ACER

European Union Agency for the Cooperation of Energy Regulators

CEER

Council of European Energy Regulators

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

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Energy Community

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Executive Summary

Considerations on the energy crisis

1 This Volume outlines retail energy market developments across Europe during 2021. Notwithstanding this, it also contains select 2022 information, given the significance of the current energy crisis Europe is facing.

2 The current energy crisis started as a gas price shock. With the economic recovery in 2021, global gas demand bounced back to pre-pandemic levels and outstripped supply. Furthermore, gas supply was severely affected by the fallout from the war in Ukraine, which led to a sharp decrease of Russian pipeline supplies. LNG deliveries to Europe increased strongly, attracted by very high gas wholesale prices. Since many gas-fired power generators are needed to meet electricity demand, these high gas prices translated into high electricity wholesale prices. On top of that, limited nuclear availability and low hydropower exacerbated the electricity supply situation, pushing prices upwards.

3 European energy consumers are affected by these high wholesale prices in sharply divergent ways: while some are temporarily protected by fixed-price contracts, others are directly exposed to wholesale prices. Notwithstanding this divergence, over time all consumers are likely to face unprecedented energy bill increases as it would seem difficult to withhold price exposure indefinitely.

4 In response to these energy price rises, the European Commission published in October 2021 a "toolbox"[1] of measures that could be taken by Member States to mitigate the impact of the significant 2021 wholesale price hikes on household bills. Particular attention was given to vulnerable consumers, whilst preserving the functioning of EU energy markets. Around the same time, ACER published a separate note analysing the price developments so far that year[2].

5 As retail prices often follow wholesale prices with a certain delay and are thus likely to increase in 2022, policy makers will be placed in a difficult position to find a balance when implementing measures to counter the impact of price increases. It is unfortunately likely that, following the expected price increases, a cohort of consumers that had never previously needed financial support will find themselves in need of assistance in managing their energy bills.

6 Wholesale price increases will not only affect energy consumers, energy suppliers will likely also face significant hedging and liquidity challenges, which can limit their ability to offer fixed price products to energy consumers. This clearly points to a range of competing demands, which will all require consideration for the remainder of 2022 and likely into 2023.

7 Main trade-offs that need to be considered include the following:

a) **Being too generous versus being too strict.** Ideally, financial support should be provided to those who most need it, also in light of available fiscal space for such support. In practice, this may be difficult to achieve, especially in view of the need for speedy implementation. This could lead to a choice between an approach that is 'too generous', by including some consumers who actually do not need support, or an approach that is 'too strict', missing out some who actually do. Obviously, such a choice also has implications for the state budget.

b) **Providing support while keeping incentives to reduce demand.** Taking generic measures to reduce energy prices, such as lowering taxes or levies on energy consumption, is easier to implement, but would lead to reduced incentives to reduce energy demand; in fact, such generic measures tend to benefit most those with high energy consumption. Given the tight supply conditions Europe is facing, incentives to save energy demand should be preserved. This could lead to an approach where, e.g., a certain percentage of a standard household energy consumption is provided at a social rate, while the remainder is exposed to market prices, or similar models. Ideally, such a system could be fine-tuned over time to include other relevant variables such as household make up. Such approaches should be combined with information campaigns to make consumers aware of the difficulties currently facing the energy system, and thereby the wider European economy, and highlight practical measures they can take to contribute.

1 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0660&from=EN

2 https://www.acer.europa.eu/events-and-engagement/news/europes-high-energy-prices-acer-looks-drivers-outlook-and-policy

c) **Short-term interventions versus long-term goals.** Despite the challenges to be overcome this winter, it is important to keep attention to long-term objectives for the energy system across the EU. While it may provide little comfort to energy consumers this winter, it is important to note that investing in other means of energy supply as well as structurally addressing energy demand will be an important part of the long-term solution to the current energy crisis. Hence, the need to make sure that current short-term interventions, brought about with the very best intentions, do not disincentivise or render more difficult such long-term efforts.

8 The key findings of the 2021 Retail and Consumer Protection MMR are outlined below.

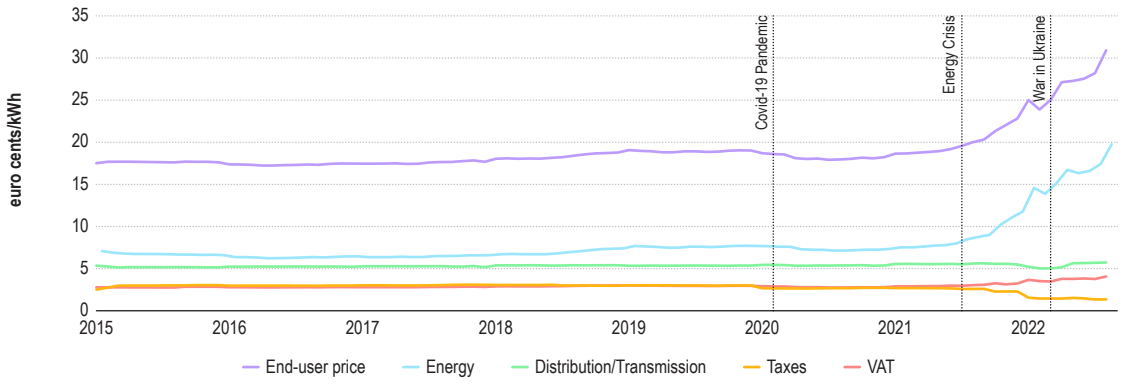
Conclusions

9 The 2021 Energy Retail and Consumer Protection Market Monitoring Report (MMR) provides information on the status of retail energy markets and the protection measures available to energy consumers in 2021. This MMR covers the European Union (EU), Norway, the United Kingdom and the Energy Community Contracting Parties (EnC).

10 As can be seen in Figure i, during the Covid-19 pandemic, electricity prices had been relatively stable until the start of the energy crisis in 2021. Since then, prices have soared dramatically. The increase was even more significant at the start of 2022, when Russian invasion of Ukraine led to additional volatility in the market and to record high end-user prices.

11 When breaking down the total price, the energy component is the main driver of the increase, which nowadays constitutes a larger share of the total price. Network costs remain rather stable and even slightly decreased in some cases due to governments' support measures to mitigate the rising prices. The most significant decrease during this period is in the energy taxes component. The reason behind the decrease are temporary support measures implemented in most European markets.

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



Source: VaasaETT

Note: The graph represents weighted averages of tariff components offered by the leading suppliers in the capital city of each country. Prices concern consumers with the typical consumption profile of each market. Data is collected from price comparison sites and / or supplier websites. Prices correspond to the first day of the month.

12 The level of supplier bankruptcy and thus market exit increased in 2021 following wholesale price increases. This made it difficult for suppliers to meet their obligations. This level of supplier exit in turn resulted in a decrease in the availability of consumer offers available in the retail energy markets. In turn, this has resulted in an increase in concentration levels, indicating less competition in retail markets.

13 A limited number of NRAs monitor the uptake of offers in their market. NRAs that do monitor the uptake of offers show that the majority of consumers have a fixed price contract with their energy supplier. While such contracts limited the exposure of consumers to energy price increases in 2021, such contracts will see significant increases during 2022 and into 2023.

14 As existing contracts reach their end, suppliers will face significant increases in the cost of procuring on the spot and forward markets. This will result in a likely unprecedented increase in retail energy prices during 2022 and likely into 2023. As outlined in the ACER assessment of the EU's wholesale electricity market design[3], energy supplier working capital requirements (e.g., guarantees) relating to wholesale markets have risen to very high levels during the energy crisis. Due to increasing hedging costs, suppliers will likely offer less (or significantly more expensive) fixed price energy contracts.

15 Member States have implemented measures with the intention of decreasing the cost burden for energy consumers, the speed of which must be commended. However, while the energy crisis will affect all consumers, it is the vulnerable and energy poor that will be disproportionately affected by price increases expected in 2022 and 2023.

16 Some NRAs have comprehensive, or a variety of roles and tasks related to energy poverty – leading to different levels of engagement with the problem of energy poverty. NRAs report that they offer expertise in defining and measuring energy poverty in nationwide working groups (e.g., Austria and Belgium), give advice to consumers (e.g., Germany), monitoring (e.g., Luxembourg) while other NRAs state that they have some role in implementing regulatory measures to assist combatting energy poverty (e.g., Italy) or have no role at all (e.g., France, Norway, Spain, Sweden).

17 Regulated prices are still applied in some Member States and in all EnC CPs. While the RePowerEU publication permits such use, it is clear that in some markets, regulated prices are available to all consumers rather than targeted at those most in need.

18 Billing requirements are failing to meet the criteria as set out in the Electricity Directive in nearly all Member States. This lack of compliance impacts negatively the ability of consumers to make informed decisions regarding their energy needs.

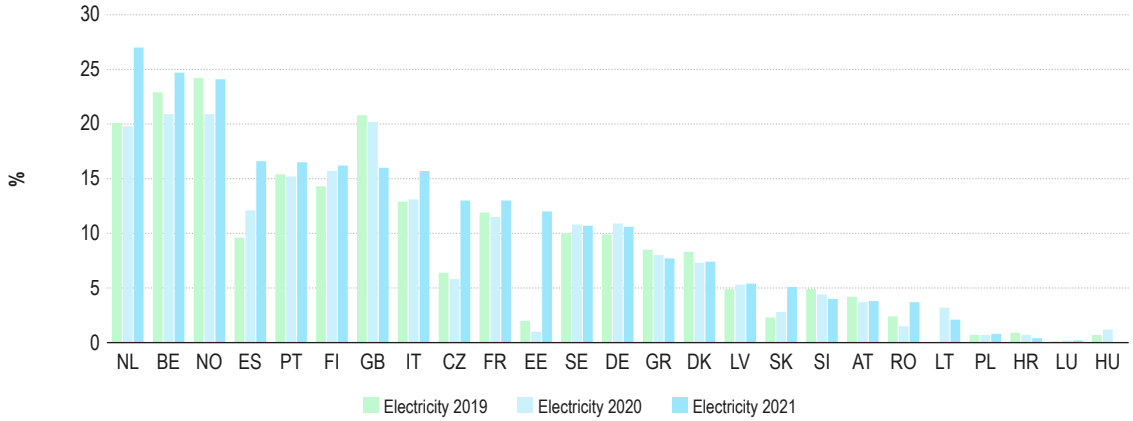
19 In 2021, Supplier of Last Resort (SOLR) mechanisms and procedures had to be widely utilised to dampen the effects of supplier failures on millions of European consumers. While SOLR processes have worked in practice, affected consumers often faced (significantly) higher SOLR prices subsequently – especially in the 2021 with increasing prices. More widespread reluctance of suppliers towards greater customer acquisition during such circumstances may call for adaptations of SOLR provisions to ensure universal service in periods of crisis.

20 Consumer complaints are measured in an inconsistent manner across Member States. The recording of complaints is more detailed in some Member States, while in other cases, DSO and supplier complaints are grouped together. This may make it difficult to identify the true source of the consumer complaint and in turn difficult for NRAs and alternative dispute resolution bodies (ADRs) to identify consumer issues and thus for NRAs to implement policy improvements.

21 While switching rates vary across the Member States, rates increased in most markets across the EU indicating that consumers became more aware of options in their markets.

3 https://www.acer.europa.eu/events-and-engagement/news/press-release-acer-publishes-its-final-assessment-eu-wholesale

Figure ii: Percentage of external switching rate of household consumers (by number of eligible meter points)

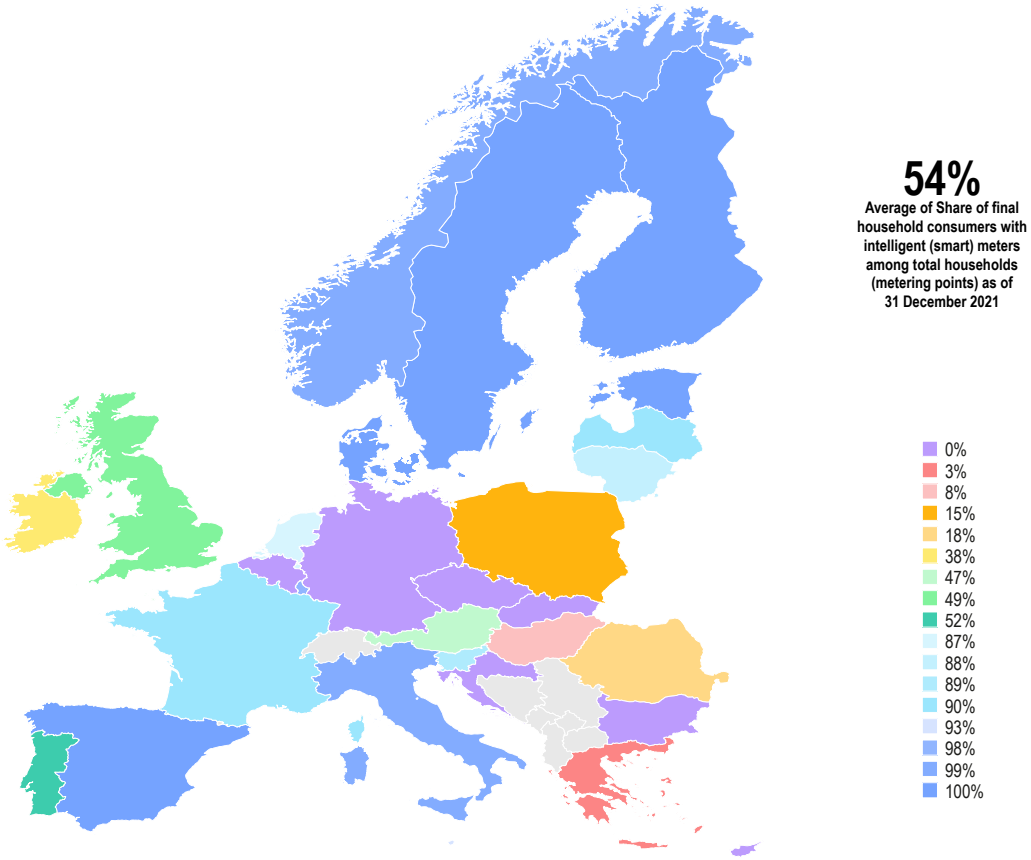


Source: CEER 2022

Smart meter rollout

22 The smart meter rollout is continuing across the EU but varies across Member States. Smart meters are essential to enable the active participation on the part of energy consumers. A significant barrier for energy consumers to participate actively is the lack of information. Average penetration across the EU was 51% in 2022.

Figure iii: The status of the roll-out of electricity smart meters at the end of 2021



Source: CEER 2022

Energy Prices

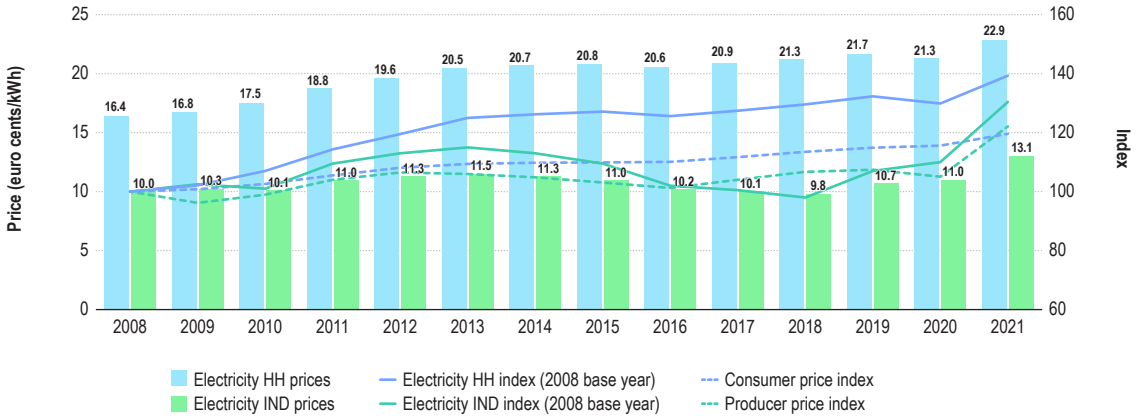
23 Electricity prices for EU consumers increased in 2021 for household and industrial consumers. Since 2010, prices have increased on average by 39.3% in nominal terms.

a) Average household electricity prices increased by 7.5% to 22.9 euro cents/kWh in 2021 in comparison to 2020;

b) Average industrial consumer electricity prices increased by 19% to 13.1 euro cents/kWh in 2021 compared to 2020 prices;

c) Unlike previous years, energy price changes at retail level were driven by the energy component as opposed to the non-contestable aspects of the energy bill in previous years.

Figure iv: Trends in final electricity prices for household and industrial consumers in the EU – 2008–2021 (euro cents/kWh and index change, 2008 = 100)



Source: ACER 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) (May 2022).

Note: Prices 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 in accordance to the size of individual MSs.

24 Large differences in electricity prices persist across the EU, Norway and the EnC CPs.

a) German household consumers paid 32.1 euro cents/kWh (the highest in the EU). This is more than three times the price paid by Hungarian household consumers (10 euro cents/kWh);

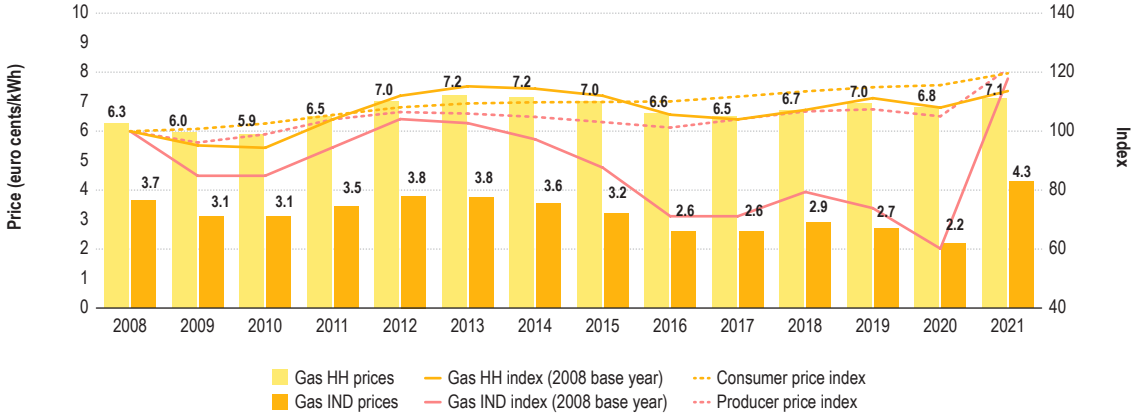
b) Even greater variations were recorded in the industrial market, with industrial electricity consumers in Denmark paying 27 euro cents/kWh in 2021 (the highest in the EU), more than four times higher than the electricity price paid by industrial consumers in Luxembourg in 2021 (the cheapest at a price of 6.4 euro cents/kWh).

25 Gas prices increased in 2021 in comparison to 2020 for both household and industrial consumers.

a) In 2021, average household gas prices across the EU increased by 4.4% with an average price of 7.1 euro cents/kWh;

b) Industrial gas prices increased by 95.4% with such consumers paying 4.3 euro cents/kWh.

Figure v: Trends in final gas prices for household and industrial consumers in EU MSs – 2008-2021 (euro cents/kWh and index change, 2008 = 100)



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) - (June 2022).

Note: Prices 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 in accordance to the size of the individual MSs.

26 As with the electricity market, there were variations in the gas markets across the EU in 2021:

a) Household gas consumers in Sweden paid three times more (15.5 euro cents/kWh) than the 3.1 euro cents/kWh paid by Hungarian household gas consumers;

b) In the industrial market, consumers in Denmark paid more than three times (10.8 euro cents/kWh) the price paid by consumers in Sweden (2.5 euro cents/kWh);

27 The difference between wholesale energy prices and retail energy prices (markup) became negative in many Member States.

Figure vi: Difference between wholesale and retail prices

Source: ACER calculations based on Eurostat (July 2022), NRAs, European power exchanges data, Eurostat Comext and ICIS Heren;

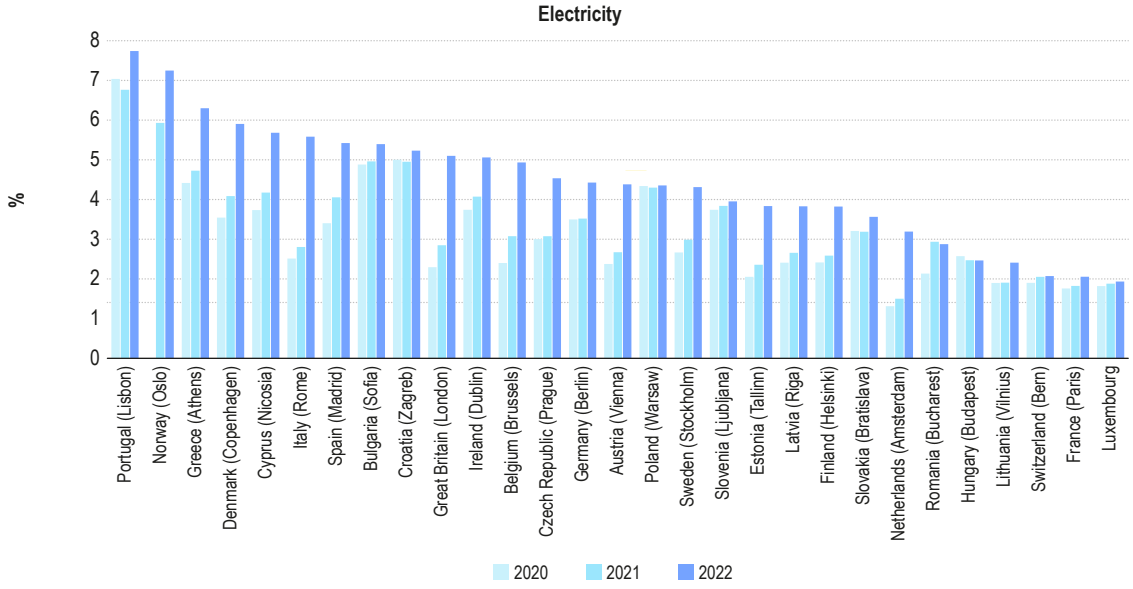
Note: This figure includes the average annual markups in the retail electricity and gas markets for household consumers for the 2014–2020 period.

28 In response to significant wholesale energy prices in both gas and electricity, many markets recorded negative prices i.e., the retail energy component being sold below the cost of the wholesale component. Such results are likely driven by the hedging strategies employed by energy suppliers in advance of and during 2021. However, such discrepancies are not sustainable and as such consumers will likely see a significant increase in energy costs during 2022.

Energy poverty

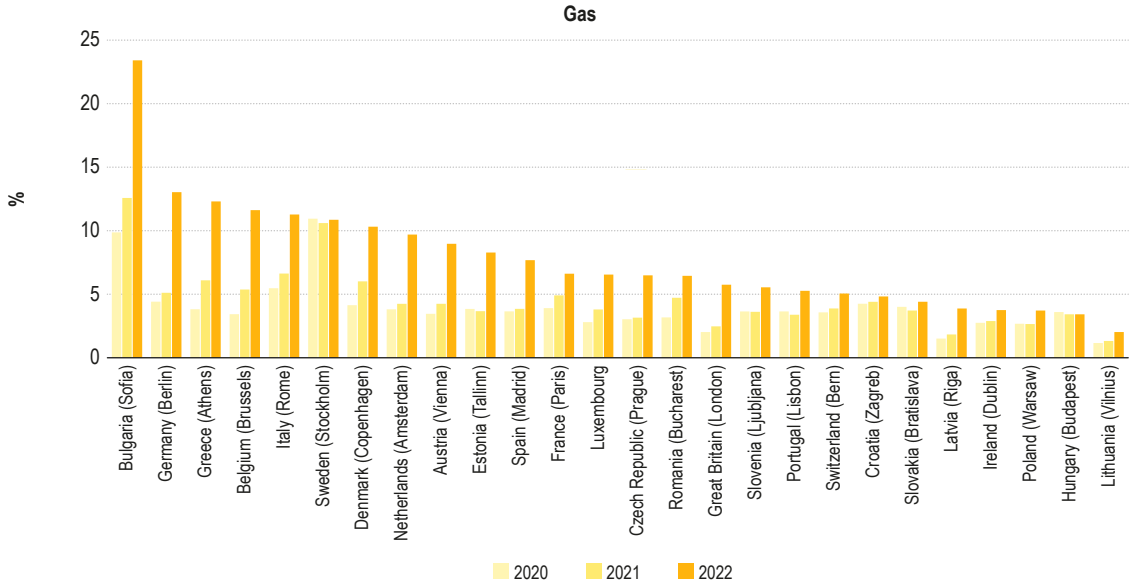
29 Energy poverty has been defined only in eight Member States. Following energy price increases during 2021 and 2022, household energy expenditure has increased across Member States.

Figure vii: Household expenditure electricity (top) and gas (bottom) in 2020, 2021, and 2022



Source: VaasaETT

Note: The above graph shows the all-in electricity bill (including energy, taxes, network charges and subsidies) for selected markets (capital cities) as a percentage of the latest available corresponding years' real adjusted gross disposable income of households per capita in PPS (Purchasing Power Standard). 2022 Price data until September. EU27 markets (capital cities) are aggregated unweighted. Source of disposable income data: Eurostat



Source: VaasaETT

Note: The above graph shows the all-in natural gas bill (including energy, taxes, network charges and subsidies) for selected markets (capital cities) as a percentage of the latest available corresponding years' real adjusted gross disposable income of households per capita in PPS (Purchasing Power Standard). EU27 markets (capital cities) are aggregated unweighted. 2022 price data until September. Source of disposable income data: Eurostat.

Recommendations

Some consumers will need assistance to manage energy price increases

30 Retail energy price increases are likely to continue throughout 2022 and likely into 2023. Accordingly, NRAs should consider how suppliers could assist consumers in managing such price increases in advance of consumers falling behind with their payments. Such measures could involve recommending that consumers enter into payment plans in advance of the winter season to limit the impact of higher energy bills during the winter months.

Support measures

31 Member States should ensure that financial support measures are targeted and aimed at those most in need. In considering how best to target this group of consumers in need, Member States, NRAs and other appropriate bodies should consider the household expenditure on electricity and gas, and household income.

32 A significant, albeit falling share of the energy bill is comprised of taxes and VAT. Notwithstanding the fiscal implications for Member States of reducing taxes, a quick and simple way to lower costs is through the elimination of taxes. However, such measures may not be particularly targeted.

33 While the efficiency of buildings may not be within the scope of an NRA's powers, a speeding up of efficiency improvements will ultimately decrease consumer energy consumption and in turn reduce operational expenditure.

Review of supplier of last resort mechanism

34 NRAs should perform an assessment of the effectiveness of the Supplier of Last Resort (SOLR) mechanism in their markets to identify areas of improvement in the process following a significant utilisation of the mechanism in 2021. In addition, NRAs and Member States should ensure that an appropriate balance is in place between the risk undertaken by a supplier and the burden being placed upon consumers following supplier bankruptcy. In ACER and CEER's view, it is not appropriate for a supplier to offer a fixed price product to a consumer when they have failed to secure such a product in the wholesale market or are not able to cover the risk in another way.

Monitoring of existing contracts

35 It is apparent that while NRAs are aware of what contracts are being offered to consumers, not all NRAs are monitoring the uptake of such contracts. To ensure ACER's ability to fully monitor retail energy markets, ACER recommends that all NRAs track and monitor the uptake of contracts in their retail energy markets.

Vulnerable consumers and energy poverty

36 NRAs and Member States should identify the potential impact of energy price increases on energy consumers to identify the potential percentage of consumers that are at risk of falling into energy poverty. At a minimum, NRAs should be informed about energy poverty in their Member State. Even if there is no direct responsibility (for NRAs), current costs affect the financial situation of consumers and thus have direct impact on energy poverty and distributional issues. The concepts of vulnerable consumers and energy poverty enable policy makers to define target groups for specific measures where their social welfare system reaches its limit.

Comparison tools

37 While comparison tools are widely available in Member States, it is apparent that existing comparison tools are not meeting the requirements as set out in Article 14 of Directive 2019/944. As such, ACER recommend that NRAs review the compliance of publicly operated comparison tools in their Member State. Where a Member State has not appointed a body to certify a comparison tool website, such a body should be appointed if the publicly operated comparison tool does not meet the criteria as set out in Directive 2019/944. This is required so that consumers in each market can access their market's trusted tool.

38 The monitoring of comparison tool usage can be beneficial in determining the level of activity among retail energy consumers. As such, NRAs in conjunction with the operator of an independent comparison tool website should monitor comparison tool usage in their market on an annual basis and report on the results. Such results should then in turn be utilised to identify opportunities to enhance utilisation of comparison tools among energy consumers. If a comparison tool receives a trust mark, the operator of such a comparison tool should provide an annual report on utilisation and make recommendations to improve traffic.

39 Finally, NRAs and, where appropriate, NRAs in conjunction with the operator of the independent comparison tool should promote comparison tools with the aim of increasing utilisation of said tool among energy consumers in their market.

Ensure consumer bills do not meet the requirement of Directive 2019/944

40 Given the importance of energy bills for the information of energy consumers, NRAs should undertake a review of the bills being issued to energy consumers in their markets. It is vital that consumer bills meet the requirements of Directive 2019/944 while being clear and easy to understand for the consumer.

Implementation of targeted consumer information campaigns

41 In response to the energy crisis, it is important that energy consumers can play their part to decrease their energy consumption. NRAs and Member States should consider how to regularly inform energy consumers of when may be the best time to consume energy with the aim of levelling the demand curve. One example might be for Member States to raise the awareness of news and weather channels about "energy weather"; this could, e.g., be included as a section in daily weather forecasts. Measures could also include the provision of regular media updates and/or the use of push notifications and/or SMS notifications issued by suppliers to consumers following a request by the transmission system operator (TSO) and the distribution system operator (DSO).

Poor monitoring of consumer complaints limits the ability of NRAs to deliver improvements for consumers

42 Complaint data must be better categorised, analysed and interpreted to understand where retail markets can be improved. ACER and CEER strongly advise that all NRAs systematically register electricity and gas market complaints, as well as supplier and DSO complaints, separately. Where the NRA is not responsible for complaints, the NRA should engage with the appointed Alternative Dispute Resolution body in a timely manner to improve the registration of complaints in order to improve the ability of ACER and CEER to monitor consumer complaints and ensure that they are processed both efficiently and effectively. As this is not yet done in many Member States, it represents a barrier to the delivery of improved services that energy consumers receive from suppliers and DSOs.

1. Introduction

43 This market monitoring report (MMR) covering 2021 is being published at a key juncture in the energy transition. The energy transition is not solely focused 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 of the consumer in the transition and will open up new opportunities for the energy consumer which have not been previously available.

44 2021 saw a significant increase in wholesale energy prices towards the end of the year. This increase resulted in negative outcomes for consumers, energy suppliers, and business users. An increase in the number of energy suppliers finding themselves in bankruptcy increased during 2021 as some suppliers found themselves in a position where they were unable to meet their consumer contract obligations following unprecedented wholesale price increases. Larger energy users saw a significant increase in their energy costs which will eventually be passed onto their consumers.

45 The impact on retail energy consumers varied across the European Union. For example, in markets where retail prices were directly linked to wholesale prices, retail consumers saw a sudden and significant increase in the cost of their energy. Consumers in markets with more fixed prices were in the initial stages to an extent protected from such increases. However, those consumers will face significant cost increases during 2022. Given the cost increases facing consumers and the fact that wholesale prices have increased again in 2022, this report contains some pricing information from 2022.

46 This report is structured in the following format:

a) Section 2 outlines the status of retail market structures across the EU in 2021. In this section, readers can find information regarding supplier numbers, market concentration, energy consumption, and CO_2 emissions;

b) Section 3 examines the conduct of consumers and suppliers with regard to their participation in energy markets across the EU and EnC. Given the focus of the Clean Energy Package regarding the role of consumer during the energy transition, this section places additional focus on consumer conduct;

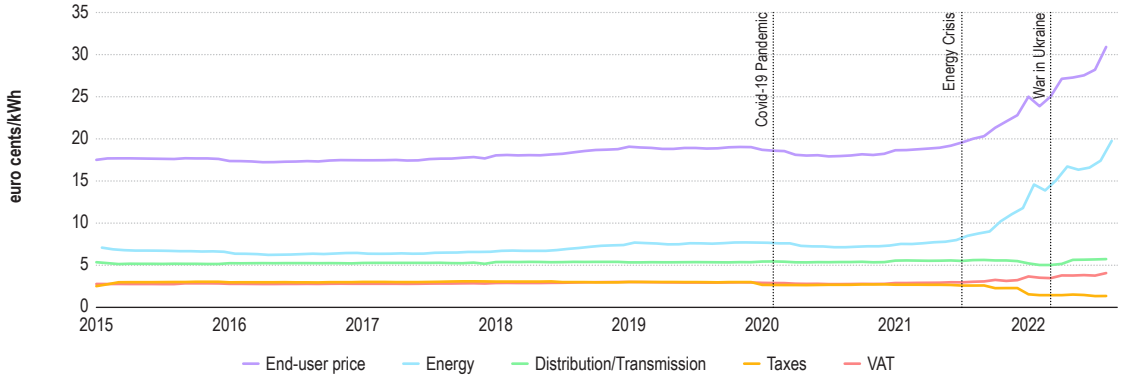
c) Section 4 shows the results of analysis of the performance of retail energy markets in 2021. Information regarding energy prices in 2021, price intervention, the treatment of energy poor and vulnerable consumers, and finally consumer complaints can be found in this section.

1.1 Price increases in 2021

47 2021 saw a significant increase in wholesale energy costs towards the second half of 2021 as energy demand increased across Member States following the removal of COVID-19 restrictions. Energy commodity prices reached unprecedented high levels across Europe. This was particularly the case towards the second half of 2021. Gas prices in October 2021 were, for example, 400% higher than in April 2021. As gas is used by many Member States for electricity generation, this increase has a strong impact on the cost of electricity.

48 As can be seen in Figure 1 and Figure 2 below, both the gas and electricity retail markets reacted to-Covid-19 with a decrease in energy prices. Following the opening up of economies after the cessation of Covid-19 restrictions, Member States observed a significant increase in demand and in turn of price. The Russian invasion of Ukraine has only compounded the issue, creating significant uncertainty within energy markets and in turn, driving up energy prices considerably.

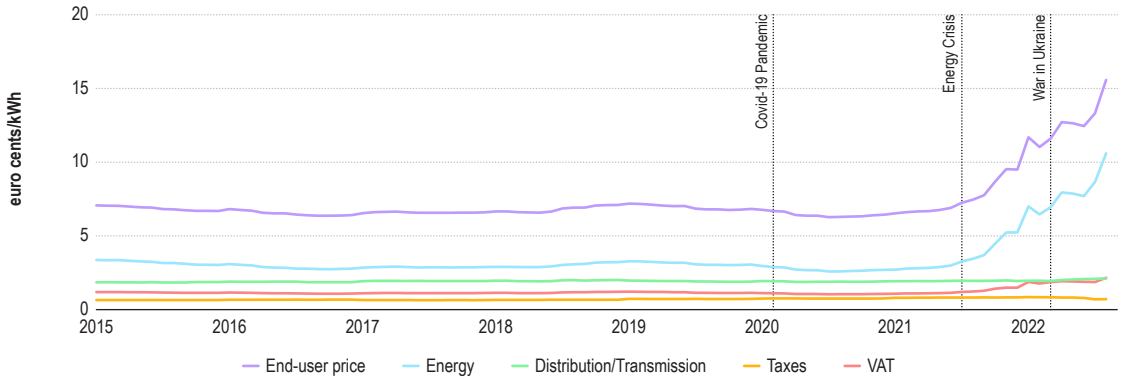
Figure 1: Evolution of electricity end-user price breakdown – Average EU-27



Source: VaasaETT

Note: The graph represents weighted averages of tariff components offered by the leading suppliers in the capital city of each country. Prices concern consumers with the typical consumption profile of each market. Data is collected from price comparison sites and / or supplier websites. Prices correspond to the first day of the month.

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



Source: VaasaETT

Note: The graph represents weighted averages of tariff components offered by the leading suppliers in the capital city of each country. Prices concern consumers with the typical consumption profile of each market. Data is collected from price comparison sites and / or supplier websites. Prices correspond to the first day of the month.

49 While various factors have contributed to the high energy prices in Europe, the main driver was the surge in the price of natural gas. Further information on the gas market can be found in the ACER Gas Wholesale Market Monitoring Report[4]. The price surge was caused by a tight global LNG market in conjunction with an increase in demand following the removal of Covid-19 restrictions. While it was expected that forward markets would decline significantly in the spring of 2022, the Russian invasion of Ukraine has only resulted in enhancing the pressures placed on European energy markets.

50 Following a request from the European Commission, ACER published its Final Assessment of the EU Wholesale Electricity Market Design in April of 2022.[5] The report found that while the current wholesale electricity market design has ensured efficient and secure electricity supply under relatively 'normal' market conditions, and whilst the current circumstances impacting the EU's energy system are far from 'normal', ACER found that the current electricity market design is not to blame for the current crisis.

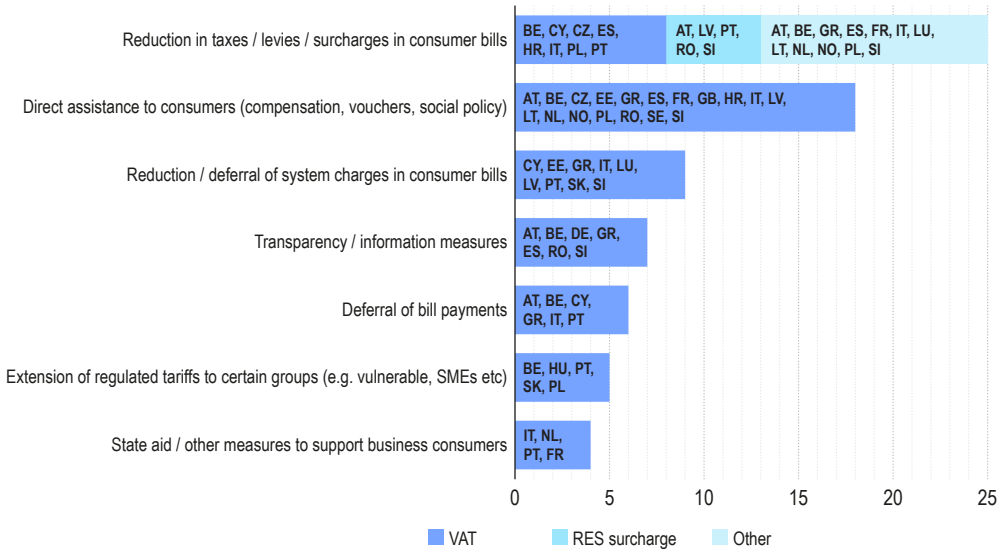
51 The energy price increase resulted in an increase in a number of retail suppliers going bankrupt and exiting retail energy markets. This resulted in an increase in the number of consumers being transferred to a supplier of last resort (SOLR). This increase created significant difficulties given the unprecedented number of supplier exits registered during 2021. Such exits continued into 2022. For more information on supplier exits and the SOLR mechanism please see Section 4.3.3.

4 https://www.acer.europa.eu/sites/default/files/documents/Publications/ACER_Gas_Market_Monitoring_Report_2021.pdf

5 https://www.acer.europa.eu/sites/default/files/documents/Publications/ACER%26%23039%3Bs%20Final%20Assessment%20of%20the%20EU%20Wholesale%20Electricity%20Market%20Design.pdf

52 In response to the high prices, the European Commission published a 'toolbox' of measures that Member States could implement in response to the high energy prices governments can use to respond to price hikes without endangering the functioning of EU wholesale markets. A range of measures implemented across the EU are detailed in Figure 3 below.

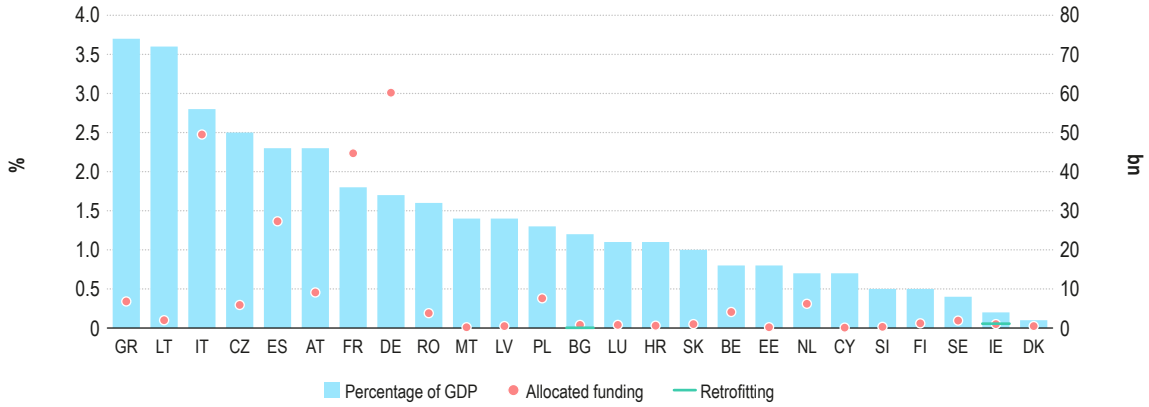
Figure 3: Measures taken since September 2021 until August 2022 grouped into seven types of responses[6]



Source: CEER 2022

53 Member States must be commended on the speed with which the measures to assist consumers were implemented. As can be seen in Figure 4 below, significant funding has been applied across Member States to assist consumers.

Figure 4: Allocation of funding to shield households and businesses from high energy prices

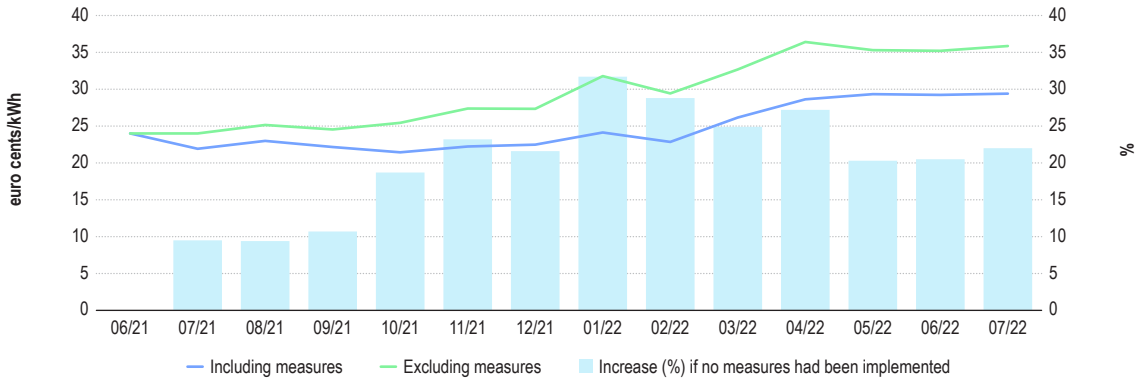


Source: https://www.bruegel.org/dataset/national-policies-shield-consumers-rising-energy-prices

54 The above measures have resulted in limiting the financial impact of wholesale energy price increases for final energy consumers. As can be seen in Figure 5 and Figure 6 on average, the electricity price (among the countries that adopted measures) would have been 22% (electricity) and 21% (gas) higher in July 2022, if no measures had been implemented.

6 Transfers to vulnerable groups refer to vouchers and cash payments.

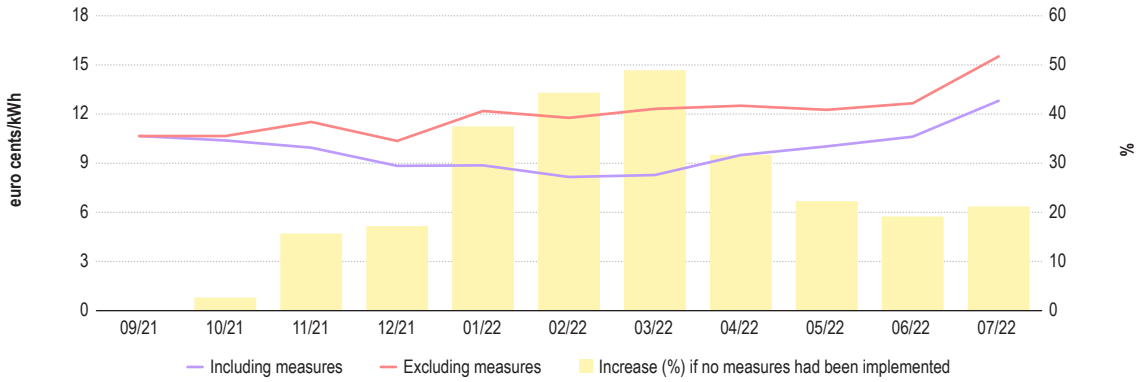
Figure 5: Impact of measures on electricity end-user price



Source: VaasaETT

*Note: The analysis only takes under consideration support measures applicable to typical residential customers living in capitals of the analysed countries. Targeted measures (e.g., for vulnerable customers, businesses) that have been applied in many countries are not taken under consideration in this analysis. Additional measures that have been applied in some countries directly on their wholesale market (e.g., price ceilings in ES, PT, GR and FR) cannot be depicted in this analysis. *AT, BE, CZ, CY, EE, FR, DE, GR, IE, IT, LV, LU, NL, NO, PL, PT, RO, SI, ES.*

Figure 6: Impact of measures on gas end-user price



Source VaasaETT

*Note: The analysis only takes under consideration support measures applicable for typical residential customers living in the capital cities of the analysed countries. Targeted measures (e.g. for vulnerable customers, businesses) that have been applied in many countries are not taken under consideration in this analysis. *AT, BE, BG, HR, CZ, EE, GR, IE, IT, LV, LT, NL, PL, RO*

55 However, ACER's view is that such measures could be more targeted at vulnerable consumers going forward. It is likely that the current crisis will not be a short-term crisis, and as such, ACER's view is that Member States, NRAs and other appropriate bodies should consider how to appropriately target measures to assist consumers most in need. Such targeting could, as an example, take into account consumer energy consumption and expenditure in conjunction with income and building energy ratings. Measures such as tax/VAT reductions may not only provide assistance to a cohort of consumers not in need of such assistance but could also impede the reduction in energy consumption by those consumers less impacted by the significant increase in energy costs.

56 In response to the hardships and global energy market disruption caused by Russia's invasion of Ukraine, the European Commission presented the REPowerEU Plan. The REPowerEU aims to drastically accelerate the clean energy transition and increase Europe's energy dependence from unreliable suppliers and volatile fossil fuels by:

a) saving energy,

b) producing clean energy, and

c) diversifying our energy supplies.

57 The difficulties faced by the energy sector and in turn energy consumers across the European Union have significantly increased during 2022. Consumers in some markets observed unprecedented price increases in 2021 (e.g., Spain). However, many European consumers were, to an extent, protected from price increases in 2021 due to the utilisation of fixed price retail contracts.

58 As can be seen in Figure 1 and Figure 2, both the gas and electricity retail markets reacted in response to COVID-19 with a decrease in energy prices. Following the opening up of economies after the cessation of COVID-19 restriction, Member States observed a significant increase in demand and in turn price. The Russian invasion of Ukraine has only compounded the issue, created significant uncertainty within energy markets and in turn, drove up energy prices considerably.

59 In response to the current crisis, it is important that correct policies are implemented to achieve the aims of REPowerEU. When it comes to retail markets the importance of saving energy is key. In addition to retrofitting, NRAs, in conjunction with TSOs, DSOs, suppliers and government bodies should consider strengthening their information channels to energy consumers with the aim of reducing dependence on imported fuels. Immediate measures to consider could include utilising daily media updates and text/push notifications from DSO or suppliers (following instructions from TSOs) about the most appropriate time to consume energy. Non-immediate measures should focus on enabling energy consumers to reduce their energy consumption via the delivery of upfront support for building upgrades, insulation, and domestic generation.

1.2 Clean Energy for all Europeans Package (CEP)

60 The CEP, adopted in May 2019, introduced a new set of electricity market design rules. The CEP puts the consumer first in liberalised markets, whereas the 2nd and 3rd packages focused on price issues.[7]

61 The package consists of eight new laws. These new rules aim to bring considerable benefits for consumers, the environment, and the economy. By coordinating these changes at the EU level, the legislation also underlines EU leadership in tackling climate change and makes an important contribution to the EU's long-term strategy of achieving carbon neutrality by 2050. Figure 7 provides details on the four regulations and four directives that make up the eight laws as part of the CEP.

Figure 7: Clean Energy Package for all Europeans (CEP)

4 Directives	**EU 2018/844 Energy Performance of Buildings Directive** Outlines specific energy efficiency provisions for the building sector, Europe's largest energy consumer
	EU 2018/2001 Renewable Energy Directive Incentivises and accelerates the uptake of renewables to reach Europe's target of at least 32% in the energy mix by 2030
	EU 2018/2002 Energy Efficiency Directive Encourages innovation and investment towards energy efficiency and energy savings
	EU 2019/944 Common rules for the internal market for electricity Enhanced rules for the generation, transmission, distribution & supply of electricity, including consumer empowerment & protection
4 Regulations	**EU 2018/1999 Governance of the Energy Union and Climate Action** Establishes a unique framework for cooperation between Member States and the EU to reach climate goals
	EU 2019/941 Risk-preparedness in the electricity sector Establishes common methods to identify and address potential future electricity crises
	EU 2019/942 ACER Regulation Outlines a stronger role and increased competencies for ACER, the EU Agency for the Cooperation of Energy Regulators
	EU 2019/943 Regulation on the internal market for electricity Sets the guidelines for the internal EU wholesale electricity market as well as network operation

62 Regarding retail markets and consumer protection, Directive (EU) 2019/944[8] is one of the key pieces of legislation introduced as part of the CEP. Given its importance with regard to retail and consumer protection, it is referenced throughout this report.

7 CEP was adopted for the EnC in November 2021.

8 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).

1.3 Introduction conclusions

63 The risks associated with the energy crisis have ramped up during 2021 and have continued into 2022 following the Russian invasion of Ukraine. This has placed energy consumers at a greater risk of energy poverty in 2021. Unfortunately, it is likely that energy poverty risks will only increase facing into the winter of 2022 and 2023.

64 Member States have implemented measures with the intention of decreasing the cost burden for energy consumers. However, such measures appear to be largely "broad brush" and not targeted at consumers most in need of assistance.

2. Retail Market Structure

65 This section examines the supply and demand side of the retail markets and provides an overview of overall functioning in retail energy markets:

a) Section 2.1 a outlines the availability of energy offers in the household and non-household segments;

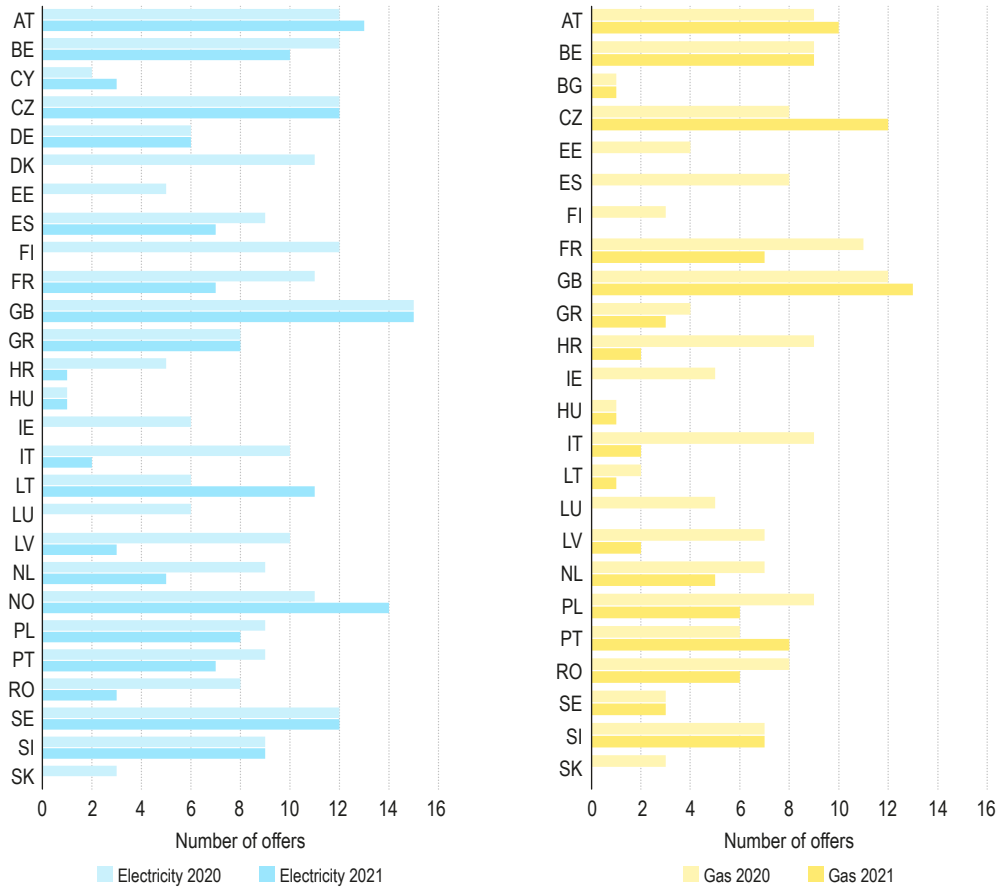
b) Section 2.2 outlines the supplier market share and provides information on the concentration levels in the national electricity and gas markets;

c) Section 2.3 outlines the CO_2 emissions of Member States.

2.1 Retail energy offers

66 Figure 8 shows the number of available offer types in MSs in 2020 and 2021. Ten MSs[9] reported a decrease of offer variety on the electricity market compared to 2020, and only Cyprus, Lithuania and Norway indicated an increase in 2021. In gas, a similar trend is observed, with the availability of offers decreasing in most Member States in 2021.

Figure 8: Number of available offer types for households in MS, electricity (left) and gas (right)



Source: CEER 2022

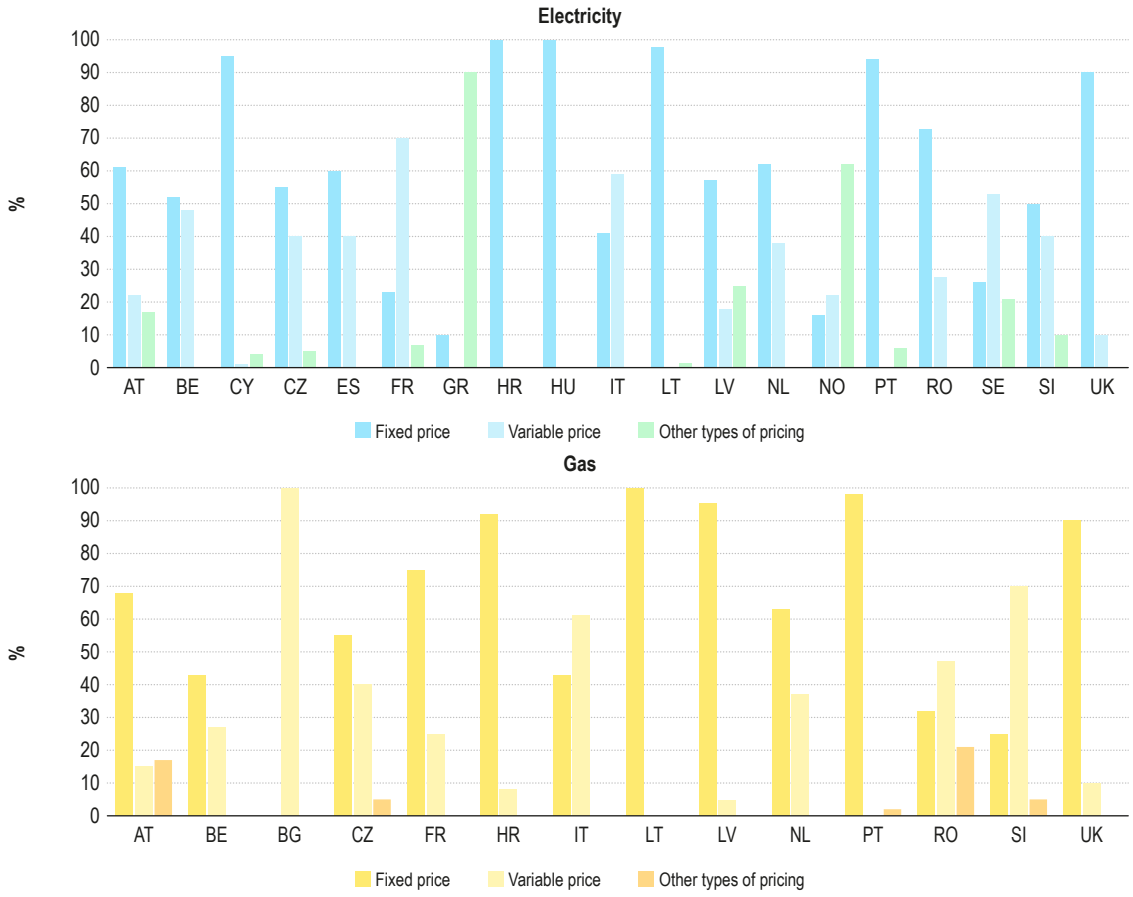
9 Belgium, Spain, France, Croatia, Italy, Latvia, the Netherlands, Poland, Portugal, Romania

67 Electricity and gas price increases impacted both consumers and suppliers in 2021. While the availability of offers in a market provides an indication of competition, it does not give an indication of how consumers are reacting to such offers. Given this, ACER and CEER have examined the uptake of offers in Member States. Figure 9 shows that the least percentage of fixed price contracts are to be found in Belgium, Czechia, France, Italy and Sweden both for electricity and gas segments.

68 While fixed price contracts can protect the consumer from short term price volatility up to the contract's expiration date, they put price risks on suppliers that have not hedged their position. This makes hedging strategies necessary to suppliers. In contrast, variable price contracts (which reflect price changes on the wholesale market) can create difficulties for uninformed consumers. This is because the retail price can immediately increase when wholesale prices increase. However, consumer benefits immediately when wholesale prices decrease and such contracts can over a longer period of time deliver real cost savings to consumers.

69 At the beginning of 2021, the variety of offers remained constant, however, towards the end of 2021 a decrease in offers was observed. At the end of 2021 and in the first half of 2022, suppliers offered less fixed-price contracts. As a measure of last resort, some suppliers attempted to transfer the risk posed by the high and volatile prices to consumers by changing a portion or all their consumers' contracts to dynamic or indexed schemes, in order to ensure financial stability and avoid insolvency. As suppliers are facing a significant increase in hedging costs due to current wholesale gas and in turn electricity price volatility, it is likely that consumers will have less access to fixed price contracts during 2022 and into 2023. Consumers may need to be provided information as to how such changes may impact them financially.

Figure 9: Percentage breakdown electricity (top) and gas (bottom) offers - fixed, variable and offers[10]



Source: CEER 2022

10 In Greece, offers are a mix of variable and a fixed pricing component where the variable is indexed to DA prices, making the whole offer variable.

70 In Belgium, the number of fixed price contracts decreased due to the risk to suppliers of customers changing contracts if prices were to decrease and the supplier was locked into an uncompetitive wholesale price. This is because in Belgium, customers are only required to provide a one month notice if they intend to switch their energy supplier. During 2022, suppliers have generally not offered fixed price contracts. In the Walloon region, only one supplier still offers fixed price products. In the Brussels region, there is only one fixed price offer and it is the most expensive on the market.

71 In Spain, the energy crisis also resulted in a decrease in the availability of fixed-price offers. Again, this was driven by wholesale energy price increases, as such some suppliers started to offer exclusively dynamic price contracts. Although Finland has not surveyed its suppliers, the NRA has received several complaints from consumers regarding electricity suppliers who have decreased the availability of fixed term/fixed price contracts. Presumably, the reason for suppliers' reluctance to offer these contracts is the price volatility in the market, particularly considering this tendency was observed between December 2021 and April 2022.

72 In Great Britain, following wholesale price increases, many suppliers have withdrawn their cheapest fixed energy tariffs. In addition, while fixed tariffs not covered by the default tariff cap have increased, the prices of variable and other default tariffs subject to the cap have remained among the cheapest deals available in the market. Increased wholesale price volatility in the beginning of 2022 further impacted the decline in the number of fixed-price tariffs. Due to the current gas crisis, most suppliers in Great Britain are not offering price quotes via their websites and/or have restricted sales to new customers.

73 In Latvia, in response to wholesale price increases, some suppliers are now only offering variable price contracts. In addition, suppliers that currently offer fixed offers will likely limit the availability of such fixed-price sales. The reason is that the cost of such contracts will become very high.

74 Fixed-price contracts in Luxembourg are guaranteed the same price for a minimum period of a year, or for a maximum period of three years. However, with the increasing energy wholesale prices, fixed-price contracts are becoming increasingly difficult for suppliers to offer as they will be significantly more expensive in comparison to the previous years.

75 In Portugal, some suppliers have also stopped offering fixed price contracts, instead only offering variable price contracts. This is because a fixed price contract is now a more difficult and in turn more expensive product for a supplier to offer to a consumer as they may not be able to procure a competitive long-term contract.

76 In Greece, Hungary, Italy, the Netherlands, Romania and Sweden a decrease in the availability of fixed-price offers is due to the high wholesale price volatility.

77 Nevertheless, no contract type can protect consumers and suppliers from long-term price changes on the wholesale level forever. Wholesale price increases will be reflected in all contracts and in turn consumer bills following the expiration contracts. While it was always important that consumers can make well-informed decisions and assess their choices in terms of existing risks and benefits, The current energy crisis, requires a more proactive approach to deliver information to consumers. A combined effort on the part of all energy stakeholders and consumers (both industrial and domestic) may be needed.

78 Data on offer/contract types and conditions is limited in most MS/NRAs as only a small number of MS/NRAs track the actual uptake of offers in their respective retail markets. This lack of data collection by MS/NRAs may restrict their full understanding of energy consumers within their market and their behaviours. In addition, the monitoring and publication of such data could help potential entrants to better identify opportunities within a specific market. For this reason, NRAs (or other responsible authorities) should consider the importance of monitoring of offers, contract types and conditions.

2.2 Concentration levels

79 The Herfindahl-Hirschman Index (HHI) is a commonly used indicator to measure the degree of market concentration. A HHI above 2,000 is a sign of a highly concentrated market. In general, a high number of suppliers and a low market concentration are indicators of a competitive market structure. With low market concentration (a lower HHI score), the ability of any market player to exploit market power to the detriment of energy consumers is reduced and consumers have the opportunity to benefit from competition, innovation and consumer services. To understand competition dynamics, concentration levels must be considered. It is not sufficient to only look at the number of nationwide suppliers because their market penetration levels also matter. A high number of nationwide suppliers with relevant market shares lead to lower market concentration levels i.e., a lower HHI score and may indicate low entry barriers. Conversely, a higher HHI indicates that more competition is possible in the market. Therefore, concentration levels are important indicators along with others, such as entry and exit barriers, mark-ups.

80 Concentration Ratio 3 (CR3) is a traditional structural measure of market concentration based on market shares. In this report, we measure the CR3 of the total market share of the three largest suppliers per MS (by metering points in the household market and by volume in the non-household market). This report considers that markets with a CR3 score between 70-100% are highly concentrated. Smaller MSs may have a relatively small market, with limited suppliers and hence high CR3 levels.

81 Figure 10 and Figure 11 present the HHI for electricity and for gas in the household market. In the electricity market, six out of eighteen respondent NRAs reported low concentration levels (HHI<2000) in 2021 with Figure 10 showing that the majority of MSs report high market concentration levels (HHI>2000).

82 In 2021 in electricity, fourteen NRAs reported a reduction in HHI levels. Lithuania reported a strong reduction, from a HHI of 9,950 in 2020 to 8,452 in 2021. Furthermore, Estonia (-525), Greece (-520), Italy (-343), France (-300) and Portugal (-230) showed a significant concentration reduction in 2021.

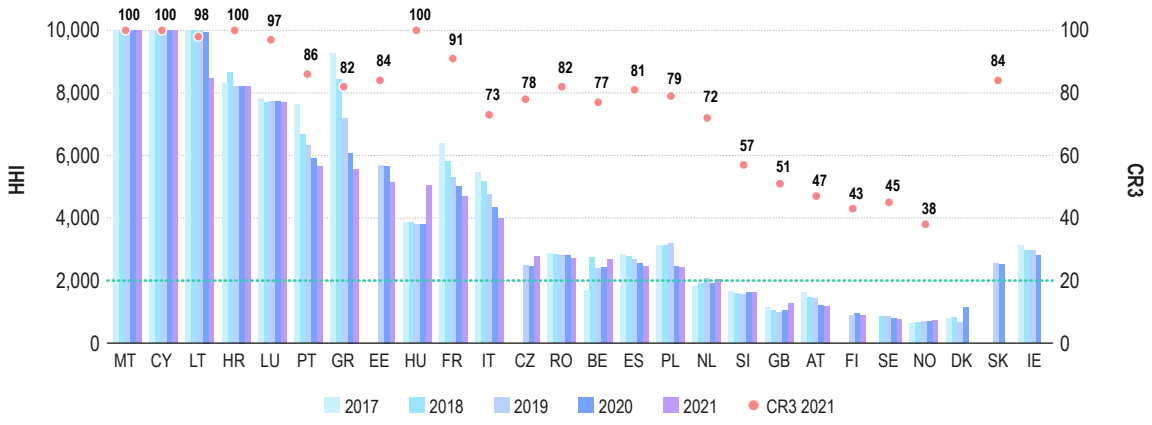
83 Nevertheless, some Member States increased or significantly altered their concentration trends:

a) Great Britain and Slovenia increased their HHI rates during 2021 following decreases during 2020.

b) Portugal and Greece recorded a reduction in the pace of decreasing concentration.

c) Stagnation or limited progression is observed across many Member States, indicating that further analysis may be required to determine the reasoning behind such lack of improvement.

Figure 10: HHI for the household market in electricity for selected countries. 2017-2021



Source: CEER 2022

Note: Latvia and Germany do not monitor this indicator. The data is based on metering points. 2021 data not provided by Ireland, Denmark and Slovakia

84 In the gas household market, in 2021 eleven out of nineteen countries registered a reduction[11] in their concentration levels. Greece and France and Estonia reduced their HHI levels the most (-551 and -400 points respectively). For the five-year period the strongest reductions are found in Greece, France and Spain (-197[12], -1600, -791 points respectively).

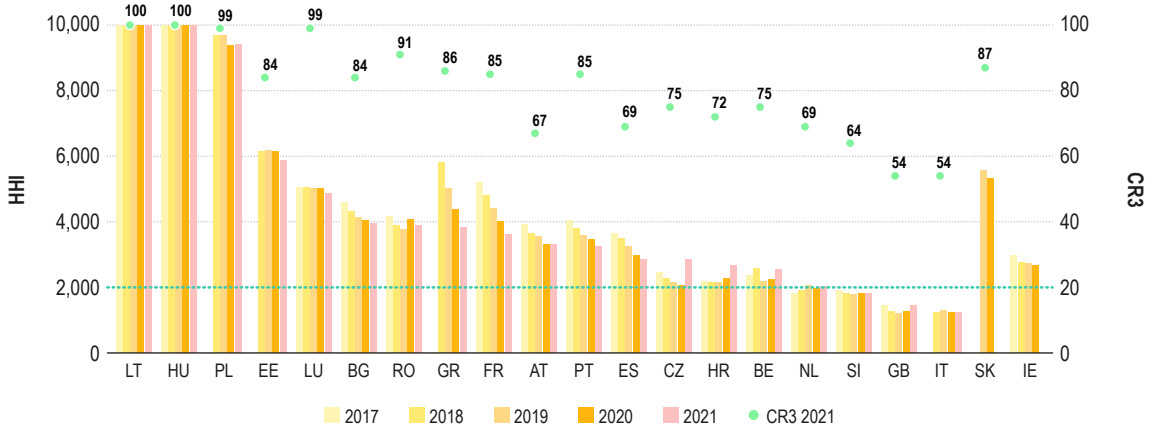
85 On the other hand, several countries increased or significantly altered their concentration trends:

a) Great Britain, Slovenia and Croatia increased their HHI rates in 2021 following decreases in 2020;

b) Austria, Spain and Bulgaria recorded a decrease in the rate of reduction in 2021 compared to 2020;

c) As with electricity, stagnation or limited progress is observed in many Member States which may require further analysis.

Figure 11: HHI for the household market based on metering points in natural gas for selected countries 2017-2021



Source: CEER 2022

Note: Denmark, Finland, Sweden, Latvia and Germany do not monitor this indicator. 2021 data not provided by Ireland and Slovakia.

86 With regard to the non-household electricity markets are on average less concentrated than gas markets. This can be due to non-household consumers being more engaged with their energy consumption due to their higher consumption levels and thus they may be more open to new suppliers.

87 Figure 12 and Figure 13 present the HHI for electricity and for gas in the non-household market. In the electricity market, eleven out of nineteen NRAs reported low concentration levels in 2021 (HHI<2,000). This is in line with figures from previous years. During the five-year period Greece and France recorded a remarkable reduction of -4,911 and -1,400 respectively.

88 As with the household electricity market, several countries increased their concentration or altered their trends significantly:

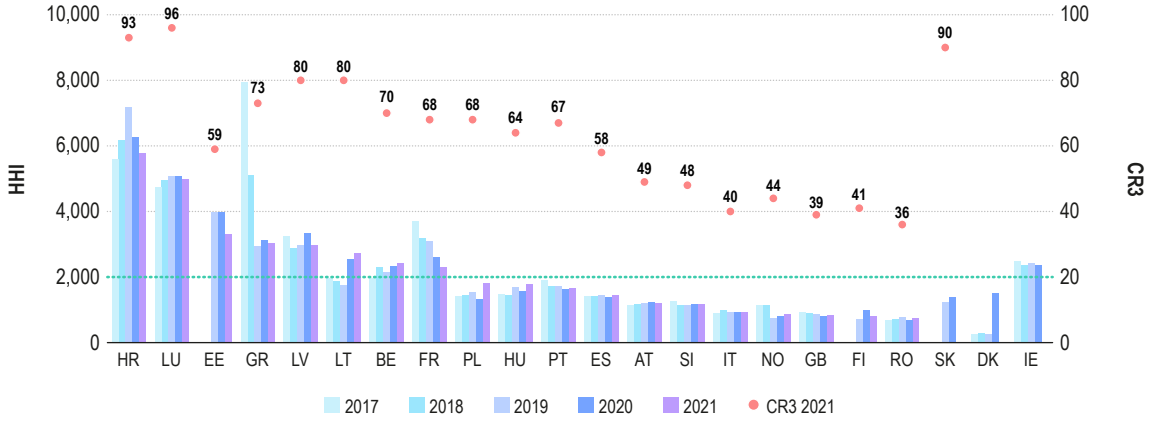
a) Lithuania, Portugal and Great Britain recorded increases in 2021 following decreases in previous years.

b) The Netherlands, Hungary, Spain, Romania and Poland also increased their concentration levels in 2021.

11 Italy, Spain, Austria, Portugal, France, Greece, Romania, Bulgaria, Luxembourg, Estonia and Lithuania.

12 In this case, data is available from 2018.

Figure 12: HHI for the non-household market in electricity 2017-2021



Source CEER 2022

Note: Sweden, the Netherlands, Czechia and Germany do not monitor this indicator. 2021 data not provided by Denmark, Ireland and Slovakia.

89 In the non-household gas market, Latvia[13], Estonia and Lithuania[14] recorded significant reductions in HHI from 2017 to 2021 (with improvements of -4022, -3089 and -2255 HHI points respectively). The 2017 liberalisation was the main driver in Latvia. However, in 2021 Lithuania suffered a strong increase in HHI (+999).

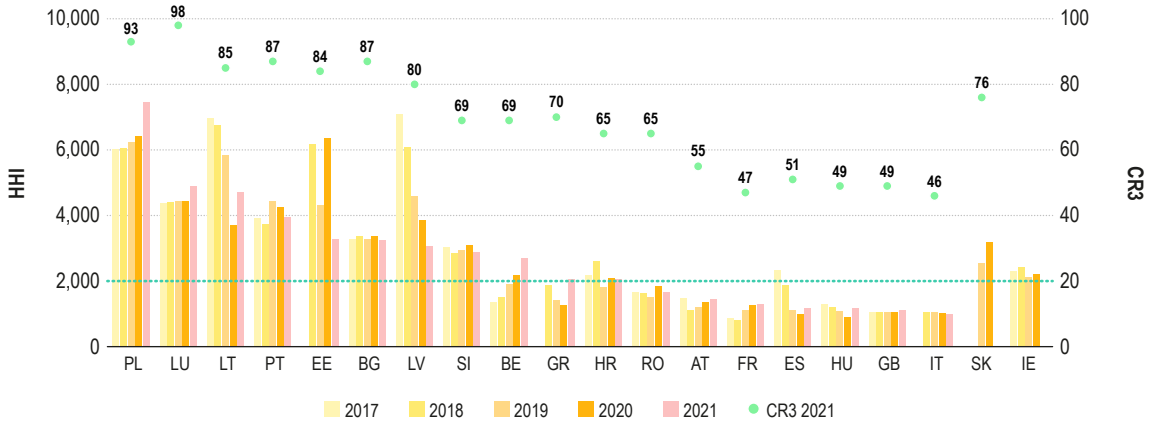
90 Likewise, the other energy segments, several countries increased their concentration or altered their trends significantly:

a) Spain, Hungary, Greece, Lithuania, France and Austria record and increase in concentration levels from 2018.

b) Belgium and Poland accelerated their rate of increase in concentration levels in 2021.

c) Both Great Britain and Luxembourg increased their concentration levels.

Figure 13: HHI for the non-household market in natural gas 2017-2021



Source: CEER 2022

Note: Czechia, Denmark, Finland, the Netherlands, Sweden and Germany do not monitor this indicator. 2021 data not provided by Ireland and Slovakia

13 Since Latvia's non-household market opening in 2017 the concentration index has decreased sharply from 10000 in 2016 to 3857.

14 In Lithuania, the changes have been driven by market liberalization, the simplification of natural gas supply authorization procedure, and the fact that, natural gas supply activities to non-household customers are unregulated, which makes it relatively easy for new suppliers to enter the market. Also, the natural gas market increased in 2020 due to the creation of a common tariff area between Finland, Estonia and Latvia (FINESTLAT), which attracted more market participants from these countries.

91 Finally, Figure 14 and Figure 15 outlines the reductions of active nationwide suppliers in 2021. Such exits were driven by financial problems and their impact on market concentration for electricity and gas respectively.

92 In general, the increasing risk environment with the onset of energy crisis led to the reduction of suppliers in 2021, increasing market concentration. A limited impact in concentration would imply the exits of small market players with insignificant market shares, and conversely a significant impact would be caused by the exit of relevant players.

Figure 14: Electricity suppliers exits and market concentration impact

Electricity	Net decrease Nº suppliers in Electricity 2021	Nº suppliers exits due to financial problems in 2021	Electricity HHI variation in HH market (2021)	Electricty HHI variation in nHH market (2021)
Norway	-38%	-	53	76
Great Britain	-20%	22 (HH) / 1 (nHH)	217	22
Portugal	-12%	3 (HH) / 4 (nHH)	-230	36
Czech Republic	-9%	9 (HH) / 0 (nHH)	334	-
Hungary	-8%	-	1254	187
The Netherlands	-7%	6 (HH) / 0 (nHH)	111	-
Germany	-3%	-	-	-
Finland	-2%	1 (HH) / 1 (nHH)	-70	-180

Source: CEER 2021

Figure 15: Gas suppliers exits and market concentration impact

Gas	Net decrease Nº suppliers in Gas 2021:	Nº suppliers exits due to financial problems in 2021	GAS HHI variation in HH market (2021)	GAS HHI variation in nHH market (2021)
Great Britain	-30%	23 (HH) / 1 (nHH)	187	67
Hungary	-23%	0 (HH) / 1 (nHH)	1	285
Poland	-20%	-	51	1028
Croatia	-20%	-	379	-37
Latvia	-9%	-	-	-792
Czech Republic	-9%	15 (HH) / 15 (nHH)	778	-
Germany	-7%	-	-	-
Austria	-7%	1 (HH) / 1 (nHH)	-21	83
The Netherlands	-7%	6 (HH) / 0 (nHH)	52	-
Belgium	-5%	-	294	535

Source: CEER 2022

2.2.1 Energy Community

93 The electricity retail markets in the EnC CPs are still highly concentrated. Market shares of the three largest suppliers are decreasing slowly from year to year, but are still above 90% in the majority of countries. The greatest decrease in retail market concentration was registered in North Macedonia – from CR3 of 88% in 2020 to 76% in 2021. In the household segment this indicator is 100% for almost all EnC CPs. The main exception is Ukraine, where CR3 was only 28.5% in both household segment and the whole retail market.

94 The retail market concentration in the retail gas markets of the EnC CPs did not change substantially in 2021 in comparison to the previous year. Bosnia and Herzegovina, Moldova and North Macedonia recorded the highest values of CR3 (above 90%). In Georgia and Serbia, CR3 levels stabilised at around 85% in 2021. The information on concentration levels in Ukraine is not available for 2021.

2.3 CO_2 intensity of energy

95 Greenhouse gas (GHG) emissions from the energy sector, including fuel combustion but also transport, roughly account for three quarters (74.2%) of all GHG emissions in the EU27 in 2020[15]. As for fuel combustion in public electricity and heat production, arguably the two most closely related sub sectors to the electricity and gas sectors, account for approximately one fifth (19.5%) of all GHG emissions, and 26.4% of all energy sector related GHG emissions in 2020.

96 Latest EU climate policy targets, commonly referred to as Fit-for-55 targets, envision a reduction of at least 55% of GHG emissions of 1990 levels by 2030. Fuel combustion in public electricity and heat production is, among only a few in the wider energy sector, already more advanced in emission reductions due to increasing renewable energy (electricity) production, substituting coal with gas and energy efficiency measures over the last decades. Especially electricity production counts as an "easier-to-abate" sector than other sectors of the economy, which makes it a prime candidate to compensate GHG emissions in other sectors with larger reductions in of fossil fuel use electricity.

97 GHG emissions from fuel combustion in public electricity and heat production have been declining at a European level for the last decades, more so from 2005 onwards. Importantly, GHG emissions in this subsector dropped by about 110 Mt CO_2e, or -14.4%, in 2020 due to large-scale restrictions in force due to the Covid-19 pandemic. Noting that scientific evidence already demonstrates a significant bounce back of emissions in 2021 reaching (almost) 2019 levels (Davis et al. 2022[16]; Lui et al. 2022[17]), this "emission dip" must not be interpreted as enduring climate mitigation but rather as a one-off reduction.

98 All things considered, much of these reductions have occurred from 2015 onwards: emissions fell from 969 Mt CO_2e to 655 Mt CO_2e that is, a decline of 32.4% in only five years or 7.5% p.a. on average across EU27. Achieved reductions until 2020 in this "model sector"[18] even amount to 46.8% from 1990. This therefore leaves an ambitious reduction path to achieve the 2030 targets. If the Fit-for-55 goal of -55% emissions (from 1990 levels) is also to be achieved in fuel combustion in public electricity and heat production, a continuous and consistent GHG emissions reduction of 1.7% p.a. is needed until 2030 to reach the required maximum emissions of 555 Mt CO_2e (45% of 1990 GHG emissions) in this subsector. Given scientific evidence about bouncing back emissions levels in 2021, however, efforts to conserve emissions must once again pick up speed and effect.

99 Figure 16 depicts reductions and levels of GHG emissions in fuel combustion in public electricity and heat production from 1990 onwards (1990=100) in a relative perspective also indicating absolute emission amounts. First, the largest reductions have been achieved in Lithuania (-88.7%), Estonia (-84.8%), Latvia (-78.4%), Denmark (-77.7%), Romania (-77.1%) and Slovakia (-73.2%). Among large-population countries in Europe, the United Kingdom (- 75.4%) has achieved the largest reductions in GHG in public electricity and heat production over this 30-year period. These countries are the only ones which have already achieved a level of reduction which equals or is higher than a modelled linear pathway of reductions to reach (hypothetical) Fit-for-55 GHG emissions objectives in fuel combustion in public electricity and heat production. Furthermore, these countries have already met these objectives before 2020.

15 Data utilised in this section is from Eurostat with 2020 data being the most complete dataset available.

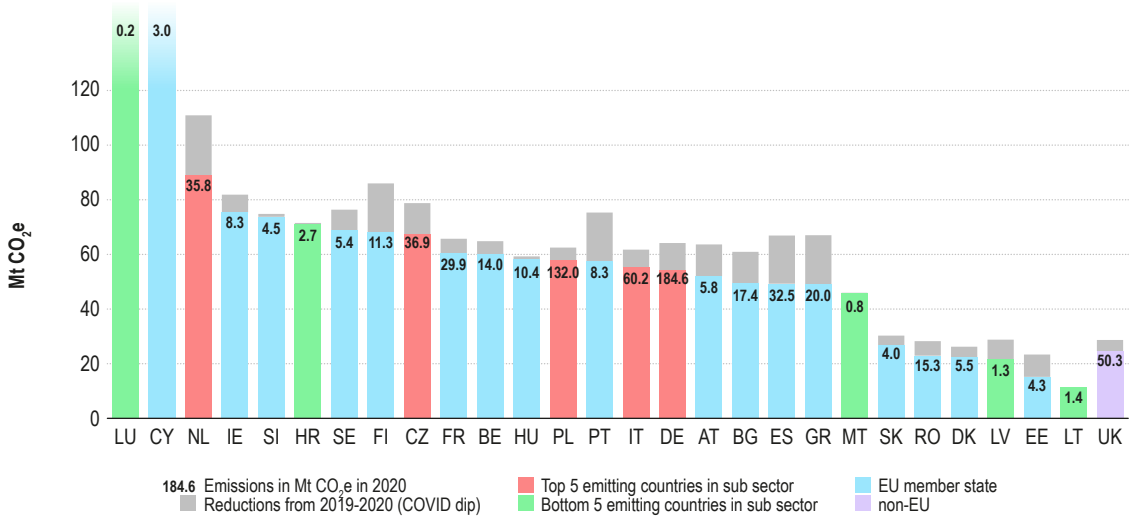
16 Davis, S.J., Liu, Z., Deng, Z. et al. Emissions rebound from the COVID-19 pandemic. Nat. Clim. Chang. 12, 412–414 (2022). https://doi.org/10.1038/s41558-022-01332-6

17 Liu, Z., Deng, Z., Davis, S.J. et al. Monitoring global carbon emissions in 2021. Nat Rev Earth Environ 3, 217–219 (2022). https://doi.org/10.1038/s43017-022-00285-w

18 Especially electricity production is often considered as a model sector to fast and permanently reduce GHG emissions due to the availability of advanced low- and zero-carbon technologies and energy carriers. In this sense, decarbonising the electricity sector is particularly often considered a low-hanging fruit with which it is possible to compensate for reductions not achieved in harder-to-abate sectors. At the same time, real Fit-for-55 targets do not apply for each sector, subsector or MS in the same way so that the assumed reduction path in this section is for illustrative purposes only.

100 On the other hand, Luxembourg and Cyprus have increased GHG emissions in this subsector over the period 1990-2020, however, at comparatively low levels of absolute GHG emissions of 0.2 and 3.0 Mt CO_2e in 2020.[19] The Netherlands have only reduced their GHG emissions in fuel combustion in public electricity and heat production below 1990 levels for the first time in 2020, registering a reduction of -11% vis-à-vis 1990 (based on an annual reduction of -19.9% in 2020 alone). Countries such as Ireland (-24.6%), Slovenia (-26.2%), Hungary (- 29.1%) and Sweden (-31.2%) have also made little progress in reducing GHG emissions in fuel combustion in public electricity and heat production.

Figure 16: Greenhouse gas emissions reductions and levels in EU27, 1990-2020



Source: Eurostat database, 2022 (10 June 2022) – https://ec.europa.eu/eurostat/databrowser/view/env_air_gge/default/table?lang=en

Note: In Luxembourg, Cyprus and the Netherlands, GHG emission levels in 2020 are 638, 179 and 110 respectively, expressed in 1990 (=100) terms. No GHG reductions in 2020 were recorded in Malta and Lithuania. Rather increases have been observed in both countries (+9.6% and +50.2% respectively)

101 Figure 16 also shows annual GHG reductions in fuel combustion in public electricity and heat production in 2020 only (grey bars). Across EU27, these amount to 110 Mt CO_2e in only one year (-14.4%), most of which has been conserved in Germany (-34.3 Mt CO_2e) in absolute terms. The largest relative "COVID dips", however, have been observed in Estonia (-35.0%), Greece (-26.8%), Spain (-26.3%), Latvia (-25.1%), Portugal (-23.6%) and Finland (-20.8%) while the smallest declines have been registered in Hungary (-1.8%), Slovenia (-1.4%) and Croatia (-0.8%). Still, in Malta (+9.6%) and Lithuania (+50.2%) even increases of GHG emissions have been noted in this subsector, although at very low absolute levels (0.8 and 1.4 Mt CO_2e respectively).

102 Figure 16 further shows absolute remaining emissions in Mt CO_2e in 2020. With 185 Mt CO_2e, Germany still emits the largest amount of GHG in fuel combustion in public electricity and heat production in 2020, followed by Poland (132 Mt CO_2e), Italy (60 Mt), UK (50 Mt), Czechia (36.9 Mt) and the Netherlands (35.8 Mt). Smaller countries, especially Luxembourg, Malta, Latvia and Lithuania emit comparatively small amounts of CO_2e.

19 In addition, some countries have temporarily overshot 1990 GHG emission levels significantly for extended periods of time during 1990-2019, most strikingly Finland between 2000 and 2005 but also Spain between 2005 and 2007. Such surplus emissions contribute to the cumulative overall carbon budget and considerably reduce the amount of future CO_2e emissions to stay within given climate goals.

2.4 Structure of retail markets conclusions

103 The level of supplier bankruptcy and thus market exit increased in 2021 following wholesale price increases which made it difficult for suppliers to meet their obligations. This level of supplier exit in turn resulted in a decrease in the availability of consumer offers available in the retail energy markets.

104 More effort is needed to deliver the reduction in emissions as outlined in the Fit for 55 program. As fossil fuels become more expensive, it will ultimately be the consumer who will likely be the one paying additional costs for an emission-intensive energy sector.

105 A limited number of NRAs monitor the offer uptake in their market. However, Member States that do monitor the uptake of offers show that there is a higher proportion of consumers who have a fixed price contract with their energy supplier. While such contracts limited the exposure of consumers to energy price increases in 2021, such contracts will see significant increase during 2022 and into 2023. Increases are expected when pre-existing forwards contracts come to term. When renewing contracts, suppliers will be required to return to the market to contract new long-term positions. As current wholesale prices are elevated, suppliers will in turn pass this cost through to consumers via their energy bills.

3. Engagement of consumers

106 This section examines the conduct of consumers and suppliers with regard to their participation in energy markets across the EU and EnC. Given the focus of the Clean Energy Package regarding the role of the consumer during the energy transition, this section places additional focus on consumer conduct. The section is structured as follows:

a) Section 3.1 and 3.2 provides an analysis of switching duration and switching rates across EU MSs and the EnC.

b) Section 3.3 examines the status and availability of comparison tools across EU MSs and the EnC.

c) Section 3.4 provides information regarding the rollout of smart meters across the EU and the EnC.

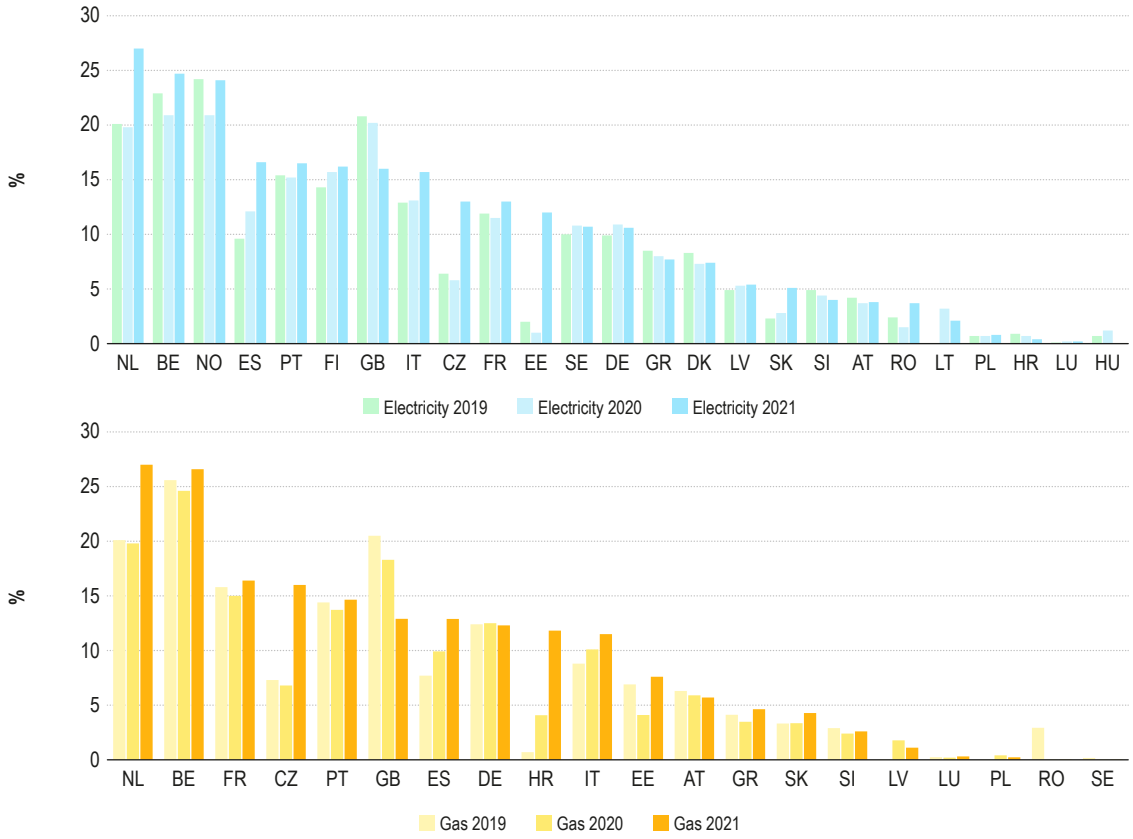
3.1 Switching Rates

107 The switching rate of consumers is one of the key indicators of well-functioning retail energy markets. Even though switching processes have been facilitated by regulation and the process automation in many MSs, there still is a high number of energy consumers especially household consumers who remain with their incumbent supplier. Where Member States constantly report very low switching rates, reasons for this development should be monitored closely and assessed. On the other hand, extremely high switching rates should also be looked at closely. While high switching rates are indicative of very well-functioning markets, in some cases, consumers may be switching because they are dissatisfied with the suppliers and quality of service. Complaint data could offer insights into these issues if analysed in depth. However, as outlined in Section 4.4, not all NRAs or ADRs collect robust data regarding energy consumer complaints which may limit their ability to identify poor consumer service on the part of energy suppliers and/or DSOs.

108 Figure 17 shows switching rates for electricity and gas household consumers by number of metering points in 2019, 2020, and 2021. It reveals that among MSs, external switching rates of household consumers differ significantly. It is worth noting that the countries with the highest switching rates are the same for electricity and gas, pointing to underlying, structural factors in those countries favouring switching among energy consumers.

109 In the majority of MSs, there is a significant increase in switching rates both in electricity and gas sectors in 2021. This increase can be seen either in MSs with already high switching rates in 2020 but also in MSs with relatively low levels in the previous year. Since several MSs included involuntary switches in the annual switching rate, this development might be partly explained by involuntary switching of household customers due to the more volatile energy markets followed by bankruptcies of electricity and gas suppliers in several MSs during the second half of 2021.

Figure 17: Percentage of external switching rate of household consumers (by number of eligible meter points)



Source: CEER 2022

Note: Bulgaria, Hungary and Ireland did not report data on external switching, for Cyprus and Malta, the indicator is not relevant due to the number of suppliers.

110 In markets where both regulated and non-regulated prices exist, consumers can choose to switch in and out of regulated contracts. Spain, France, Italy, Lithuania, Poland, Portugal and Hungary reported switching activities for regulated prices in 2021, as seen in Figure 18.

Figure 18: Switching rates in markets with regulated prices

	Electricity switching rates		Gas switching rates	
	out of regulated prices (by metering point) for household	in regulated prices (by metering point) for household	out of regulated prices (by metering point) for household	in regulated prices (by metering point) for household
ES	4.2	1.5	0.3	0.3
FR	3.0		22.8	-
IT	4.2	0.2		
LT	21.0	0.2	-	-
PL	2.1	2.6	0.2	0.2
PT	4.1	0.5	1.1	0.1
HR			10.5	-

Source: CEER

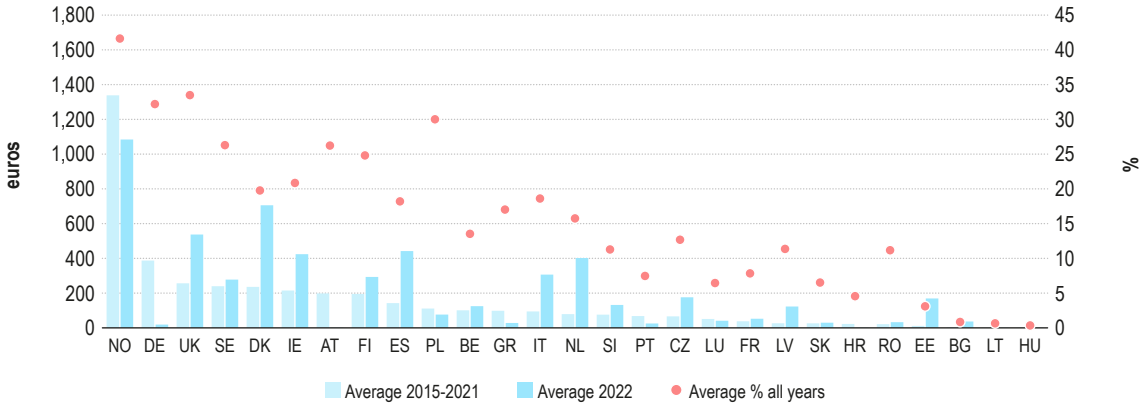
111 Due to high wholesale energy prices during the second half of 2021, more electricity and gas suppliers filed for bankruptcy in several MSs, significantly more than in previous years. This consequently led to the involuntary switching of household customers supplied by these energy suppliers. For the development of this year's report, NRAs were asked about involuntary switching rate of household customers due to non-self-inflicted events. The limited number of replies on this new indicator does not yet allow to build a comprehensive picture. However, in order to nevertheless address this development, we take a closer look at Germany and Czechia.

112 In Germany, several electricity and gas suppliers went insolvent or terminated their contracts with household customers in 2021. One explanation could be that some of these companies procured energy on spot exchange on a very short term and offered it to the end consumers mostly over a fixed price contract at lower prices. When the energy prices increased significantly, some suppliers could not pass the actual procurement costs to the end consumers, as the companies are obliged to follow the fixed contract price. This wave of bankruptcies and contract terminations affected approximately 950,000 household customers, who had to involuntary switch to other suppliers. This is equal to involuntary switching rate of household customers amounting to approximately 2%.

113 In Czechia, sixteen suppliers went bankrupt between October 2021 and January 2022 leaving approximately one million customers without an energy supplier. The involuntary switching rate of household customers amounted to more than 10% of all consumers. After the bankruptcy of suppliers, the affected customers were transferred to Suppliers of Last Resort (SOLR)[20].

114 Despite the energy crisis, in some markets energy consumers continue to have opportunities to unlock savings as outlined in Figure 19 and Figure 20.

Figure 19: Average electricity savings potential 2015-2021 vs 2022 (based on annual energy consumption in each Member State and Norway)



Source: VaasaETT

Note: The above graph represents the average € difference that a residential electricity customer would save when switching away from the by-default to the cheapest offer available in 2022 (until August), compared with the average of years 2015-2021, alongside the average % decrease of the by-default bill that could be achieved, since 2015. Prices concern consumers with the typical consumption profile of each market. Data is collected 3 times per year (April, August and December) from price comparison sites and / or supplier websites and correspond to the first day of the month.

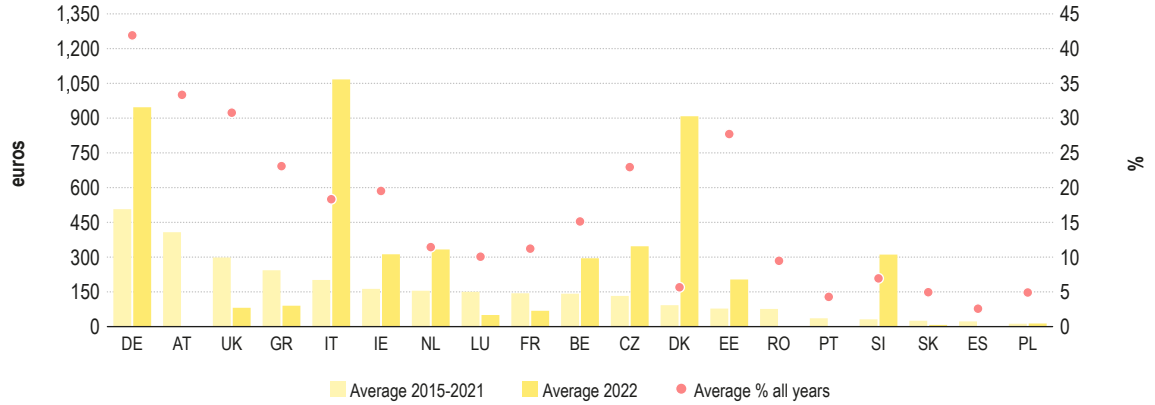
115 Higher savings opportunities appear in the most competitive markets. Countries with less liberalised electricity markets tend to have lower (to none) savings opportunities. When switching from the by-default tariff to the cheapest available option, customers could save on average €152 per year during 2015-2021 compared to €205 per year, in April 2022. In some cases market savings are zero, meaning that the by-default contract is the cheapest available option.

116 The energy crisis has highlighted the importance of providing customers with a) awareness that they can save and how much and b) awareness of how they can achieve the savings. It has also highlighted the importance of competition.

117 A similar story arises in gas as shown in Figure 20 where despite the energy crisis, there are some opportunities for consumers to unlock savings opportunities in some markets.

20 The Energy law defines the incumbent supplier for each DSO territory and they step in in the event of failure of energy suppliers.

Figure 20: Average gas savings potential 2015-2021 vs 2022 (based on annual energy consumption)



Source: VaasaETT

Note: The above graph represents the average € difference that a residential natural gas customer would save when switching away from the by-default to the cheapest offer available in 2022 (until August), compared to the average of years 2015-2021, alongside the average % decrease of the by-default bill that could be achieved, since 2015. Prices concern consumers with the typical consumption profile of each market. Data is collected 3 times a year (April, August and December) from price comparison sites and / or supplier websites and correspond to the first day of the month.

3.1.1 Switching rates -Energy Community

118 In the electricity sectors of the majority of the EnC CPs, small numbers of non-household consumers switched supplier in 2021. The highest switching rates were recorded in North Macedonia and Ukraine – 1.7% i.e., 1.5%, in other EnC CPs the switching rates were less than 1% when measured in number of metering points[21]. The only EnC CP without switching was Montenegro, while data was not available for Georgia. In the gas sector, only in Serbia a very limited number of consumers changed supplier in the previous year – around 0.01%. The information for gas sector of Ukraine was not available for 2021.

3.2 Switching duration

119 Regulation on switching improves switching behaviour. Shorter switching times encourage consumers to actively search for better energy deals and switch supplier. Article 12 of Directive 2019/944 allows a maximum time of three weeks to switch from the date of the request and by no later than 2026, the technical process of switching shall take no longer than 24 hours on any working day.

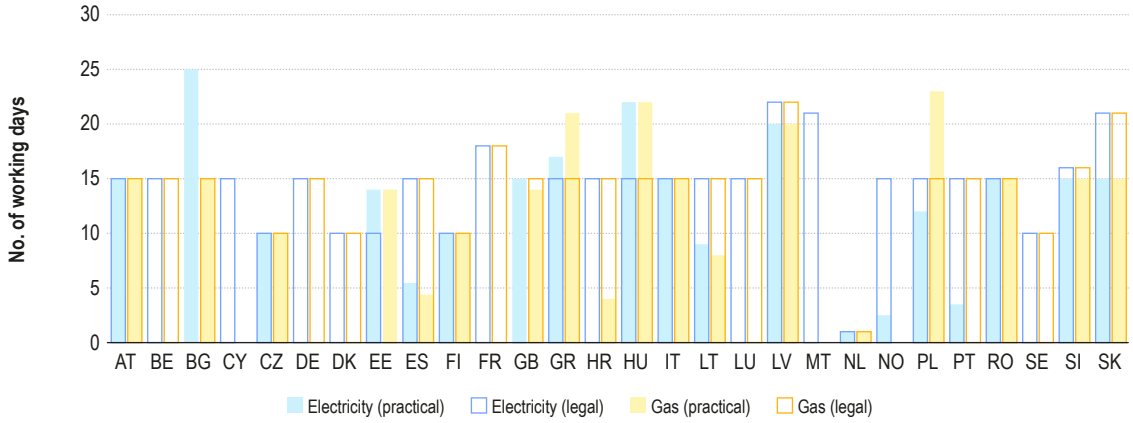
120 Figure 21 shows that the legal maximum duration of an electricity or a gas supplier switch meets the respective Directive requirement of three weeks[22] (or 15/18 working days) in most MSs. The only exception is Latvia, Slovenia and Slovakia. In all other MSs the legal switching durations have already decreased to under 15 working days, yet the number of working days required for switching still takes longer in Greece, Hungary and Poland[23].

21 Switching rates calculated in terms of electricity volumes reveal that big non-household consumers are those that changed their supplier in 2021.

22 In Directives 2009/72/EC and 2009/73/EC, art. 3.5 and art. 3.6 respectively: "where a customer, while respecting the contractual conditions, wishes to change supplier, the change is effected by the operator(s) concerned within three weeks"

23 However, in the Poland case, as more data with exact date of switching activation is received this duration excess disappears in electricity (from 21 in 2020 to 12 in 2021) and reduces significantly in gas (from 36 in 2020 to 23 in 2021)

Figure 21: Legal maximum and actual switching duration in EU MSs and Norway – 2021 (in working days)



Source: CEER 2022

121 To empower consumers, most MSs provide both consumers and suppliers the possibility to choose a precise switching date according to their individual preferences and circumstances (e.g., end of contract). On the other hand, in five MSs[24] consumers cannot choose the specific date of switching. The situation is similar for gas in four MSs[25].

122 Article 12 of Directive 2019/944 explicitly prohibits the use of termination fees[26] for energy contracts except in very specific circumstances. The fees themselves shall be proportionate and shall not exceed the direct economic loss to the supplier or the market participant engaged in aggregation resulting from the consumer's termination of the contract, including the costs of any bundled investments or services that have already been provided to the consumer as part of the contract.

123 In 2021, such termination fees could be imposed under certain circumstances in 21 MSs[27]. In Belgium, France[28], Hungary, Lithuania and Slovakia[29] NRAs[30] report that specific contract termination fees are not allowed. In most countries this is mirrored in the gas sector, except for Hungary, where fixed gas termination fees are allowed. Besides, some countries qualified the scope of their termination fees and require the payment of certain fees. Information about them is made available in the Annex of the document.

124 Early contract cancellations by suppliers have been reported across the region as a consequence of price developments in 2021-2022. So far seven[31] NRAs have pointed out that legal procedures would have been taken against these cancellations in their respective countries.

3.2.1 Switching duration – Energy Community Contracting Parties

125 The legal maximum duration of an electricity or a gas supplier switch in most EnC CPs is also in line with the Directive requirements – three weeks. Legal switching durations are reduced to 15 days in Albania and Montenegro (for electricity sector) and 10 days in Georgia (for gas sector).

24 Greece, Croatia, Latvia, Estonia and Slovakia.

25 Same countries as for electricity with Estonia (Answer: don´t know) and Croatia being exceptions. In the latter's case it's for gas the consumer can actually choose the precise switching date.

26 It must be noted that termination fees may have a negative impact on the market switching rates but may also imply cheaper supplier offers.

27 Austria, Bulgaria, Cyprus, Czechia, Germany, Denmark, Estonia, Spain, Finland, Great Britain, Greece, Croatia, Italy, Luxembourg, Hungary, Ireland, Latvia, the Netherlands, Poland, Portugal, Romania, Sweden, Slovenia, Slovakia.

28 Although termination fees are permitted for small enterprises since 2021 (non-household consumers employing less than 50 persons and less than 10M€ sales revenue).

29 Only for households.

30 Although in Greece termination fees are currently permitted, in 2020 the NRA, through Decision 409/2020, provided guidelines to suppliers so that termination fees would only be applied in fixed tariff contracts. Before that Decision, termination fees were common both in fixed tariff contracts and mixed contracts (i.e., contracts with a fixed component and an adjustment clause that permitted the suppliers to charge consumers more if the average monthly day-ahead market clearing price exceeded certain level which was defined in the supply contract). Today, most mixed supply contracts with termination fees have ceased to exist in the market.

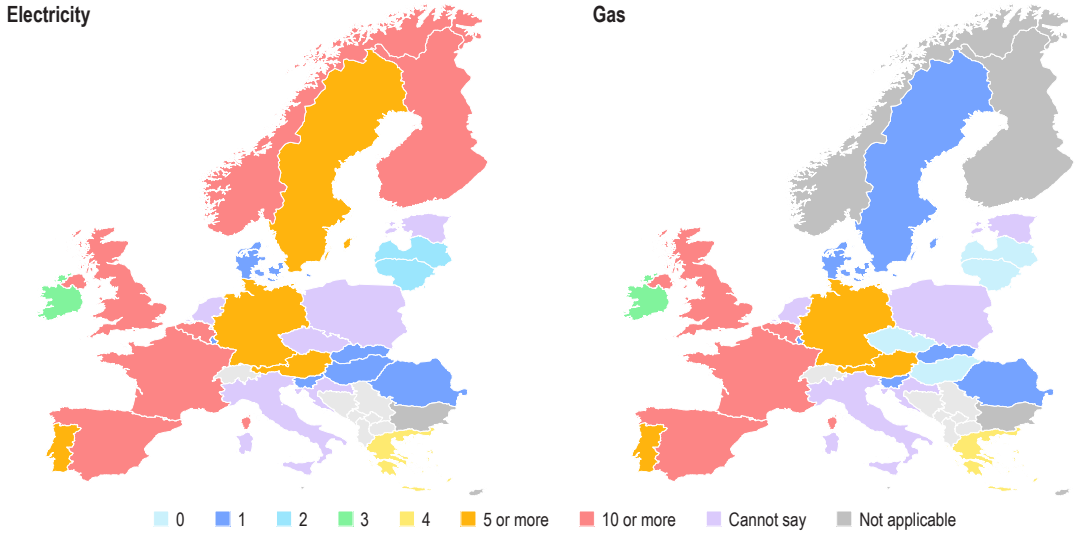
31 Austria, Germany, Greece, Hungary, Luxembourg, the Netherlands and Slovenia.

3.3 Comparison Tools

126 Comparison tools (CTs) can empower consumers by enabling them to easily compare retail electricity and gas prices in their market. This facilitates the consumer in making an informed and trusted decision with regard to which energy supplier can provide the best service based on their energy consumption. It is a requirement that energy consumers have access to high-quality comparison tools to assist them in choosing an energy supplier.

127 Figure 22 shows that CTs for electricity[32] exist in 25 MSs and 19 for gas. Some MSs have more than 10 comparison tools, while others have only one. Comparison tools are operated by NRAs, other public bodies or commercial companies.

Figure 22: Number of Comparison Tools in EU MSs and in Norway 2022.

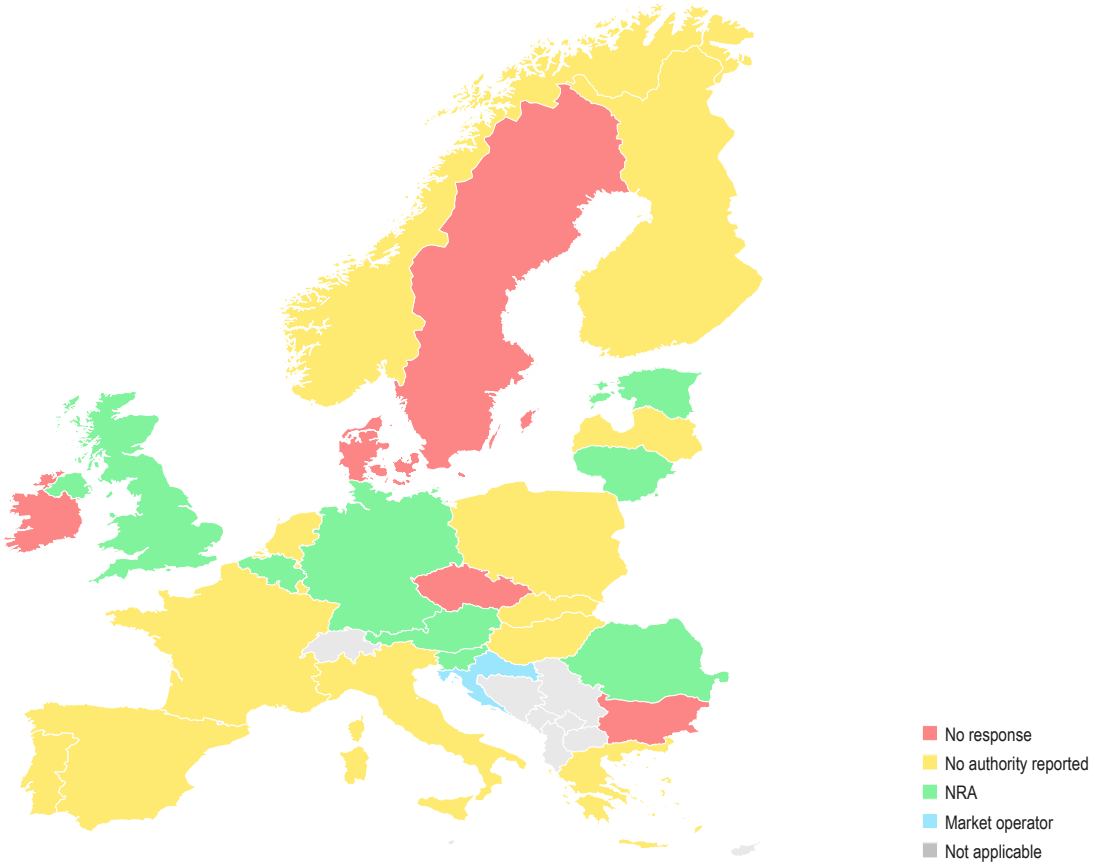


Source: CEER 2022

128 While there is a large number of comparison tools available to energy consumers, when focusing on Directive 944 and comparison tools for electricity, it is clear that very few consumers have access to a comparison tool that meets the requirements of Article 14. In most Member States, as Figure 23 shows, no authority has been given responsibility for issuing trust marks to comparison tool operators. While the Directive allows for an exemption in this area in instances where the operator of the comparison tool is an NRA or appointed public body, such exemptions are only available when the comparison tool provided meets the criteria as set out in the Directive. Given that very few markets offer dynamic price contracts to consumers, where such offers do not exist, the comparison tools in such markets cannot be viewed as meeting the criteria as set out in the Directive.

32 Public and/or private.

Figure 23: Authority appointed to certify comparison tool operators.



Source: CEER 2022

129 While it is clear that consumers in most Member States have access to a comparison tool (or several in some cases) (Figure 22), the availability of certified comparison tools for consumers is poor. While in Member States where a comparison tool is operated by an independent or public body, an exemption exists regarding the need for a certification body, such exemptions are only applicable where the publicly operated comparison tool meets all the criteria of Article 14 of Directive 2019/944. Given that Article 14 requires that the comparison tools compare the price of dynamic price contracts and that there is limited availability of such contracts in most EU retail markets, it is likely that most publicly operated tools are not fulfilling the requirements of the Directive. In fact, in most Member States, no authority has been appointed to certify comparison tools. Given this, ACER believes that a review of independent comparison tools should be undertaken to ensure compliance with Directive 2019/944.

3.3.1 Comparison tools - Energy Community Contracting Parties

130 In the EnC CPs, 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. In all other EnC CPs, in 2021, regulatory authorities continued working on creating relevant comparison tools.

3.3.2 Comparison Tool analysis case study

Price peaks led more users to consult comparison tools

131 There is a strong correlation between electricity prices and the number of visitors to the Swedish independent price comparison tool Elpriskollen. When prices increased dramatically in 2021 and 2022, the number of unique users increased simultaneously.

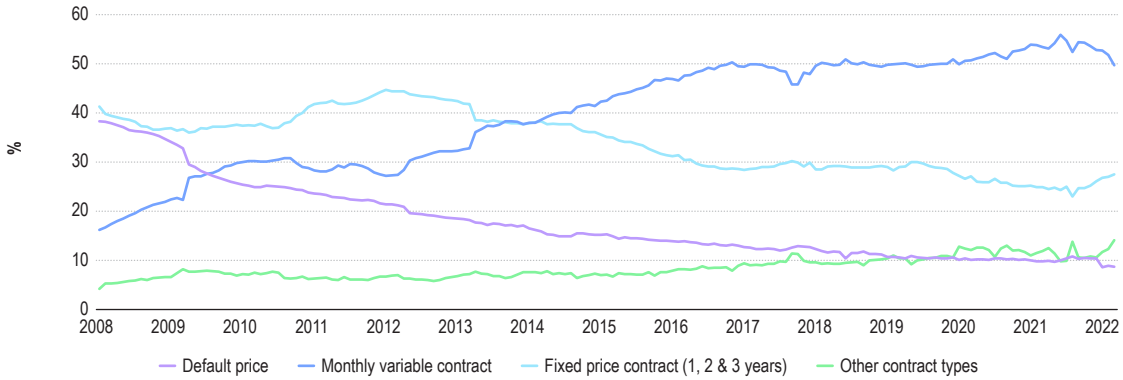
132 However, all comparisons do not lead to a switch. The switching rate did increase, but not as much as the number of unique users. And high prices are not the only explanation to the increase in unique users. Marketing activities 2017-2022 have gradually enhanced knowledge among customers so that when prices started to rise in 2021, they knew where to turn for independent information.

Many Swedish households were immediately affected by the price peaks

133 In Sweden, around 140 suppliers offer a range of different contract types. The most popular among households is a monthly variable contract where the price is based on the average spot price during the month of the consumption.[33]

134 Figure 24 shows how households since 2008 gradually switched to monthly variable contracts. In 2021 and 2022, around half of all Swedish household customers had this contract type, which means that they were immediately affected by price peaks, usually with only a few weeks delay when they received their monthly bill.

Figure 24: Customers per contract type January 2008 to March 2022 (%)



Source: Statistics Sweden

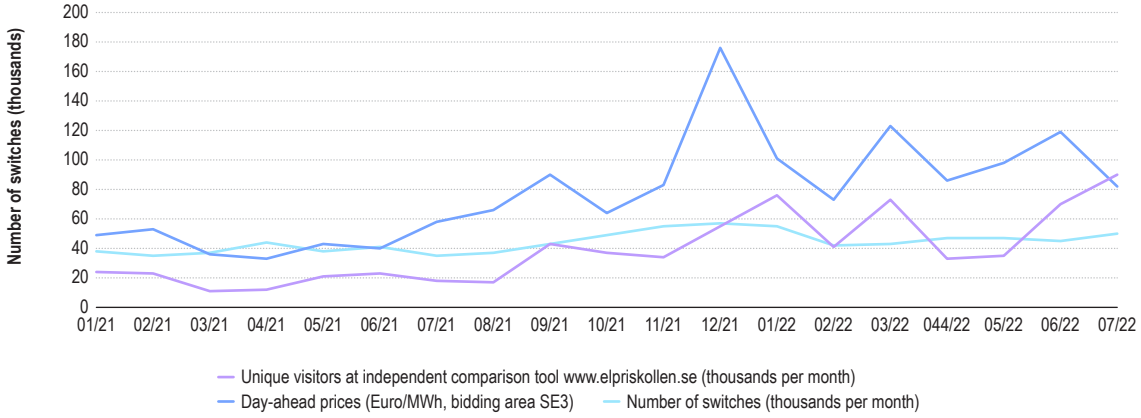
135 At the same time, one out of four customers have a fixed-price contract with a binding period of 1, 2 or 3 years. These customers were of course also affected by the higher prices, but not until their current contract expired and they had to sign a new contract.

Correlation between prices and unique visitors

136 Figure 25 shows the number of unique users at Elpriskollen, prices and switching rate between January 2021 and July 2022. One conclusion is that when prices increased, the number of unique users at Elpriskollen also increased. Another conclusion is that the number of switches did not increase to the same extent as prices and unique users.

33 The price also includes the suppliers' add-ons and VAT

Figure 25: Unique visitors, prices and number of switches 2021 and 2022



Source: Google Analytics, Nord Pool and Statistics Sweden

137 It is obvious that many customers came to Elpriskollen to find a better deal when prices increased. However, higher prices are not the only explanation for the increase in unique users. In order to to attract visitors when prices increase, according to the Swedish NRA´s, experience a comparison tool must be known among end users and/or considered relevant by search engines like Google.

138 Knowledge among customers can be enhanced by, for example, information campaigns or media coverage. For a link to be considered relevant by search engines, and therefore to be placed higher in search results, is to a large extent based on actual traffic, where web pages that attract traffic and where users stay for a certain time are prioritized by the search engines.

139 The Swedish Energy Markets Inspectorate, Ei, started Elpriskollen in 2008 and decided to market the comparison tool in 2017, after a decline in the number of unique users. Between 2008 and 2016, no resources were spent on marketing activities. The marketing campaign from 2017 and onwards has been successful, going from 60,000 unique users in 2015 to over 500,000 in the first 8 months of 2022.

140 Google and Facebook users who searched for certain words connected to electricity price or comparison of different electricity suppliers have been targeted. The short-term goal was to attract more unique users and the long-term goal was to enhance knowledge and direct traffic (visitors using the address www.elpriskollen.se).

141 Table 1 analyses the traffic that came to Elpriskollen between 2017 and 2022. During this period, Ei has seen how the direct traffic has increased, especially in 2021 and 2022. Ei´s conclusion is that when the price peaks occurred, customers knew where to find independent information and that the marketing campaign between 2017 and 2022 helped build that knowledge.

Table 1: Traffic to Elpriskollen 2017–2022

Year	Unique visitors (number)	Unique visitors (growth)	Visitors that perform a comparison[34]	Ave-rage time at CT	Direct traffic (share of all traffic)	Direct traffic (growth)	Organic growth[35]	Visitors via adds
2017	117,000	+95%[36]	-	3:40	34%	-	-	6,630
2018	188,000	+60%	-	3:46	31%	+9,6%	+49%	9,670
2019	195,000	+4%	-	3:22	28%	+23%	+9%	44,237
2020	210,000	+8%	57%	3:32	35%	+35%	-13%	34,830
2021	304,600	+45%	62%	3,57	42%	+80%	+6%	53,772
2022[37]	491,100	+61%	73%	3:04	58%	+96%	+22%	58,067

Source: Google Analytics (the empty boxes in table 1 is parameters not measured that particular year)

3.3.3 About the independent comparison tool Elpriskollen

142 All suppliers that sell electricity to households or commercial customers with an annual consumption bellow 100,000 kWh/year are required by law to report prices and terms to the Swedish Energy Markets Inspectorate (Ei). Ei operates Elpriskollen where prices and terms can be compared. Elpriskollen fulfils the criteria defined in the Electricity Directive.

143 Ei measures the traffic to and at Elpriskollen with Google Analytics. The number of unique users, the number of users leaving the start-page without making a comparison and the number of users that heads to a supplier's website after a comparison are examples of parameters that are measured and analysed. The data is used continuously to improve the website and make it more user-friendly.

3.4 Smart Meter Rollout

144 Figure 26 shows the status of the rollout of electricity smart meters at the end of 2021. In twelve countries, the rollout rate of electricity smart meters has reached 80% or higher: Denmark[38], Estonia, Spain, Finland, Italy, Norway recorded a 98% rollout rate or higher, followed by Luxemburg, Malta, France, the Netherlands and Slovenia, with rollout rates between 88% and 93%.

145 Taking into account the progress of rollout in contrast to legal requirements (>80%) and actual rollout rates, some delays are arising or expected in the future. For example, Austria targeted 80% rollout by 2020 but moved its target to 2024, as rollout levels are still below 50%. Cyprus, Poland and Romania have a rollout rate lower than 20% with a target of 80% set beyond 2024. Hungary and Lithuania have a rollout rate lower than 10% without any defined legal target.

34 Share of unique visitors that that insert necessary customer data and perform a comparison.

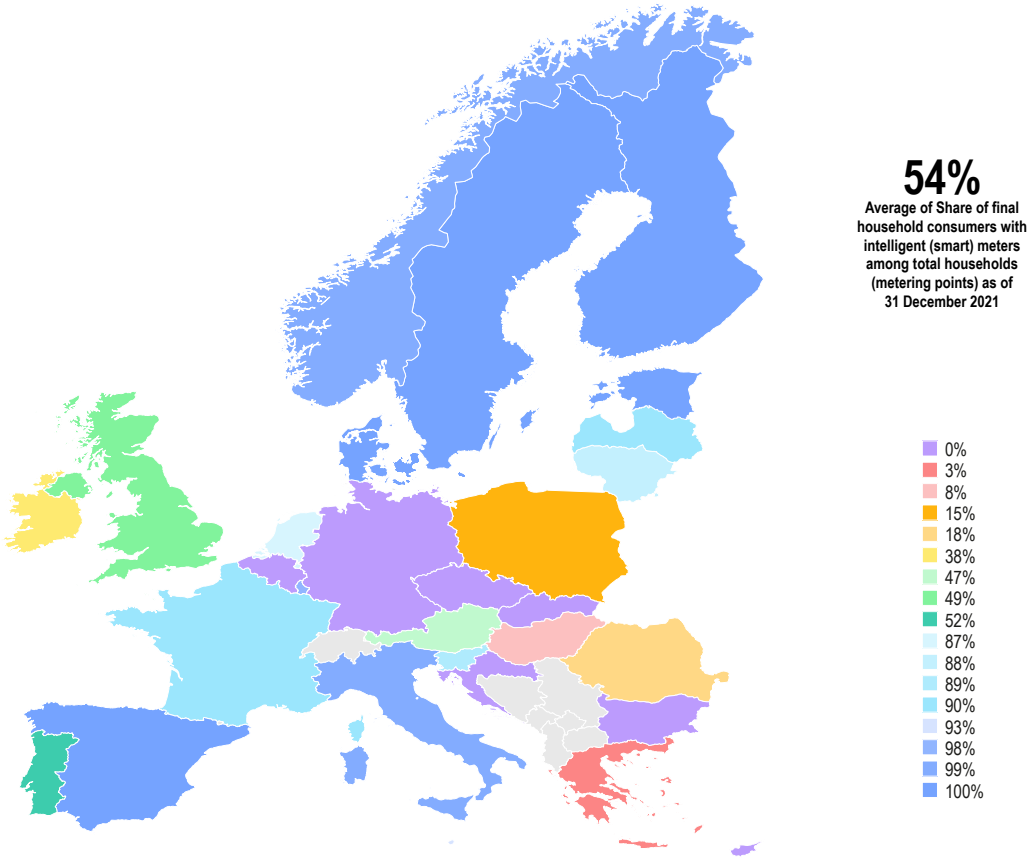
35 Share of traffic from Google Search.

36 Compared to 2015 since unique users 2016 was not measured.

37 1 January - 11 August 2022.

38 In Denmark, 100% rollout of electricity smart meters has to be reached by the end of 2020 according to national law. An 80% target was never defined, however that level was reached in 2018.

Figure 26: The status of the rollout of electricity smart meters – 2021 (%)



Source: CEER 2022

Note: No data for Ireland provided, data gathered from ESB Networks.

146 For the gas sector, Annex I of Directive 2009/73 requires MSs to prepare a timetable for the rollout of smart gas meters with no indication of a timeline and subject to cost-effectiveness, factoring in the European and national decisions on the future of gas consumption. The rollout of smart gas meters is very limited. Consequently, a few countries represent significant rates. Only the Netherlands (87%) and France (83%) have surpassed 80%[39], followed by Italy (73%) and Great Britain (42%).

3.4.1 Smart meter rollout - Energy Community Contracting Parties

147 The rollout of electricity smart meters in the EnC CPs started with implementation of Directive 2009/72, however, with very different dynamics. The largest penetration of smart meters in the household segment was recorded in Montenegro (83%), followed by Kosovo*[40] (15%), Bosnia and Herzegovina (13.5%), Ukraine (more than 12%), Albania (3.5%) and Serbia (3%). For the other EnC CPs, the information was not available. Legal requirements for smart meters' functionalities were established in five EnC CPs. It is expected that the implementation of the newly adopted Electricity Directive (EU) 2019/944 will improve the rollout and functional requirements for smart meters in this region.

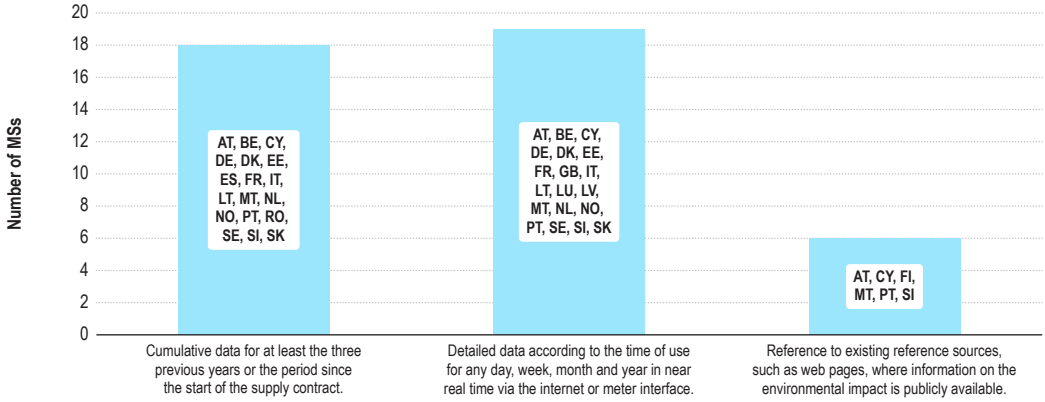
39 Estonia planned to achieve the 80% target in 2020 but no data is available.

40 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.

3.5 Features and consumption information of smart meters

148 In order to ensure benefits to household consumers, minimal technical and other requirements for smart meters are defined in legislation in twenty MSs for electricity and in ten MSs for gas.

Figure 27: Complementary information on historical consumption that final household consumers with smart meters must have access to – 2021 (# of MSs)



Source: CEER 2022

3.5.1 Electricity products and services enabled by smart meter

149 All consumers should be able to benefit from direct participation in the market by adjusting their consumption according to market signals and in return benefit from lower electricity prices. Dynamic price contracts create price-driven incentives for consumers to react flexibly to wholesale market conditions, providing greater transparency regarding the price of electricity and incentivise consumers to actively adapt their electricity consumption. For this type of price contract, smart meters play a crucial role. While there are benefits to dynamic contracts, these benefits can only be unlocked if a consumer is responsive to a price signal.

Figure 28: Overview of rollout rate, target year by when the 80% rate of electricity smart meters will be reached in EU MSs and Norway and types of electricity products enabled by smart meter

Country	Share of final household consumers with intelligent (smart) meters among total households (metering points) as of 31 December 2021	Rollout of intelligent (smart) meters reaching the target of 80% of consumers being equipped with them as stated in Annex I of Directive 2009/72/EC according to national law	Time-of-use with intra-day/ weekdays/ weekend energy price differentiation	Real-time/ hourly energy pricing	Remote control of consumption (e.g. remotely operated heat pumps, etc…)	Critical peak pricing
AT	46.6%	2024	x	x	x	
BE	0.0%	No national law stating this (despite positive roll out decision)	x			
BG	0.0%	Not applicable (no positive roll out decision yet)				
CY	0.0%	Beyond 2024	x			
CZ	0.0%					
DE	0.0%	Beyond 2024	x	x	x	
DK	100.0%	2020	x	x		x
EE	99.7%	2017		x		
ES	99.6%	2017	x	x		
FI	99.9%	2017		x		
FR	90.0%	2020	x	x	x	x
GB	49.0%	2024	x	x		
GR	2.6%	No national law stating this (despite positive roll out decision)				
HR	0.0%	Not applicable (no positive roll out decision yet)				
HU	7.8%	No national law stating this (despite positive roll out decision)				
IE	37.5%	Ireland's smart metering programme targets a roll out of 500,000 smart meters by 2024.				
IT	98.5%	2017	x			
LT	88.0%	No national law stating this (despite positive roll out decision)	x			
LU	98.0%	2019				
LV	90.4%	2022	x	x		x
MT	93.0%	Beyond 2024				
NL	87.4%	No national law stating this (despite positive roll out decision)	x	x		
NO	99.0%	2018		x	x	x
PL	15.4%	Beyond 2024	x			
PT	52.00%	No national law stating this (despite positive roll out decision)	x			
RO	17.7%	Beyond 2024	x			
SE	100.0%	2017		x	x	
SI	88.1%	2020	x			x
SK	0.0%	2020	x	x		

Source: CEER 2022. Note, no data for Ireland provided, data gathered from ESB Networks.

150 Less responsive consumers may be more suited to a fixed price contract where they pay a higher unit rate for their electricity. However, as stated earlier, such contracts will likely be either be significantly more expensive or simply not offered by suppliers in 2022.

151 As outlined in Directive 2019/944, Member States must ensure that final consumers with smart meters can request a dynamic electricity price contract from at least one supplier and/or from every supplier that has had more than 200,000 final consumers since January 2021.

152 Fourteen MSs[41], with (partial) smart meter rollout, report having dynamic electricity price offers. France implemented the framework regarding such offers, with issuing of provisions regarding information to provide for dynamic electricity price contracts postponed from 2021 to 2023. In Germany, it is the duty of suppliers with more than 200,000 customers to offer dynamic price contracts and to give information about the cost, benefits and disadvantages. In the Netherlands, the NRA is in contact with suppliers to create a standardized approach to offering these products and to provide clarity for the consumer.

153 Suppliers must formally inform their final household consumers about the opportunities, costs and risks of dynamic contracts. Information regarding the content provided by suppliers about this type of contract to household consumers is available in the Annex.

3.5.2 Demand Side Response

154 Demand side response (DSR)[42] is seen as one of the key solutions to accommodating more variable renewable electricity generation, such as wind and solar. Given the current crisis, the role of both demand side response and demand reduction will be key is combating the high energy prices faced by consumers in 2022.

155 MSs have started to support the use of demand side response, but DSR implementation progress differs across the MSs.

156 DSR provides an opportunity for consumers to reduce or adjust electricity usage away from peak periods.

157 There are two forms of DSR:

a) implicit demand-side flexibility - which is the consumer's reaction to price signals[43]

b) explicit demand-side flexibility - which is committed and dispatchable.[44]

158 Examples of explicit demand response in different EU countries as of 2021:

a) In Belgium, it is possible to participate in ancillary services through certain assets, such as home batteries and electric boilers.

b) In Germany, consumers with controllable consumer devices are charged lower network fees, provided that they are controllable by the DSO for congestion management reasons and have the necessary grid usage contract.

c) In France, explicit demand response can participate in the wholesale markets and in ancillary services. Most of the available capacity comes from industrial facilities but residential users can also participate with electric heating and electric boilers.

41 Austria, Belgium, Germany, Estonia, Spain, Finland, Croatia, Hungary, Lithuania, Latvia, the Netherlands, Portugal, Romania, Sweden.

42 According to Directive 2019/944, 'demand response' means the change of electricity load by final consumers from their normal or current consumption patterns in response to market signals, including in response to time-variable electricity prices or incentive payments, or in response to the acceptance of the final consumer's bid to sell demand reduction or increase at a price in an organised market, whether alone or though aggregation.

43 Some implicit demand response mechanisms are time-based rates, time-of-use pricing, critical peak pricing, variable peak pricing, real time pricing, and critical peak rebates.

44 Flexibility that can be traded (like generation flexibility) on different energy markets (wholesale, balancing, system support and reserves markets). Electricity consumers receive specific rewards or incentives in order to change their consumption patterns upon request (using more or using less). See Art 17. of Directive "Member States shall allow final customers, including those offering demand response through aggregation, to participate alongside producers in a non-discriminatory manner in all electricity markets."

d) In Great Britain, the availability of explicit demand response offers is limited to consumers that are half-hourly settled, i.e., to those consumers who have meters that record electricity use on a half-hourly basis and for whom these half-hourly readings are used to determine the volume of electricity attributed to their supplier in each settlement period.

e) In Norway, a few companies offer remote control of appliances, heating and charging of electric vehicle. This process can be adjusted based on price or voltage.

f) In Slovenia, households can participate in explicit demand response for ancillary services based on products defined by the TSO through aggregation. Pilot projects enable households to participate in explicit demand response (congestion management and non-frequency ancillary services), both directly or through aggregation.

g) Meanwhile in Lithuania explicit demand response offers are only available to non-household consumers (legal amendments are currently discussed to enable demand side response for household consumers as well) and a law has entered into force in March 2022 in Estonia.

159 In a large majority of the MS, prosumers can sell excess energy that they produce. However, prices of excess energy can only be compared in three MSs:

a) Only partly possible in Austria as there is no comprehensive comparison of all excess energy prices available. Excess energy of residential and small commercial customers is usually bought by suppliers and NRA's price comparison tool publishes excess energy price offers but not all suppliers use this opportunity. The input of excess energy prices is voluntary for suppliers;

b) Only in the Flemish region of Belgium;

c) and in the Netherlands.

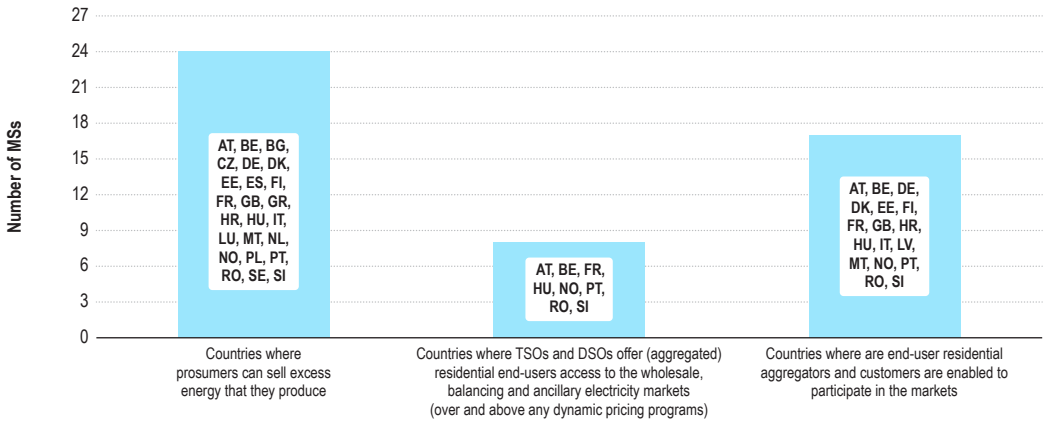
160 Figure 29 shows that in 17 MSs[45], end-user residential aggregators and customers are enabled to participate in the markets. However, only in 9 MSs[46], DSOs and TSOs offer (aggregated) residential end-users access to the wholesale market[47], balancing and ancillary electricity markets (over and above any dynamic pricing programs).

45 AT, BE, DE, DK, EE, FI, FR, GB, HR, HU, IT, LV, MT, NO; PT, RO, SI.

46 AT, BE, FR, HU, NO, PT, RO, SI, SK.

47 For residential customers in Austria, access to wholesale market is theoretically possible through once own supplier, (is "once own supplier really correct? What does once own mean?) who offers aggregation.

Figure 29: Access to sale of excess electricity and availability of aggregation opportunities in Member States



Source: CEER 2022

3.6 Conduct conclusions

161 The energy crisis has highlighted the importance of providing customers with a) awareness that they can save and how much and b) awareness of how they can achieve the savings. It has also highlighted the importance of competition. In addition, the high number of supplier failures may have led customers in many markets to fear competitors and feel safer with incumbents, thus potentially exposing them to higher prices.

162 While consumers in many markets have access to an independent comparison tool, it is apparent that Member States have not put in place a body to certify comparison tools in their Member States. While such bodies are not required where an independent body exists, Member States should examine whether their independent comparison tools fully meet the criteria of Directive 2019/944 to be certain that such exemptions apply.

4 Performance

163 This section provides performance overview of retail markets, with a focus on the most recent price trends, including retail pricing during 2021 and the first half of 2022.

164 The section contains the following information:

a) Section 4.1 provides an analysis of energy prices and energy bill breakdown across EU MSs and the Energy Community Contracting Parties;

b) Section 4.2 provides an analysis of the compliance of energy consumer bills with regard to Directive 2019/944 with a view to identifying areas of improvement for European energy consumers;

c) Section 4.3 examines MS action regarding energy poverty and vulnerable consumers in response to the energy crisis;

d) Section 4.4 reviews complaints and identifies concerns regarding the monitoring of such complaints in Member States.

4.1 Energy Prices

165 Retail energy prices are an important part of household and industrial consumers' expenditure. This section examines retail energy prices in 2021 and their trends over the 2008-2021 period at the European Union (EU) and Energy Community (EnC) Contracting Partners (CP) level, as well as for individual countries. Limited parts of the analysis will offer price trends for the first half of 2022 to increase the insight about the price increase related to the energy crisis. In such instances, data has been provided by VaasaETT.

166 Retail energy prices are 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 stated above, where 2022 prices are outlined, such data has been provided by VaasaETT.

167 The price includes basic electricity price, transmission, system services and distribution fees, taxes and levies and also VAT. EU aggregates are calculated by Eurostat by weighting the national prices with the latest available national consumption for either the household sector or the industrial sector.[48] Similarly, in the case of gas, data is also sourced from Eurostat with gas price data being reported by National Statistical Institutes, Ministries, Energy Agencies, or in the case of monopolies, by single gas companies.[49]

4.1.1 Electricity retail prices

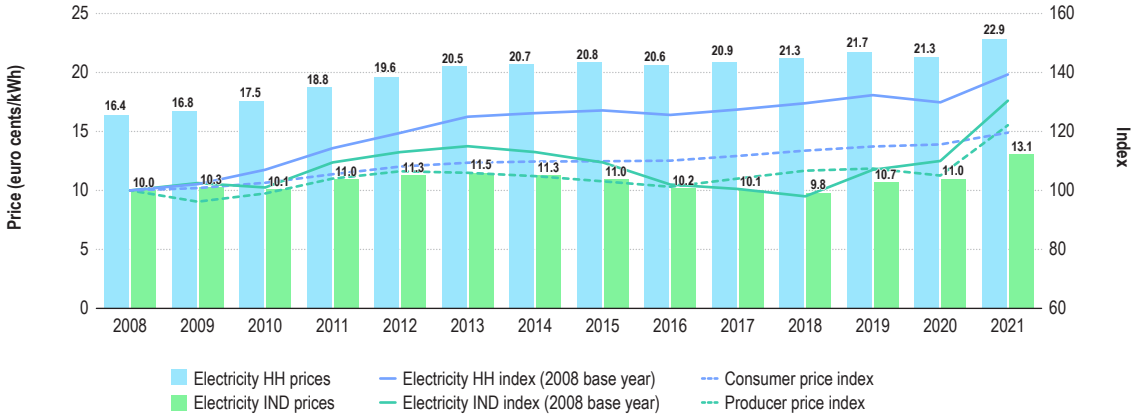
168 As shown in Figure 30, electricity prices for EU households increased in 2021. On average, household electricity prices increased by 7.5% to 22.9 euro cents/kWh in comparison to 2020. For industrial consumers, electricity prices increased in 2021 for the third consecutive year. On average, industrial electricity prices increased by 19% to 13.1 euro cents/kWh in 2021 compared to 2020 prices.

169 Considering pricing trends since 2008, Figure 30 shows that on average, electricity prices for household consumers across the EU increased in nominal terms by 39.3%. Industrial prices increased by 30.5% over the same period. It is noteworthy that household prices have increased notably faster than inflation. Up to 2020 the price increase for electricity consumers mainly reflects increases in non-contestable charges like network costs, taxes and renewable energy-related (RES) charges, while in 2021 is mainly due to the energy component increase.

48 https://ec.europa.eu/eurostat/cache/metadata/en/nrg_pc_204_esms.htm

49 https://ec.europa.eu/eurostat/cache/metadata/en/nrg_pc_202_esms.htm

Figure 30: Trends in final electricity prices for household and industrial consumers in the EU – 2008–2021 (euro cents/kWh and index change, 2008 = 100)



Source: ACER 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) (May 2022).

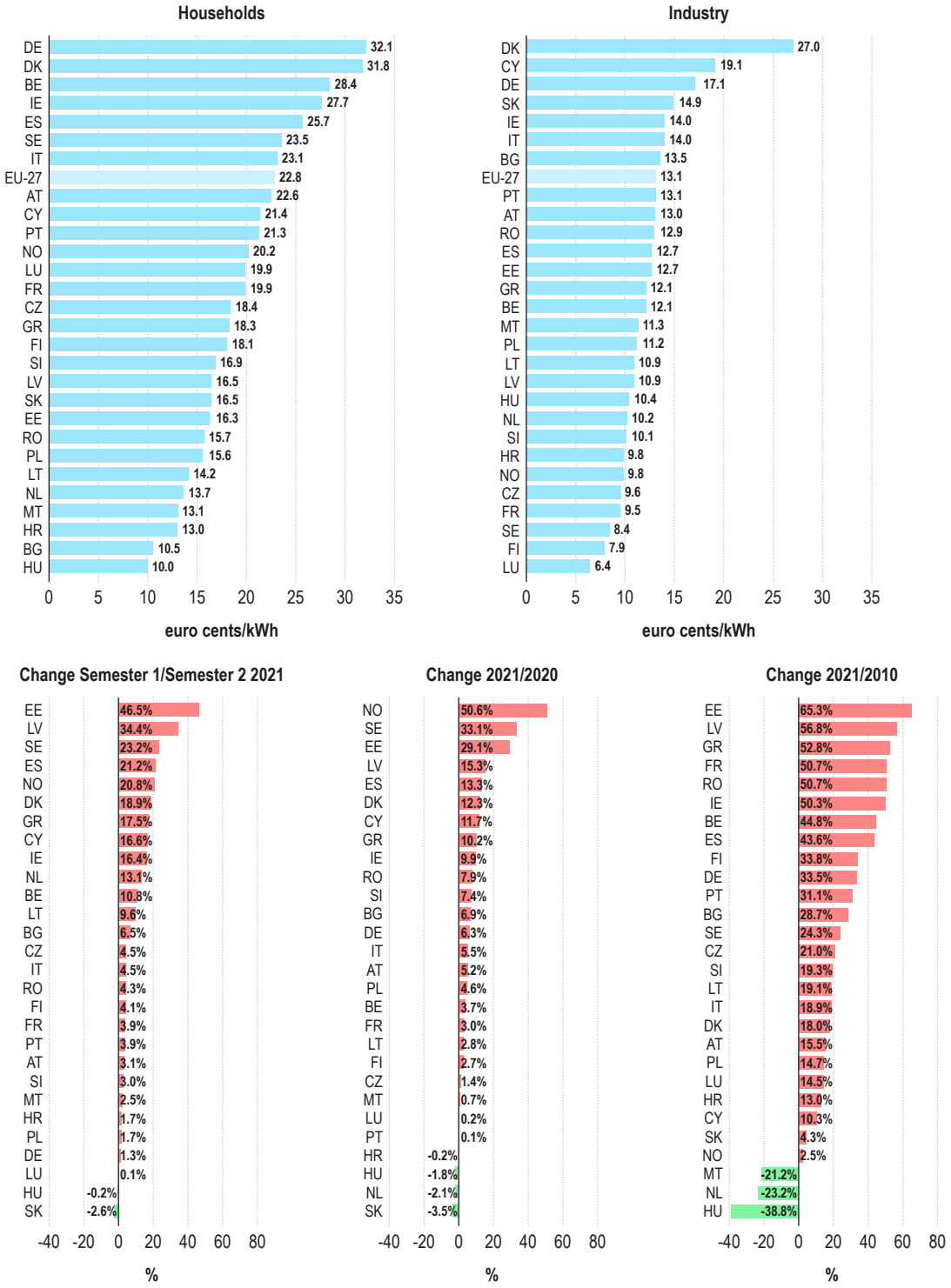
Note: Prices in nominal terms. The consumer price index is the Harmonised Index of Consumer Prices; the producer price index covers the producer prices in industry. Both indexes are weighted in accordance to the size of individual MSs.

170 Large differences in retail electricity prices continue across the EU, as shown in Figure 31. In Germany (the MS with the highest household price, at 32.1 euro cents/kWh), household consumers pay more than three times that of Hungarian household consumers (10 euro cents/kWh). These differences are even higher in the industrial market, as industrial electricity prices in Denmark, the most expensive MS (27 euro cents/kWh), are more than four times higher than those in Luxembourg, the cheapest (6.4 euro cents/kWh). In the EU as a whole, electricity prices for industry have been decreasing slightly year on year until 2018. However, as outlined earlier, 2021 is the third year that has seen a price increase

171 In comparison to 2020 prices, the largest price increases for household consumers were recorded in Norway (+50.6%) and Sweden (+33.1%), while in Slovakia and in the Netherlands electricity prices decreased by 3.5% and 2.1%, respectively. Such fluctuations can be explained by a stronger link between wholesale and retail prices in the retail markets of both Norway and Sweden, whereas markets which had a small fluctuation may indicate a stronger uptake of fixed price contracts which would have been somewhat shielded from initial price spikes in 2021. In the industrial market, electricity prices increased the most in Norway (+145.4%) and Estonia (+56.8%), while no MS recorded a price decrease year on year.

172 Given the high volatility of the prices caused by external factors described in ACER's High Price note in October 2021 on high prices, a new indicator has been added to the report to highlight price dynamics in 2021. In particular, as shown in Figure 31, the percentage difference between the first and the second semester of 2021 for household consumers has been added. The largest price increases for household consumers were recorded in Estonia (+46.5%) and Latvia (+34.4%), while in Hungary and Slovakia electricity prices decreases by 0.2% and 2.6% respectively, representing the only price decreases in 2021. At the same time, the highest increases in industrial electricity prices were recorded in Greece (+79.2%) and Spain (+69.6%), while the only price decreases within the year were recorded in Malta (-0.1%) and Czechia (-2.5%).

Figure 31: Final electricity prices for households and industrial consumers in the EU MSs in 2010 (euro cents/kWh) and changes compared to 2020 and 2021 (%)[50]

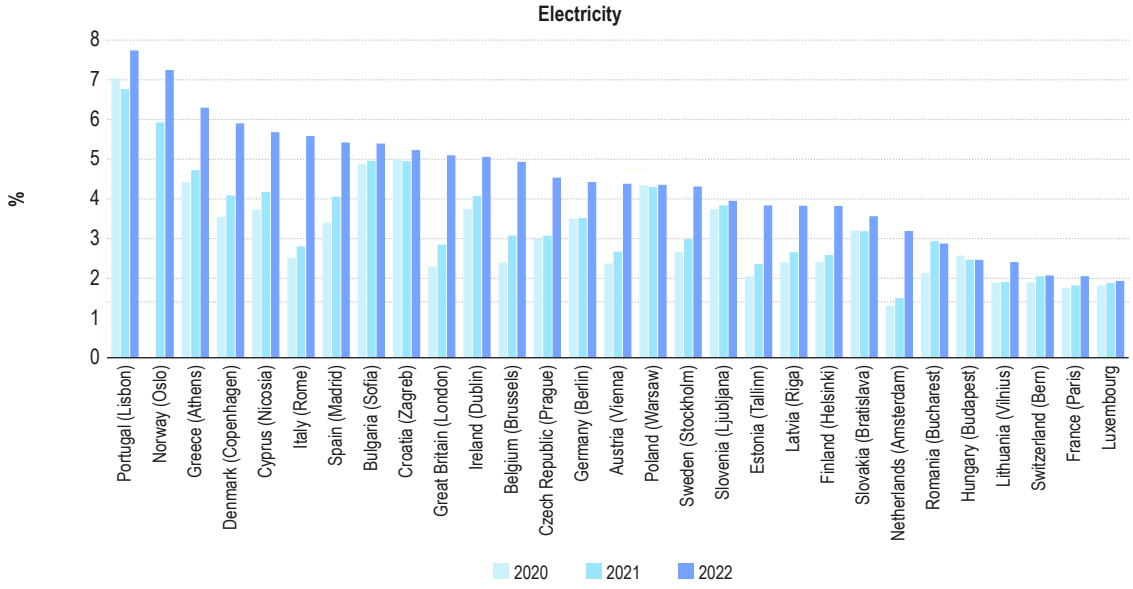


Source: Eurostat, Band DC: 2,500–5,000 kWh (household electricity consumption) and Band IE: 20,000–70,000 MWh (industrial electricity consumption) (June 2022).

Note: Prices in nominal terms.

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

Figure 32: Electricity expenditure – share of household disposable income



Source: VaasaETT

**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.*

173 As can be seen in Figure 32 since 2020, the share of disposable income spent on electricity bills has been increasing in European markets, leading to its highest value in 2022, at the peak of the energy crisis.

174 When comparing 2022 with previous years, there are some markets where the increase is substantial (specifically, in the Netherlands and Italy), while there are others like Poland, Romania, France and Luxembourg with a more flat share development in recent years. However, the general trend remains upwards.

4.1.1.1 Energy Community (EnC) electricity prices

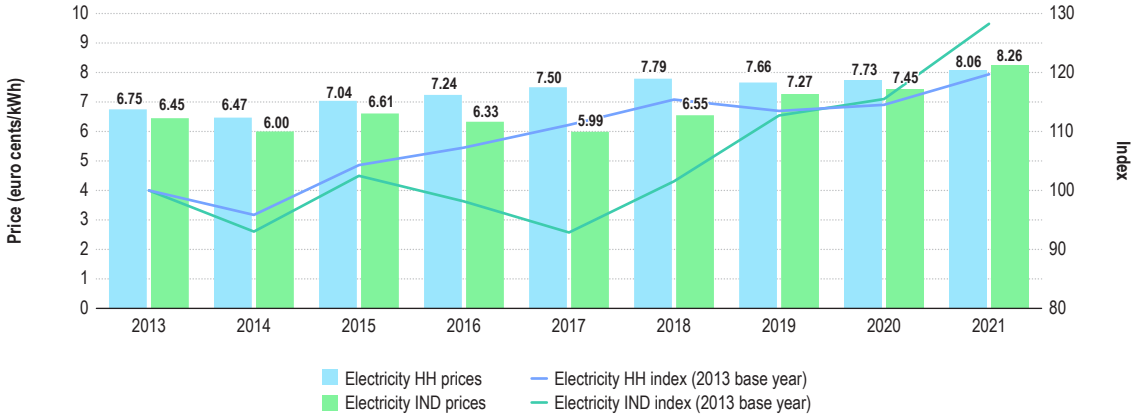
175 In the EnC, final average household prices increased in 2021 by 5% compared to 2020. Industry prices increased by 11% to 8.26 euro cents/kWh in 2021 compared to 2020. This is the first time since 2013 that average industry price in the EnC CPs is higher than the average price for households.

176 From 2013 to 2021, electricity prices for households in the EnC CPs excluding Ukraine increased, on average, by 20%, while industrial prices increased on average by 28%, as shown in Figure 33. This trend has not been observed in Ukraine, where, over the same period, electricity prices for households increased by 67% and industry prices decreased by 33%. The unwinding of cross-subsidization partially explains the price dynamics in the two segments.

177 In 2021, the average electricity price for household consumers in EnC CPs, excluding Ukraine, was 8.08 euro cents/kWh. This is 2.8 times less than the average EU electricity price for households in 2021. Household consumers in Ukraine paid in 2021, on average, around 1.7 times less than in other EnC CPs – only 4.85 euro cents/kWh.

178 Figure 33 shows the final electricity prices in nominal terms for household and industrial consumers in the EnC CPs from 2013 to 2021 (euro cents/kWh).

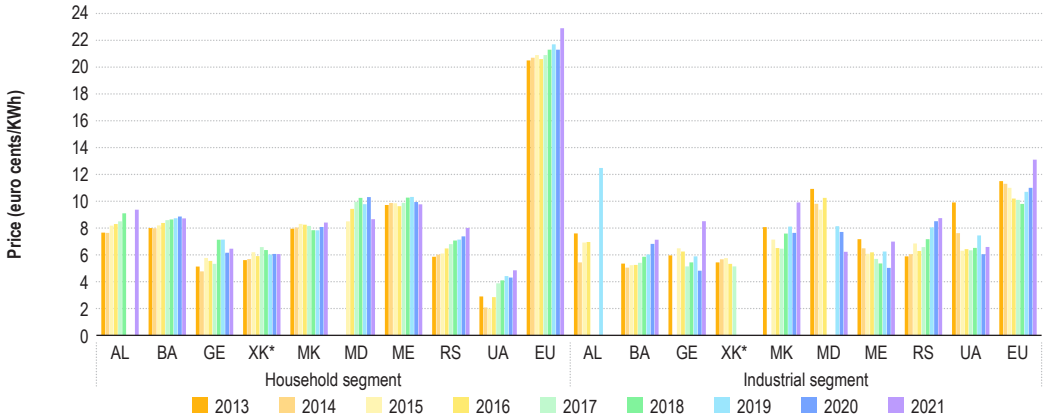
Figure 33: Trends in final electricity prices for household and industrial consumers in the EnC CPs, excluding Ukraine – 2013-2021 (euro cents/kWh and index change, 2013 = 100)



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) (July 2022) and NRA contributions.

Note: Prices in nominal terms.

Figure 34: Final electricity prices in nominal terms for household (left) and industrial (right) consumers in EnC CPs – 2013-2021 (euro cents/kWh)



Source: EnC Secretariat calculations based on Eurostat and NRAs

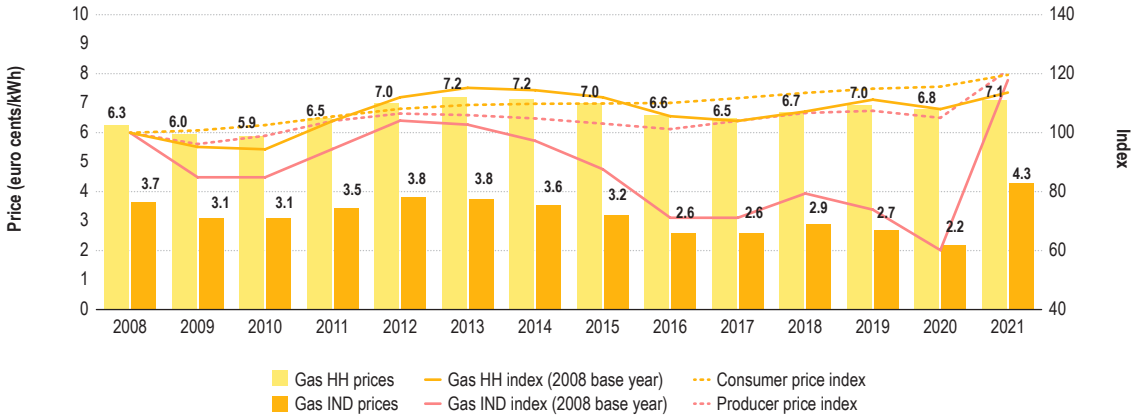
179 As in previous years, variations in electricity price were observed across the EnC CPs. In 2021, household electricity prices were the highest in Montenegro (9.77 euro cents/kWh), which is twice the price paid by household electricity consumers in Ukraine. In comparison to 2020 prices, the slight decreases for household consumers were recorded in Bosnia and Herzegovina, Kosovo* and Montenegro while in Moldova household electricity prices decreased by 16%. In other EnC CPs electricity prices increased (the biggest increase was registered in Ukraine – 12.5%). Over the 2013–2021 period, household electricity prices increased in all EnC CPs. End consumer prices for households were still regulated in all EnC CPs, except in Montenegro, sometimes resulting in prices being set below actual costs.

180 From 2013 to 2021, in part of the EnC CPs, industrial electricity consumers observed decreasing electricity prices (Moldova, Montenegro and Ukraine). This was not the case for consumers in Bosnia and Herzegovina, Georgia, North Macedonia and Serbia, where average industrial prices increased by between 23% and 48%, respectively. The highest year-to-year increase (76.6%) was observed in Georgia, where prices increased from 4.82 euro cents/kWh in 2020 to 8.51 euro cents/kWh in 2021. The lowest electricity prices for industrial electricity consumers were in Ukraine with 6.59 euro cents/kWh on average, whereas the highest industrial price was reported in North Macedonia (9.91 euro vents/kWh). In 2021, average electricity prices for industrial consumers in the EnC CPs were around 63% of the average electricity prices for industry in the EU MSs.

4.1.2 European Union gas prices

181 In 2021, average gas prices across the EU increased by 4.4% for household consumers and 95.4% for industrial consumers, with respect to the previous year, by settling at 7.1 euro cents/kWh and at 4.3 euro cents/kWh respectively. Since 2008, the average final gas price for household consumers increased by 13.6% and by 17.8% for industrial consumers. Figure 35 shows that in 2021 household gas prices increased, almost reaching the highest values recorded since 2008 with only 2013 and 2014 being more expensive. Industrial gas prices increased significantly in 2021, recording the highest level since 2008 and almost doubling 2020 levels. Figure 35 shows that while the price dynamics of households and industrial gas prices follow a similar path, household gas consumers were shielded from the level of gas price increases as observed in the industrial sector. This would indicate that the household gas consumers should expect significant gas price increases in 2022 and 2023.

Figure 35: Trends in final gas prices for household and industrial consumers in EU MSs – 2008-2021 (euro cents/kWh and index change, 2008 = 100)

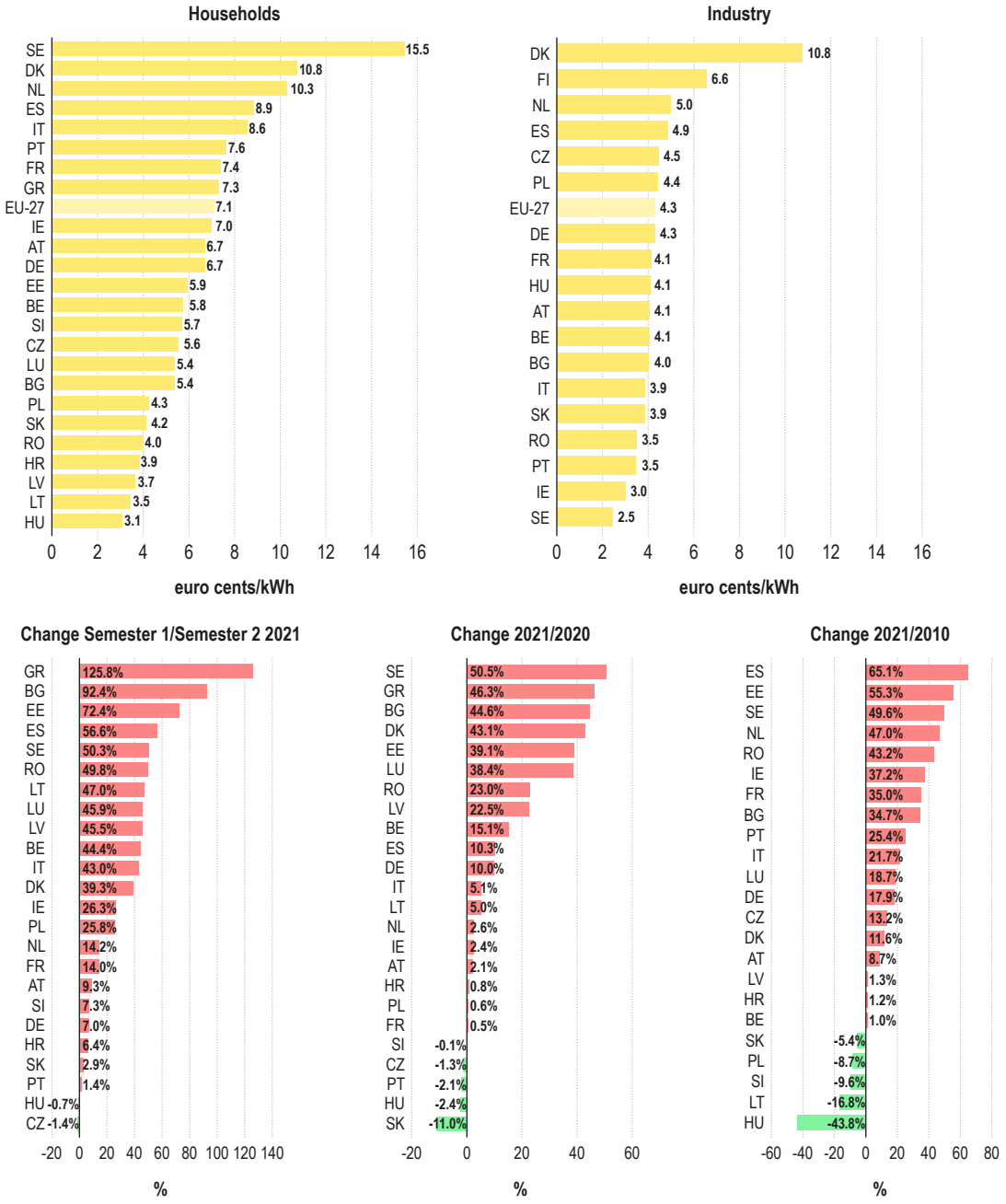


Source: ACER calculations based on Eurostat, Band D2: 20–200 GJ (household gas consumption) and Band I5: 1,000,000–4,000,000 GJ (industrial gas consumption) - (June 2022).

Note: Prices 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 in accordance to the size of the individual MSs.

182 As with the electricity retail market, there are large discrepancies across the EU in the gas retail market. Figure 36 shows that the final price paid by household gas consumers in Sweden (15.5 euro cents/kWh) was five times higher than the 3.1 euro cents/kWh paid by Hungarian household gas consumers. In the industrial market, consumers in Denmark paid more than four times (10.8 euro cents/kWh) the price paid by consumers in Sweden (2.5 euro cents/kWh). In comparison to 2020 prices, the largest price increases for household consumers were recorded in Sweden (50.5%) and Greece (46.3%), while the largest price decreases were recorded in Slovakia (-11%) and in Hungary (-2.4%). At the same time, the highest increases for industrial gas prices were recorded in France (+168%) and Belgium (+137.6). Only Sweden recorded a decrease in the industrial gas prices (-37.1%), year on year.

Figure 36: Final gas prices for households and industrial consumers in the EU MSs in 2021 (euro cents/kWh) and changes compared to 2020 and 2010 (%)



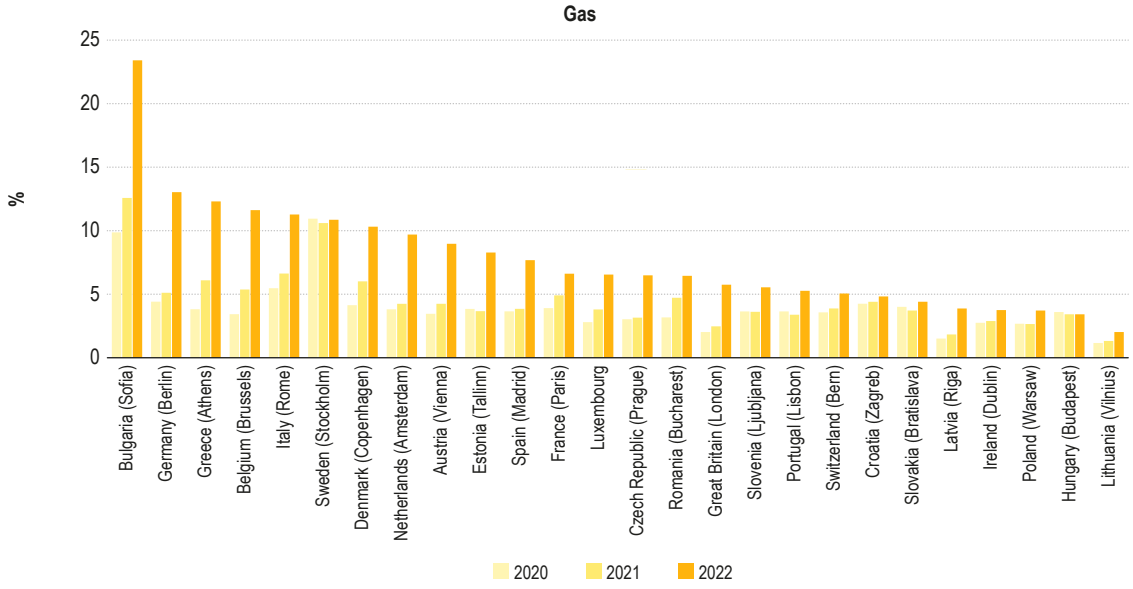
Source: ACER calculations based on Eurostat, Band D2: 20–200 GJ (household gas consumption) and Band I5: 1,000,000–4,000,000 GJ (industrial gas consumption) – (June 2022).

Note: Prices in nominal terms. For Greece (households) and Ireland (industry), the 'change 2019/08' is with respect to 2012. Data on industrial prices in Croatia, Lithuania, Luxembourg and Slovenia are not available. Prices in nominal terms. For GB, Eurostat data is available only for the GB as a whole. Prices for Finland are not available. For Greece (households) and Ireland (industry), the 'change 2019/09' is with respect to 2012

183 As shown in Figure 37, the share of disposable income is even more apparent in the natural gas market, leading to its highest value in 2022, at the peak of the energy crisis. The share of disposable income spent for gas is almost double the share spent for electricity.

184 When comparing 2022 with previous years, there are some markets where the increase is substantial (specifically, in Germany, the Netherlands, Austria, Great Britain and Belgium the share more than doubled). However, other markets e.g., Sweden and Hungary had a flatter share development in recent years. Still, the general trend is facing upwards.

Figure 37: Gas expenditure – share of household disposable income



Source: VaasaETT

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.

4.1.2.1 Energy Community gas prices

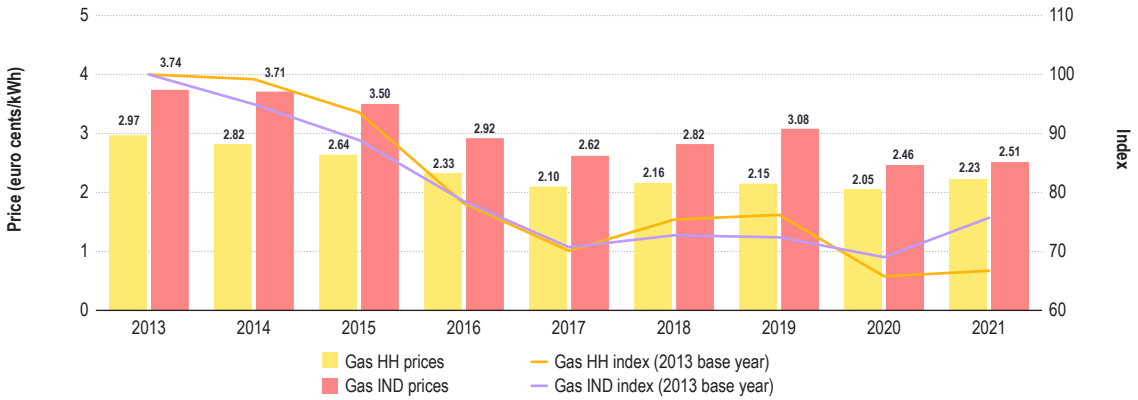
185 In the EnC, contrary to trends observed in the EU, the industrial gas prices, on average, continued to be higher compared to household prices in 2021.

186 Figure 38 shows the trend in final gas prices for industrial and household consumers in the EnC CPs, excluding Ukraine, between 2013 and 2021. Between 2013 and 2021, average gas household prices in these CPs decreased by 25%. Over the same period, household gas prices for Ukrainian consumers increased by more than 230%.

187 Between 2013 and 2021, average industrial prices decreased in the EnC CPs, excluding Ukraine, by 33%. In Ukraine, industrial prices decreased by 44% over the same period. Developments in both household and industry prices in the EnC CPs can be mostly explained by stepwise abandoning of cross-subsidization between the sectors.

188 In 2021, despite the energy crisis, both household and industry gas prices increased only by 8.7% and 2% respectively in comparison to 2020. Greater than average increases in gas prices for both segments were registered in Ukraine (25% for households and 57% for non-households), Moldova (25% for households and 10% for non-households) and in North Macedonia for industry – close to 17%.

Figure 38: Trends in final gas prices for industrial and household consumers in EnC CPs, excluding Ukraine – 2013-2021 (euro cents/kWh and index change, 2013=100)



Source: EnC Secretariat calculations based on Eurostat and NRAs.

Note: The figure is based on bi- annual data for Band D2: 20–200 GJ (household gas consumption) and Band I5: 1,000,000–4,000,000 GJ, for Bosnia and Herzegovina, Georgia and Serbia i.e., Band I4: 100 000 GJ -1 000 000 GJ, for Moldova and North Macedonia, (industrial gas consumption) – (July 2022).

4.1.3 Bill Breakdown

189 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 is collected from Eurostat. For household electricity, Eurostat Band-DC and Band-D2 for gas are utilised.[51] As outlined by Eurostat, Member States must report national prices that are representative for the whole country. These national prices will represent weighted average prices, using the market shares of gas supply undertakings surveyed as weighting factors.[52]

190 Figure 39 shows that the composition of the final electricity bill for household consumers varies greatly across countries and ranks the cost of electricity in each MS. As can be seen, the energy component varies across MSs, with 73% of the final bill in Malta accounting for the energy component. However, in Denmark, only 24% of a consumer's bill relates to the energy component, with the majority composed of network charges and other fees.

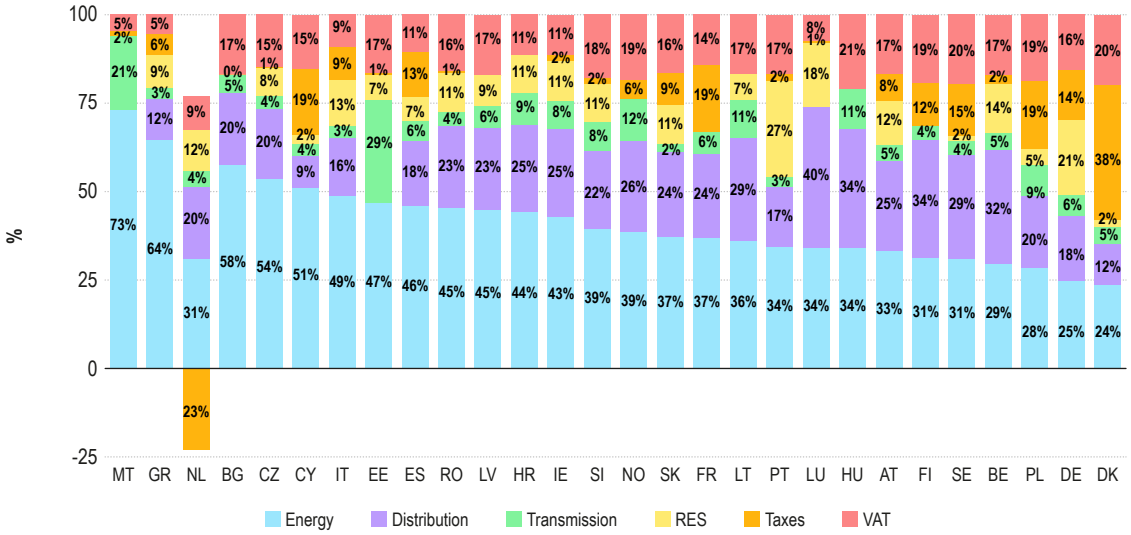
191 Based on an average electricity consumption of 3,500kWh per annum[53], the highest share of network charges in the final price are paid in Hungary. Network charges divided between distribution and transmission network costs where possible, are estimated to account for the price paid by consumers in the range between 13% as measured in Cyprus and 45% as measured in Hungary. RES charges account for 27% of the total in Portugal and 21% in Germany, while retail electricity markets in Hungary (21%), Sweden (20%) and Denmark (20%) had the highest share of VAT in the final electricity price, consistent with the previous year. In addition, other taxes range from less than 1% of the final price in Bulgaria to 38% in Denmark. Of note is the negative taxation reported for the Netherlands (-23%) that represents a tax refund. Such differences result from individual energy policies and taxation decisions applied in each MS. If compared to greenhouse gas emission reductions from 2015 onwards in Section 2.3 (CO_2 intensity of energy), higher rates of taxes, especially RES contributions, align with larger reductions of emissions (r = 0.386) demonstrating the environmental impact of energy taxation on consumption and penetration of renewable energy sources.

51 https://ec.europa.eu/eurostat/cache/metadata/en/nrg_pc_202_esms.htm

52 https://ec.europa.eu/eurostat/cache/metadata/en/nrg_pc_202_esms.htm

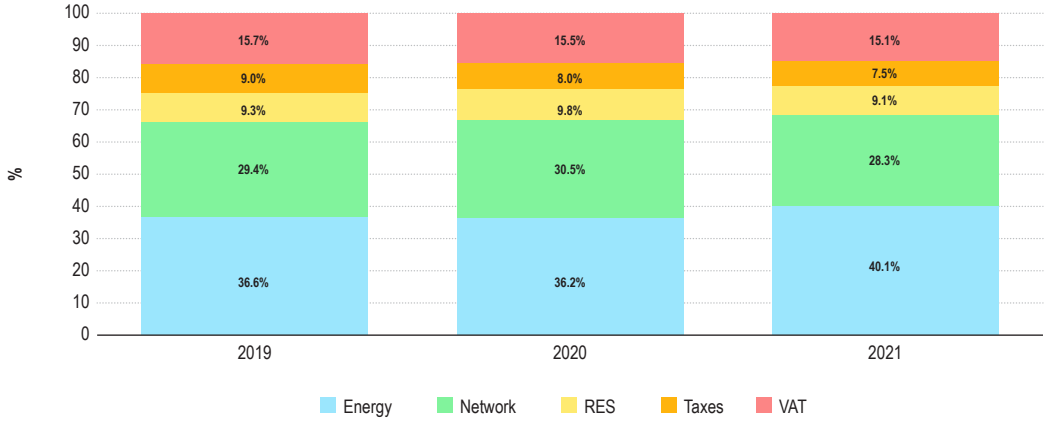
53 Energy consumption varies greatly across EU MSs. Such variation may impact the breakdown of energy bills.

Figure 39: Breakdown of electricity prices & network breakdown – 2021



192 Figure 40 shows that in 2021, on average, the energy component (contestable charges) increased, after the decrease based on 2019 values (36.6%) to the 2020 values (36.2%), reaching 40.1% of the total, the price dynamics are consistent with the pressure on the commodity prices. The remaining 59.1% of the electricity bill consisted of non-contestable charges, i.e., the sum of network costs, taxes, levies and other charges. In particular, the network charges share decreased from 30.5% in 2020 to 28.3% in 2021 due to the absolute price increase while the network costs remain similar. The other non-contestable charges, RES, Taxes and VAT, decreased with respect to the values the 2020, both in absolute values and in the share of the total price for the willingness of the governments to partially absorb the increase of the energy component.

Figure 40: Electricity weighted average breakdown – 2019-2021 (%)



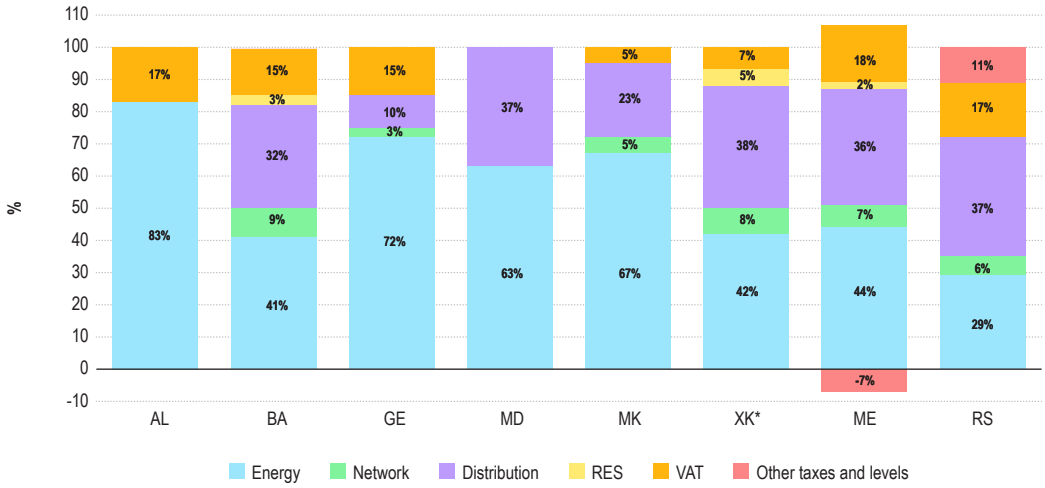
Source: Eurostat Band DC: 2,500–5,000 kWh (household electricity consumption) (May 2022).

Price breakdown – EnC

193 Figure 43 shows the breakdown of the final electricity price for households in the EnC CPs in 2021. The composition of final household electricity price varies widely across EnC CPs. The share of the energy component in the final bill was the highest in Georgia (72%)54 and the lowest in Serbia (29%). In the EnC CPs, the share of network costs in the total household electricity price ranged between 13% in Georgia and 46% in Kosovo*.

194 The share of RES charges in the final price gives an indication of the support for renewable electricity production in the EnC CPs. In Albania, Georgia and Moldova, no RES support mechanism was reported for 2021. In North Macedonia, the RES charge is part of the energy charge and is not presented separately in the EUROSTAT database. In other EnC CPs, the RES support amounts to 2% of the final household price in Montenegro, 3% in Bosnia and Herzegovina and 6% in Kosovo*.55 Diverse VAT shares correlate to differences in taxation policies in the EnC CPs: in Moldova, for example, there is no VAT contribution in the final electricity price for households while in North Macedonia it was decreased in 2021 to only 5% as a measure to protect consumers from price surge. In other EnC CPs, VAT shares range between 7% and 18%.

Figure 41: Breakdown of electricity prices for households in EnC CPs- 2021 (%)



Source: EnC Secretariat calculations, based on Eurostat and NRAs (August 2022)

4.1.3.1 Gas price breakdown

195 Figure 42 shows the breakdown[56] of final gas prices, where data was available and where a gas retail market exists. It illustrates that the composition of the final gas bill for household consumers continues to vary greatly across MSs. For example, the energy component accounted for 77% of the final bill in Czechia, while it represented only 29% of the final bill in the Netherlands.

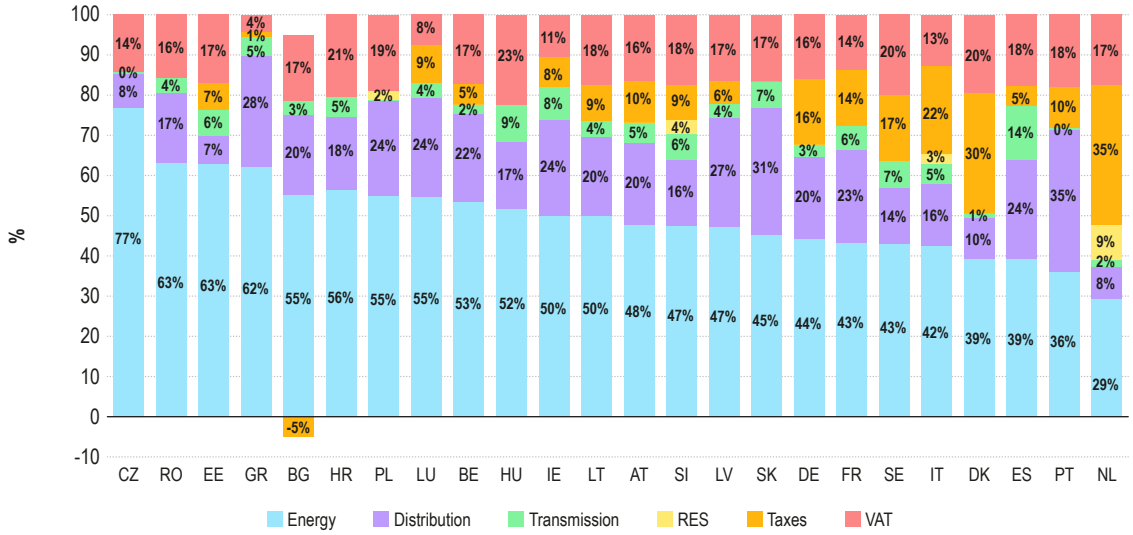
196 Network costs, divided between distribution and transmission network costs where possible, accounted for the largest share in the final price in Slovakia (38%) and Spain (38%). Hungary, Croatia, Sweden and Denmark had the highest share of VAT in the final gas price (between 23% and 20%), while the Netherlands (35%), Denmark (30%) and Italy (22%) had the highest proportion of taxes and charges in 2021, while Bulgaria allows for a tax refund of 5%. The Netherlands, Italy, Slovenia and Poland foresee a RES component.

54 The share of network costs in the final price is not available for Albania, therefore it cannot be concluded what the energy share is – 83% includes both.

55 The information on electricity price breakdown is not available for Ukraine.

56 Based on Eurostat, Band D2: 20–200 GJ (household gas consumption) and Band I5: 1,000,000–4,000,000 GJ (industrial gas consumption) - (June 2022).

Figure 42: Breakdown of gas price – 2021[57]

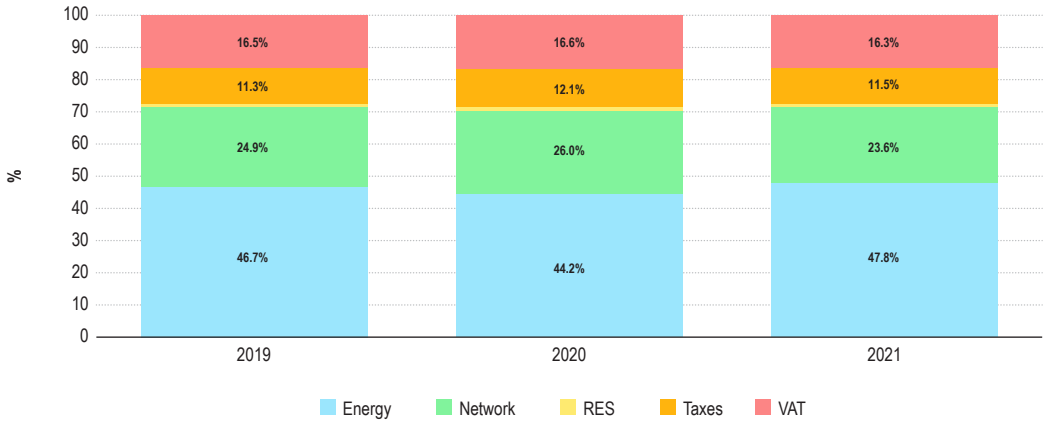


Source: Eurostat, Band D2: 20–200 GJ (household gas consumption).

197 As shown in Figure 43, on average, less than half of the final price paid in 2021 by end consumers covered the energy component of their annual gas bill, while the rest covered the sum of network costs, taxes, levies and other charges.

198 The energy component increased in 2021 when compared to 2020. This increase was driven by wholesale gas price increases during 2021. On the other hand, the network component decreased with respect to 2020.

Figure 43: Average gas price breakdown for households – 2019-2021 (%)



Source: Eurostat, Band D2: 20–200 GJ (household gas consumption) and Band I5: 1,000,000–4,000,000 GJ (industrial gas consumption) - (June 2021).

4.1.3.2 Gas price breakdown – Energy Community Contracting Parties

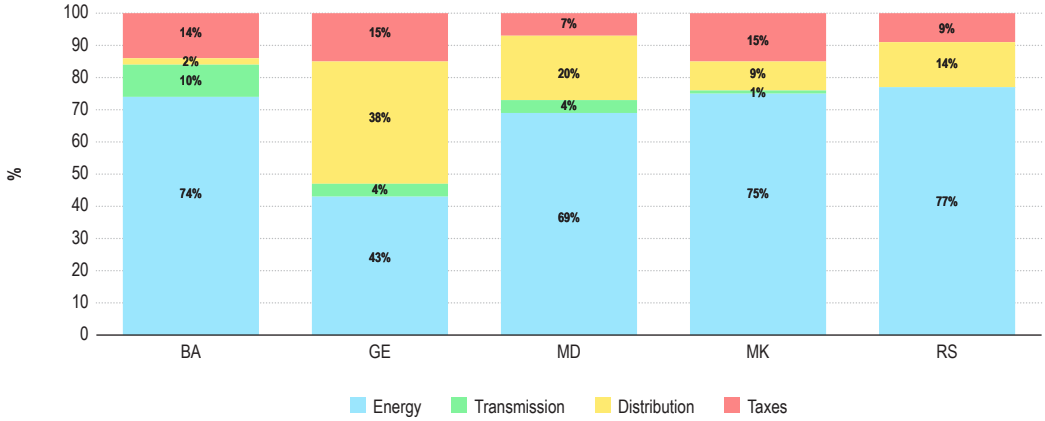
199 Figure 44 illustrates the breakdown of gas prices for households in the EnC CPs, for which the information was available and where a gas market exists[58]. The share of energy component in the final gas price in 2021 ranged from 43% in Georgia to 77% in Serbia. The share of network charges, including both distribution and transmission network costs, ranged from 10% in North Macedonia to 42% in Georgia.

200 More than half of the final price paid in 2021 by end consumers of gas in majority of the EnC CPs, on average, covered the energy component i.e., contestable component of their annual gas bill.

57 Figures are rounded to the nearest whole number.

58 For 2021, information on gas price breakdown is not available for Ukraine.

Figure 44: Breakdown of household gas prices in the EnC CPs – 2021 (%)



Source: EnC Secretariat calculations, based on Eurostat and NRAs (August 2022)

4.1.4 Mark ups – Electricity and Gas

201 This section assesses the evolution of markups from 2014 to 2021 and the responsiveness of the energy component of retail prices to changes in the wholesale price from 2008 to 2021 for electricity and from 2012 to 2021 for gas. The analysis focuses on the household markets.

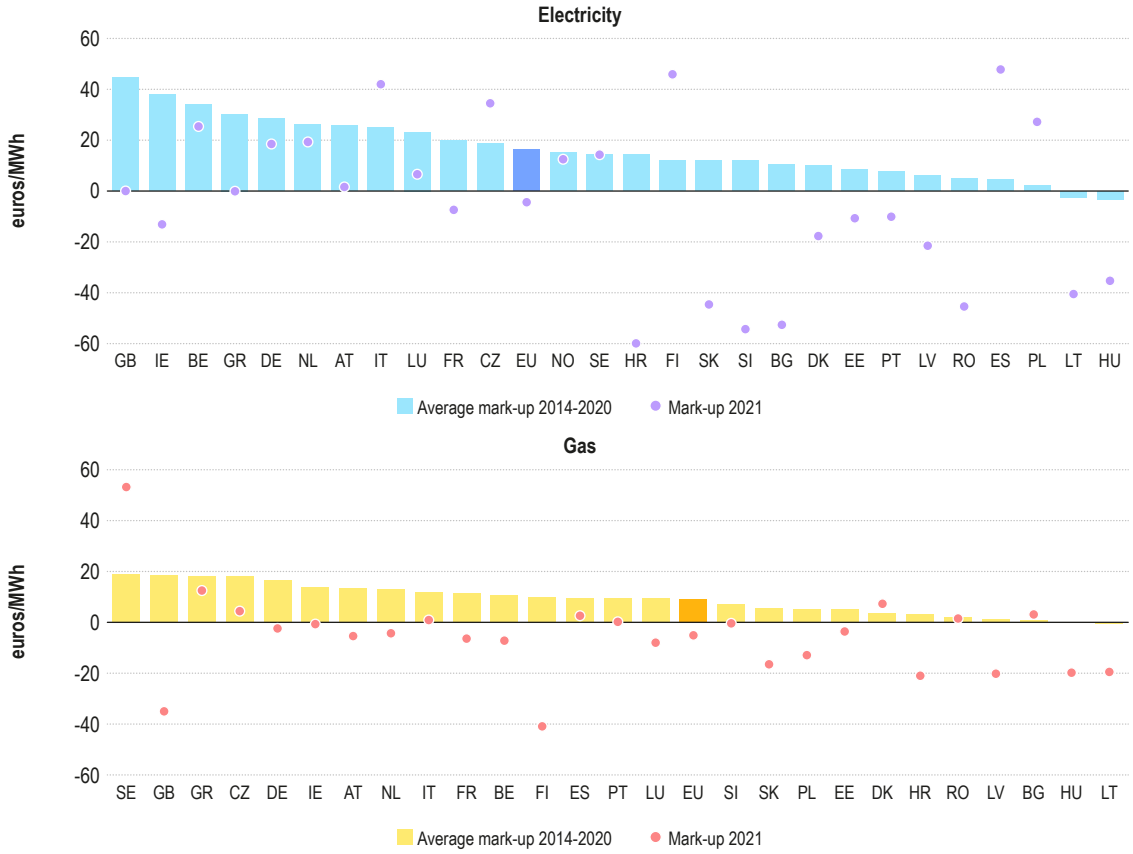
202 The markup is an indicator of the theoretical gross 'profitability' of suppliers, as well as an indicator of the level of responsiveness of retail energy prices to changes in prices on wholesale markets. The gross 'profitability' level is the difference between prices charged to consumers and the estimated costs to supply them with energy. This analysis assumes that suppliers are rational and employ a 'close-to-optimal' procurement strategy, as detailed in the methodology and data underlying mark-ups in retail markets[59]. As such, the markups below give one view as it aims to make MSs comparable. When looking at individual MSs only, it is best to complement with extra data. To be clear, markups are not the same as profits because suppliers have additional operating costs (e.g. marketing, sales, consumer services, overhead, etc.) in bringing a product to the market.

203 The degree of alignment between the evolution of the energy component of retail prices and wholesale prices over time could be used as an indicator of the effectiveness of competition in retail energy markets.

204 Figure 45 shows that the estimated average markups in the retail electricity and gas markets for the household market vary widely across countries in the EU. In the case of gas, the average retail markup in the household market has decreased significantly (-157%) across the EU in 2021 compared to the 2014-2020 average, just like in the case of electricity throughout the same period.

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

Figure 45: Average annual markup in retail electricity and gas markets for household consumers in EU MSs and Norway from 2014–2020 and annual markup in 2021 (euros/MWh)[60]



Source: ACER calculations based on Eurostat (July 2021), NRAs, European power exchanges data, Eurostat Comext and ICIS Heren;

Note: This figure includes the average annual markups in the retail electricity and gas markets for household consumers for the 2014–2020 period.

205 In some countries with regulated prices[61], average markups for the monitored period were negative because the energy component of the retail prices was set at a level below wholesale energy costs. See Section 4.1.5 for more information regarding price intervention. In addition, the impact of significant wholesale price increases in 2021 in conjunction with the hedging strategies implemented by some suppliers assisted in shielding energy consumers from significant price increases.

206 In Figure 45 above, the majority of the member states show a negative markup for 2021, with Great Britain and Finland reporting negative values around 7 and 8 times larger (in absolute terms) than the average across Europe (-5.1 euros/MWh), respectively. This behaviour is explained by both inflation and (unprecedented) growing demand during the post pandemic economic recovery, which pushed wholesale gas prices up to unprecedented levels.

207 The setting of end-user prices below energy sourcing costs may seem appropriate to consumers especially in the light of the existing energy crisis which is placing consumers under significant financial strain. However, such a policy is an absolute barrier to market entry for new suppliers, and hence, to competition. In markets with persistent negative markups, market participants do not receive the appropriate signals, which can lead to inefficiencies and may negatively impact consumers in mid-term as investments in the network may be lower than required.

60 The Lithuanian NRA has stated that "In Lithuania negative markups occur due to the settings of the regulated price methodology, where the price for year t is set in year t-1 based on market price forecast for year t. The difference between forecasted and actual market price in year t is compensated in year t+1"

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

208 Where prices are set below actual costs, consumers do not receive the "correct" price signals[62] regarding their consumption. This may also lead to wasteful consumption. Additionally, negative markups hinder product and service innovation, deter new suppliers from entering the market and may remove the incentive for consumers to be active in energy markets.

209 Figure 46 shows the responsiveness of the energy component of retail prices to changes in the wholesale energy price and the evolution of the markup over the 2008–2021 period for electricity and the 2012–2021 period for gas at the EU level[63]. Clearly, 2021 is an outlier for both electricity and gas across the EU with retail energy components.

Figure 46: Responsiveness of the energy component of the retail prices to changes in wholesale prices and evaluation of markups in the household markets from 2008 to 2021 for electricity and from 2012 to 2021 in gas (euros/MWh)

Source: ACER Retail Database, Eurostat, NRAs, European power exchanges data, Eurostat Comext, ICIS Heren and ACER calculations.

Note: The EU average markup is assessed as the arithmetic average of MS markups. 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 and 2021 except for Finland, due to unavailability in Eurostat. Prices in nominal terms.

210 As seen in Figure 46, a relatively strong correlation is observed in electricity between the energy component and wholesale prices from 2008 to 2013 and for 2017. However, divergence can be seen between 2013 and 2016 and again in 2020, where wholesale prices reductions were not followed by a similar reduction in the energy component of the retail prices. In 2021, wholesale electricity prices surpassed retail electricity prices. This was driven by a significant increase in wholesale gas prices during 2021 and possible due to the heging strategies employed by retail suppliers in offereing fixed price contracts to energy consumers. However, such results are not sustainable and as such, retail electricity prices will increase in 2022.

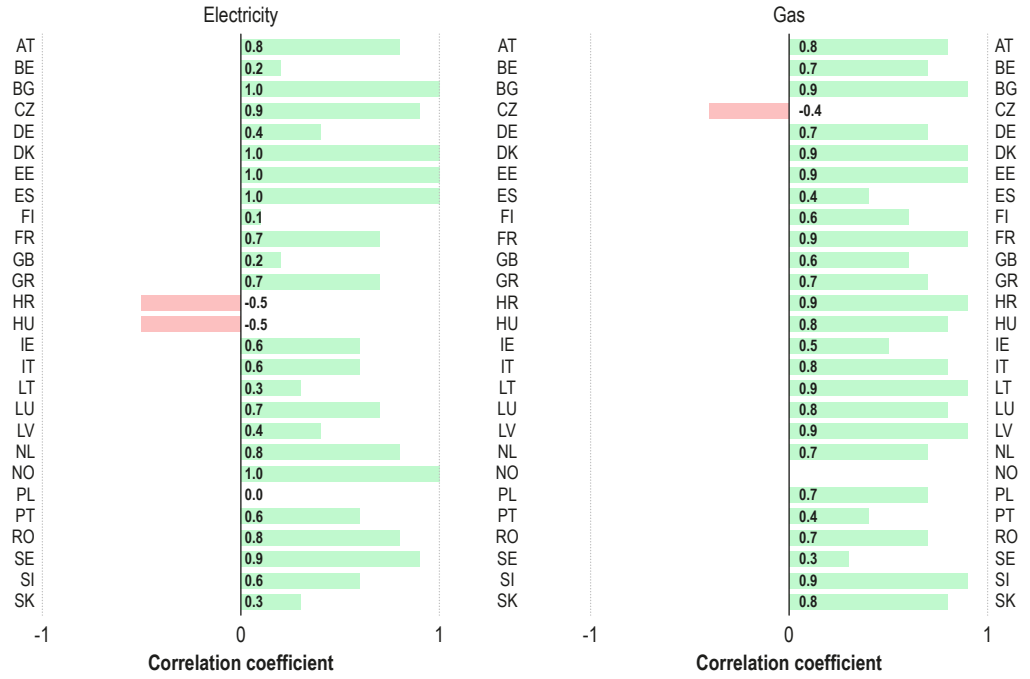
62 Correct prices relate to input cost of energy.

63 Based on 25 countries in electricity and gas for which data was available. UK prices no longer considered for 2020.

211 The downward slope of the average wholesale price and of the average energy component of the retail price diverged in 2015, 2016 and noticeably in 2020, when the average retail energy component price did not follow the average decreases in wholesale gas prices. In 2017, retail prices on average decreased, despite higher wholesale prices. After hitting a record low due to the lockdown measures taken during the COVID-19 pandemic, wholesale energy prices skyrocketed in the household gas market and eventually overcame the retail gas prices in the first quarter of 2021.

212 When comparing the evolution of gas and electricity retail and wholesale prices over time, the responsiveness of the energy component of retail prices to wholesale energy prices for gas is higher than for electricity. This is also clearly visible in the evolution of electricity markups . Figure 47 illustrates the relationship between the change in the energy component of retail prices and the change in wholesale prices in electricity and gas markets for household consumers in MSs and Norway, expressed by the correlation coefficient of these two variables[64]. If two variables in a country correlate well, this should be reflected in a high positive high value of the correlation coefficient, while the negative and low value imply a weak correlation. Figure 47 is based on the data behind the charts for individual countries presented in Annex 1, which show the degree of correlation between the energy component of retail prices and wholesale prices for households at national level.

Figure 47: Correlation between the retail energy component price for household consumers and wholesale price in electricity (2008–2021) and gas markets (2012–2021) in EU MSs and Norway – (correlation coefficient)



Source: ACER Retail Database, Eurostat, NRAs, European power exchanges data, Eurostat Comext, ICIS Heren and ACER calculations.

213 Figure 47 shows that, on average, there was a better correlation between sourcing costs and the energy component of retail prices in gas markets than in electricity markets (i.e., more countries with a higher correlation coefficient).

214 However, the correlation between wholesale and retail energy markets is weak in several MSs as retail prices have not responded well to changes in the wholesale price. Poorer performing markets could be driven by a number of factors such as poor supplier choice for consumers, lack of action on the part of the consumer, or the prevalence of interference in the price paid by consumers. Section 2 provides more detail on outcomes which may affect consumer choice and thus the correlation between the wholesale and retail prices.

64 Figure 45 is based on the individual charts presented in Figure A1-1 and Figure A1-2 in the Annex 1.

215 As indicated in previous reports, the energy component of retail prices and wholesale prices appears to correlate better in two groups of countries, but for different reasons. Prices correlate well in those markets characterised by lively competition, where final retail prices closely follow the wholesale market price, i.e., the offers available to consumers contain a direct reference to wholesale costs and a markup, e.g., electricity markets in Norway, Sweden and Finland. In addition, a good correlation is observed in certain countries with regulated retail electricity prices, e.g., in Hungary and Poland. In these countries, retail household prices are set closely to follow changes in wholesale prices.[65]

4.1.5 Regulated prices

4.1.5.1 Household market

216 This section sets out the status of public price intervention in 2021. It provides information on the price intervention for non-vulnerable customers on the one side, and for vulnerable customers on the other side.

217 MSs may apply price intervention[66] for non-vulnerable customers for the purpose of a transition period to establish effective competition, but within the limits defined in the Electricity Directive, where such intervention has to be accompanied by a set of measures. The aim is to comply with the Directive, however, some of the results are showing that this is not the case yet, adding the particularity of the year 2021 with the price crisis which is carried forward to 2022.

218 Fourteen countries in electricity and seventeen in gas reported to have a form of price intervention for household customers in 2021.

219 Six countries (BE, CY, ES, GB, GR, NL) responded that they have an intervention in price setting for vulnerable customers in electricity and seven countries in gas (BE, EE, GB, HU, PT, RO, SK). The number of vulnerable customers varies between 4% and 42%.

Figure 48: Existence of price intervention for household electricity and natural gas consumers in 2021

Country	Non-vulnerable customers		Vulnerable customers	
	Electricity	Gas	Electricity	Gas
BE		X	X	X
BG		X		
CY	X		X	
CZ				
EE		X		X
ES	X		X	
FR	X	X		
GB	X	X	X	X
GR	X	X	X	
HR		X		
HU	X	X		X
IT	X	X		
LT	X	X		
LV		X		
MT	X			
NL	X	X	X	
PL	X	X		
PT				X
RO	X	X		X
SK	X	X		X

65 In France, there is a specificity with the ARENH mechanism, which leads to a small portion of the final price being directly linked to the wholesale price.

66 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.

220 Price intervention for non-vulnerable customers was reported by 13 countries in electricity and 15 in gas and is mainly present in the form of price regulation. Few countries responded to have price caps or price approvals in place. In Belgium, Greece (electricity) and Portugal (gas), there is price intervention for vulnerable customers.

221 The main reason, as stated by NRAs, for price intervention is to protect customers against high prices and undesired price fluctuations, whether they are vulnerable or non-vulnerable.

222 However, it is clear that measures applied by some MSs go beyond the measures stated in the Electricity Directive. However, in the REPowerEU Communication, a temporary extension of regulated retail prices in electricity to cover even small and medium-sized enterprises is deemed acceptable. This extension provides broader limits but aims at managing trade-offs between price protection and avoidance to trigger an increase of consumption. The same applies to the gas regulated prices and this is particularly relevant when gas plays a particular role in heating and industrial feedstock.

223 Notwithstanding Directive 2019/944, the percentage of non-vulnerable household customers that are benefiting from price intervention in electricity varies between 30.5% for Spain and 100%. Cyprus and Hungary have the highest rate, 100% and 98% respectively, indicating that both Member States are going beyond the scope of the Directive. On the gas market, the percentage varies between 19% for Spain and 100% for Bulgaria, Hungary, Lithuania and Slovakia.

224 On the electricity market, Hungary stated that their prices are not set above cost as stated in Article 5, thus in breach of Directive 2019/944. All the other countries with price intervention state that their prices are set above costs. As for the gas market, Latvia and Romania[67] and Spain[68], state that their prices were set below cost in the public intervention price setting mechanism, thus in breach of Directive 2019/944.

225 Prices differ where a public body intervenes. For instance, in France, the methodology to calculate regulated prices in electricity intends to guarantee the contestability of these tariffs by alternative suppliers (and offer the possibility for the alternative suppliers to compete on the retail market). On the gas market, regulated prices need to cover the incumbent's costs, including a reasonable margin. An ex-post analysis is done to check the adequacy between tariffs and costs. Several countries[69] apply cost benchmarks to establish a reasonable basis for intervention. In other cases, like in the Netherlands, the NRA does not intervene in the actual price setting. The NRA only checks whether the profit margin is not too high using a specific model. The model is based on average production costs over time and recent global market prices.

226 Only three Member States have a roadmap towards a price intervention removal. In electricity: Italy (2024), Lithuania and Romania (both 2023). In Italy[70], the standard offer regime is going to be phased out as of 2024. In Lithuania, the NRA sets electricity market price and final price cap for household customers, however, liberalisation of electricity sector is in place and will be completed by 2023. In Romania[71], the current measures will apply for one year, between 1 April 2022 and 31 March 2023.

67 In Romania, the government covers the difference between the capped final price and the average acquisition cost of natural gas accomplished by each supplier in addition to tariffs.

68 Spain set an exceptional measure. (ref.) Spain stated that as a temporary protection measure, the regulated price in the winter period 2021/2022 was set below cost (by fixing a maximum increase of 15% every 3 month) The price difference will be recovered later (starting in summer) from the consumer's bills in the regulated tariff, that will not be lowered until it recovers the pending differences.

69 In GB, the NRA sets the cap at typical consumption values using a bottom-up cost assessment. GB has designed a cap that provides a high level of protection – preventing unjustified price increases and ensuring default tariffs reflect more closely the underlying costs of supplying energy (i.e., any price increases will be justified by underlying costs, and the cap will reduce when underlying costs fall). In Greece on the gas market, within the SOLR mechanism, the prices are determined after an offer has been submitted by the gas supplier to the NRA during a public call for expression of interest for the SoLR service. The NRA may accept or reject the offer. In Croatia, on the gas market, the main objectives of the methodology for setting tariffs for gas supply as a public service are creating preconditions for the optimal functioning of the gas market. The tariffs of household customers under public service regulation (regulated price) are calculated considering the cost of purchasing gas, the tariff for the distributed quantity of gas. The cost of purchasing gas reflects the price of gas on the reference gas market and is determined under the influence of futures contracts. In Poland, the tariff for households has to be calculated to cover costs at a justified level: costs associated with the purchase of energy on market-based conditions, costs associated with support for production of energy in RES, costs associated with the purchase of the property rights attached to energy efficiency certificates, operational costs, costs related to excise tax and profit margin.

70 According to Law 124/17.

71 Provisions of GEO no. 27/2022.

227 On the gas market, seven countries reported to have a plan to remove price intervention. Out of these seven countries, four explained their roadmap. In France[72], regulated gas prices will be removed as of 30 June 2023 and households can no longer subscribe to regulated prices. In Portugal, the transitory tariffs are available up to 31 December 2025 for annual consumptions lower or equal to 10,000 m3. In Romania, as for the electricity market, the price cap is set until 31 March 2023. In the Netherlands, originally, the intention was to remove this intervention during the implementation of the new energy laws which are under review. This may be reconsidered by the Ministry of Economic Affairs and Climate Policy given the extreme gas price conditions.

4.2 Consumer Bills

228 Alternative options and consumer rights empower electricity and gas consumers; however, it remains a challenge how to best convey such information. As of now, most communication between energy service providers and consumers is through bills and billing information. Bills and the wider information they (could) contain about electricity and gas usage provide vital substantial and procedural knowledge about how to navigate energy markets.

229 However, billing information can also overwhelm consumers, especially in cases where bills are issued irregularly e.g., annual electricity and gas bills. However, annual electricity and gas bills only remain typical in a decreasing number of MSs in 2021: Austria, Belgium (regional differences), Czechia, Denmark (gas only), Germany, Latvia (gas only), Netherlands, Poland (gas only) and Slovakia. In most other MSs, monthly or bimonthly bills are becoming more common. This ensures a greater level of understanding by such consumers as they are provided with consumption and price information on a more regular and frequent basis. It may be considered that annual billing may be wholly inappropriate given the current energy crisis where prices are expected to increase substantially.

230 Directive 2019/944/EC outlines the information that should be provided to consumers via their energy bills. Bills should now contain more comparative information regarding the consumers' past and present consumption levels, or in contrast to peer groups of energy consumers.

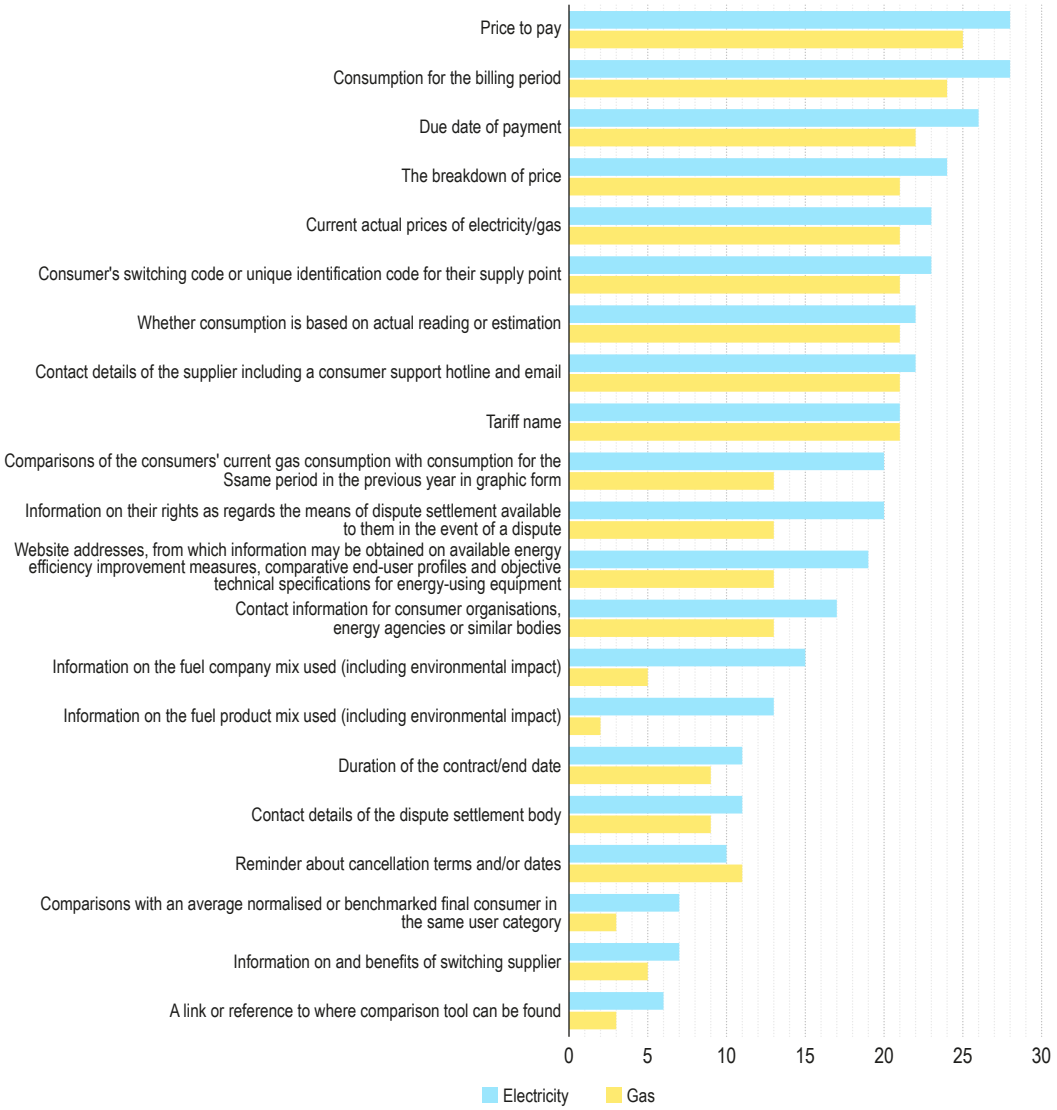
231 Electricity bills and billing information shall show the contribution of each energy source to the overall energy mix of the supplier. Consumers should receive information on the environmental impact, at least in terms of CO_2 emissions and the radioactive waste resulting from the electricity produced by the overall energy mix of the supplier over the preceding year inasmuch as the product fuel mix. The disclosure of electricity produced from renewable sources shall be done by using guarantees of origin (GOs). According to Annex I of the Directive, electricity bills shall further disclose the sources of energy for the product.

232 Figure 49 illustrates the information that shall be provided to household consumers and the number of MSs providing such information. Consumers in most MSs receive information on their bills on the billed amount, the due date of the bill, the price breakdown and the actual consumption.

233 However, despite explicit requirements regarding billing already formulated in Directive 2009/72/EC, there remain shortcomings on informing about the fuel mix, the environmental impact of energy consumption and contact details of alternative dispute resolution (ADR).

72 According to the Energy law of 8 November 2019.

Figure 49: Information elements provided on household consumer bills in EU MSs, Great Britain and Norway – 2021 (Number of MSs)



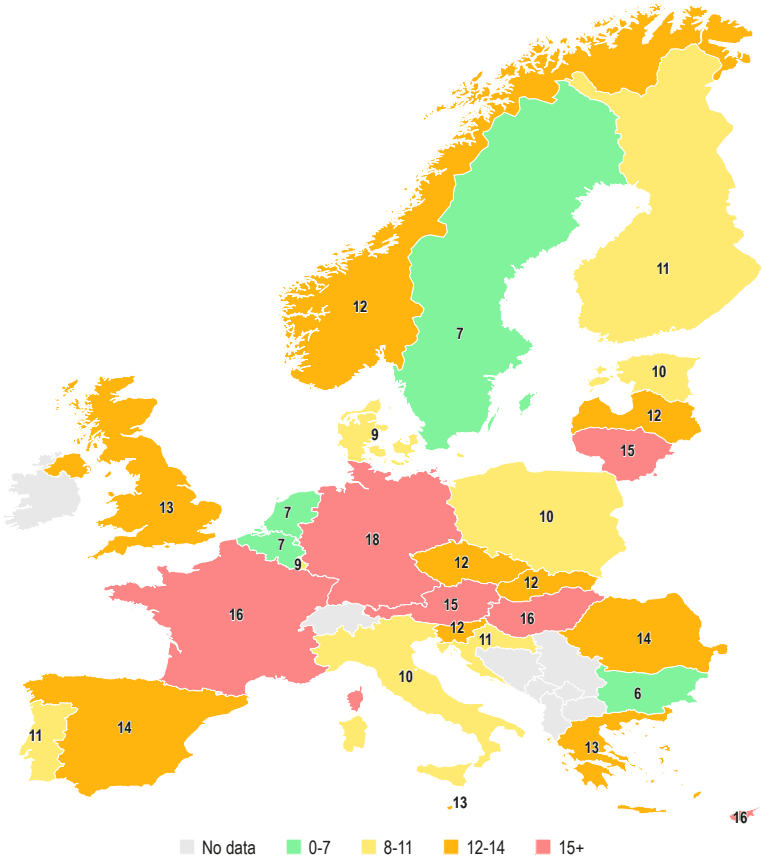
Source: CEER database, 2022.

234 Latest additions to information requirements in electricity bills by Directive 2019/944/EC, such as information on and benefits of switching or a reference to a comparison tool are not yet widespread on European electricity bills. Yet, comparing these figures to last year, there has been an increase in availability of such information which is now available on bills in seven and six MSs respectively, compared to five in 2019. Interestingly, the same information is increasingly available on gas bills, although there is no legal requirement at the European level to provide such information as of 2021.

235 18 out of the 21 billing items are referenced in the Directive.[73] As shown in Figure 50, only in Germany can all 18 required items be found on electricity bills issued to energy consumers as of 2021. Figure 50 further shows that bills in the remaining MSs do not yet meet the required level of information.

73 Two billing items, "actual prices of electricity" and "reminder about cancellation terms and/or dates" are not listed in Annex 1 of Directive 2019/944 and the item "duration of the contract" only applies in settings with fixed term contracts (not applicable in all MSs).

Figure 50: Billing information requirements in MSs, Great Britain and Norway – 2021 (number of required items on bills)



Source: CEER Database, 2022.

236 As for gas, bills in eight MSs list 15 or more information items out of the 21 listed ones (e.g., Germany (19) and Romania (17)), while bills in nine MSs contain 10 or less such items (e.g., Belgium, Netherlands (each 7) and Luxembourg (6)). Given this divergence, European MSs have adopted different ways to make provision of information via bills. Some require lots of information on bills while others have opted for comparatively little information on them, notwithstanding a long list of EU requirements on bills and billing information.

237 These findings are largely in line with previous MMR editions indicating that national billing requirements have not yet been amended to a great extent. This indicates that there is significant room for improvement in the delivery of service quality to European energy consumers.

4.2.1.1 Billing information – Energy Community Contracting Parties

238 In all the EnC CPs, both electricity and gas bills are based on actual consumption and issued monthly. Information on actual consumption, accounting period and supplier's details are included in all electricity and gas bills. Information regarding the energy/fuel mix is available in electricity bills in all EnC CPs except Bosnia and Herzegovina and Kosovo*. Finally, an improvement is needed in terms of providing information on breakdown of prices and switching, as this is not the case in all EnC CPs.

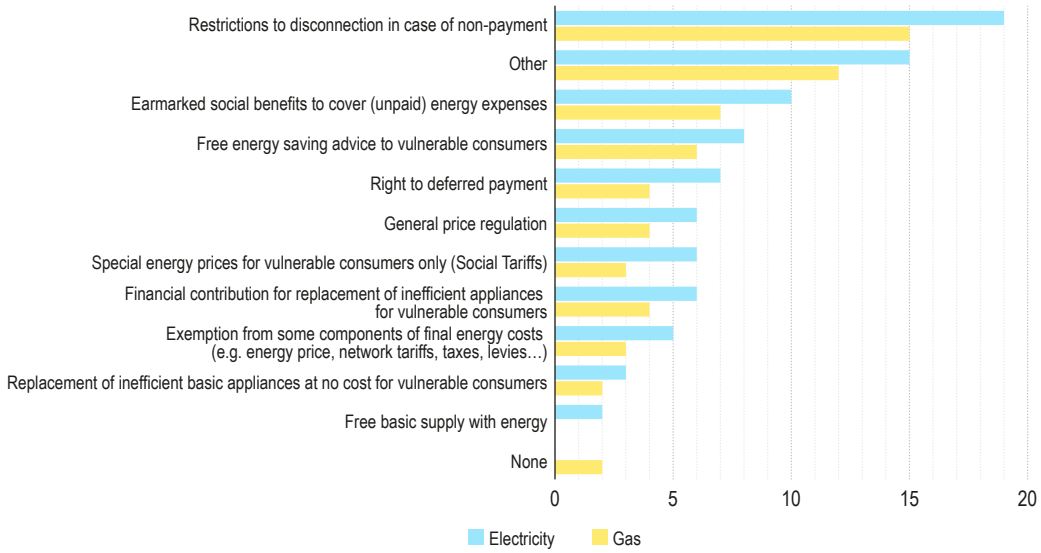
4.3 Energy Poverty and Consumer Protection

4.3.1 Vulnerable Consumers and Energy Poverty

239 Vulnerable consumers have been defined in the majority of MSs, most often referring to income levels (in 19 MSs) and critical dependency on electricity for health reasons (11 MSs). Irrespective of a definition in the law (explicit definition, available in 19 MSs) or derived from various social benefits eligibility criteria or similar (implicit definition, found in six MSs), vulnerable customers are protected by a series of safeguards in most MSs.

240 Figure 51 demonstrates which safeguards are currently in place to protect the vulnerable and energy poor. MSs frequently restrict disconnection due to non-payment to protect vulnerable consumers. Some MSs also maintain general price regulation (see Section 4.1.5.3) and special energy prices for such groups. Other measures such as social benefits to cover energy costs, exemptions from parts of the energy costs (especially funding contributions to renewable energy or energy efficiency) or (partial) grants for replacing old appliances with new, more energy efficient ones have also gained popularity.

Figure 51: Safeguards for vulnerable consumers – 2021 (Number of MSs)



Source: CEER database, 2022.

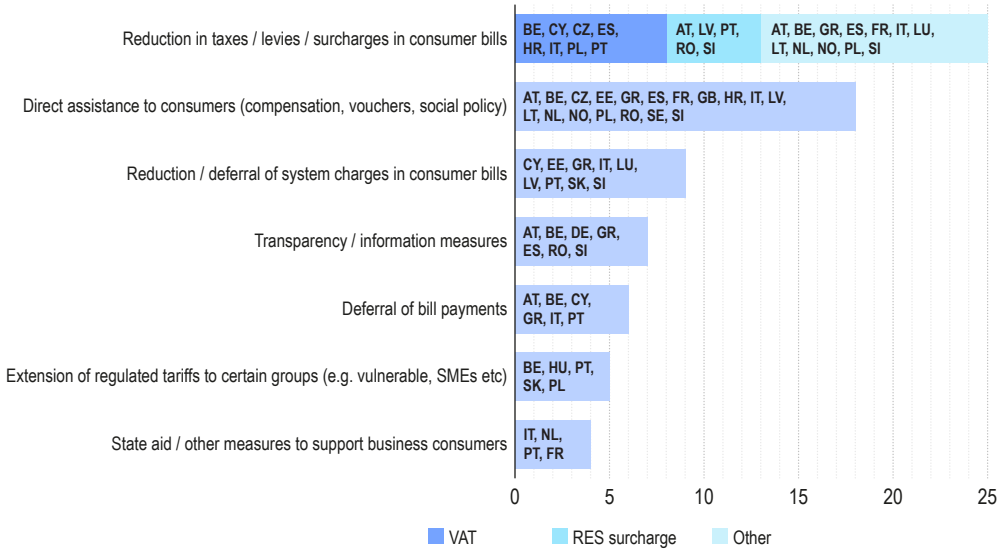
241 In most MSs, the availability of energy-specific safeguards is limited. Only six MSs offer five or more safeguards for electricity and four MSs for gas. Sixteen MSs have two or fewer safeguards for vulnerable consumers for gas, twelve MSs for electricity. While energy-sector specific safeguards are often rather restricted, the overall social welfare regime of each MS may offer the national specific level of protection in different ways beyond energy needs as well.

242 First due to COVID-19, followed by electricity and gas price hikes starting in 2021, MSs have introduced a series of wider measures to combat rising energy prices and inflation.

243 Against the background of extremely high and volatile energy prices, governments and NRAs have introduced a variety of measures to help ease the impact on consumers and other market participants. These include direct assistance to households and businesses (e.g., vouchers, tax reductions, or state aid), as well as measures affecting retail markets (e.g., introducing/increasing price caps or increasing oversight of suppliers). According to NRAs, some countries have also opted for redistributive policies and interventions in wholesale markets (e.g., taxation of windfall profits, or capping fuel prices for generators to lower the price of electricity).

244 As shown in Figure 52, one of the most common types of intervention was direct assistance to consumers (particularly low-income and/or vulnerable household consumers) in the form of coupons, vouchers, compensation, and/or social welfare policies to alleviate the impact of energy bills (and wider cost of living issues). Another common form of intervention in many of the jurisdictions covered by this report was to reduce taxes, levies, and surcharges which form a part of total energy bills. Eight NRAs reported reductions in VAT in their countries, five reported reductions in RES surcharges, and twelve reported reductions in other taxes, surcharges, or levies. Ten NRAs also reported that measures were taken in their countries to reduce or defer system charges included in consumer energy bills. NRAs also reported a variety of other measures taken in their jurisdictions to support consumers in the context of rising electricity and gas bills (see Figure 52).

Figure 52: Measures to support consumers against price hikes in 2021/2022 in EU, Great Britain and Norway



Source: CEER 2022

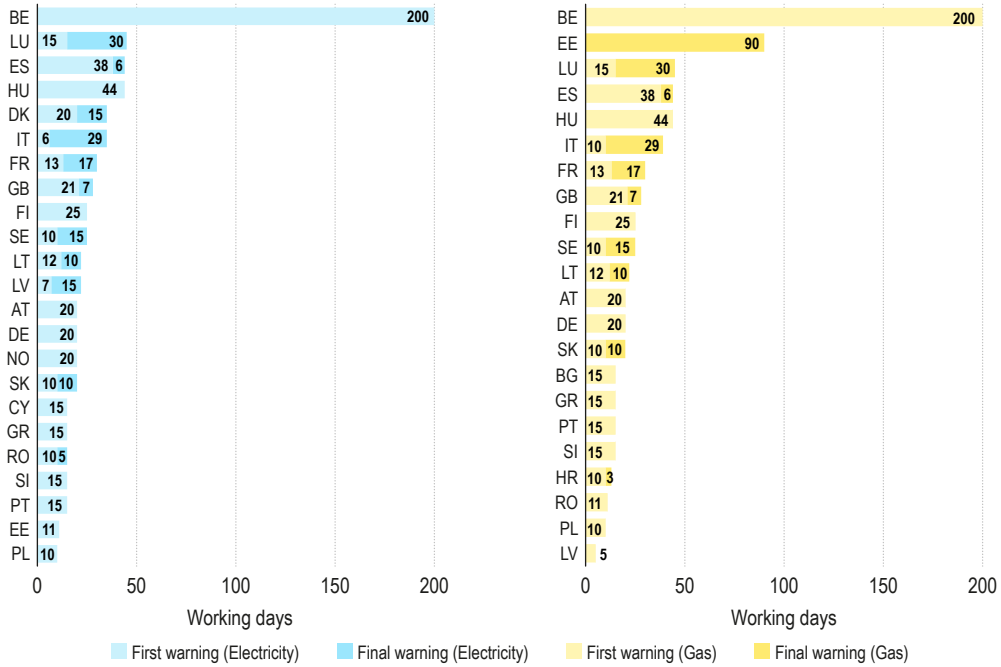
245 Warning procedures alert consumers to pay their energy bills on time to avoid disconnection. A lengthier disconnection process enables consumers to settle their bills. It also increases the likelihood of payment or allows them to seek alternatives. However, excessively long processes may incentivise consumers to delay payment, exacerbating the financial situation of suppliers and DSOs.

246 In addition to written reminders to settle accounts, some MSs have long since established additional prohibitions to disconnect on specific days (e.g., weekends), seasons (e.g., winter) or in specific circumstances (e.g., if consumers critically depend on energy for life-supporting appliances). Article 10 of Directive 2019/944/EC now requires that electricity suppliers provide household consumers with adequate information on alternative measures to disconnection sufficiently in advance of any disconnection due to non-payment.

247 Such information is available to household consumers almost everywhere although (electricity) suppliers are not yet required to do so in all MSs due to pending transposition of European legislation. However, suppliers (and other bodies) usually inform about payment plans, prepayment metering, and assistance from social services, energy efficiency advice, alternative supply contracts and other alternatives to counter disconnection. Although there is no such legal information requirement for gas suppliers (yet), consumers are very similarly informed about alternatives in case of pending gas disconnection.

248 Figure 53 demonstrates legal disconnection minimum durations, counting working days from a first reminder to pay to the earliest possible disconnection date. There is a considerable variation in disconnection duration across MSs, with reminders and warnings ranging from approximately two weeks (10 working days) to nine weeks for electricity (e.g., Hungary, Luxembourg and Spain), 18 weeks for gas (in Estonia) and uniquely in Belgium up to 200 working days (40 weeks). In practice, disconnection often takes longer, e.g., in Norway (45 working days) and Great Britain (80).

Figure 53: Legal minimum duration of the disconnection process in EU MSs, Great Britain and Norway – 2021 (Number of working days)

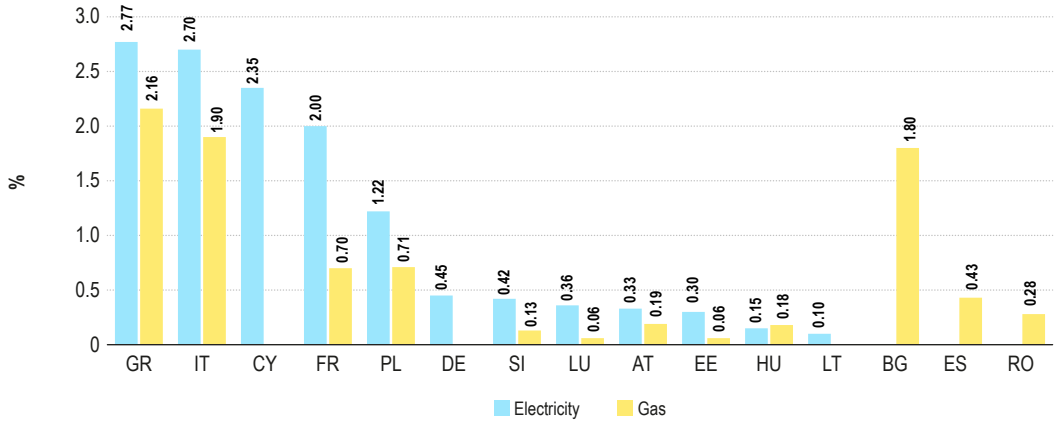


Source: CEER database, 2022.

249 Disconnection rates due to non-payment among household consumers are only reported by a minority of NRAs. According to available information, disconnection rates remain low across Europe. In electricity, they range from 2.7% in Italy to 0.1% in Lithuania, where prepayment meters serve as alternative (see below). As for gas, disconnection rates are even lower (see Figure 54).

250 Prepayment meters are more widely used only in Great Britain (14.4% for electricity, 13.6% for gas) and Romania (17.7% for electricity). In some other countries, very small shares of consumers are supplied via such meters (e.g., 2% in Hungary, 1% in Poland. 0.04% in Germany or 0.01% in Austria, all for electricity). In most countries, prepayment meters are not in place at all.

Figure 54: Share of disconnections due to non-payment in EU MSs and Norway – 2021 (% of household metering points).



Source: CEER database, 2022.

4.3.2 Energy poverty

251 MSs shall assess the number of energy poor households (Article 3 3d Regulation 2018/1999). According to Article 29 of Directive 2019/944, MSs shall establish and publish a set of criteria, which may include low income, high expenditure of disposable income on energy and poor energy efficiency when assessing the number of energy poor households. EU guidance on what to consider in this assessment covers necessary domestic energy services needed to guarantee basic standards of living in the national context, social and other relevant policy and has been made available in a Staff Working Document.[74] Arguably, the recognition of and measures against energy poverty are crucial in fostering a just energy transition with a view to Fit-for-55 climate goals.

252 In 2021, official (governmental, legal) definitions of energy poverty are reported from 8 NRAs from Cyprus, France, Great Britain, Greece, Latvia, Romania, Slovakia and Spain. In some other MS, e.g., Poland, a definition is only available for statistical purposes. As for the assessment criteria, low income and high energy consumption are the most widespread ones (in 8 MSs and Great Britain). Poor energy efficiency is only mentioned four times (electricity) or twice (gas) as an assessment criterion. Some MSs have added additional assessment criteria, such as delays in paying bills.

253 The Staff Working Document[75] further proposes to measure energy poverty with the help of four different types of indicators. Energy poverty could be measured by (1) indicators comparing energy expenditure and income of households, reported by NRAs from eight MSs and Great Britain, (2) indicators based on self-assessment, which ask households directly how affordable energy is, as reported by five MSs, (3) indicators based on direct measurement of physical variables to determine the adequacy of energy services (e.g. room temperature), as reported by the Latvian NRA, and finally (4) indirect indicators on related factors, such as falling behind on their utility bills, number of disconnections, and housing quality, as listed by NRAs from six MSs and Great Britain.

254 More statistics on energy poverty are available from only a few countries. According to NRAs, 4% of the population is energy poor in Cyprus and Spain, 9% in Italy, 10% in France and 13% in Great Britain.

255 Eurostat offers two main indicators on energy poverty as suggested by the Energy Poverty Advisory Hub. Both are examples of a self-assessment indicator and indirect measurement of energy poverty according to the aforementioned classification.

256 Figure 55 shows data on percentage of households below the poverty line who are 1) unable to adequately heat their home or 2) falling behind on their utility bills. In some countries, especially Bulgaria and Greece, but also in Cyprus, Lithuania and Portugal, more than 1 in 3 poor households experience issues of energy poverty as measured with these two indicators.

257 Importantly, Figure 55 also demonstrates significant improvements in these figures in the mid to long term (5 years) while short-term fluctuation (1 year) exacerbates instant impacts of policies against energy poverty. As clearly shown, in almost all countries, percentages of affected poor people have declined from 2015 to 2020. In Italy, Bulgaria and Latvia, remarkably fewer households are unable to heat their homes adequately in 2020 than five years before. In Hungary, Cyprus and Latvia, significantly fewer poor people have fallen behind on their utility bills in 2020 than in 2015. Only in exceptional cases, 5-year differences hint at stable or even increasing prevalence rates of energy poverty among poor households.

74 See: https://ec.europa.eu/energy/sites/default/files/swd_on_the_recommendation_on_energy_poverty_swd2020960.pdf.

75 https://energy.ec.europa.eu/system/files/2020-10/swd_on_the_recommendation_on_energy_poverty_swd2020960_0.pdf

Figure 55: Harmonized main energy poverty indicators: inability to keep home adequately warm and falling behind on utility bills among households below the poverty line in Europe, 2015-2020.

*Note: * break in time series; invalid comparisons over time.*

Source: Eurostat Database Living Conditions-Material Deprivation-Economic Strain (ilc_mdes01 and ilc_mdes07), 2022.

258 National-level percentages of energy poor (as measured above) either among the total population or among the population below the poverty line are not significantly related to the national average share of expenditure on electricity, gas and other fuels. Hence, based on this statistical information it cannot be argued that energy poverty is more prevalent in countries where households spend a larger share on energy, i.e., where energy is relatively more expensive in comparison to other consumption and/or available household budgets. This somewhat surprising lack of correlation is revealed when correlating the subjective indicators above with Eurostat's information on household expenditure at country-level.[76]

259 The Staff Working Document also recommends a wider national debate about energy poverty, involving many different stakeholders. NRAs report that national governments (in 19 MSs and Great Britain), NRAs (in nine MSs and Great Britain) and subnational governments at regional and/ or local levels (11) are most often part of national discourses on energy poverty. In addition, energy companies, ADR bodies and NGOs, including consumer organisations, also take part in these debates in some MSs. In 10 MSs there are more than three stakeholder groups involved (Austria, Belgium, Cyprus, Germany, Greece, Italy, Luxembourg, Netherlands, Romania and Spain).

260 Some NRAs have comprehensive roles, and several of the roles and tasks are related to energy poverty – leading to different levels of engagement with the problem of energy poverty. NRAs report that they offer expertise in defining and measuring energy poverty in nation-wide working groups (e.g., Austria and Belgium), give advice to consumers (e.g., Germany), monitoring (e.g., Luxembourg) while other NRAs state that they have some role in implementing regulatory measures to assist combatting energy poverty (e.g., Italy) or have no role at all (e.g., France, Norway, Spain, Sweden). As a minimum, NRAs should be informed about energy poverty in their country and in Europe. Even if there is no direct responsibility, many NRA decisions affect the financial situation of consumers and thus have direct impact on energy poverty and distributional justice. The concepts of vulnerable consumers and energy poverty enable policy makers to define target groups for specific measures beyond their social welfare system.

76 https://ec.europa.eu/eurostat/cache/infographs/hhexpcofog/hhexpcofog_2020/?lang=en

4.3.2.1 Vulnerable consumers and energy poverty in the Energy Community Contracting Parties

261 Explicit definitions of vulnerable consumers have been introduced in the majority of the EnC CPs, except in Ukraine[77] and Bosnia and Herzegovina (for electricity). Although there are a variety of national approaches in defining the criteria for obtaining the status of a vulnerable consumer, the common criteria are income levels and critical dependence on electricity-powered equipment for health reasons. The most common measures for protection of vulnerable consumers in the EnC CPs are disconnection restrictions due to non-payment and social benefits to cover energy expenses.

262 None of the EnC CPs had defined energy poverty in 2021, so there were no official statistics on the number of energy poor households. Nevertheless, the majority of CPs engaged in preparation of NECPs, although there was still no legal obligation for the EnC to implement Regulation 2018/1999 and Directive 2019/944[78]. The Study on addressing energy poverty in the EnC, completed in 2021, provided assistance to the CPs in assessing the number of energy poor households and in defining adequate policies and measures for reducing energy poverty.

4.3.3 Supply of last resort (SOLR)

263 In general, SOLR mechanisms shall generally ensure universal service and access to electricity and, where a gas network exists (locally), also to gas. In all MSs but Finland and Malta, electricity SOLR mechanisms safeguard customers in the case of supplier failure – guaranteeing a continued connection and supply with energy in such events as supplier bankruptcy. In addition, related SOLR mechanisms are also in place to protect inactive consumers in 10 MSs, and in another two MSs (Austria, Belgium, Cyprus and Spain), there are SOLR processes in place to further protect consumers struggling with paying their bills.

264 In terms of gas, the situation is very similar with the most frequent function to protect consumers in case of supplier failure (in 21 MSs), inactive consumers (in eight MSs) and those with payment difficulties (in four MSs). In Bulgaria, France and Slovenia, there is no SOLR for gas.

265 In most MSs, certain electricity and gas suppliers are generally appointed as SOLR, meaning that selected suppliers are designated, appointed or nominated by legislation to take over the role as SOLR in case. SOLR could be incumbent suppliers (e.g., in Belgium with the exception of Flanders, or in Czechia) or even DSOs (e.g., in Estonia). In Germany, the supplier with the highest market share in a DSO area is designated SOLR in each DSO area.

266 In six MSs, SOLRs are designated via a public call of expression of interest. In France, all (electricity) suppliers with a market share of 10% or more are obliged to bid an expression of interest. In Greece, the supplier with the highest market share will be SOLR in case of no incoming expressions of interest.

267 In three MSs, SOLRs are designated on a case-by-case basis using, for instance, a random selection process (e.g., in Austria). In Poland, every supplier states whether they want to provide SOLR services in the DSO area – a list of SOLR suppliers and their terms and conditions, including prices, is available from DSOs. The SOLR is thus already named in supply and DSO contract in advance. If it turns out that such a SOLR is not available in an event of supplier failure, the designated default supplier will take over as SOLR, completing a "hierarchy" of suppliers on which customers can rely in case of business failure.

268 In other MSs, SOLRs are designated or appointed based on other predefined criteria. In the Netherlands, for instance, the trustee in the bankruptcy of the exiting supplier has up to 10 days to try to sell the customer base to another supplier. If the customer base is not sold after 10 days, the customer base is distributed across the other suppliers by market ratio.

269 And finally, in Great Britain, SOLR designation follows an NRA assessment by Ofgem of appointing one supplier from these who bid to become SOLR according to a) account balances, 2) costs of SOLR transfers, 3) SOLR price offer and 4) customer service quality considerations.

77 The primary legislation provides background for defining vulnerable customers, however, secondary legislation has not been developed yet. In practice, vulnerable groups are protected by different measures of social protection.

78 Only at the end of 2021 was this legislation adopted for the EnC CPs.

270 The role of NRAs varies across Member States with NRAs responsible for the designation or appointment of electricity and/or gas SOLR in six MSs, NRAs oversee the designation/appointment process in another six MSs. In another seven MSs, NRAs have either an advisory or supervisory role or they propose specifications to SOLR tenders run by ministries in which suppliers express interests to provide SOLR services. In many MSs, NRAs are not directly involved in the SOLR designation/appointment process.

271 Supplier reactions to SOLR designation: In 16 MSs, designated or appointed electricity SOLR cannot refuse to act as SOLR, though in Spain SOLR may refuse to supply customers with debt. In eight MSs, a designated or appointed SOLR may refuse to take over SOLR services – in Austria, for instance, there is no legal obligation to give any reason for refusal to become SOLR. In other MSs, refusal is limited to specific conditions (e.g., economic hardship) or only possible by refusing in front of a court (e.g., Hungary).

272 In nine MSs, electricity SOLR prices are determined by NRAs and in six MSs for gas SOLR. Most often, the SOLR offer is approved by NRAs. In two MSs, the ministry is responsible for determining the tariff paid by (electricity) consumers. In six MSs, SOLRs determine their prices freely. In most MSs, however, there are guidelines or (legal) frameworks in place which restrict the tariff set by SOLR to reasonable prices – to block unacceptably high SOLR prices.

273 In 18 MSs, SOLR prices are then generally higher than the prices of other electricity suppliers, yet this is often ambiguous since SOLR prices may depend on specific designation/appointment criteria, market environments at the time of business failure (e.g., high- or low-price periods), prior contract details with the failing supplier and specific SOLR offers. In six MSs, SOLR prices are about the same as other suppliers' prices. In no MS, SOLR are prices generally lower than standard prices. The situation is very similar in gas.

274 Customers can either switch immediately to a supplier of their choice before (in 12 MSs for electricity and in nine MSs for gas) or after the completion of the SOLR transfer ruling out being trapped with a (more expensive) SOLR against one's will for an extended period. Switching ahead of the SOLR transfer relies, however, on prior awareness and rapid action on behalf of customers since, once started, the SOLR transfer must be completed before customers can switch to another supplier. In most cases, customers are not aware of their supplier's failure before transfers to SOLR.

275 In 2021, approximately 70 electricity and 60 gas supplier failures initiated the start of SOLR across Europe. Most SOLR events were recorded in Great Britain (27 for electricity, 26 for gas), followed by Czechia (10 for electricity, 14 for gas) and Spain (six for electricity) in 2021.

276 Roughly 3.5 million household electricity customers have been transferred to SOLR across all MSs, most of them in Great Britain (2.5 million), Czechia (590,000) and the Netherlands (130,000). In many MSs, electricity supplier failures only affected a smaller number of customers being transferred to SOLR, for instance in Austria and Luxembourg (2,500 each), Hungary (112) or France (60). As a share of the population supplied by SOLR, very small percentages were reported in France and Hungary (0%), Austria, Poland and Slovenia (0.1%), Luxembourg (0.4%), Latvia (0.6%) and Lithuania (0.9%). Somewhat higher shares were observed in Norway and the Netherlands (2%), Bulgaria (5%), Czechia (10.1%), Sweden (10.4%), Portugal (14.7%) and Estonia (20%). Even higher shares were reported from NRAs in Spain (34.7%), Romania (41.9%) and Slovakia (67.1%).

277 In terms of gas, roughly 2.7 million households have been transferred to SOLR across all MSs. Likewise, most transfers have taken place in Great Britain (2 million), followed by Czechia (320,000), the Netherlands and Slovakia (120,000 each). Subsequently, different shares of household consumers were supplied by SOLR, ranging from 0% Croatia, France, Hungary, Lithuania, Slovenia, Austria and Poland (both 0.1%), Italy (0.2%) over smaller shares in Romania (1.2%), Estonia (1.7%) and the Netherlands (2.1%) to up to 10% in Czechia, 14.7% in Portugal or 19% in Spain.

278 To conclude, in 2021, SOLR mechanisms and procedures had to be widely utilised to dampen the effects of supplier failures on millions of European consumers. While SOLR processes have worked in practice, affected consumers often faced (significantly) higher SOLR prices – especially in the 2021 soaring price environment. More widespread supplier reluctance to customer acquisition in such times may call for adaptations of SOLR provisions to ensure universal service in crisis.

4.3.3.1 Supply of last resort - Energy Community

279 A supplier of last resort for electricity has been appointed in all EnC CPs[79]. For gas, a supplier of last resort exists in all EnC CPs except Georgia. SOLR prices are approved or set by NRAs in all CPs except North Macedonia and Serbia. In Montenegro and Ukraine, the NRA defines a methodology for calculation of the SOLR price. The NRAs of Albania, Bosnia and Herzegovina, Georgia, Kosovo* and Ukraine reported higher SOLR prices than non-SOLR prices. In other EnC CPs, SOLR price levels depend on the tendering results and/or accompanying methodologies for their calculation.

4.4 Complaints

280 This section analyses available complaint data from MSs across Europe. Given that complaints are defined, handled and ultimately monitored in an inconsistent manner across the Member States, the results and the number of complaints vary significantly between MSs. This section also describes who is responsible for complaint handling, a consumer´s access to information about how to complain, and the legal maximum time to respond to a complaint for energy companies, NRAs, Alternative Dispute Resolution (ADRs), and Ombudsmen.

281 The most common reason to submit a complaint against an electricity supplier is in relation to billing. Interestingly, in gas, consumer service is the key complaint raised by consumers. Most complaints against an electricity or gas DSOs concern the connection to the network.

4.4.1 Complaint Handling bodies and procedures

282 According to the latest European Commission´s Consumer Market Monitoring Survey[80], on average 9% of European consumers[81] experience problems with their electricity services. This ranges from 2% in Luxemburg and Slovenia to 24% in Malta. On average, 7% of gas customers experience problems, ranging from 2% in Greece to 14% in Italy.

283 When submitting a complaint, just over 50% turn to their supplier and/or the DSO. Another 10% turn to a public authority, 10% to a consumer organization and 4% to an Ombudsman[82]. However, submitting a complaint does not appear to improve consumer satisfaction. On average, 36% of consumers submitting a complaint were fairly or very dissatisfied with the outcome of the complaint regarding electricity and 43% regarding gas). However, conversely, the majority of consumers that do submit complaints are satisfied following conclusion of the process.

284 Directive 2019/944 requires that MSs introduce speedy and effective complaint-handling procedures. MSs must assign roles and responsibilities in handling consumer complaints and design a process on how to handle consumer complaints. Article 10 gives final consumers the right to a good standard of service and complaint handling by their suppliers.

285 In most MSs (23 for electricity and 19 for gas), the role of dealing with final consumer complaints has been assigned to NRAs. In some MSs (17 for electricity and 15 for gas), NRAs also forward complaints to other responsible parties.

286 Information about what consumers complain about and how often they do is widely available. In 17 MSs, NRAs must publish complaint data about final household consumers. In three MSs[83], DSOs for electricity and gas must publish complaint data. In five MSs[84], suppliers must publish such data. In 13 MSs the Alternative Dispute Resolution (ADR) body or the Ombudsman also must publish the data. However, in three MSs (Bulgaria, Norway and Poland), reporting data on consumer complaints is not obligatory for any of the above-mentioned parties.

79 In Serbia, consumers turn to a guaranteed supplier for electricity and to a public supplier for gas that practically have the role of SOLR.

80 Published in 2021.

81 9% in EU27 (Iceland, Norway and Great Britain not included).

82 European Commissions Consumer Market Monitoring Survey 2021.

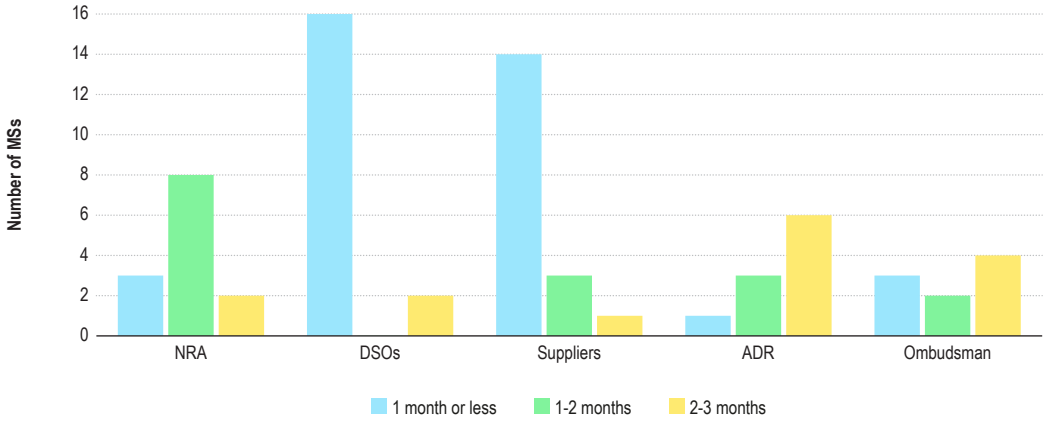
83 Greece, Croatia and Portugal.

84 Great Britain, Greece, Croatia, Portugal and Romania.

287 In most MSs, information about where and how to complain is mandatory in contracts and bills. In 10 MSs[85] for electricity and five for gas[86], consumers must be provided the contact details of relevant complaint services on advertising/information material such as leaflets, flyers, etc.

288 To accelerate the complaint services, a short legal maximum processing time is set for the various market actors, as shown in Figure 56. For example, in 16 MSs, for electricity, DSOs are requested to respond to consumer complaints within 1 month or less. NRAs, ADRs and Ombudsman 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.

Figure 56: Legal maximum processing time to handle electricity market complaints in MSs and Norway – 2021 (No. of MSs)



Source: CEER 2022.

4.4.2 Alternative Dispute Resolution (ADR)

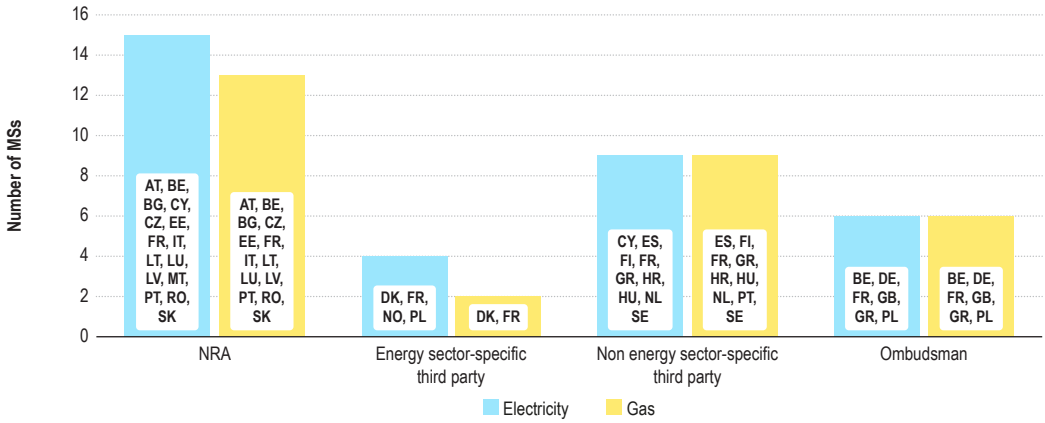
289 In 2021, 23 MSs had implemented an ADR mechanism for electricity and gas that is free of charge. Cyprus, Denmark, the Netherlands and Portugal also have an ADR mechanism, but with a fee. Such fees may represent a barrier to some consumers when it comes to the submission of a complaint regarding their energy service provider. According to Article 26 of Directive 944/2019, ADR-services should also be available for commercial customers. In 2021, this was not yet the case in Denmark, Finland, Norway, Poland and Sweden.

290 Figure 57 shows that 15 MSs in electricity and 13 in gas have assigned the role of ADR to the NRA. Non-energy sector specific third parties, such as non-sector specific consumer bodies, come second. ADRs in the countries represented in Figure 57 together settled 42,893 disputes for final household electricity customers and 4,925 disputes for commercial electricity customers.

85 Belgium, Denmark, Estonia, Great Britain, Greece, Croatia, Hungary, Malta, Slovenia and Slovenia.

86 Belgium, Great Britain, Greece, Hungary and Slovenia.

Figure 57: Entities responsible for ADR in EU MSs and Norway – 2021 (No. of MSs)



Source: CEER 2022.

4.4.3 Complaint data

291 Consumer complaint data is an important source of information for NRAs. The data can be used to understand how the market functions and what the specific issues that impact consumers are. The information can also guide decisions on where to focus monitoring exercises or to suggest changes in the regulation.

292 The number of final household consumer complaints received by NRAs, suppliers, DSOs, ADRs or energy Ombudsmen continues to vary significantly across MSs because of different definitions used and also due to different population sizes. Apart from that, variation is caused by differences in handling and reporting procedures in MSs, so that the absolute number of complaints is not a straightforward indicator of the quality of service in a country. Hence, a cross-national comparison of the number of complaints is challenging and robust conclusions about consumer protection and market-functioning are difficult to draw from such comparison.

293 According to available MS data, in 2021, approximately 6.5 million complaints regarding electricity and 4.7 million complaints regarding gas were reported to suppliers, DSOs, ADR bodies, Ombudsmen or NRAs.

294 Suppliers received the most complaints in both electricity and gas markets. However, data on complaints received by electricity suppliers is only reported by 11 out of 26 NRAs[87], of which a few MSs process most complaints[88]. The other NRAs are not able to submit complaint numbers received by suppliers. In total, 12 NRAs were aware of complaints received by DSOs[89].

295 Only a small portion of all complaints is sent directly to NRAs, ADRs and energy Ombudsmen (3% of all complaints in the electricity markets and 13% in the gas markets[90]). However, statistics on complaints directly addressed to these public bodies appear to be more comparable than data on complaints submitted to suppliers or DSOs thanks to better reporting across MSs. These complaints may include ones which had not been solved by the energy companies and thus "moved on" to NRAs, ADRs and Ombudsmen potentially representing the most contested cases.

296 The following sections comment on the final household consumer complaints directly addressed to NRAs, ADRs and/or Ombudsmen in 21[91] countries where these public bodies register complaints separately for electricity and gas markets, and in nine[92] countries where these public bodies also register complaints separately for suppliers and DSOs.

87 Austria, Cyprus, Spain, Great Britain, Greece, Hungary, Italy, Malta, Poland, Portugal and Slovenia.

88 Great Britain 3,048,738, Spain 1,276,486, Malta 342,560 and Italy 289,035 complaints received by suppliers reported to the NRA.

89 Austria, Spain, France, Hungary, Greece, Italy, Lithuania, Luxemburg, Malta, Poland, Romania and Slovenia.

90 The higher percentage in the gas market is explained by the fact that the Spanish NRA registered 515,685 gas market complaints.

91 Austria, Belgium, Bulgaria, Cyprus, Germany, Estonia, Spain, Finland, France, Greece, Hungary, Italy, Lithuania, Luxemburg, Latvia, Poland, Portugal, Romania, Slovenia, Slovakia and Sweden.

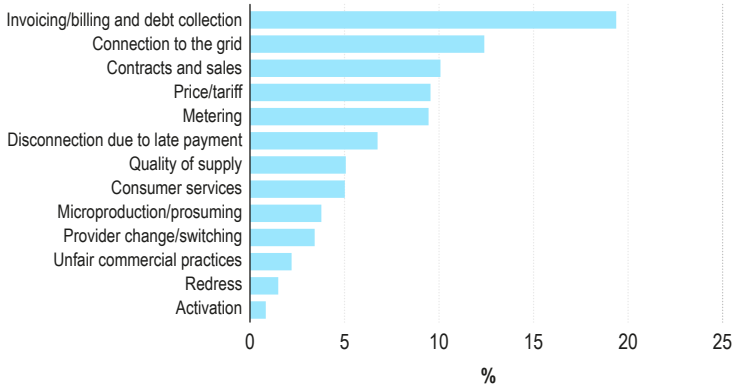
92 Belgium, Spain, Finland, Greece, Hungary, Poland, Portugal, Sweden and Slovakia.

Electricity complaints

297 Member States that aim to use complaint statistics to improve the market, launch monitoring exercises or suggest legislative changes must at least register electricity and gas market complaints separately. In the absence of such monitoring, it will be unlikely that any substantial improvement will be able to be implemented as the key issues will not be understood.

298 Figure 58 shows that in the countries that register electricity and gas market complaints separately, on average 19% of all complaints regarding electricity companies (suppliers and DSOs) was related to invoicing/billing and debt collection. 12% concerned connection to the grid and 10% contracts and sales.

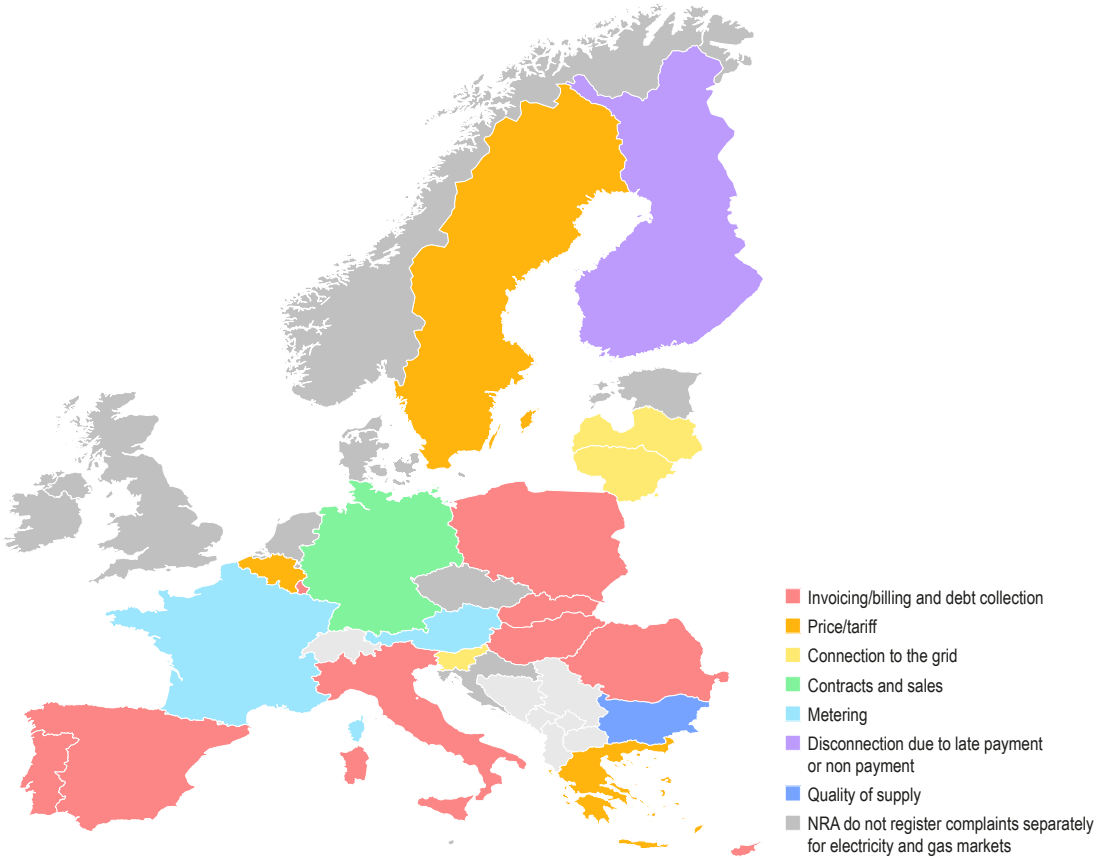
Figure 58: Average national shares of types of final household consumer complaints in the electricity market directly addressed to NRAs, ADR or Ombudsmen in 19 MSs across Europe that register electricity and gas market complaints separately – 2021 (%)



Source: CEER 2022

299 Figure 59 shows the most common complaint category in the 20 countries that register complaints separately for electricity and gas markets. For example, in Portugal, Spain, Italy, Poland, Slovakia, Hungary and Romania, problems related to invoicing/billing and debt collection is the most common reason to complain to NRAs, ADRs or Ombudsmen.

Figure 59: Most common reason to complain regarding electricity market in MSs across Europe – 2021



Source: CEER 2022

300 Any Member State that wants to use complaint statistics for evidence-based decision making should register complaints separately, not only for electricity and gas markets, but also for suppliers and DSOs. To do so would enable the NRAs or ADRs to identify the key cause of consumer issues and thus implement policy changes with the aim of improving the quality of service consumers receive and in turn reduce the number of complaints issued. Notwithstanding this, it is important to recognise that there is most likely a cross-over between a supplier and a DSO when it comes to a consumer complaint. For example, a consumer submitting a complaint regarding a bill may be initially a supplier-directed complaint. However, the cause of the inaccurate bill may in fact be due to an inaccurate meter reading issued by the DSO. At present, in many Member States this is not taking place, as it may not be possible for the NRAs or the ADRs to identify the true root of the issue causing a consumer to complain.

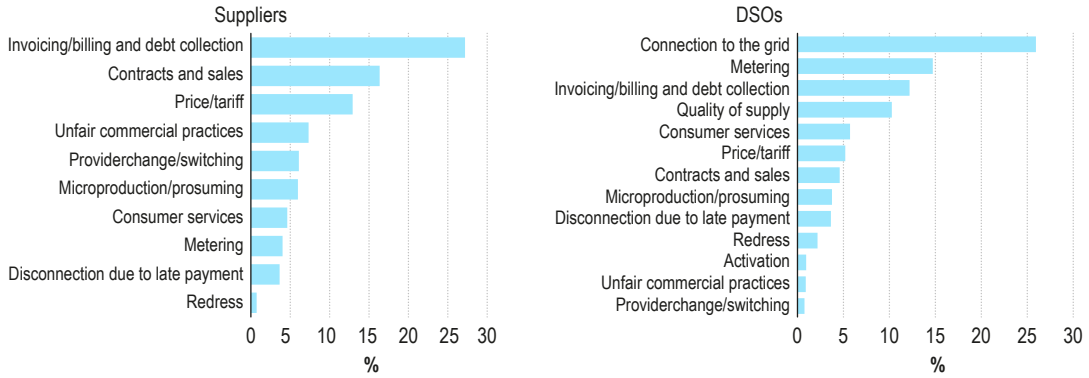
301 Only nine countries[93] have reported data for complaints to NRAs, ADRs, and Ombudsmen separately for suppliers and DSOs. The conclusions in this section are based on data from these countries.

302 Figure 60 shows that problems with invoicing/billing and debt collection are the most common reason to complain about electricity suppliers (on average, 24% of all complaints). Issues regarding contracts and sales are the second most common reason to complain (on average, 16% of all complaints).

303 When it comes to electricity DSOs, the most common reason to complain are issues regarding connection to the grid (on average, 26% of all complaints) followed by metering (on average, 15% of all complaints).

93 Belgium, Spain, Finland, Hungary, Poland, Sweden, Portugal, Greece and Slovakia.

Figure 60: Average national shares of types of final household consumer complaints in the electricity market directly addressed to NRAs, ADRs or Ombudsmen in 9 MSs across Europe that register supplier and DSO complaints separately – 2021 (%)



Source: CEER 2022.

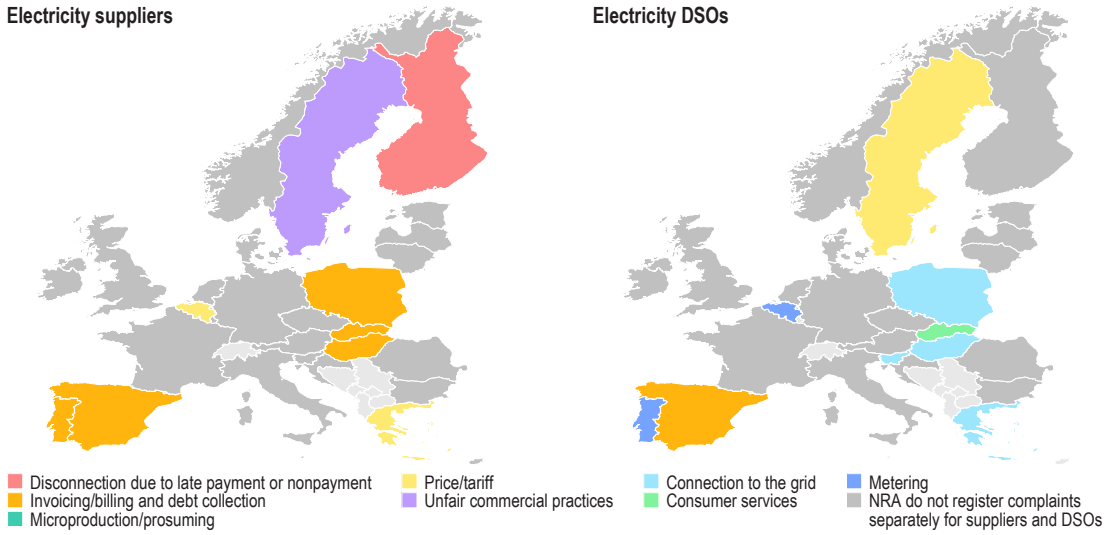
Note: For the presentation of the types of consumer complaints, population weighting and the number of complaints reported by each NRA are not considered. Resulting figures thus refer to MS-level average percentages of complaints in the various categories.

304 Electricity customers across the EU complain about different things. Figure 61 shows the variations across Europe regarding the dominant complaint category for suppliers and DSOs.

305 In Sweden, 36% of complaints regarding suppliers concerned unfair commercial practices. In Portugal, Poland, Hungary and Greece most complaints regarding electricity suppliers concerned invoicing/billing and debt collection[94]. Regarding DSOs, in Slovenia 95% of the complaints concerned connection to the grid and in Spain 56% of the complaints concerned invoicing/billing and debt collection.

94 Hungary 43%, Spain 36% Poland 32%, Portugal 55% and Greece 77%.

Figure 61: Most common reason to complain in MSs across Europe – 2021



Source: CEER 2022.

306 One reason for NRAs, ADRs or Ombudsmen to register complaints is to analyse how the market functions and address the most common problems that consumers experience. However, some of the complaint categories mentioned above are very general and thus difficult to analyse and address without more information. Only three MSs (Greece, Sweden and Belgium) report that subcategories are used to the complaint categories mentioned above.

307 For example, in Sweden, the most common complaint regarding suppliers concerns the category of unfair commercial practices. Here the Swedish NRA and the single point of contact use six subcategories. The results have been used when the need for legal changes has been investigated and suggested to better protect customers from unfair commercial practices.

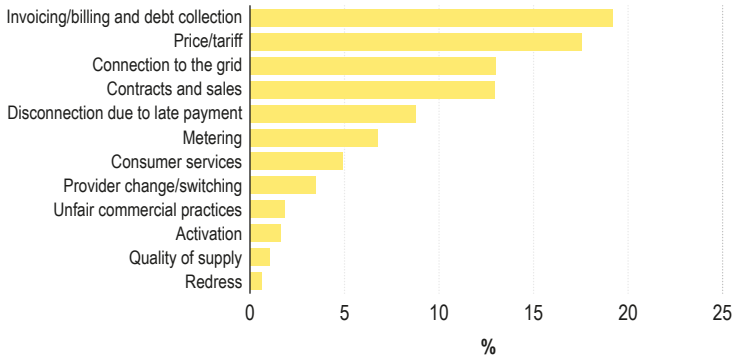
308 In Belgium, many sub-categories are used to all the categories mentioned above, for example switching that is categorized in 4 subcategories (delay, unwanted switch, and mystery switch and termination fees).

4.4.3.1 Gas market complaints

309 Any country that wants to use complaint statistics to improve the market, launch monitoring exercises or suggest legislative changes, must at least register electricity and gas market complaints separately. As outlined above with electricity, while there are obviously interlinkages between some complaints (pricing) it is important that NRAs and ADRs are in a position to identify the cause of the complaint and in turn implement actions to reduce complaints.

310 Figure 62 shows that on average 19% of all complaints regarding gas companies (suppliers and DSOs) was related to invoicing and billing, followed by complaints regarding price/tariff.

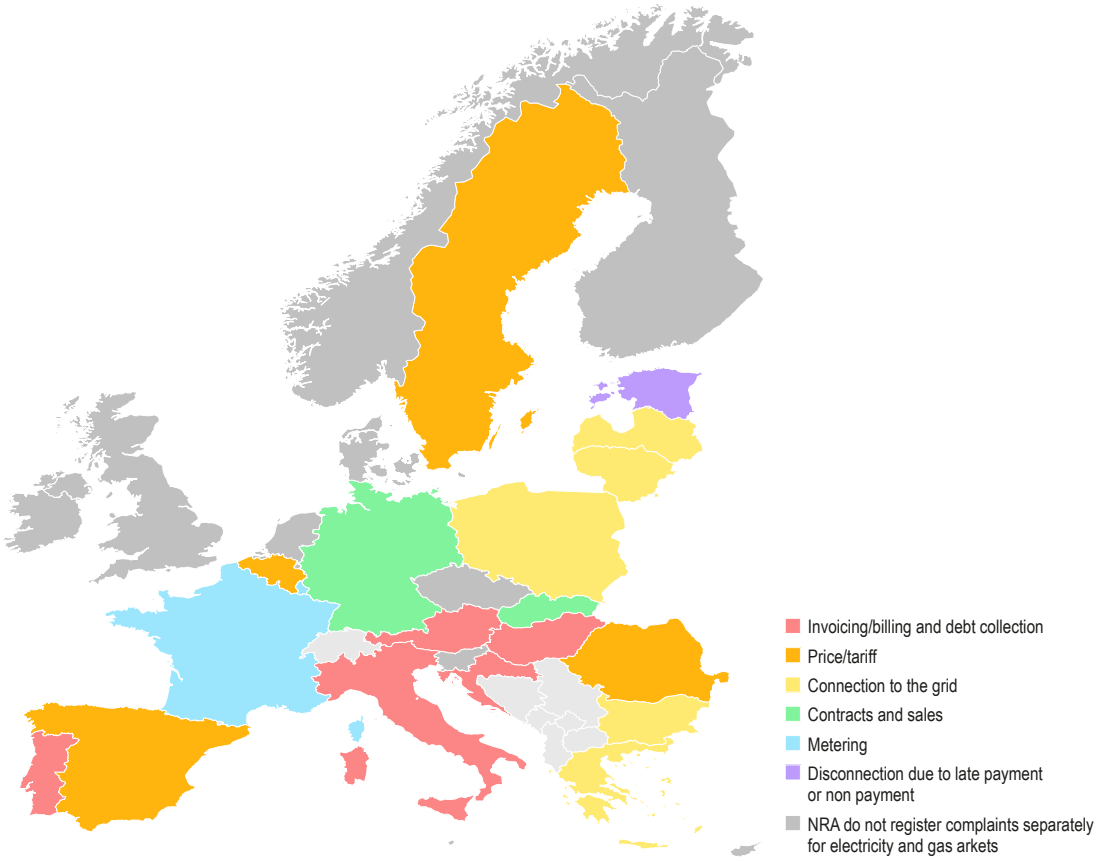
Figure 62: Average national shares of types of final household consumer complaints in the gas market directly addressed to NRAs, ADRs or Ombudsmen in 16 MSs across Europe that register electricity and gas market complaints separately – 2021 (%)



Source: CEER 2022

311 Figure 63 shows the most common complaint category in the countries that register complaints separately for electricity and gas markets. In Latvia, Lithuania, Greece, Poland and Bulgaria, problems related to the connection to the grid was the most common reason to complain to an NRA, ADR or Ombudsman. In Sweden, Romania and Spain prices/tariffs are the most common reason to complain.

Figure 63: Most common reason for gas market complaints in MSs across Europe – 2021



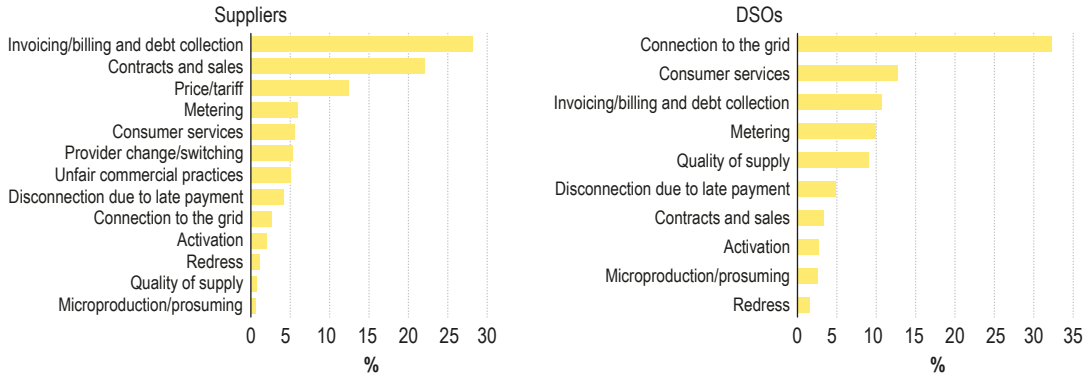
Source: CEER 2022

312 In seven countries[95], the NRA, ADR, Ombudsman or some other public entity also registers complaints separately for suppliers and DSOs in the gas market. The conclusions in this section are based on data from these countries.

95 Belgium, Greece, Spain, Hungary, Poland, Portugal and Slovakia.

313 In general, suppliers attract more complaints than DSOs. Figure 64 shows that problems with invoicing/billing and debt collection is the most common reason to complain about gas suppliers (on average, 28% of all complaints). When it comes to gas DSOs, the most common reason to complain are issues regarding the connection to the grid (on average, 32% of all complaints).

Figure 64: Average national shares of types of final household consumer complaints in the gas market directly addressed to NRAs, ADRs or Ombudsmen in 7 MSs across Europe that register supplier and DSO complaints separately – 2021 (%)

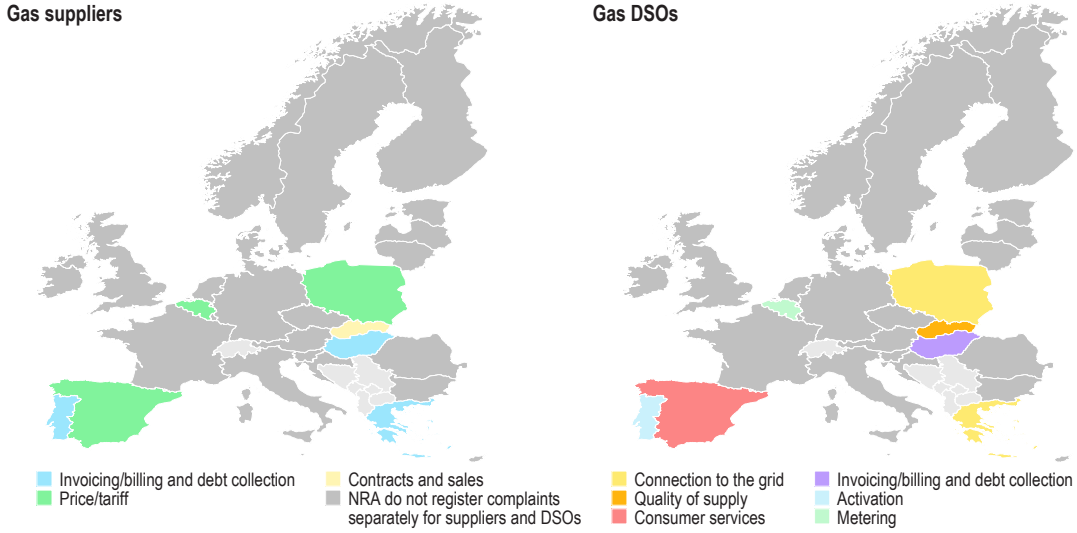


Source: CEER 2022.

Note: For the presentation of the types of consumer complaints, 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.

314 The content of the complaints varies across the EU. Figure 65 shows the dominant complaint category for suppliers and DSOs. For example, in In Spain, 26% of complaints regarding gas suppliers concern price/tariff and in Hungary, 32% of complaints regarding gas suppliers concern invoicing/billing and debt collection. Regarding gas DSOs, in Poland 85% concern connection to the grid.

Figure 65: Most common reason to complain in MSs across Europe – 2021



Source: CEER 2022.

315 One reason for NRAs, ADRs or Ombudsmen to register complaints is to analyse how the market functions and address the most common problems that consumer's experience. However, some of the complaint categories mentioned above are very general and thus difficult to analyse and address without more information.

316 Based on the information provided by NRAs, only Spain, Greece, Portugal and Sweden[96] report that they use subcategories to the complaint categories mentioned above. However, national complaint categories may be more detailed than NRAs categories.

4.5 Performance conclusions

317 Energy prices increased significantly in 2021 in response to the opening of economies following the removal of restrictions in place to prevent the spread of Covid-19. Following the Russian invasion of Ukraine in early 2022, European retail energy consumers have seen a significant increase in the cost of both electricity and gas. Such price increases will likely continue into late 2022 and early 2023 at a minimum.

318 Supplier hedging by suppliers assisted in protecting consumers from the initial energy price spike. However, it is clear that the sourcing of hedging for suppliers now represents a significant cost burden which may make it difficult for suppliers to offer fixed-price energy contracts.

319 Regulated prices are still being applied across the European Union in some Member States. While the RePowerEU publication permits such use, it is clear that in some markets, regulated prices are being made available to all consumers and not targeted at those most in need.

320 Billing requirements are failing to meet the criteria as set out in the Electricity Directive. This lack of compliance is negatively impacting consumers and their ability to become more engaged.

321 Some NRAs have several comprehensive roles and tasks related to energy poverty, leading to different levels of engagement with the problem of energy poverty. NRAs report that they offer expertise in defining and measuring energy poverty in nation-wide working groups (e.g., Austria and Belgium), give advice to consumers (e.g., Germany), monitoring (e.g., Luxembourg) while other NRAs state that they have some role in implementing regulatory measures to assist combatting energy poverty (e.g., Italy) or have no role at all (e.g., France, Norway, Spain, Sweden).

322 In 2021, SOLR mechanisms and procedures had to be widely utilised to dampen the effects of supplier failures on millions of European consumers. While SOLR processes have worked in practice, affected consumers often faced (significantly) higher SOLR prices – especially in the 2021 increasing price environment. More widespread supplier reluctance of customer acquisition in such times may call for adaptations of SOLR provisions to ensure universal service in crisis.

323 European energy consumers file millions of complaints to their suppliers and distribution system operators across the European Union each year. Issues connected to invoicing, billing and debt collection were the most common reason to complain in the electricity market, while prices and tariffs were the most common reason for complaints in the gas market.

96 The Swedish NRA uses similar subcategories for the gas market and the electricity market, but had no complaints in 2021.

Annex 1: The relationship between retail and wholesale prices in electricity and gas markets for households by country

Figure A1-1: Responsiveness of the energy component of retail electricity prices to wholesale electricity prices and evaluation of markup in the household market from 2008 to 2021 (euros/MWh)

Hungary
Ireland
Italy
Latvia
Lithuania
Luxembourg
Netherlands
Norway
euros/MWh
Markup
Retail
Wholesale

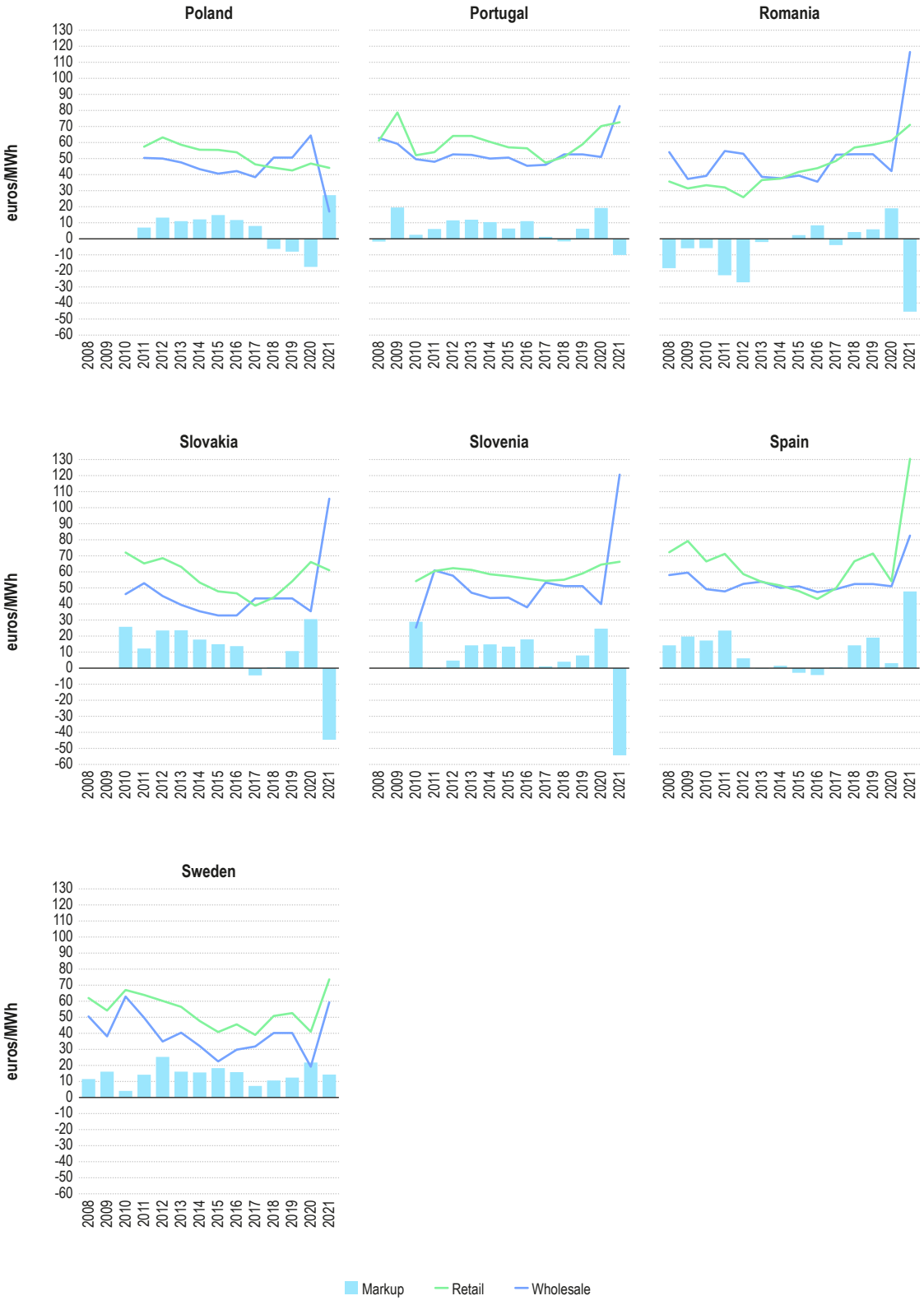
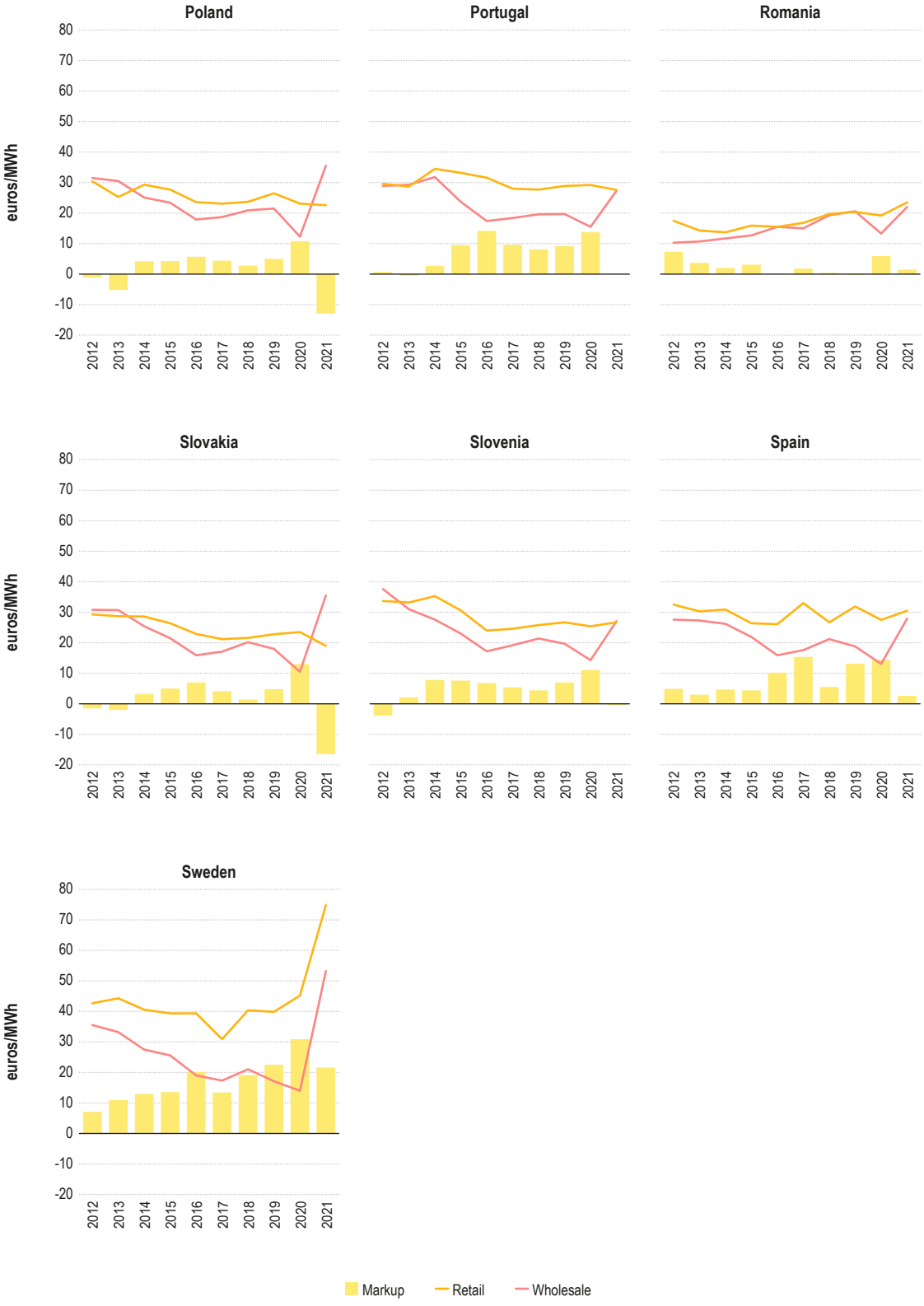

Poland
Portugal
Romania
Slovakia
Slovenia
Spain
Sweden
euros/MWh
Markup
Retail
Wholesale

Figure A1-2: Responsiveness of the energy component of retail gas prices to wholesale gas prices and evaluation of markup in the household market from 2008 to 2021 (euros/MWh)

Germany
Greece
Hungary
Ireland
Italy
Latvia
Lithuania
Luxembourg
Netherlands
euros/MWh
60
50
40
30
20
10
0
-10
-20
-30
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Markup
Retail
Wholesale


Poland
Portugal
Romania
Slovakia
Slovenia
Spain
Sweden
euros/MWh
80
70
60
50
40
30
20
10
0
-10
-20
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Markup
Retail
Wholesale

Annex 2: Rationale for permission of termination fees

a) In Germany, the German NRA states that setting a termination fee within the terms and conditions of an energy supply contract would fall under this category, thereby being rendered illegal. However, a termination of the contract before the end of the stipulated duration period may legally lead to damages being paid by the party who unduly terminated the contract

b) Pursuant to the Danish Consumer Contracts Act, a consumer is free to terminate a supply contract with one month's notice when five months have passed since the conclusion of contract, i.e., the supplier cannot charge termination fees. If, on the contrary, a consumer wishes to terminate the contract prior to the six months, the supplier can charge a termination fee, provided that the consumer has agreed to this contractual term.

c) In Croatia, electricity contract termination fees are not permitted for household customers and other customers who benefit from the public/last resort supply.

d) Charging penalties, damages, compensation or any other form of payment for reasons of withdrawal from the contract prior to its expiry is prohibited in Slovenia for household consumers if such withdrawals take effect after one year from the conclusion of the contract. A similar legal provision is being considered in Spain.

Annex 3: Information provided by suppliers to consumers

a) In Austria, suppliers inform about current prices and price formulae (e.g., spot prices) and time intervals of price adjustments. Some display past price developments (e.g., time series of underlying indices) or refer to websites where customers can check them.

b) In Belgium, in Brussels region, suppliers explain that these offers allow for better usage of energy and reduce CO_2 emissions. In Flanders, supplier shall inform customers at least annually of the possibility of concluding a contract with the supplier based on a dynamic electricity price. If the supplier offers such a contract, it shall inform customers about the possibilities, costs and risks of such contracts. It shall explain that customers can only enter into such a contract if they already have a digital meter or are having a digital meter installed, stating the cost and the procedure for doing so. A changeover to a contract based on a dynamic electricity price is only possible with the express, written consent of the customer, after prior information about possible price fluctuations and their implications

c) In Germany, suppliers have to inform comprehensively about costs, pros and cons of a dynamic contract, and information about the installation of a smart meter.

d) In Finland, suppliers are required by law to inform consumers about the key conditions and pricing options of electricity supply contracts (e.g., the price formation mechanisms of dynamic electricity price contracts).

e) While there is no requirement to inform consumers of opportunities, costs and/or risks in Great Britain, suppliers do have obligations to treat their customers fairly and should provide information about the tariffs and make the conditions clear.

f) In Croatia, some suppliers inform consumers about opportunities, costs and risks of dynamic electricity price contracts on the bilateral level.

g) In Lithuania and in Slovakia, suppliers communicate that electricity price depends on the period of electricity consumption and is related to the market price.

h) In Latvia, suppliers provide information on the main differences between fixed and dynamic contracts, the method for calculating the price of electricity, and the pros and cons of particular types of contracts. Some suppliers have designed calculators for their electricity products, which allow consumers to compare different opportunities based on their consumption.

Annex 4: Supplier numbers

Suppliers

324 This section focuses on the analysis of active nationwide suppliers.[97] Supplier activity provides an indication of the level of competition within a specific market. If suppliers are active and competing, they create favourable market conditions.

325 In order to achieve a well-functioning retail energy market, new suppliers must be able to enter a market and compete with existing suppliers. Therefore, the total number and entry/exit activity of suppliers provides an indication of consumer choice and of the available options in each national market.

326 Below presents the number of nationwide[98] suppliers and the total number of consumers in each Member State. In the electricity sector, Spain, Italy and Poland[99] recorded the most nationwide suppliers in 2021[100]. Spain and Italy presented 306 and 195 suppliers, with consistent growth since 2017 that slowed down in 2021. On the contrary, Germany and Poland experienced a sudden increase in their figures.

327 On the other hand, several countries registered a reduction in their number of active suppliers:

a) Decreasing number of suppliers observed in countries which recorded increases in 2020: Norway (-38%), Portugal (-12%) and Czechia (-9%);

b) A continuation of decreasing number of suppliers observed: Great Britain (-20%) and Finland (-2%). In Great Britain's case the number of active nationwide suppliers reduced significantly in the last five years, passing from 100 in 2017 to 66 in 2021[101];

c) No distinct trend but a reduction observed: The Netherlands (-7%) and Hungary (-8%).

97 However, some countries have stricter conditions to consider a supplier's activity as nationwide. For instance, in France a nationwide supplier is defined as one that is active (has at least one customer) and it covers 90% of the national territory.

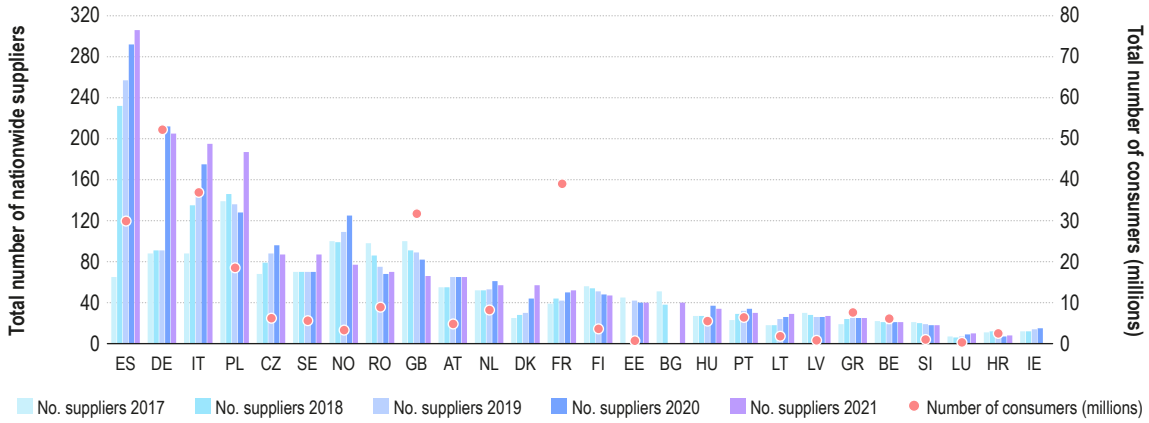
98 Active nationwide suppliers offer contracts to either household and/or non-household customers throughout the country and have at least one customer. This is in contrast with the total number of active suppliers in the country, where the only condition is to offer contracts to customers in at least one part of the country (e.g., one region) and to have at least one customer. However, some countries have stricter conditions to consider a supplier's activity as nationwide.

99 Poland difference respect previous year results (This is ungrammatical. Maybe: In contrast, Poland considers previous year's results…) based on a greater number of surveyed companies and not based on any significant changes on the market.

100 Spain records a relatively low HHI (under 1500) in the non-household segment, and a higher one in the household segment (2450), with a decreasing trend in the latter (-389 in last five years). On the other hand, Italy recorded a low concentration HHI in the non-household market (under 1000), and a high concentration HHI in the household market (nearly 4000), that shows a significant decrease in concentration (-1483 in the last five years), which is consistent with high entry numbers? reported by both MSs in the last years and retailers that gradually gain market shares. See Section 2.3 for further details.

101 That seems to be connected to an increase in the concentration level in the household segment in 2020 and 2021 (+217), yet remaining quite low in total (under 1300). In the non-household market, which has very low concentration (barely above 800), there was a change in the reduction trend in 2020, but HHI increase was insignificant.

Figure A4-1: Total number of active nationwide electricity suppliers and total number of metering points in the entire retail market 2017-2021



Source: CEER 2022

Data not provided for 2021 by Ireland.

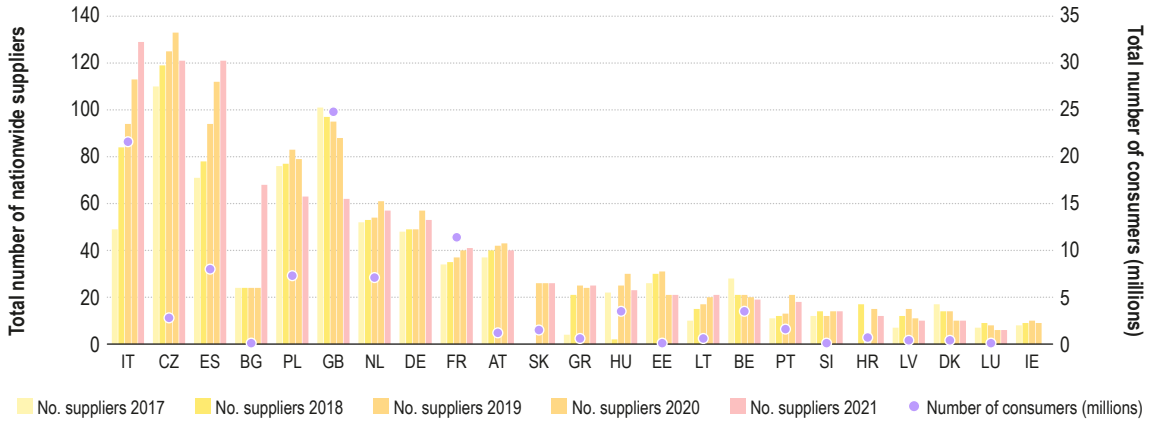
328 In the gas sector, Italy (129), Czechia (121) and Spain[102] (121) had the most active nationwide suppliers. Italy and Spain show significant increase in their number of active nationwide suppliers (+14% and +8%). Meanwhile most countries recorded a decrease in active suppliers:

a) Decreasing number of suppliers observed in countries which recorded increases in 2020: Poland (-20%), Portugal (-14%), Latvia (-9%), Czechia (-9%), Germany (-7%), Austria (-7%) and the Netherlands (-7%);

b) A continuation of decreasing number of suppliers observed: Great Britain (-30%), Croatia (-20%) and Belgium (-5%). In Great Britain, this trend has accelerated;

c) No distincti trend but a reduction observed: Hungary (-23%)

Figure A4-2: Total number of active nationwide natural gas suppliers and the total number of metering points in the entire retail market 2017-2021



Source: CEER 2022

102 Czechia recorded a relatively low HHI in the gas household market (roughly 2000) with a decreasing trend (-128 in the last four years), that changed strongly to a very significant concentration increase of +778, consistent with the number of suppliers trend change and the exit of relevant competitors. Italy has the lowest HHI in the gas household (around 1200) and non-household market (around 1000), although only a slow decreasing trend is recorded in the latter segment. Spain has the fourth lowest HHI in the non-household gas market (around 1200), with a very strong downward trend (-1358) until 2020, when the trend changed to an increase of 208 points. However, the mid to highly concentrated household market (under 3000) has kept to the downward trend in the last 5 years (-791).

329 NRAs reported on the number of suppliers that exited the market due to financial problems[103] during 2019, 2020 and 2021. Several countries reported an increase in exits due to a significant increase in supplier bankruptcy following unprecedented wholesale energy price increases in 2021.

330 For electricity, in the household market, an aggregate of 7-8 of this type of exits was reported in 2019 and 2020, rising to 69 in 2022, which concentrated in Great Britain (22), Spain (16), Czechia (9) and the Netherlands (6). The figures are lower in the non-household market but with similar trends being observed.

331 For gas, in the household market, a sharp rise in supplier failure has been registered in 2021. Most of them were registered in Great Britain (23), Czechia (15), and The Netherlands (6).

Energy Community

332 In the EnC CPs, the number of active nationwide electricity suppliers varies from one in both Montenegro and Kosovo*, two in Georgia, to 523 in Ukraine. In recent years, substantial market reforms in Ukraine have resulted in large increases in the number of electricity suppliers, with 227 new entries registered in 2020 and 59 in 2021. The electricity markets of Albania, Bosnia and Herzegovina, Moldova, North Macedonia and Serbia recorded between 11 and 21 nationwide suppliers.

333 In the majority of EnC CPs all electricity suppliers are active nationwide. The exception is Bosnia and Herzegovina, where 8 out of 17 suppliers are active only in a specific geographical area. In none of the EnC CPs electricity suppliers exited the market in 2021.

334 Similar findings are observed in gas markets. The number of active nationwide gas suppliers ranges from two in Bosnia and Herzegovina to 262 in Ukraine (with 24 more exits in 2021 compared to 2020). While in Bosnia and Herzegovina, Georgia and Ukraine all gas suppliers are nationwide suppliers, in Moldova, one out of 14 is active at a nationwide level, in North Macedonia one out of four and in Serbia 70% of suppliers is active nationwide.

103 Examples of financial problems: company declared bankruptcy, company cancelled contracts and exited the market to avoid bankruptcy, company activity license was revoked due to inability to keep market guarantees or due to non-payments, etc.