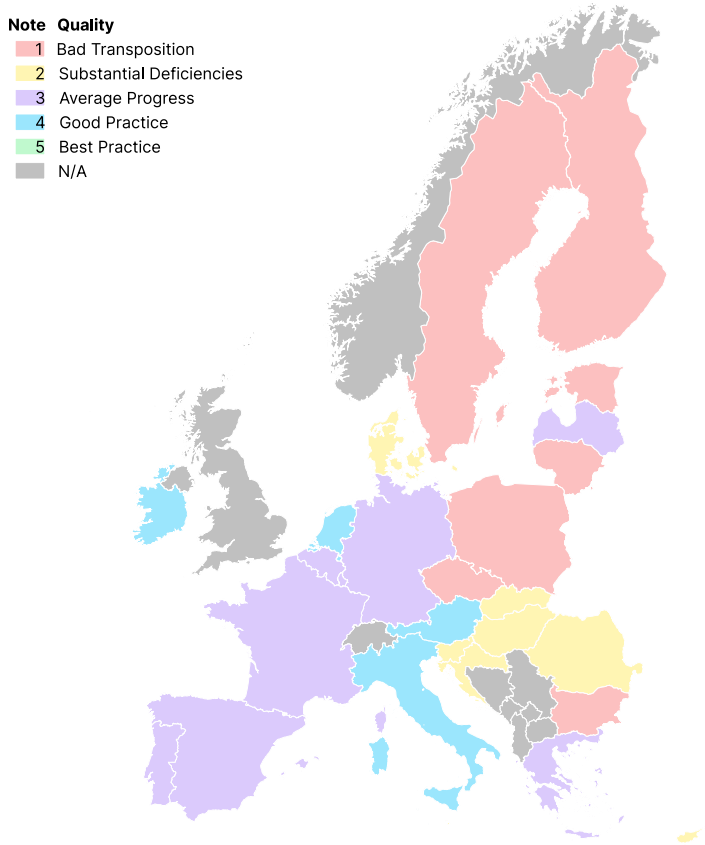
181 Directive 2019/944, which defines 'active consumers' and CECs, was expected to be transposed by the Member States by the end of December 2020. Directive 2018/2001, defining 'renewables self-consumption' and RECs was to be finalised by the end of June 2021.

182 REScoop.eu, Transposition tracker – Definitions (May 20223): REC and CEC definitions - REScoop.

183 Directive 2018/2001 and Directive 2019/944. For RECs Member States should put in place an effective legal, regulatory and administrative framework that creates a favourable environment for the creation and the functioning of RECs. For CECs, the Member States should create a level playing field so they can participate across the market. REScoop.eu, Enabling frameworks for renewable energy communities, report on good practices. REScoopEU-Briefing-on-Enabling-frameworks-for-RECs-final.pdf.

184 REScoop.eu, Transposition tracker – Enabling frameworks & support schemes (Enabling Frameworks & Support Schemes - REScoop).

Figure 59: Member States' effort to develop an enabling framework for RECs (May 2023)



Source: REScoop.eu, Transposition tracker – Enabling frameworks & support schemes[185]

233 REScoop's assessment concludes that the pace of transposition has been uneven across Member States. Transposition has been chaotic and often fragmented rather than holistic[186]. Indeed, the necessary assessment of the potential for and barriers to the development of energy communities is currently lacking in most Member States. This is unfortunate as the enabling framework should already be in place.

234 In conclusion, Member States should at least adopt clear and workable definitions of energy communities into their national legislation. Explicit recognition in the definition of the specificities of energy communities, i.e. small size, collective ownership, non-commercial purpose, may help energy communities to overcome some of the barriers mentioned above. In addition, Member States should establish an enabling framework that provides clarity on the definition, the basic rights, obligations and the legal status of energy communities. As a first step, the assessment by the Member State of the potential for and barriers to energy communities, taking into account the national context, should be a good starting point.

6.3. Smart meter roll-out

235 Table 12 shows the status of smart electricity meter deployment at the end of 2022. Thirteen countries have a smart meter penetration rate of 80 % or more. However, many markets have yet to make smart meters available to their consumers. The lack of real-time data on consumption and prices can limit consumers' ability to become more informed about their energy consumption.

185 Enabling Frameworks & Support Schemes - REScoop, last updated in December 2022.

186 REScoop.eu, Enabling frameworks for renewable energy communities, report on good practices. REScoopEU-Briefing-on-Enabling-frameworks-for-RECs-final.pdf.

Table 12: Electricity smart meter availability 2022

Country	Share of final household consumers with smart meters 2022	80 % of consumers being equipped with them as stated in	Time-of-use with energy price differ-entiation	Real-time/ hourly energy pricing	Remote control of consumption (e.g. remotely operated heat pumps, etc...)	Critical peak pricing
SE	100.0 %	Complete		x	x	
DK	100.0 %	Complete	x	x		x
FI	99.9 %	Complete		x	x	
EE	99.8 %	Complete		x		
ES	99.0 %	Complete	x	x		
NO	99.0 %	Complete		x	x	x
LU	98.5 %	Complete				
LV	98.0 %	Complete		x	x	x
IT	97.5 %	Complete	x			
FR	92.0 %	Complete	x		x	x
MT	92.0 %	Complete				
SI	91.9 %	Complete	x	x	x	x
NL	88.7 %	Complete	x	x		
PT	73.0 %	In 2023	x			
AT	68.4 %	In 2024	x	x	x	
GB	56.0 %	In 2024	x	x		
IE	56.0 %	No national law stating this (despite positive roll out decision)	x			
BE	22.4 %	Later than 2024	x			
HR	19.0 %	Not applicable (no positive roll out decision yet)				
PL	18.7 %	Later than 2024	x			
SK	15.1 %	In 2021		x		
LT	12.3 %	No national law stating this (despite positive roll out decision)	x	x		
HU	7.3 %	No national law stating this (despite positive roll out decision)				
BG	0.0 %	No answer				
CY	0.0 %	Later than 2024				
CZ	0.0 %	Not applicable (no positive roll out decision yet)				
DE	0.0 %	No answer	x	x	x	
GR	0.0 %	Rollout postponed (due to public procurement procedure been challenged multiple times).				

Source: CEER 2023

236 Taking into account the progress in roll-out compared to the legal[187] requirements (> 80 %) and actual roll-out rates, some delays have or are expected to occur in the future. Romania has a penetration rate of less than 20 % against a target of 80 % beyond 2024. Hungary and Lithuania have a roll-out rate of less than 12 %, without any specific targets defined by law.

237 The non-availability of smart meters is a key barrier to consumers receiving regular and accurate metering data in a timely manner. The lack of smart meters has additional consequences in that without real-time data consumers are unable to take advantage of the opportunities to respond to real-time price signals.

238 For innovative market players, the lack of smart meter roll-out can be a barrier to market entry and thus to competition. As new suppliers enter the market and offer real-time billing, consumers may respond by switching to other suppliers.

6.4. Conclusions on consumer engagement

239 Switching is a form of consumer engagement in energy markets. In 2022, switching rates for both electricity and gas decreased in several Member States compared to previous years, while increasing in others. The possible reasons for the lower switching rates in 2022 are related to pricing and the emergency measures taken during the energy crisis. Both very low and very high switching rates should be closely monitored and the functioning of the markets should be assessed.

240 Although, at this stage, the impact of energy communities is relatively small in terms of number of initiatives, people involved and citizen-owned renewable capacity, the interest of citizens in getting involved in energy communities is still there and seems to have increased during the energy crisis. In order to facilitate their development a clear and workable definition of energy communities and an enabling framework in national legislation are needed. The transposition of European rules on energy communities into national law is lagging behind in some Member States and can be improved, giving a boost to the development and functioning of energy communities in Europe.

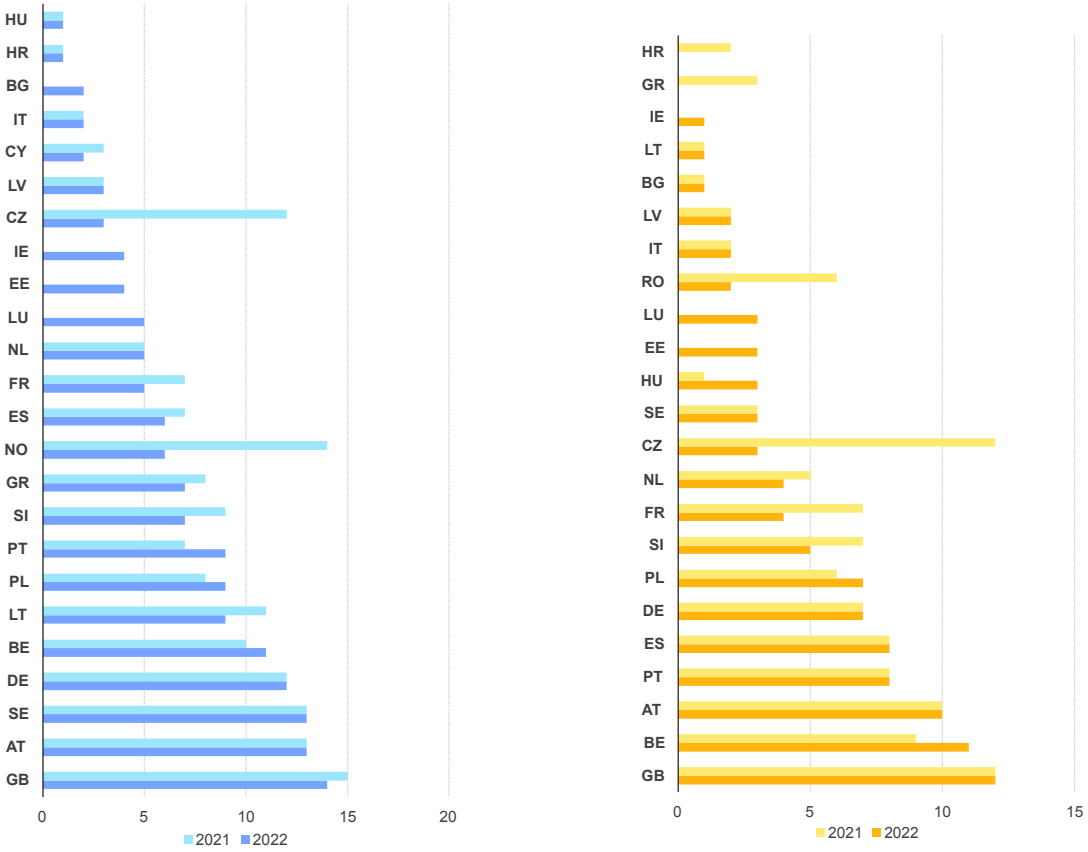
241 With regard to smart meters, an essential tool to facilitate consumer engagement in the functioning of the energy system, the report notes their successful roll-out in thirteen member States and regrets that eleven Member States have barely started the process.

187 Article 19 and Annex II to Directive 2019/944.

7. Annex

7.1. Types of offers available to households (number)

Figure 60: Number of contract offers available to householder as reported by NRAs – Electricity (left) and gas (right)

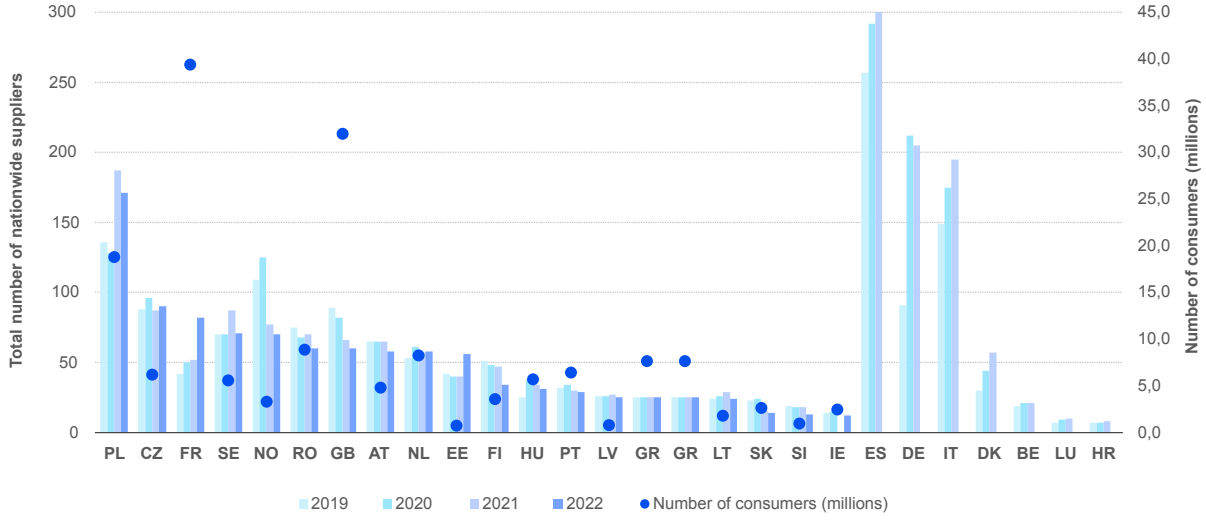


Source: CEER 2023

Note: Electricity is shown in blue on the left, gas in green on the right.

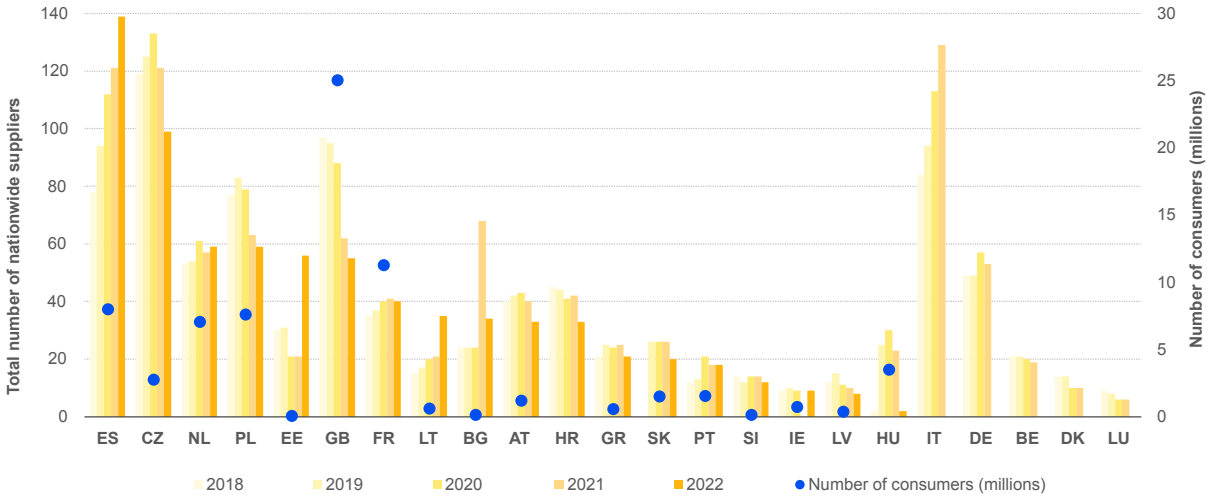
7.2. Total number of active suppliers

Figure 61: Total number of active nationwide electricity suppliers and total number of metering points in the whole retail market 2018–2022



Source: CEER 2023

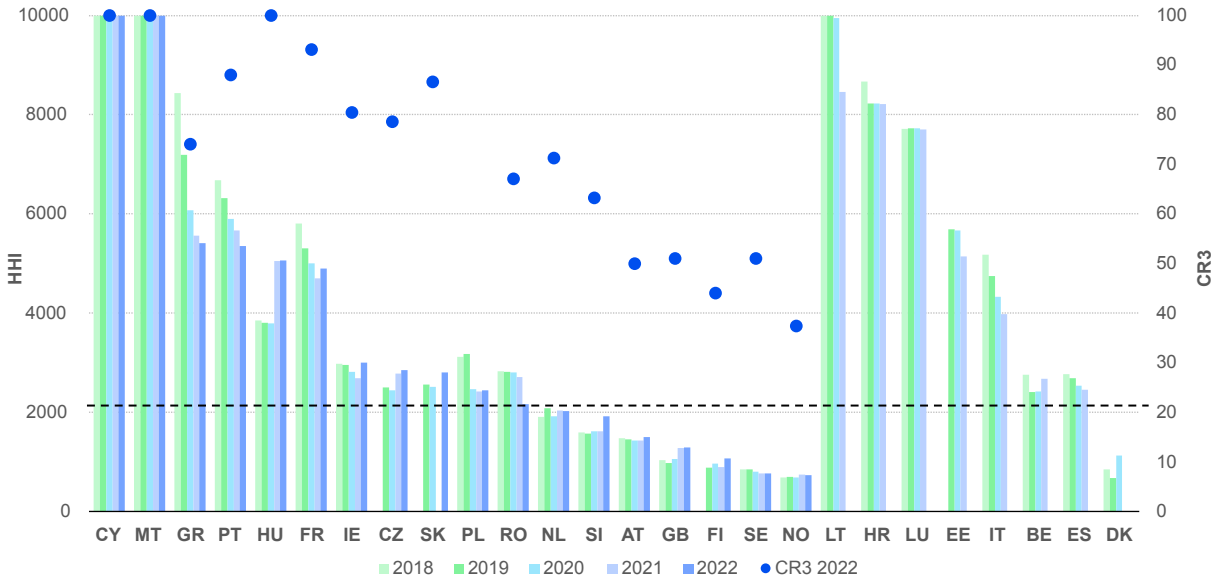
Figure 62: Total number of active nationwide natural gas suppliers and total number of metering points in the whole retail market 2018–2022



Source: CEER 2023

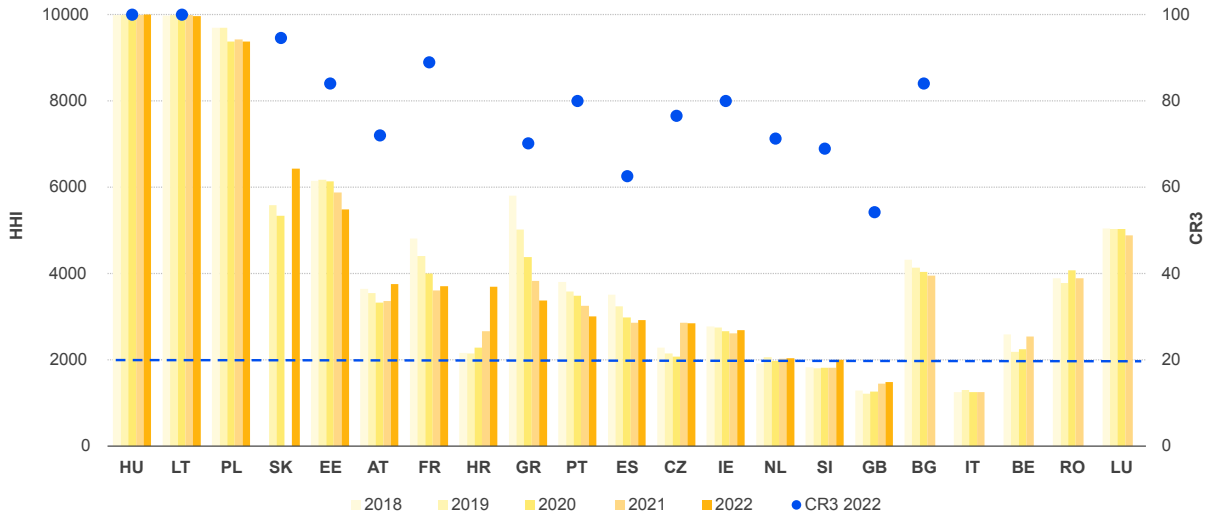
7.3. Concentration levels

Figure 63: HHI for the household market in electricity for selected countries, 2018–2022



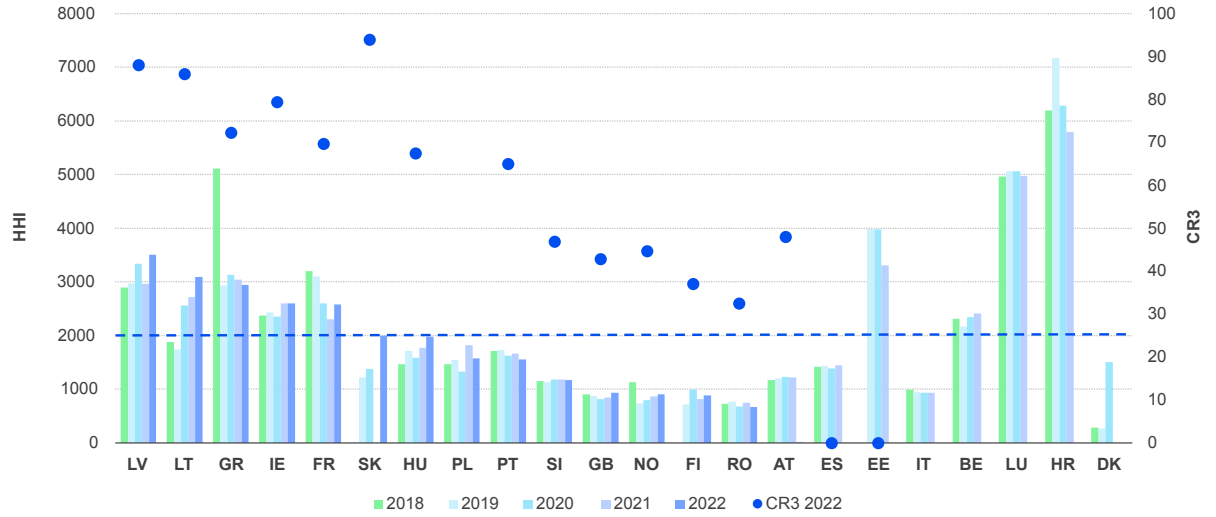
Source: CEER 2023

Figure 64: HHI for the household market in gas for selected countries, 2018–2022



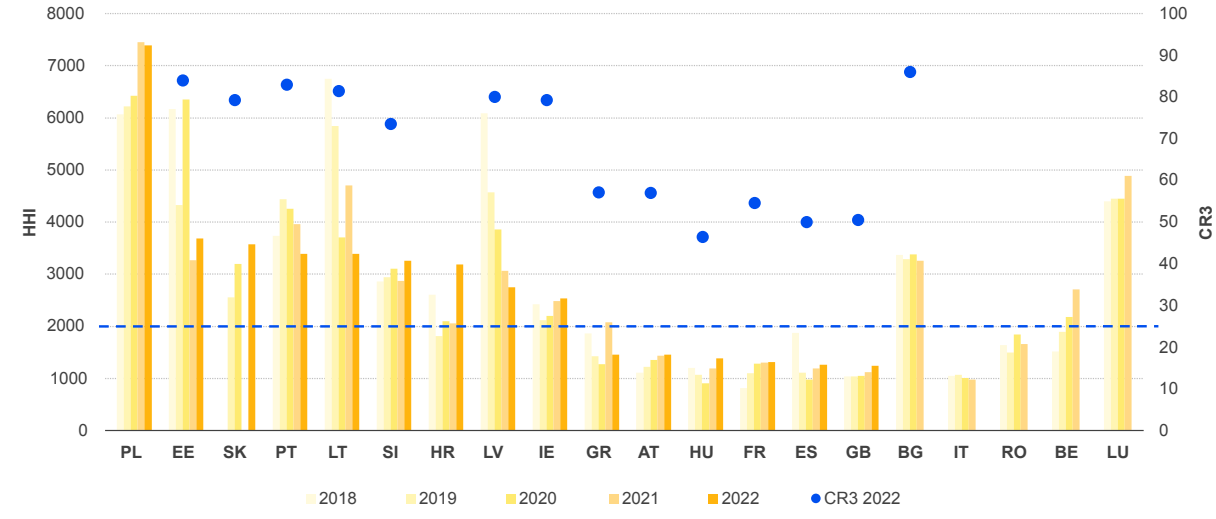
Source: CEER 2023

Figure 65: HHI for the non-household market in electricity, 2018–2022



Source: CEER 2023

Figure 66: HHI for the non-household market in natural gas, 2018–2022

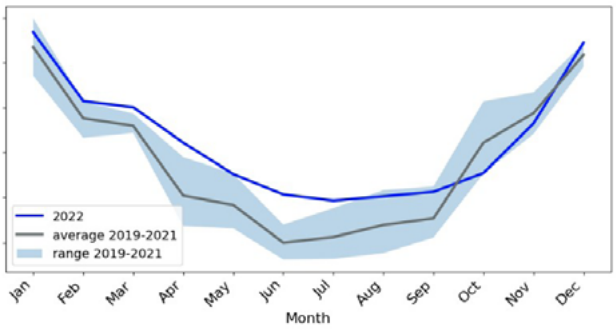


Source: CEER 2023

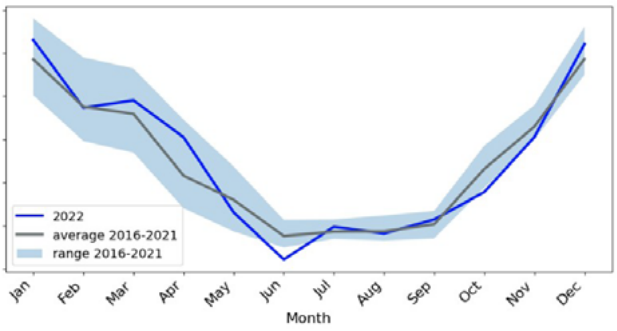
7.4. Household energy demand data per country

Figure 67: Annual household electricity demand pattern per country, comparison of demand between 2022 and the period 2015–2021

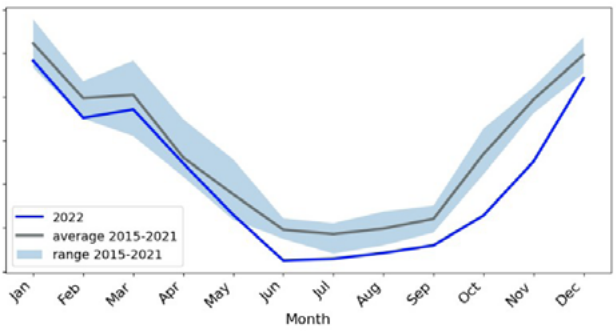
Belgium



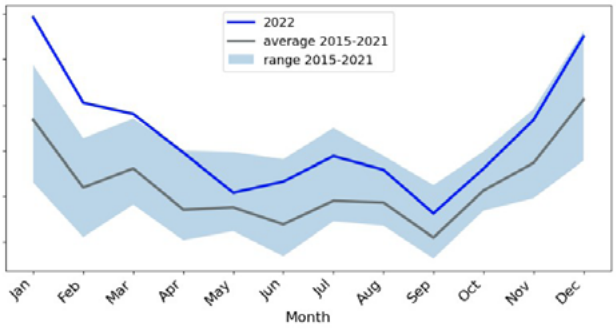
Czechia



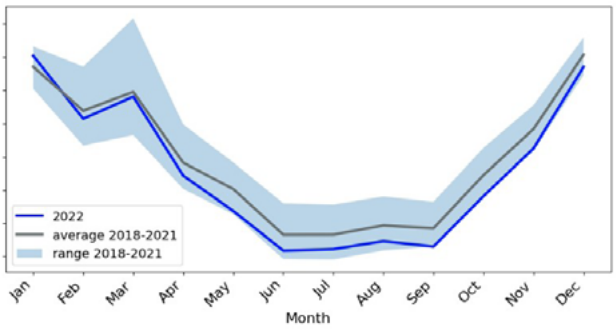
Great Britain



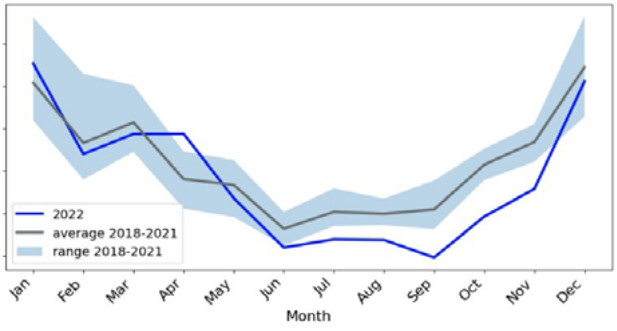
Hungary



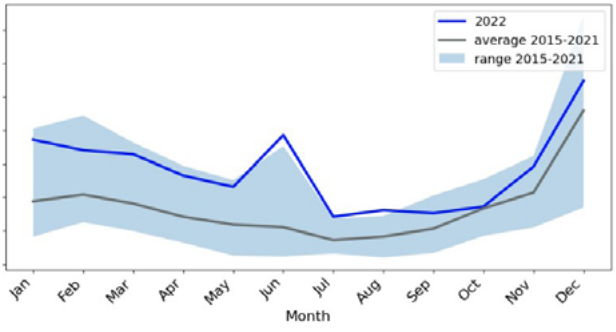
Ireland



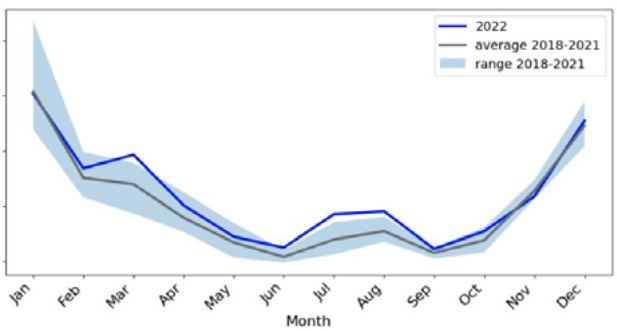
Latvia

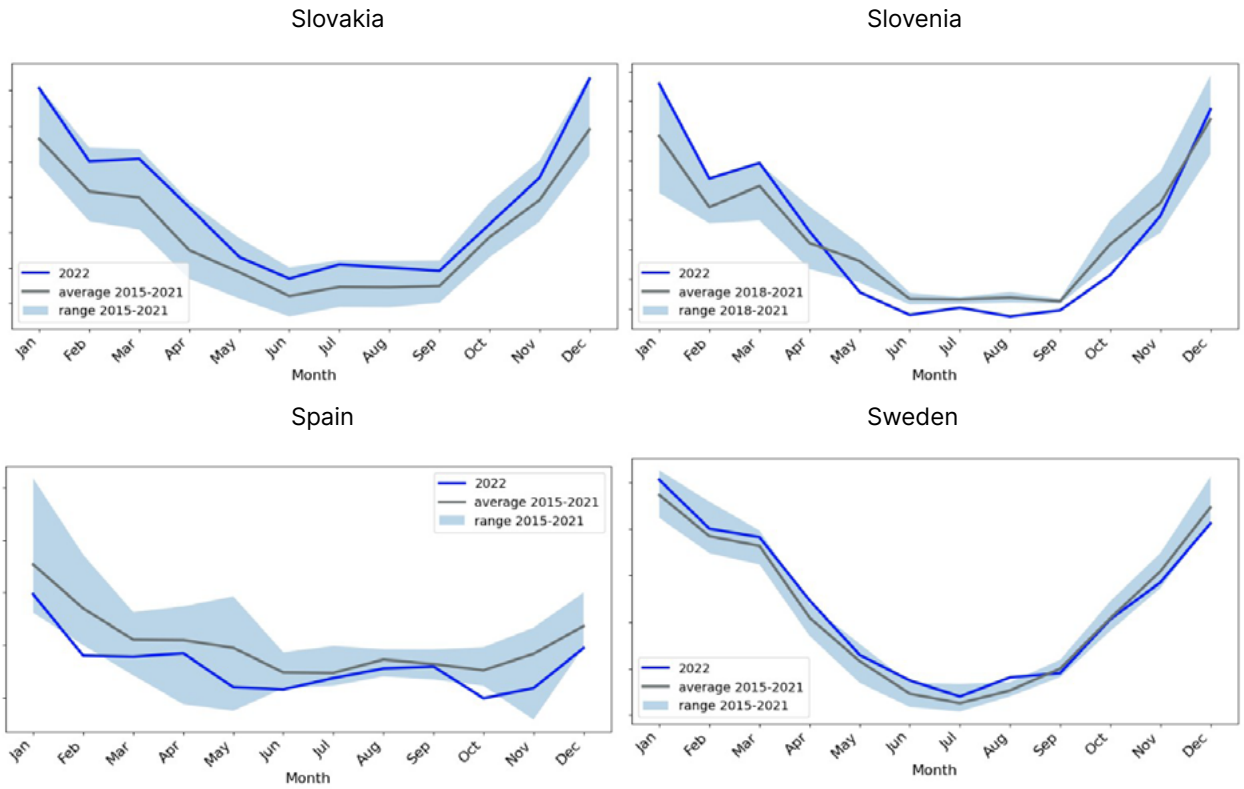


Lithuania



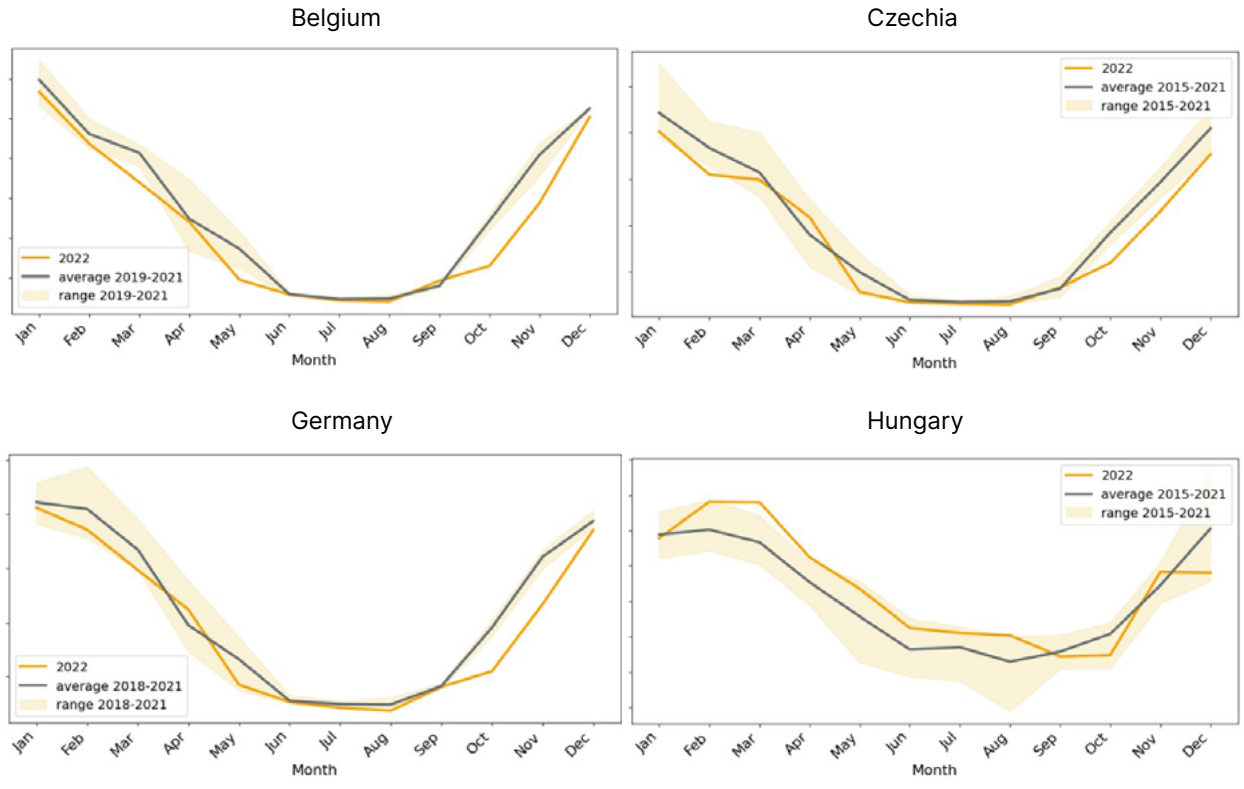
Portugal



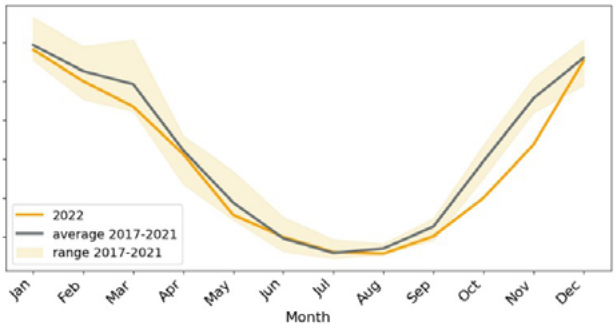


Source: VaasaETT 2023

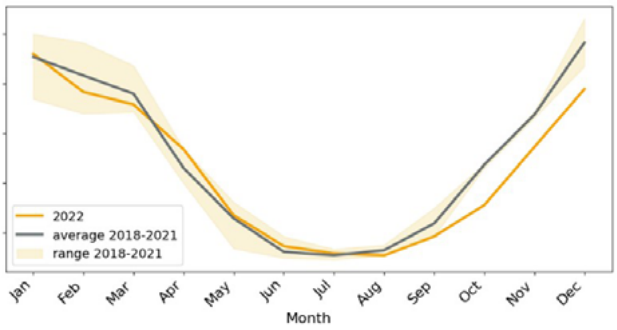
Figure 68: Annual residential gas demand pattern per country, comparison of demand between 2022 and the period 2015–2021.



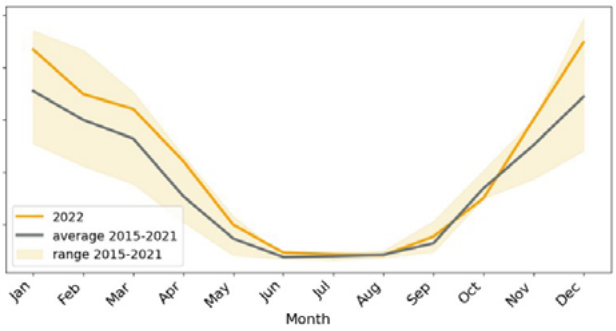
Ireland



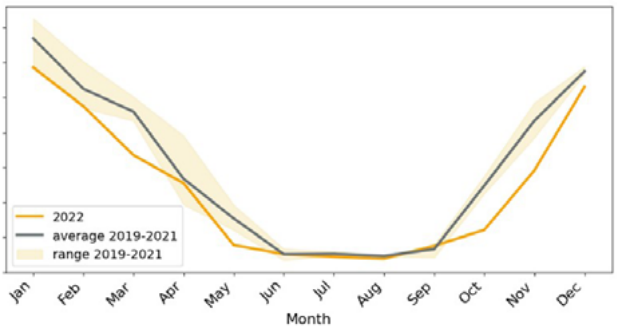
Latvia



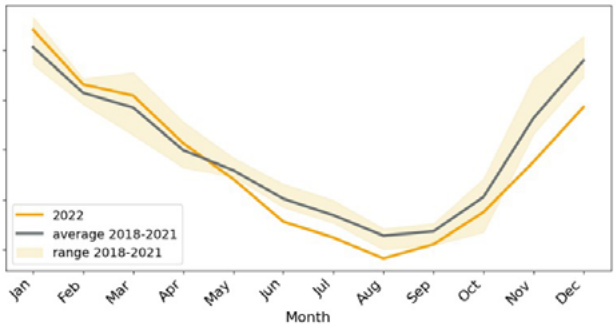
Lithuania



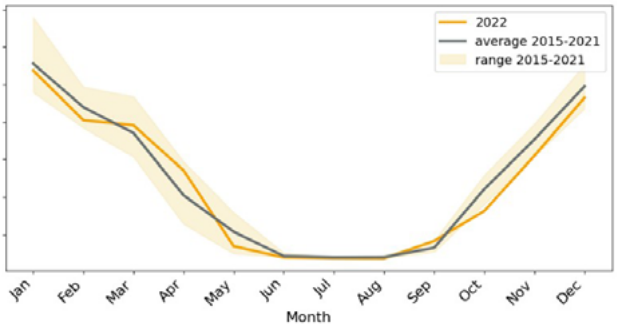
Netherlands



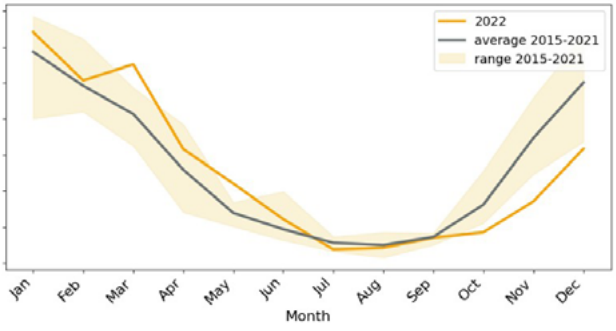
Portugal



Slovakia



Spain

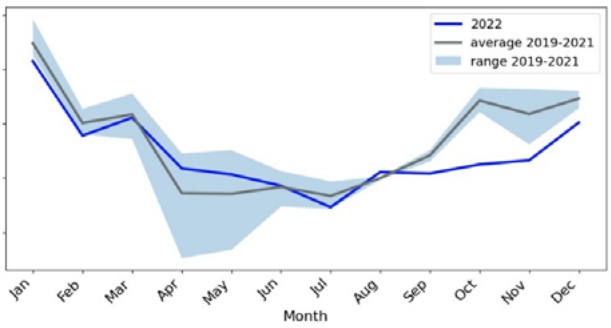


Source VassaETT 2023

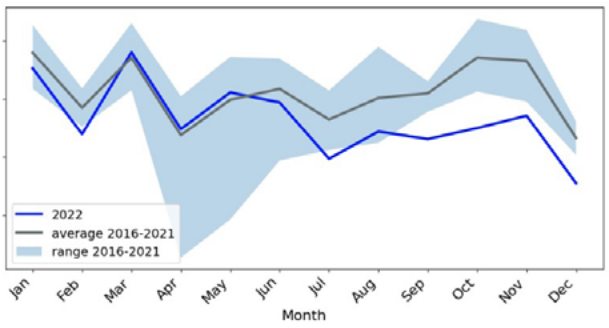
7.5. Industrial energy demand data per Member State

Figure 69: Annual industrial electricity demand pattern per country, comparison between 2022 and 2015-2021 demand.

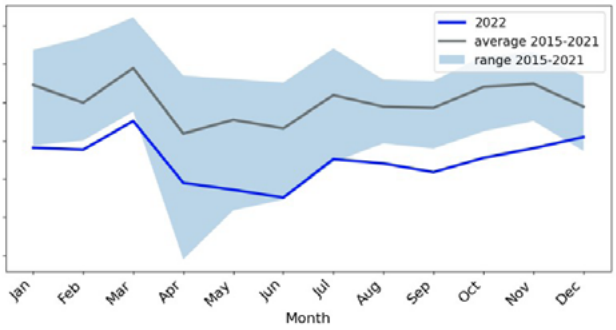
Belgium



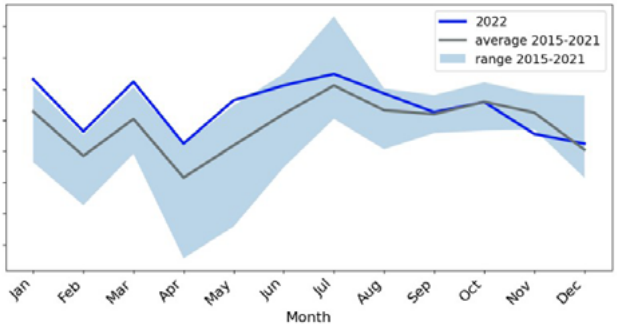
Czechia



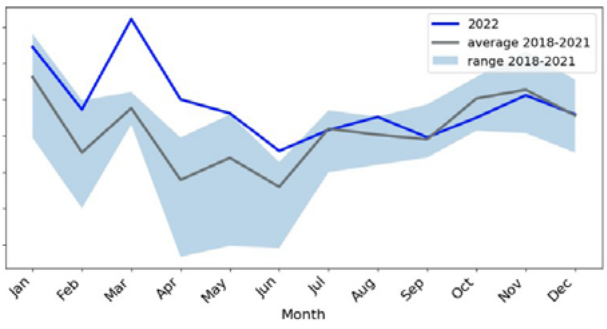
Great Britain



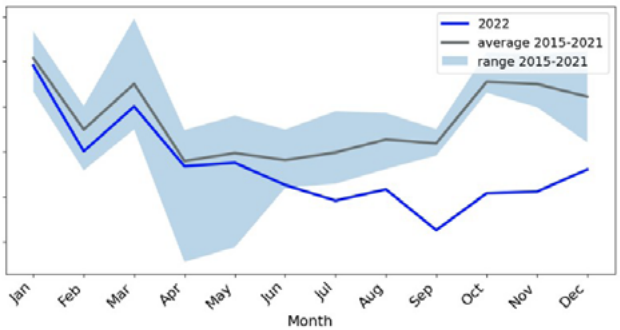
Hungary



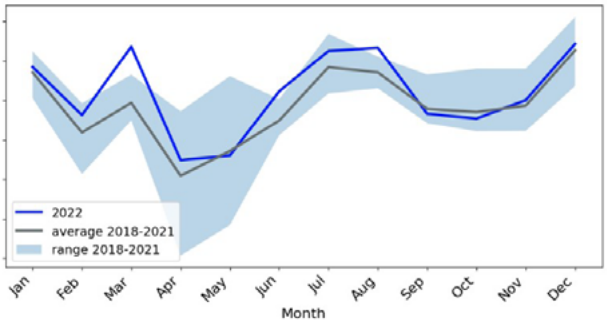
Ireland



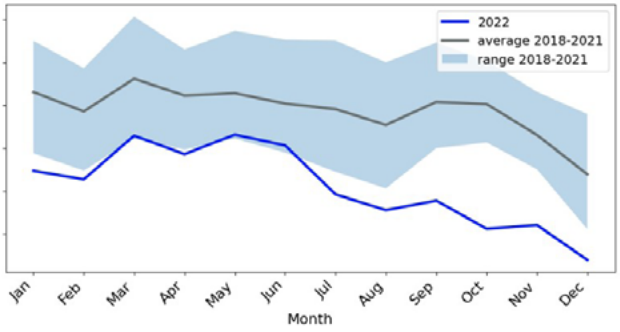
Lithuania

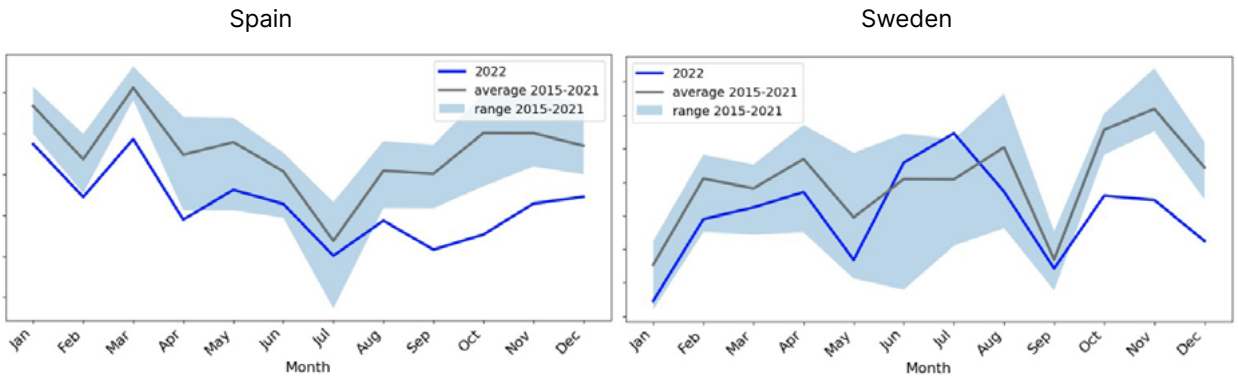


Portugal



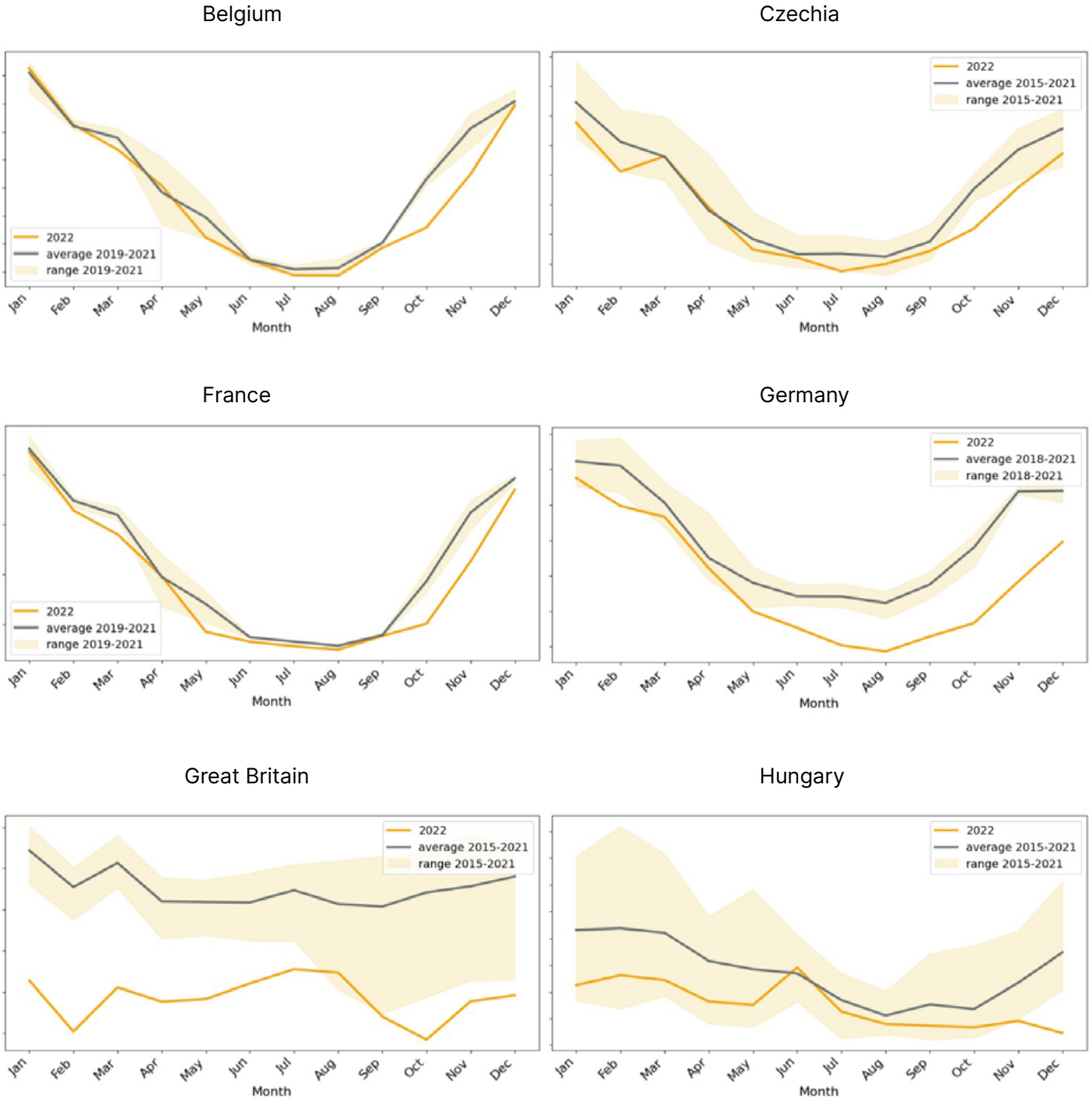
Slovenia



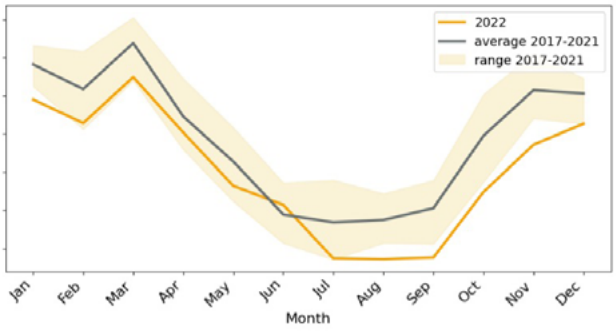


Source: VassaETT 2023

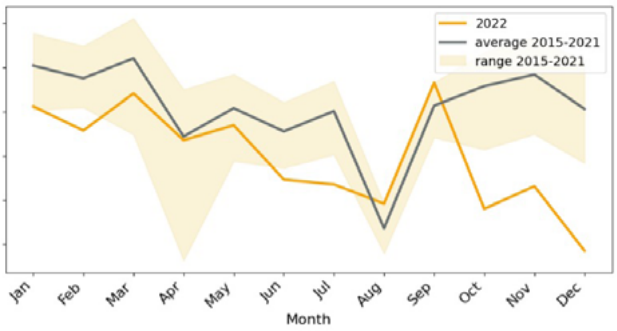
Figure 70: Annual industrial gas demand pattern per country, comparison of demand between 2022 and the period 2015–2021.



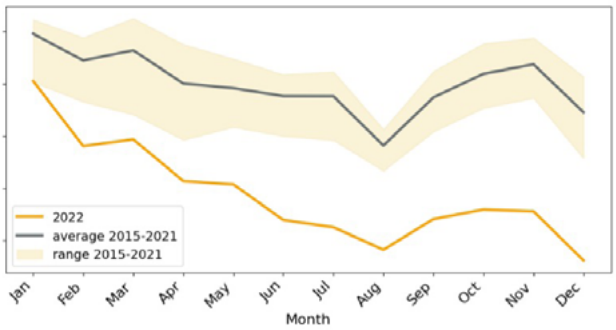
Ireland



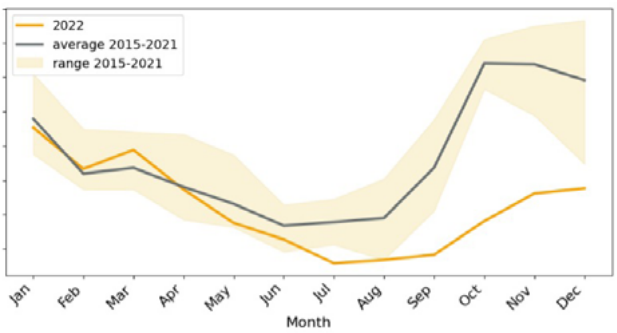
Italy



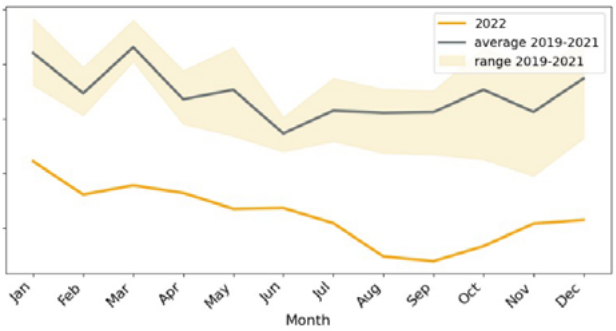
Lithuania



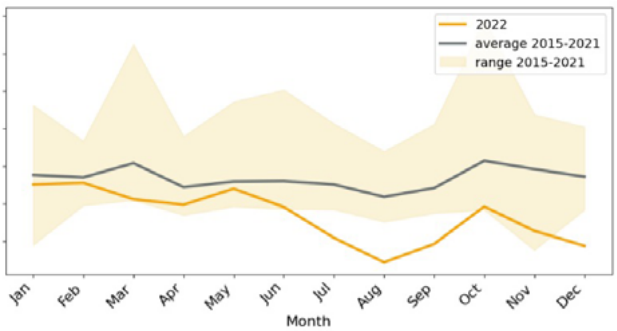
Luxembourg



Netherlands

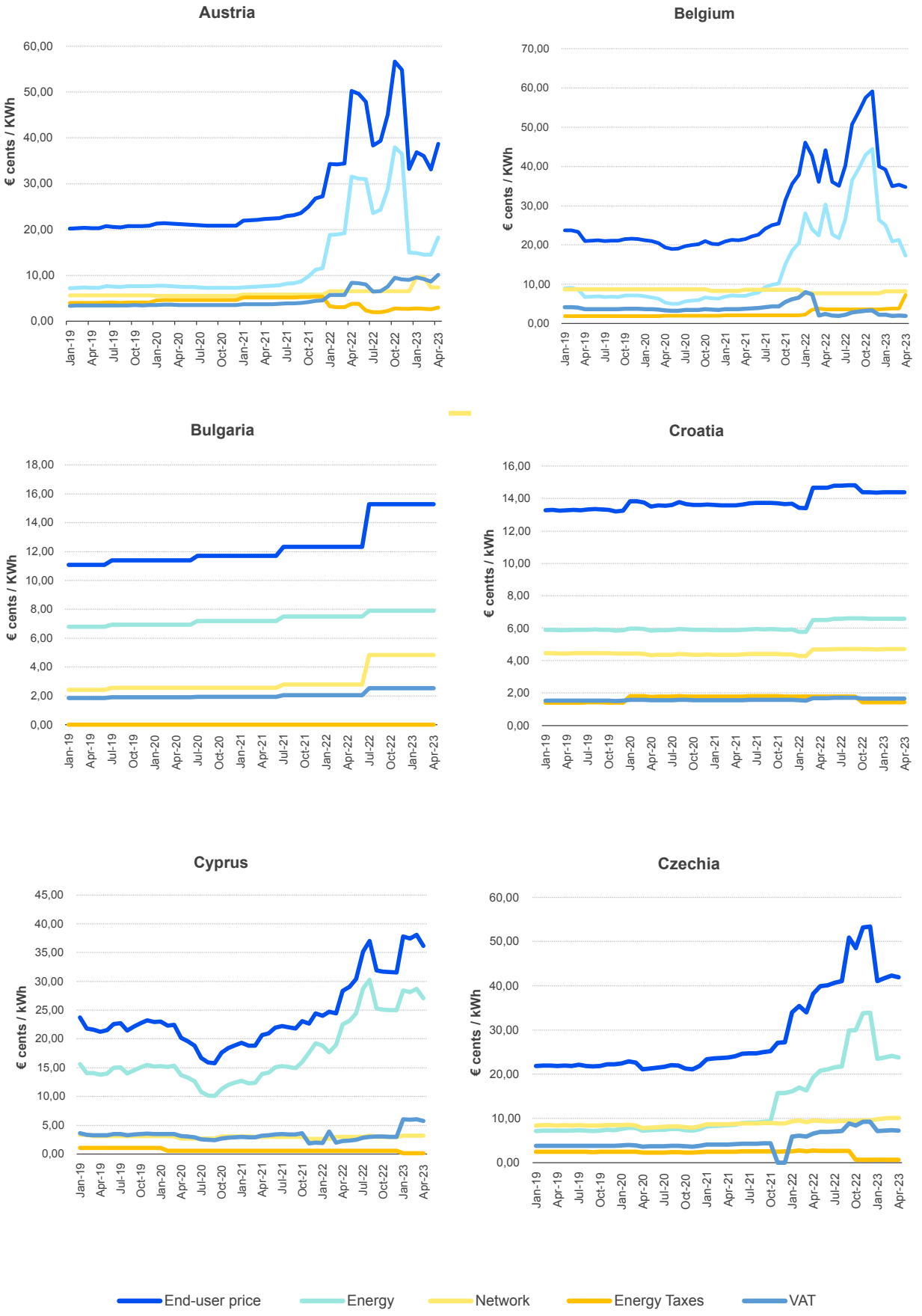


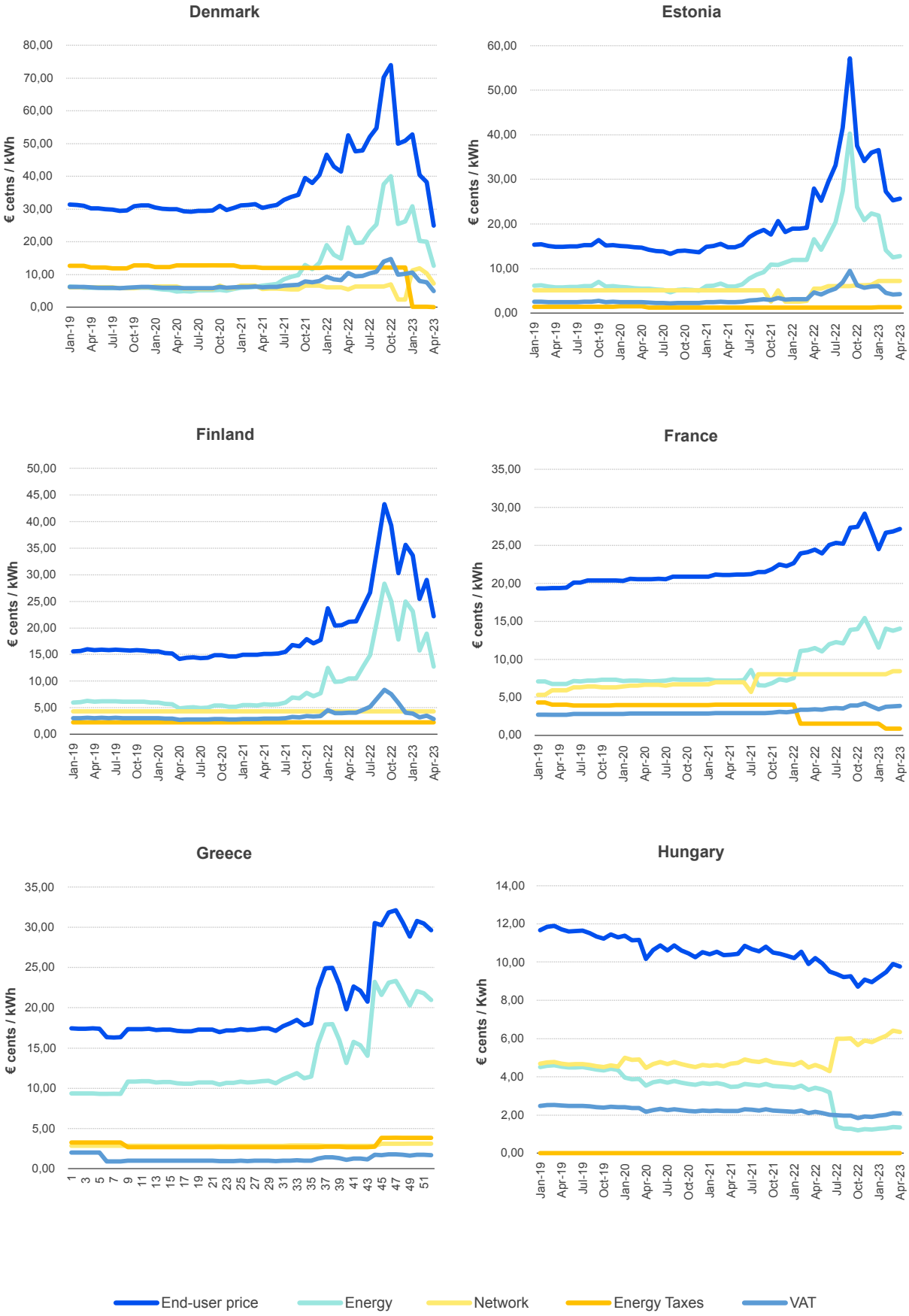
Spain

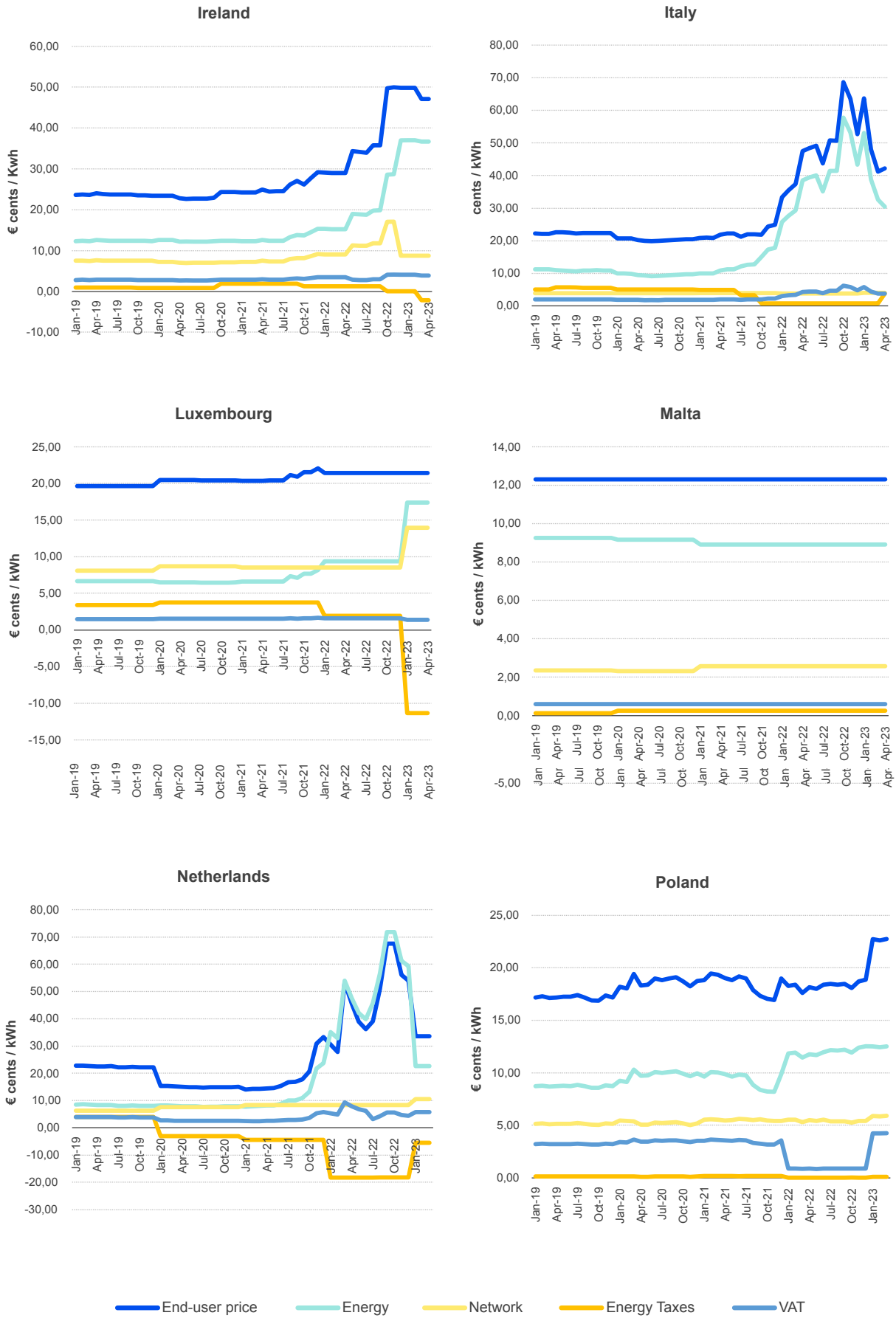


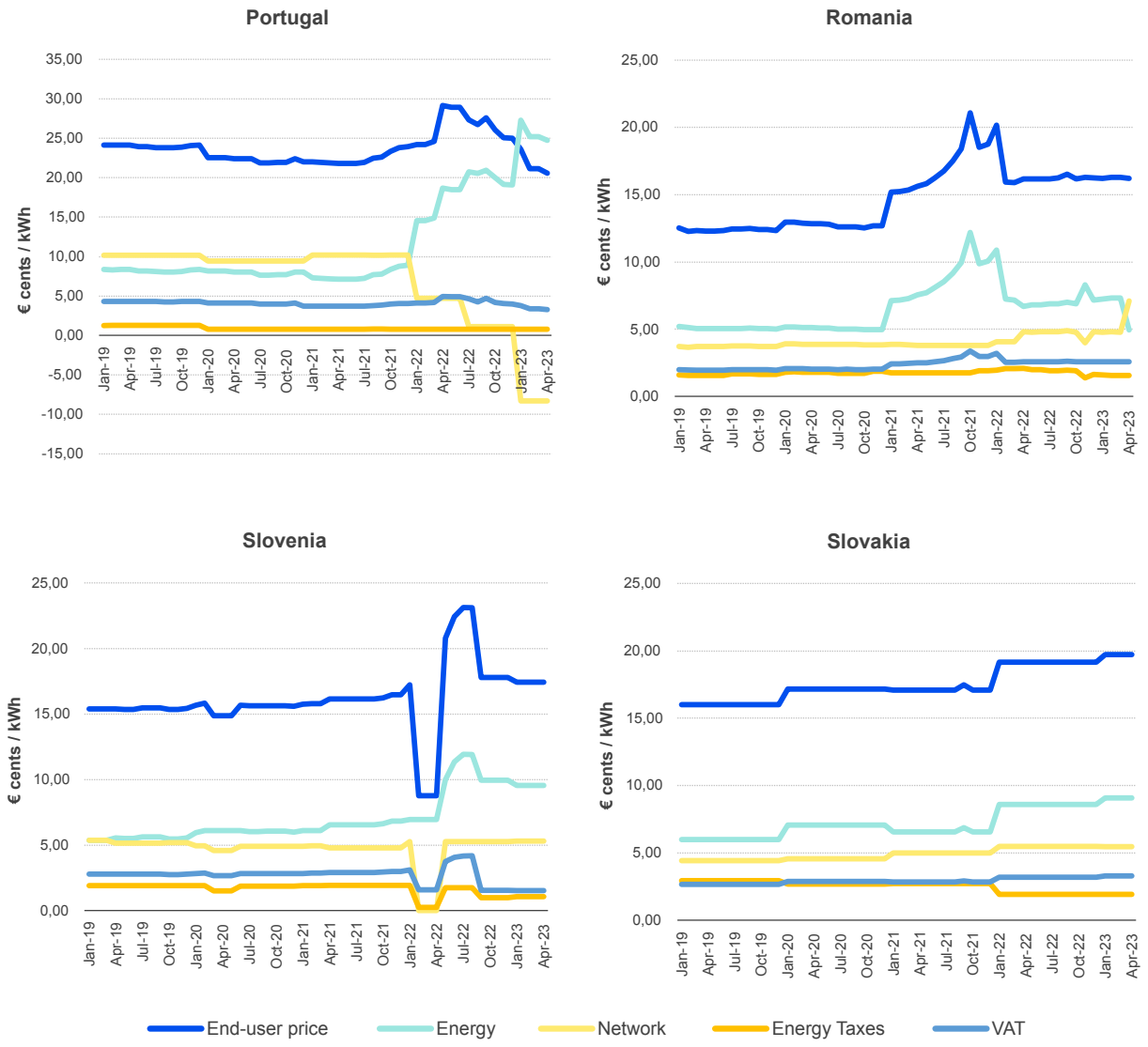
Source: VassaETT 2023

7.6. Electricity price trends per Member State



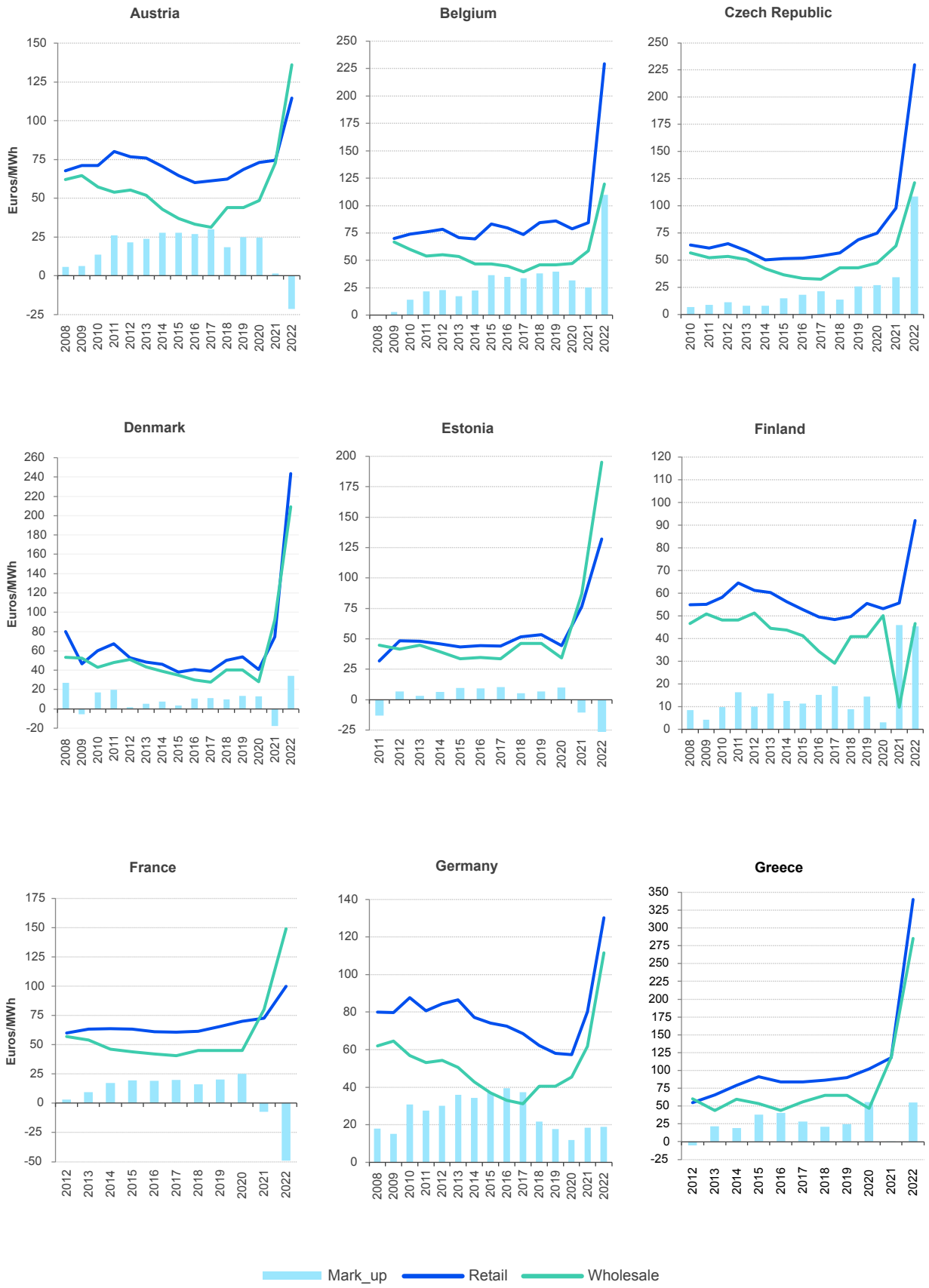

Denmark
€ cetns / kWh
Estonia
€ cents / kWh
Finland
€ cents / kWh
France
€ cents / kWh
Greece
€ cents / kWh
Hungary
€ cents / Kwh
End-user price
Energy
Network
Energy Taxes
VAT

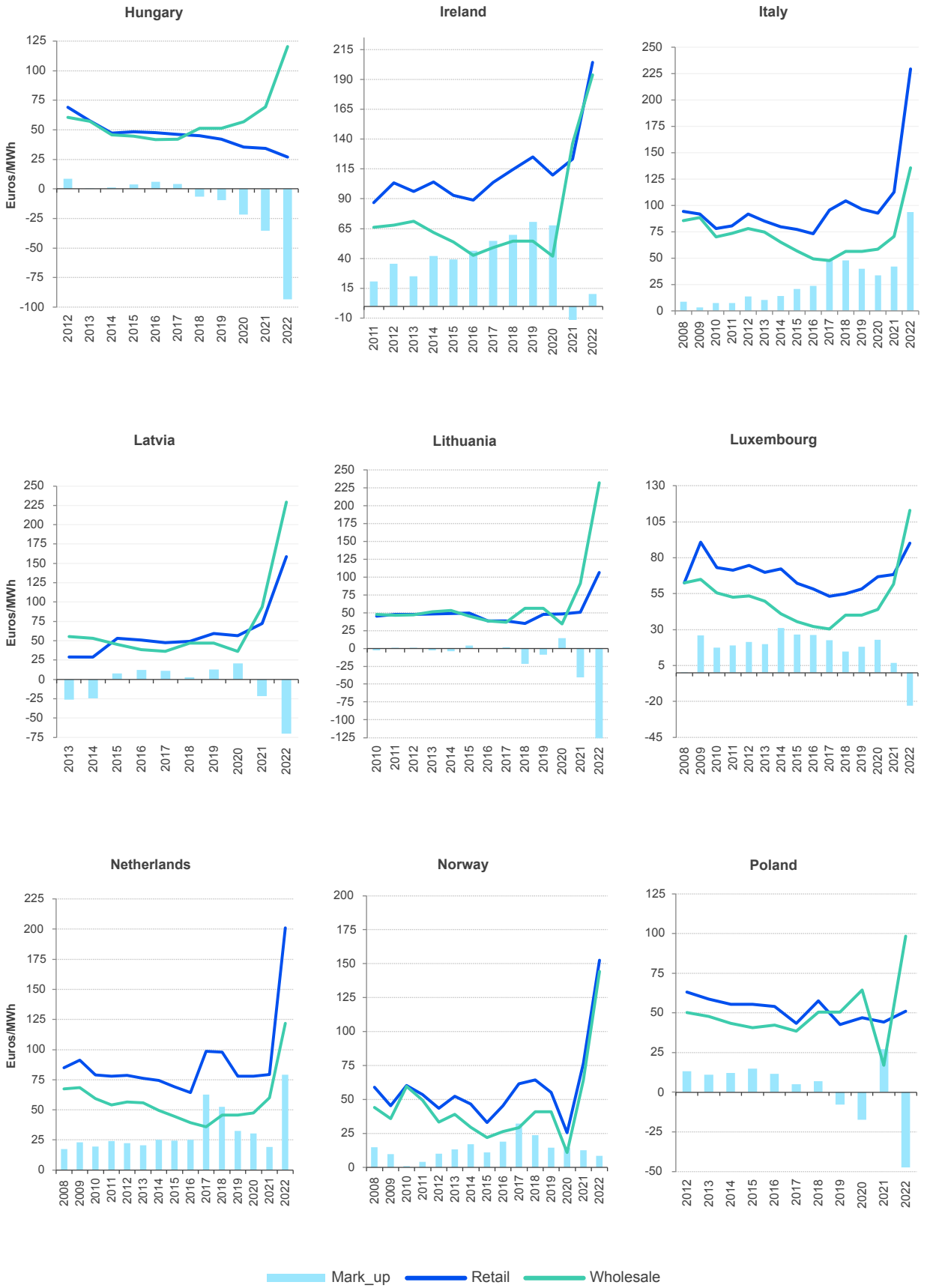

Ireland
€ cents / Kwh
60,00
50,00
40,00
30,00
20,00
10,00
0,00
-10,00
Jan-19
Apr-19
Jul-19
Oct-19
Jan-20
Apr-20
Jul-20
Oct-20
Jan-21
Apr-21
Jul-21
Oct-21
Jan-22
Apr-22
Jul-22
Oct-22
Jan-23
Apr-23
Italy
cents / kWh
80,00
70,00
60,00
50,00
40,00
30,00
20,00
10,00
0,00
Luxembourg
€ cents / kWh
25,00
20,00
15,00
10,00
5,00
0,00
-5,00
-10,00
-15,00
Malta
€ cents / kWh
14,00
12,00
10,00
8,00
6,00
4,00
2,00
0,00
-5,00
Netherlands
€ cents / kWh
80,00
70,00
60,00
50,00
40,00
30,00
20,00
10,00
0,00
-10,00
-20,00
-30,00
Poland
€ cents / kWh
25,00
20,00
15,00
10,00
5,00
0,00
End-user price
Energy
Network
Energy Taxes
VAT



Source: ACER based on VassaETT data

7.7. Mark ups - electricity

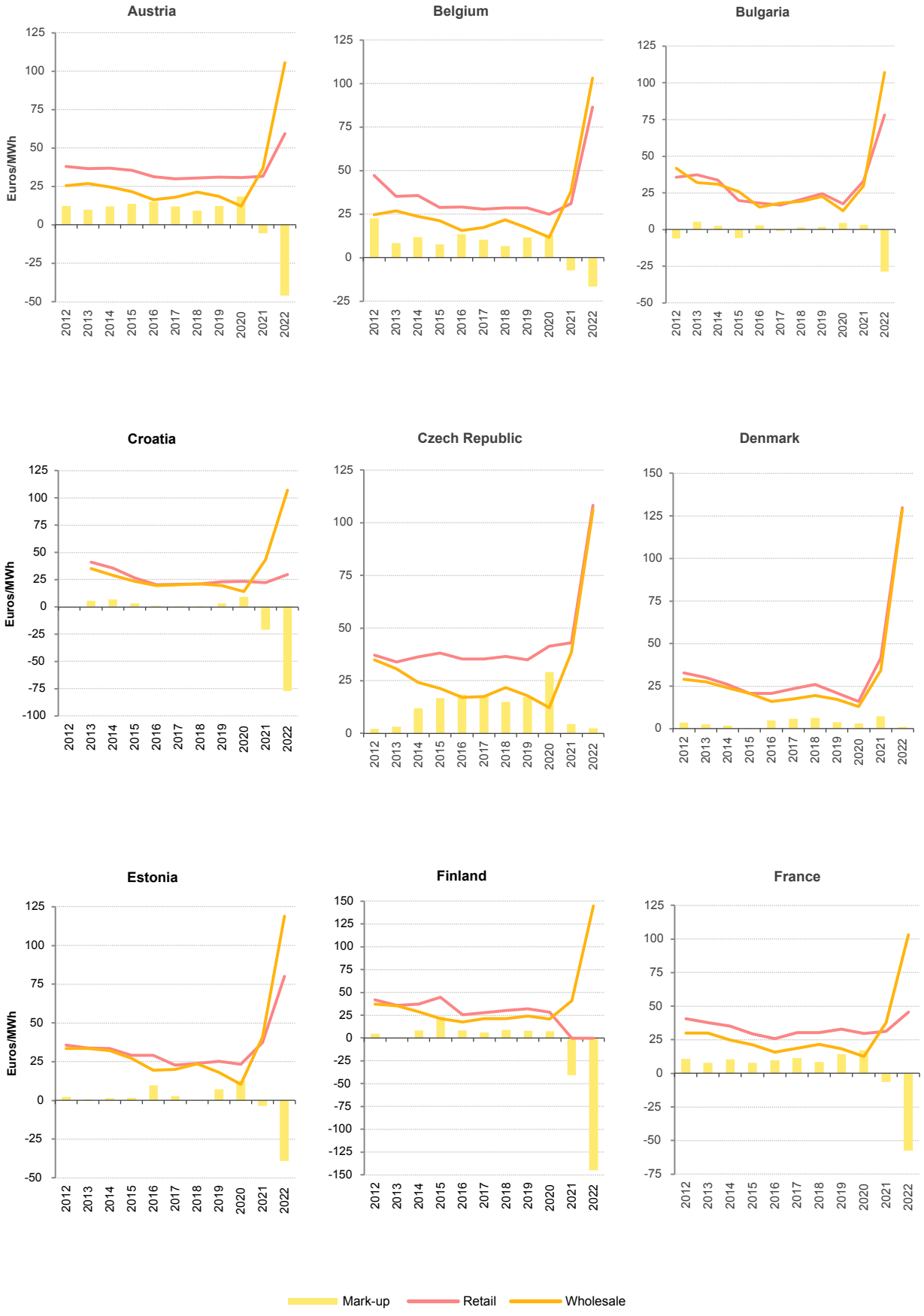


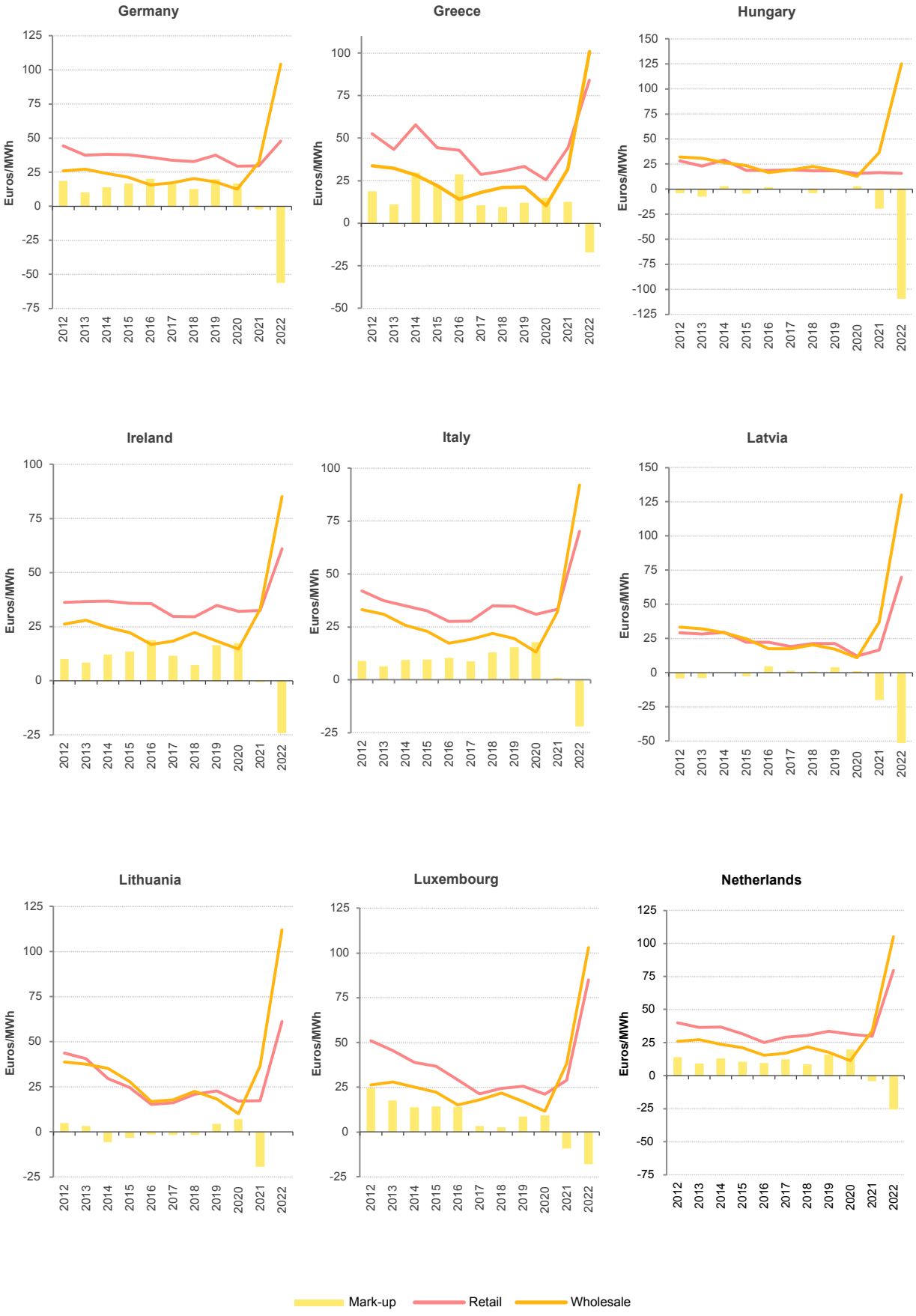

Hungary
Ireland
Italy
Latvia
Lithuania
Luxembourg
Netherlands
Norway
Poland
Euros/MWh
Mark_up
Retail
Wholesale

Source: ACER calculations based on Eurostat (July 2023), NRAs, European power exchanges data, Eurostat Comext and ICIS Heren

Note: This figure includes the average annual mark-ups in the retail electricity and gas markets for household consumers for the 2014–2022 period.

7.8. Mark ups – gas




Germany
Greece
Hungary
Ireland
Italy
Latvia
Lithuania
Luxembourg
Netherlands
Euros/MWh
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Mark-up
Retail
Wholesale

Source: ACER calculations based on Eurostat (July 2023), NRAs, European power exchanges data, Eurostat Comext and ICIS Heren

Note: This figure includes the average annual mark-ups in the retail electricity and gas markets for household consumers for the 2014–2022 period