



European Union Agency for the Cooperation
of Energy Regulators



European retail markets for electricity and gas

2026 Monitoring Report

30 September 2026

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Executive summary

Household expenditure on electricity ranged from 1.2% to 3.9% of the national median income

20% potential saving on electricity bills.

More than 80% of household consumers in nine countries are on fixed-term, fixed-price contracts

Affordability depends on consumption and income, not prices alone. The burden differs substantially across countries and households.



Switching from fixed to dynamic pricing and shifting consumption to lower-price periods offer savings for many types of households.



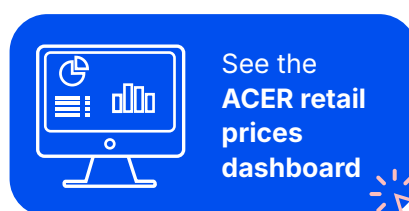
Understanding the contracts that consumers use matters.



- 1 The **European Commission's [Electrification Action Plan](#)** (July 2026) has an ambitious goal to increase electrification from 23% (in 2024) to 32% by 2030 and 46% by 2040 thus reducing Europe's dependency on imported fossil fuels. At the same time, it will make households, transport and businesses increasingly dependent on electricity and on the prices, contracts and services provided through retail markets. The European Commission's [Affordable Energy Action Plan](#) makes affordability central to this transition to greater electrification. To encourage electrification, the price of electricity relative to gas should not discourage consumers from switching where electrification would benefit them.
- 2 Greater electrification will mean an increase in electricity demand. The growth in electricity demand and in the share of weather-dependent renewables increases the need for flexibility in the system and in turn the savings opportunities for consumers who provide flexibility. Retailers should thus offer citizens contracts that balance price stability with incentives to use their electricity flexibly. This report examines whether retail market conditions support affordable electrification and enable consumers to benefit from more flexible electricity use.



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Electricity prices for households have fallen slower than for business consumers

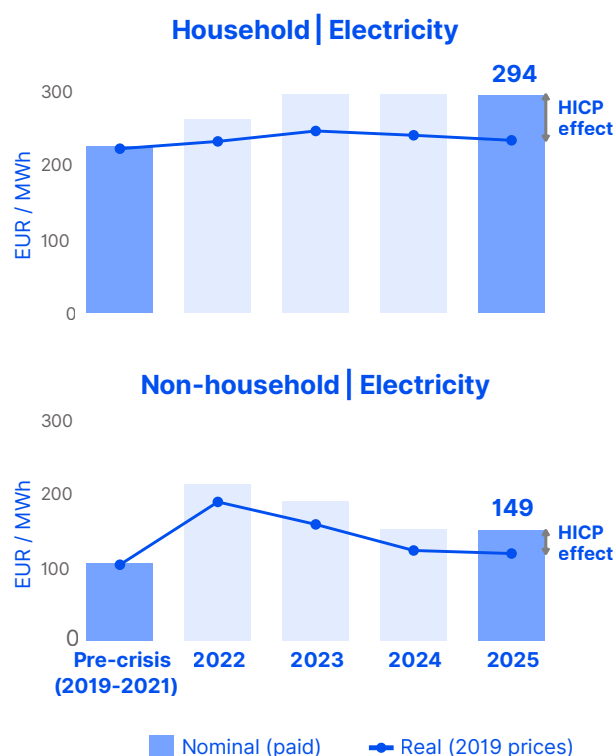
- 3 Household consumers were initially shielded from the wholesale price spike of the 2022 energy crisis, as their final electricity prices increased less sharply than wholesale prices. The pattern reversed as of 2023, as wholesale electricity prices fell: the cost of the energy and supply part of the bill declined more slowly, while, for non-household (business) consumers, prices adjusted more quickly.
- 4 For the consumer, it is the total consumer bill that is relevant. The energy and supply cost elements remain important but final bills also depend on network costs and taxes. The network cost part of the bill is expected to become more important as network investment grows.

Energy affordability differs substantially across countries

- 5 Energy affordability depends not only on final energy prices but also on consumption and household income. Household electricity expenditure in 2025 ranged from around 1 % to 4 % of median income across the European countries shown below, with the percentage increasing in some countries and decreasing in others since 2019.

EU household and non-household electricity prices, 2019–2025

Electricity prices developed differently for households and non-households. In 2025, nominal household prices remained close to their post-crisis peak, while non-household prices had fallen substantially from their 2022 high.



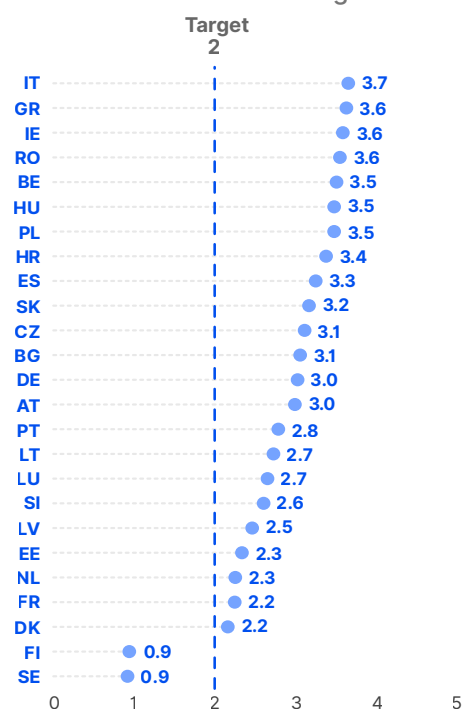
Source: Eurostat data on household electricity and industrial non-household electricity (nrg_pc_204_c, nrg_pc_205_c, band IF, HICP, harmonised index of consumer prices)

High electricity-to-gas price ratios can weaken the incentive to electrify

- 6 High electricity-to-gas price ratios can discourage consumers from switching energy source, even where electric technology is more efficient. In 2025, ratios exceeded the European Commission's proposed targets of 2 (for non-household consumers) and 2.5 (for households) in most EU Member States. The figure for non-households shows that most are above 50 %. Taxes, fees, levies and charges often widen the price gap. Whether electrification benefits consumers ultimately depends on whether operating savings justify the upfront investment. The financial case rests on three factors: relative prices, including network and fiscal charges; technology efficiency; and upfront equipment, installation and renovation costs, net of any available financial support.

Non-household electricity-to-gas price ratios

In 2025, most Member States had electricity-to-gas price ratios that exceeded the target ratio of 2.



Note: CY and MT not depicted, as they are not captured by Eurostat.
Source: Eurostat datasets nrg_pc_203_c and nrg_pc_205_c.

Enhanced contract monitoring is essential to assess market impacts on consumers

- 7 Electrification will increase electricity demand, including demand from electric vehicles, whose charging can often be shifted to different times. Understanding whether consumers' electricity contracts reward them for shifting their consumption in response to price signals is therefore increasingly important. Available data from [ACER's 2025 Retail energy markets dashboard](#) provide a broad picture of contract uptake, but do not establish consistently how many consumers receive meaningful signals to shift consumption or how exposed they are to wholesale market developments. More detailed and comparable information on the pricing structures of electricity contracts that consumers are on and the price signals that they receive are required to build an understanding of this market segment. Enhanced contracts monitoring enables the effective assessment of market impacts on consumers, flexibility potentials and, over time, contracts and services innovation.

Flexibility can create value and improve affordability, but the benefits depend on contract types and consumer consumption behaviour

- 8 Under 2025 market conditions, many households had **opportunities to save on the energy and supply component** of their electricity bills by switching to a dynamic-price contract and shifting some of their energy consumption away from peak demand periods. For a representative 3 000 kWh household, the estimated average annual cost saving across the EU-27 and Norway was 20 % of the average electricity bill (~EUR 120).

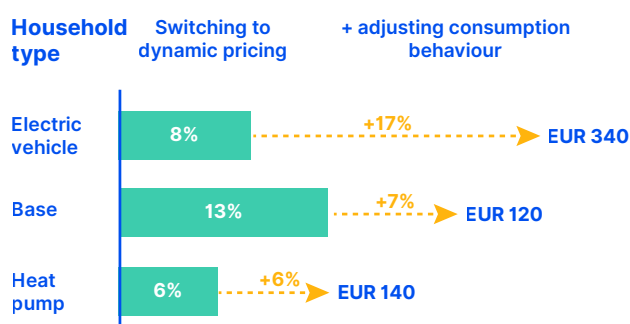
- 9 The size of the benefit depends on the customer's consumption and on 2025 market conditions such as wholesale electricity price volatility. Customers with electric vehicles show the greatest potential for savings on their bills. Importantly, the analysis shows that consumers with less flexible demand may also benefit where dynamic contracts are available. Hence, flexibility gains are not confined to specific regions or household types as even relatively small amounts of consumption can be shifted away from higher-priced periods. However, as seen during the 2022–2023 period, these gains are not guaranteed.

Consumer outcomes should guide the retail transition as electrification progresses

- 10 Overall, retail markets should support affordable energy, enable consumers to electrify where this is economically beneficial and offer a meaningful choice between price stability and exposure to variable prices. Three priorities follow for the consideration of national regulatory authorities and Member States.

Potential annual savings of EUR 120 or more for flexible households in 2025, on average

Estimated average annual cost savings (electricity energy component only) from switching to a dynamic price contract compared with an average-price flat contract and adjusting consumption behaviour for three modelled household types, EU-27 + Norway average, share of annual electricity bill and absolute numbers, in 2025.



Note: Annual consumption: base household 3 000 kWh; heat pump 6 000 kWh; electric vehicle 6 500 kWh; the estimated savings relate only to the energy and supply component of the bill; the overall electricity bill figures used for this comparison reflect the average retail price for the 2 500–5 000 kWh/year consumption band (Eurostat, nrg_pc_204), including taxes, subsidies and rebates; the average-price flat contract considers actual contract uptake.

Source: ACER assumptions and calculations based on wholesale price data from the European Network of Transmission System Operators for Electricity's transparency platform and average retail price data from Eurostat.

Make electrification financially attractive.

Consider how relative electricity and fossil fuel prices affect incentives to electrify, alongside technology efficiency and measures addressing equipment, installation and renovation costs.

Ensure growing network investment delivers value for consumers.

As network investment increases, efficient planning, investment and use of existing grids will be increasingly important to contain costs and protect electricity affordability, as highlighted in [ACER's 2026 report on distribution system operator revenue setting](#).

Enhance monitoring of energy retail contracts to understand consumer choice.

More complete and comparable information on the contracts consumers hold, rather than those simply offered, is needed to assess the price signals and market exposure that consumers face and whether available choices continue to meet their needs as electricity uses change. Understanding the contracts that consumers use matters.

Introduction

- 1 Retail energy markets connect wholesale energy markets with consumers. Suppliers purchase energy in wholesale markets and convert it into retail products that differ in price structure, contractual terms and exposure to market price movements. In doing so, they allow consumers to access energy without participating directly in wholesale markets, manage price and volume risks on their behalf, and offer different levels of price stability. Effective competition between suppliers can also broaden consumer choice, encourage innovation and improve the quality of services available to consumers.
- 2 But wholesale markets are evolving. The European Union Agency for the Cooperation of Energy Regulators' (ACER's) [Key Developments in European Electricity and Gas Markets – 2026 monitoring report](#) shows how growing renewable generation is changing the times when electricity is abundant and how wholesale prices vary over time.¹ Electrification will add demand from transport and heating, increasing the value of using electricity when it is more abundant. Suitable contracts, smart meters and automation can help consumers benefit from this flexibility while reducing demand at times of scarcity. Retail markets determine whether and how these opportunities are reflected in the prices, contracts and services available to consumers.
- 3 EU energy policy increasingly seeks to ensure that electrification and decarbonisation also deliver affordable energy, stronger consumer protection and greater opportunities to participate in energy markets. Fit for 55 and REPowerEU are accelerating renewables deployment and energy efficiency and increasing the role of electricity in heating and transport.² The reformed electricity market design gives consumers access to both fixed-term, fixed-price contracts and dynamic-price contracts, strengthens safeguards for vulnerable consumers and enables energy sharing.³ The Affordable Energy Action Plan addresses each component of the energy bill,⁴ while the Electrification Action Plan⁵ seeks to bring alignment between electricity and gas prices, accelerate smart-meter deployment and reduce the upfront cost of heat pumps, electric vehicles (EVs) and other electric technologies. The Citizens Energy Package introduces practical measures including clearer and more comparable contract information, electricity supplier switching within 24 hours by the end of 2026, stronger protection against disconnection and supplier failure, and support for self-consumption and energy communities.⁶

1 European Union Agency for the Cooperation of Energy Regulators (ACER), Key Developments in European Electricity and Gas Markets – 2026 monitoring report, Ljubljana, 2026, <https://www.acer.europa.eu/sites/default/files/documents/Publications/2026-ACER-Gas-Electricity-Key-Developments.pdf>.

2 [Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – 'Fit for 55': Delivering the EU's 2030 climate target on the way to climate neutrality, COM\(2021\) 550 final of 14 July 2021](#), and [Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – REPowerEU Plan, COM\(2022\) 230 final of 18 May 2022](#).

3 Directive (EU) 2024/1711 of the European Parliament and of the Council of 13 June 2024 amending Directives (EU) 2018/2001 and (EU) 2019/944 as regards improving the Union's electricity market design, OJ L, 2024/1711, ELI: <http://data.europa.eu/eli/dir/2024/1711/oj>.

4 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Action plan for affordable energy: Unlocking the true value of our energy union to secure affordable, efficient and clean energy for all Europeans, COM(2025) 79 final of 26 February 2025.

5 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – [Electrification action plan, COM\(2026\) 595 final](#) of 17 July 2026.

6 Communication from the Commission to the European Parliament and the Council on the citizens energy package, COM(2026) 115 final of 10 March 2026. The specific implementing measures include Implementing Regulation (EU) 2026/855 on supplier switching and Recommendations (EU) 2026/1001, 2026/1007, 2026/1008 and 2026/1009 on vulnerable consumers, energy communities, contractual information and supplier risk management.

- 4 This report has two chapters. Chapter 1 examines retail prices, bills, affordability and the conditions that shape electrification. Chapter 2 examines contract price signals, the potential value of flexible consumption and the risks that arise when price signals and consumption patterns are misaligned.
- 5 Additional country-level indicators supporting the analysis presented throughout this report are available through [ACER's Retail Market Dashboard](#), providing interactive access to a wider set of retail market indicators and longer-term market trends.

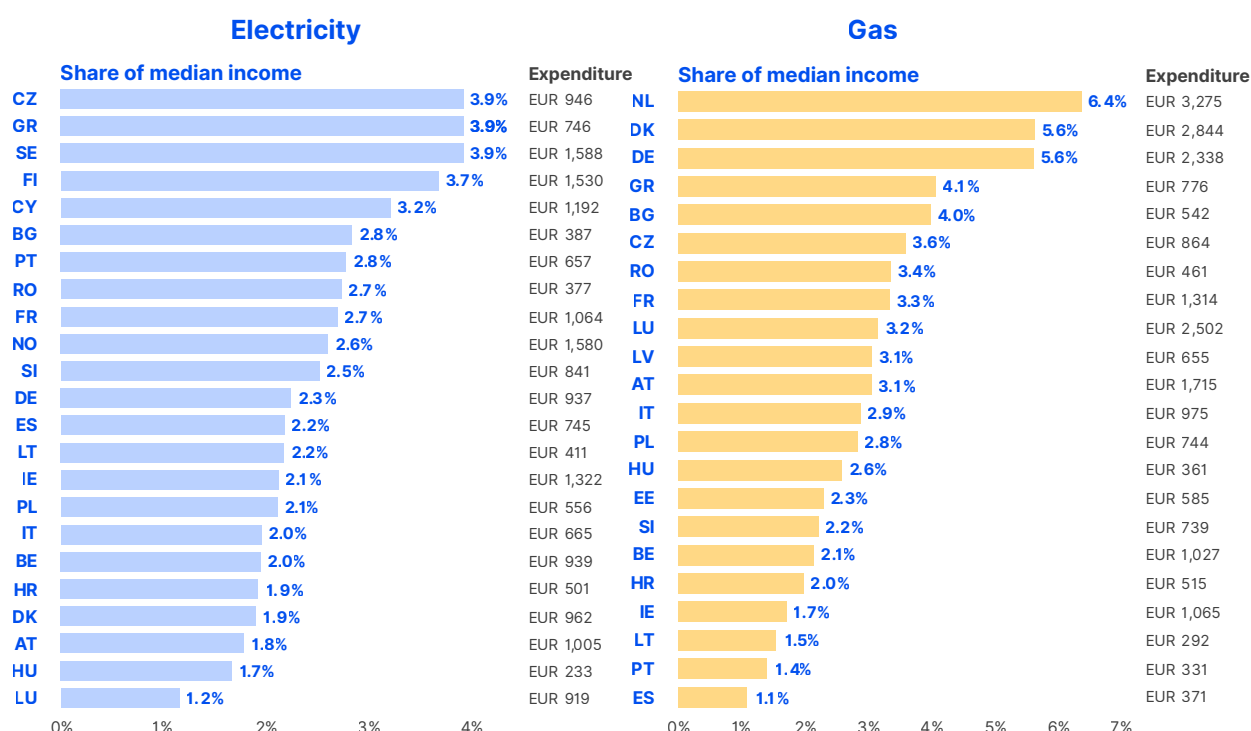
1. Retail energy markets: prices, affordability and changing consumption

- 6 The shift towards a more renewable and electrified EU energy system is changing electricity generation patterns and wholesale price variability. Retail contracts translate these changes into the prices, stability and incentives experienced by consumers. This chapter examines household prices, bills and household expenditure, before assessing the conditions that shape whether consumers can benefit from electrification. These include relative energy prices, technology and building efficiency, smart-meter deployment and retail market conditions.

1.1. Final prices, bills and bill components

- 7 Unit prices do not show what households ultimately pay or whether that expenditure is affordable. Annual expenditure depends on consumption, while the financial burden depends on expenditure relative to household income. Consequently, countries with lower energy prices can still face greater affordability pressures than higher-priced countries.
- 8 To show what unit prices mean for consumers, estimated annual expenditure combines national prices with average household consumption in each market. [Figure 1](#) combines the national average unit price with the average annual household electricity and gas consumption in each EU Member State and considers the result in relation to median household income. This approach reflects actual national consumption variations rather than a fixed assumption for consumption, allowing differences in national retail prices to be expressed as a realistic annual cost in euro.

Figure 1: Annual household electricity and gas expenditure as a percentage of median household income and as absolute values across selected European markets, 2025 (EUR/year)



Note: Expenditure figures are estimated using the country-specific average unit price (all bands) combined with the annual average household consumption in each Member State. The affordability ratio is calculated by dividing the estimated annual average expenditure by the median household income, derived from median equivalised income and average household size. See [Table 1](#) in the Annex for the values used to build this figure. Consumption data from Estonia, Latvia, Malta, the Netherlands, and Slovakia are missing. Gas expenditure estimates are sensitive to the use of national median income, as gas-connected households tend to be concentrated in urban areas, where incomes may differ from the national median.

Source: ACER calculations based on national regulatory authorities' data, Eurostat datasets *nrg_pc_204_c* and *nrg_pc_202_c* for electricity and gas prices, bands all, *ilc_di04* for median equivalised income and *ilc_lvph01* for average household size. See the ACER Retail Energy Markets Dashboard for the complete methodology and results for additional consumption levels.

- 9 In 2025, estimated annual household electricity expenditure ranged from EUR 233 in Hungary to EUR 1 588 in Sweden, while gas expenditure ranged from EUR 292 in Lithuania to EUR 3 275 in the Netherlands. These differences reflect both unit prices and typical consumption, meaning that a lower price does not necessarily result in a lower annual bill. For consumers, higher expenditure places greater pressure on household budgets, particularly for low-income and high-consumption households. However, these national averages mask differences between individual households and do not, on their own, establish whether energy is affordable. These differences show why unit prices alone are not enough to assess consumer outcomes: affordability depends on the resulting expenditure and the income available to meet it.
- 10 Actual household expenditure on energy depends on consumption.⁷ This varies with climate, housing characteristics, building energy performance by means of heating/cooling systems, level of insulation, household size and consumer behaviour. Gas expenditure is particularly sensitive to heating demand, while electricity expenditure will differ according to whether electricity is used for heating and cooling, EV charging or other energy services. The results in [Figure 1](#) should therefore be interpreted as representative national averages rather than estimates of individual household bills.
- 11 However, energy expenditure alone does not establish whether energy is affordable, as affordability also depends on consumers' income and circumstances (e.g. poor building performance, high number of household members). The same annual cost represents a greater burden for a lower-income household than for a higher-income household. Given this, [Figure 1](#) compares estimated annual expenditure with median household income. The resulting affordability ratio shows the share of representative household income required to cover the estimated annual energy expenditure. It is a comparative indicator and should not be interpreted as a direct measure of energy poverty.⁸
- 12 In 2025, estimated electricity expenditure for a household with median income and average consumption ranged from 1.2 % of income in Luxembourg to 3.9 % in Czechia, Greece and Sweden, and exceeded 3 % in five Member States.⁹ Where this share is higher, electricity bills absorb more of the household budget, leaving less income for other needs. This explains why comparatively low unit prices do not necessarily translate into more affordable electricity.
- 13 Gas expenditure placed an even greater burden on household budgets, with correspondingly greater variation, in some markets. For a household with median income and average consumption, it ranged from 1.1 % of income in Spain to 6.4 % in the Netherlands, with relatively high shares also recorded in Germany and Denmark (both 5.6 %). Households relying on gas for heating may therefore be particularly exposed to high bills, especially during colder periods, when consumption increases. However, these national averages do not show how the burden differs across income groups or account for differences in the prevalence of gas heating.

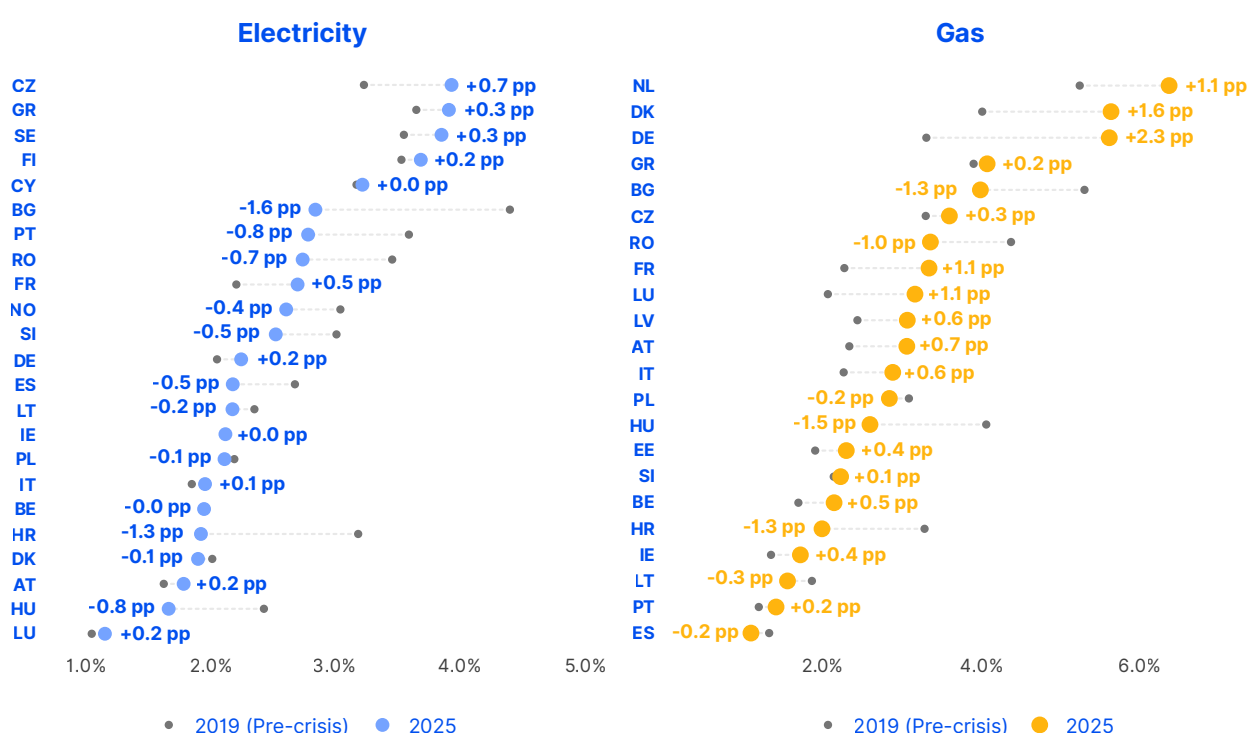
⁷ See [ACER Retail Energy Markets Dashboard – 2025](#) for more information on energy consumption across Member States.

⁸ See Energy Poverty Advisory Hub, 'Energy Poverty Indicators Dashboard', European Commission website, <https://energy-poverty.ec.europa.eu/epah-indicators?indicator=inability+tkphmdqt+warm-eurostat+households-total+bynts+region-nuts+2-country-all+indicators-2025>, for information regarding energy poverty indicators.

⁹ The calculation combines median household income with average household consumption, as comparable data on median household consumption are not available. The resulting indicator should therefore be interpreted as an approximation of the expenditure burden for a typical household.

- 14 Overall, the results describe the expenditure burden for a household with median income and average consumption rather than determining whether energy is affordable for all households. However, for a household with lower income, expenditure accounts for a higher share of its budget, while households with above-average energy consumption may face additional financial pressure due to their higher consumption volume. Where support is considered necessary, this points to the value of directing assistance towards households facing the greatest financial pressure. Electrification introduces a related affordability question: whether switching from fossil fuels to electricity reduces the cost of the energy service delivered. This report therefore later examines the relative prices, technology efficiencies and retail market conditions that determine whether consumers can benefit from electrification.

Figure 2: Changes in estimated household electricity (left) and gas (right) expenditure as a percentage of median household income across selected European markets (percentage points), 2019 and 2025



Note: The household expenditure is calculated by dividing the estimated annual average expenditure by the median household income, derived from median equivalised income and average household size. The 2019 baseline, before the 2022 energy crisis, assumes constant consumption levels. Household expenditure for 2019 was therefore computed by multiplying 2019 Eurostat final consumer prices by the 2025 average consumption per customer, obtained by dividing the total annual consumption volumes by the total number of customers in each country.

Source: ACER calculations based on national regulatory authorities' data and Eurostat datasets nrg_pc_204_c, nrg_pc_202_c, ilc_di04 and ilc_lvph01. See the ACER Retail Energy Markets Dashboard for the methodology and additional country-level results.

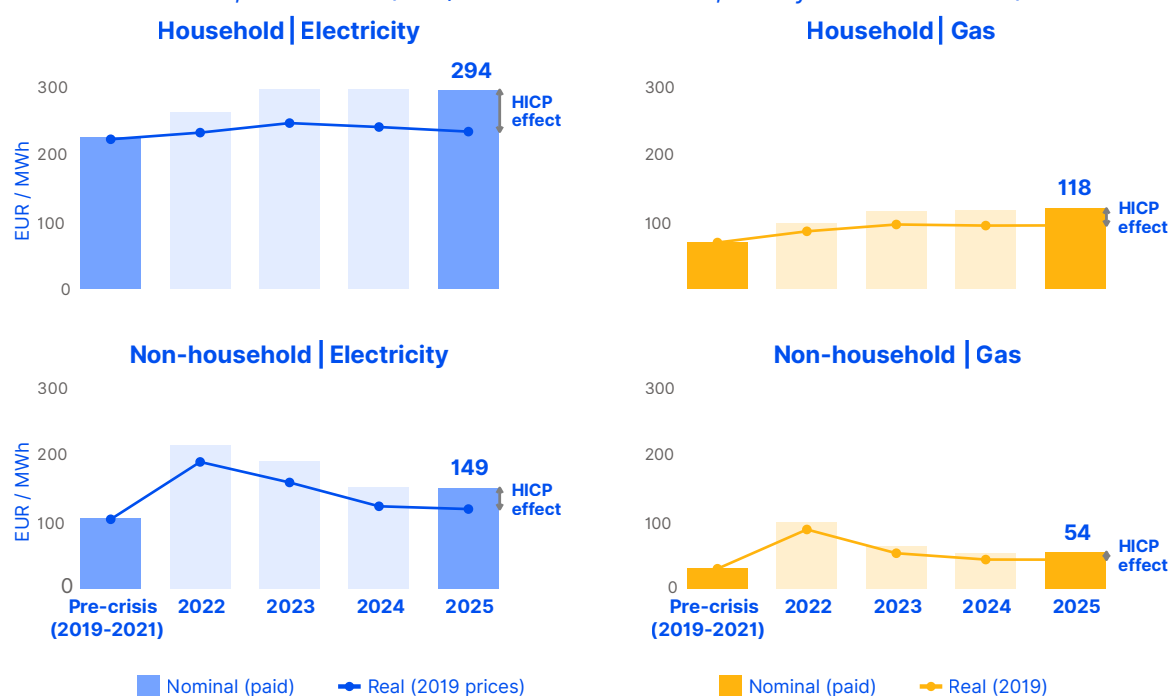
- 15 [Figure 2](#) compares the affordability of electricity and gas for households in 2019 and in 2025, measured by applying the same level of annual consumption for the consumer in both 2019 and 2025. Affordability has gone in opposite directions for the two commodities.
- 16 For electricity, the median household expenditure declined across the 23 markets from around 2.5 % of equivalised disposable income in 2019 to around 2.1 % in 2025, and fell in 12 of them. The largest reductions were recorded in Bulgaria (– 1.6 percentage points (pp)), Croatia (– 1.3 pp), Portugal and Hungary (– 0.8 pp each) and Romania (– 0.7 pp). Increases reached or exceeded 0.5 pp only in Czechia (+ 0.7 pp) and France (+ 0.5 pp).

- 17 For natural gas, the picture is reversed. The median burden across the 21 countries covered rose from around 2.1 % of equivalised disposable income in 2019 to around 2.7 % in 2025 and increased in 14 of them. Germany stands apart, with an increase of 2.3 pp, followed by Denmark (+ 1.6 pp), the Netherlands, France and Luxembourg (+ 1.1 pp each). Reductions were confined to seven markets and were in countries that improved on electricity. The largest falls were in Hungary (– 1.5 pp), Bulgaria and Croatia (– 1.3 pp each) and Romania (– 1.0 pp). Spain and Portugal recorded the lowest burdens, below 1.1 % of income in 2025.¹⁰

Retail electricity and gas prices remain above the levels before the 2022 energy crisis. Non-household prices have fallen more strongly from recent peaks; household prices show a more moderate fall, while substantial differences in household prices persist across Member States¹¹

- 18 Retail electricity and gas prices have eased from their energy crisis peaks but remained above the 2019–2021 household average in both nominal and inflation-adjusted terms.¹² In 2025, the EU-27 average household electricity price was 294 EUR/MWh, compared with 224 EUR/MWh over 2019–2021, while the household gas price was 118 EUR/MWh, compared with 69 EUR/MWh. General consumer-price inflation explains part, but not all, of these differences.

Figure 3: EU-level changes of retail electricity and gas prices for household and non-household consumers, 2019–2025 (EUR/MWh and index value; base year 2019 = 100 %)



Note: HICP, harmonised index of consumer prices. The index change tracks the percentage change in nominal prices since 2019, where the base year equals 100 %. ACER's 2026 monitoring report [Key Developments in European Electricity and Gas Markets](#) also highlighted that household electricity and gas prices had stabilised at elevated post-crisis levels. The present report examines the trend further by separating nominal price movements from general inflation.

Source: ACER calculations based on Eurostat data on household electricity and gas consumption (nrg_pc_204_c, nrg_pc_202_c), band all, and non-household electricity and gas consumption (nrg_pc_205_c, nrg_pc_203_c), band IF/15, updated in June 2026.

- 10 Gas figures refer to gas-connected households only and are therefore not directly comparable across countries with different levels of gas penetration.
- 11 The price trends presented here are based on Eurostat data and cover developments up to the end of 2025. They therefore do not reflect the renewed upward pressure on energy prices following the escalation of the Middle East conflict in early 2026. More recent data point to an emerging upward trend in retail prices in 18 (electricity) and 16 (gas) retail markets between January and August 2026; see [ACER's Retail Prices Dashboard](#) for the latest energy retail price developments.
- 12 Inflation-adjusted prices are expressed at 2019 price levels using the harmonised index of consumer prices (HICP), rebased to 2019 = 100.

- 19 Nominal electricity prices remained broadly stable between 2023 and 2025, while nominal gas prices were also broadly stable before increasing slightly in 2025. In real terms, electricity prices declined moderately after 2023, while gas prices remained broadly unchanged.

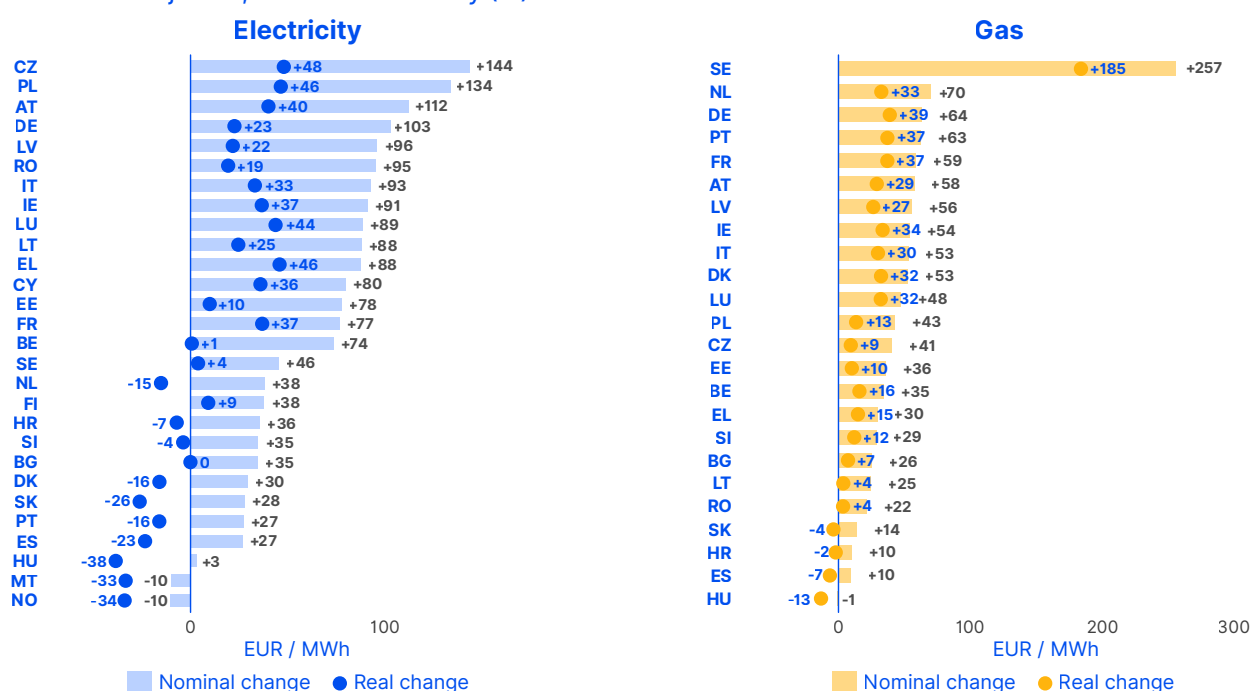
Non-household prices have adjusted more strongly than the household prices after the crisis

- 20 Non-household prices for electricity and gas increased sharply during the energy crisis but subsequently fell considerably (Figure 3). However, by 2025, non-household electricity prices had declined to 149 EUR/MWh from more than 200 EUR/MWh in 2022, while non-household gas prices had fallen to 54 EUR/MWh from close to 100 EUR/MWh. Both nevertheless remained above their pre-crisis averages.
- 21 The stronger post-crisis declines in non-household prices suggest that market changes are more rapidly passed on to these consumers. However, other factors may also contribute, including how and when electricity and gas are purchased, the amount of energy consumed, whether contract prices are fixed or market linked, and differences in tax rates or government support that reduces bills. The comparison of household and non-household prices therefore does not establish why the price trends differ.

Household prices differ sharply across the EU, yet most have increased since 2019

- 22 Between 2019 and 2025, nominal and inflation-adjusted household price changes varied widely across markets (Figure 4).¹³ The gap between the two measures shows how general consumer price inflation affects the comparison, while the inflation-adjusted change captures energy-specific developments without identifying their causes.

Figure 4: Change in household electricity and gas prices between 2019 and 2025, nominal and HICP adjusted, EU-27 and Norway (%)

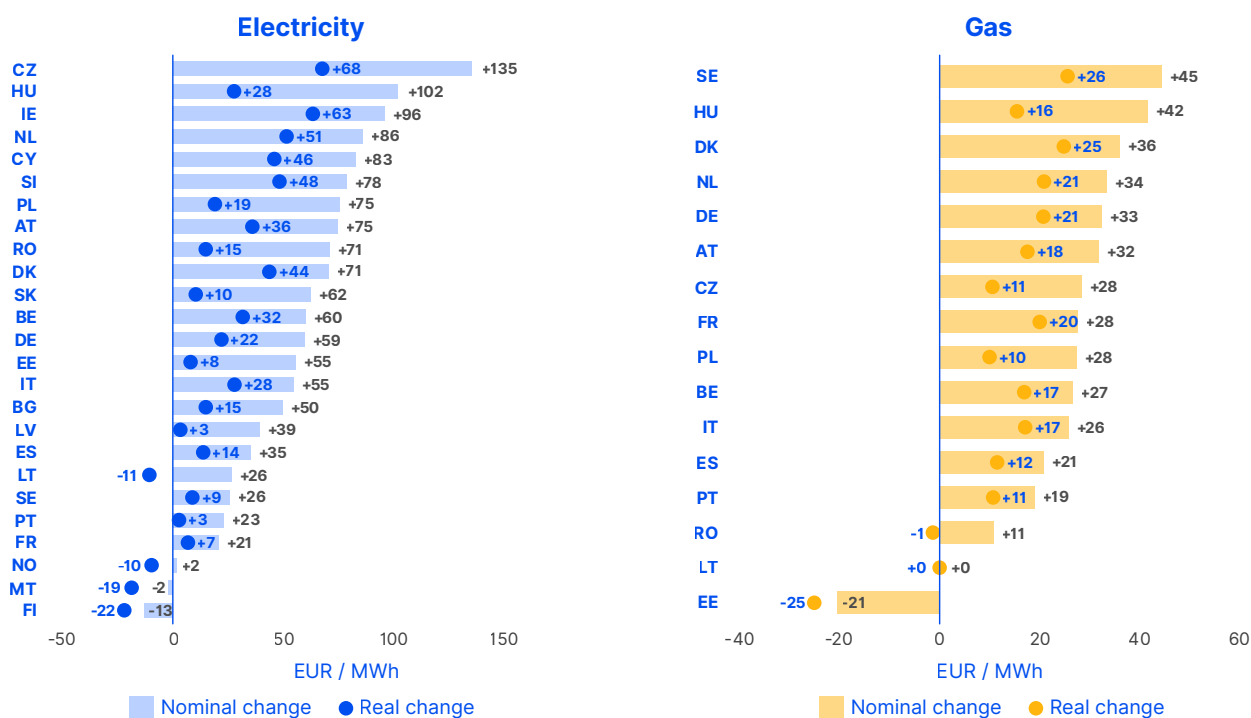


Note: Nominal change compares reported household prices in 2019 and 2025. HICP-adjusted change expresses the 2025 price at 2019 price levels using the national all-items HICP, with 2019 equal to 100. Energy is a component of the index and therefore contributes to overall inflation. The difference between the nominal and inflation-adjusted changes shows the effect of general consumer price inflation on the comparison; it does not isolate the causes of changes in energy prices.

Source: ACER calculations based on Eurostat datasets nrg_pc_204_c, nrg_pc_202_c and prc_hicp_aind; household consumers, band all, all taxes included.

13 Inflation-adjusted prices are expressed at 2019 price levels using the HICP, rebased to 2019 = 100.

Figure 5: Change in non-household electricity and gas prices between 2019 and 2025, nominal and HICP adjusted, across European markets (%)



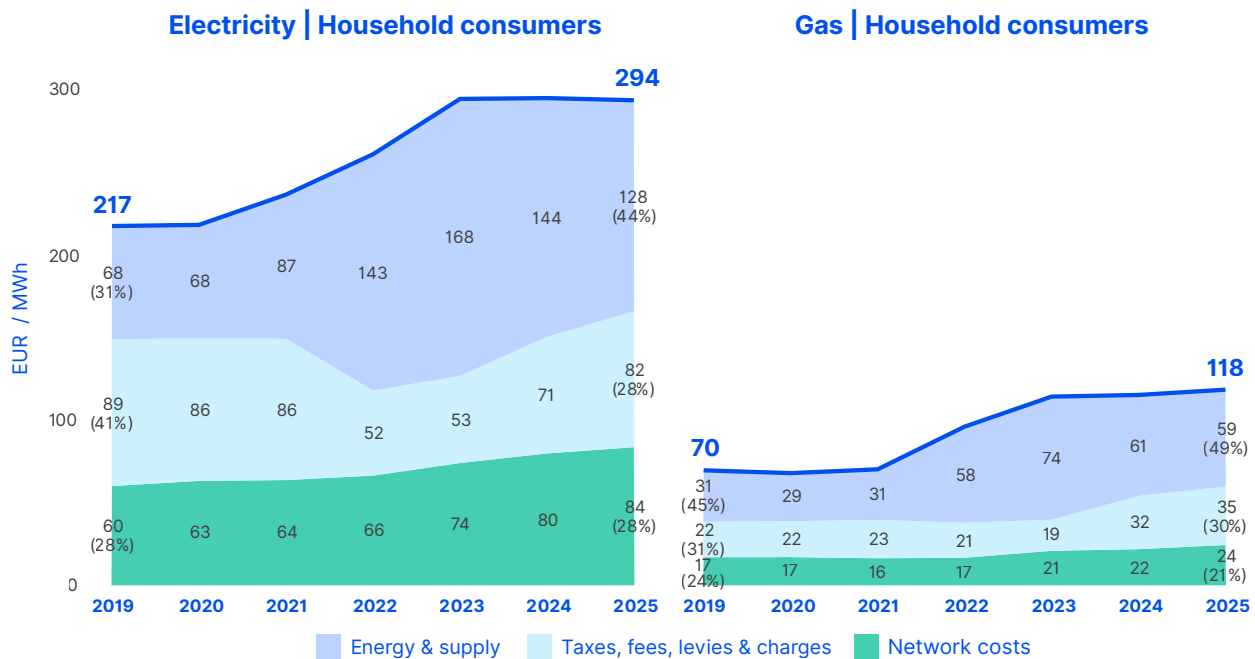
Note: Nominal change compares reported household prices in 2019 and 2025. HICP-adjusted change expresses the 2025 price at 2019 price levels using the national all-items HICP, with 2019 equal to 100. The difference between the nominal and HICP-adjusted changes shows how general consumer price inflation affects the comparison; it does not identify the causes of changes in energy prices.

Source: ACER calculations based on Eurostat datasets *nrg_pc_205_c*, *nrg_pc_203_c* and *prc_hicp_aind*; industrial consumers, Band IF/I5, all taxes included.

Bill components: energy costs remain elevated

- 23 Energy and supply costs have fallen from 2023 peaks, but final household prices remain elevated. Network charges and taxes now represent a larger share than at the height of the crisis, while electricity network charges have also increased in absolute terms (Figure 6).
- 24 Final retail prices comprise three principal components, each covering a different set of costs. The energy and supply component covers energy procurement and the costs of supplying retail consumers. Network charges recover the costs of building, operating and maintaining electricity and gas networks. Taxes, fees, levies and charges reflect fiscal charges and the recovery of policy-related costs.

Figure 6: Changes in household electricity and gas bill components across the EU-27 and Norway (2020–2025)

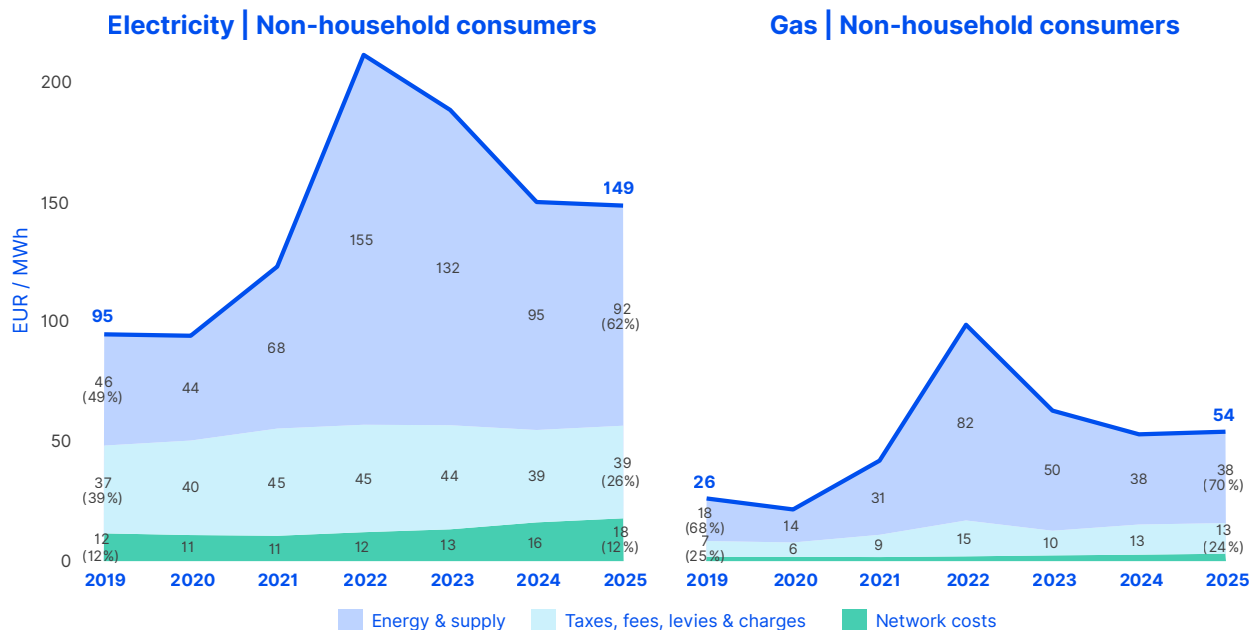


Note: The figure presents nominal unit prices rather than annual household expenditure. Percentage labels show the component's share of that year's total price.

Source: ACER calculations based on Eurostat datasets *nrg_pc_204_c* and *nrg_pc_202_c*, household consumers, band all. Updated from ACER, [Key Developments in EU Electricity and Gas Markets – 2026 monitoring report](#), slide 20.

- 25 Between 2023 and 2025, household energy and supply costs declined from their crisis-era peak but remained well above pre-crisis levels. For electricity, higher network costs and the nominal increase in taxes, fees, levies and charges counteract lower energy and supply costs, resulting in an increase in the final consumer electricity price. For gas, increases in network and taxes and levies components are observed, resulting in a higher final price for household consumers. The rise in fiscal components may partly reflect the withdrawal of crisis-era bill support. For non-household consumers, electricity and gas prices also remained above 2019 levels in 2025, despite substantial declines in energy and supply costs from their 2022 peak (Figure 7). The rise in fiscal components may partly reflect the withdrawal of crisis-era bill support.

Figure 7: EU-27 average electricity and gas price components for industrial consumers, 2020–2025 (EUR/MWh)



Note: The left panel presents industrial consumers, Eurostat band IF (70 000–149 999 MWh). The right panel presents industrial consumers using gas consumption band I5 (1 000 000–3 999 999 GJ). Percentage labels show the component's share of that year's total price.

Source: ACER calculations based on Eurostat electricity (*nrg_pc_205_c*) and gas (*nrg_pc_203_c*) price component data, industrial consumers, bands IF and I5. Updated from slide 21 in ACER, Key Developments in European Electricity and Gas Markets – 2026 monitoring report.

Network and fiscal components limited the effect of lower energy and supply costs

- 26 Household electricity network charges rose by one third between 2020 and 2025, from 63 EUR/MWh to 84 EUR/MWh. For a household consuming the EU average of approximately 2.9 MWh annually, this 21 EUR/MWh increase is equivalent to around EUR 60 more per year. Non-household charges increased from 11 EUR/MWh to 18 EUR/MWh, adding to operating costs, particularly for electricity-intensive consumers. Higher network charges therefore absorbed part of the savings from declining energy and supply costs, limiting the reduction in final bills. The comparison starts in 2020 because comparable component data are not available for 2019.
- 27 Growing network investment increases the importance of ensuring that expenditure is efficient and delivers value for consumers. ACER's 2026 report [Managing the ramp-up of electricity distribution investments to better serve grid users](#)¹⁴ identifies a significant increase in distribution grid investment and emphasises robust planning, expenditure transparency and regulatory incentives that promote the highest-value solutions.
- 28 [Getting the Signals Right: Electricity network tariff methodologies in Europe](#) explains how network costs are allocated and recovered from different network users. As network investment increases, both the level and the design of network charges will become increasingly important for electricity affordability and for the incentives provided to consumers.¹⁵

14 ACER (2026), Managing the ramp-up of electricity distribution investments to better serve grid users: ACER report on distribution system operator (DSO) revenue setting practices, 14 April 2026.

15 See [ACER \(2025\), Getting the signals right: Electricity network tariff methodologies in Europe, ACER report on network tariff practices](#).

- 29 Taxes, fees, levies and charges remain important components for consumer billing. They accounted for 28 % of the household electricity price and 24 % of the household gas price in 2025. Their increases since 2023 partly reflect the withdrawal or expiry of crisis-era tax reductions, subsidies and allowances. The end of such support offset falling energy and supply costs and helped keep final prices elevated. These charges reflect national fiscal and policy arrangements rather than responding mechanically to wholesale prices.
- 30 While the report does not assess individual charges, the composition of final prices therefore matters as much as their overall level. Lower wholesale prices can reduce the energy and supply component, but the resulting benefit for consumers also depends on developments in network charges and taxes. The European Commission's proposal to revise the Energy Taxation Directive highlights the importance of aligning energy taxation with EU energy and climate objectives.¹⁶ However, unit prices alone do not determine the financial burden experienced by households; this also depends on the amount of energy consumed and household income.

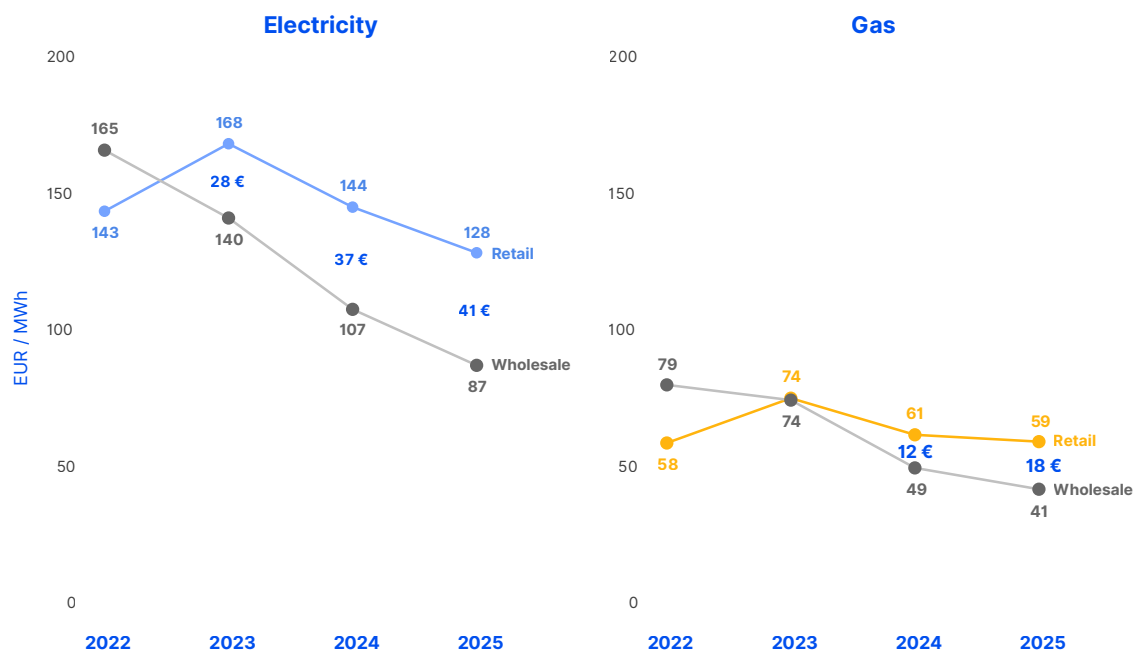
Falling wholesale prices reach household consumers gradually

- 31 Most household consumers do not see wholesale price changes in their bills immediately, due to the contracts that they have entered (see [Figure 8](#)). Suppliers buy energy over time and include hedging, balancing and retail costs in the energy and supply component. This section compares that component with an annual wholesale benchmark. While complete wholesale energy price pass-through is probably not possible (as other non-energy costs are included), the difference, referred to as the retail markup, provides a comparable measure of how the gap between wholesale and retail prices evolves over time and therefore helps assess the timing and scale of price pass-through. It should not be interpreted as supplier profit or as representing an individual supplier's procurement strategy.
- 32 [ACER's Key Developments in European Gas and Wholesale Electricity Markets 2025](#) shows that wholesale prices increasingly vary across the day as solar generation lowers prices during periods of abundant supply, while gas-fired generation continues to influence prices as a key source of flexibility in several Member States especially in the evening, when solar generation declines. A lower annual wholesale benchmark therefore does not translate mechanically into an equivalent reduction in retail prices: pass-through also depends on when consumers use electricity and when and how suppliers procure it.¹⁷

¹⁶ [European Commission, Proposal for a Council Directive restructuring the Union framework for the taxation of energy products and electricity \(recast\), COM\(2021\) 563 final of 14 July 2021.](#)

¹⁷ ACER, Key Developments in European Electricity and Gas Markets – 2026 monitoring report.

Figure 8: Comparison of household electricity and gas bill retail energy and supply components across the EU-27, 2022–2025

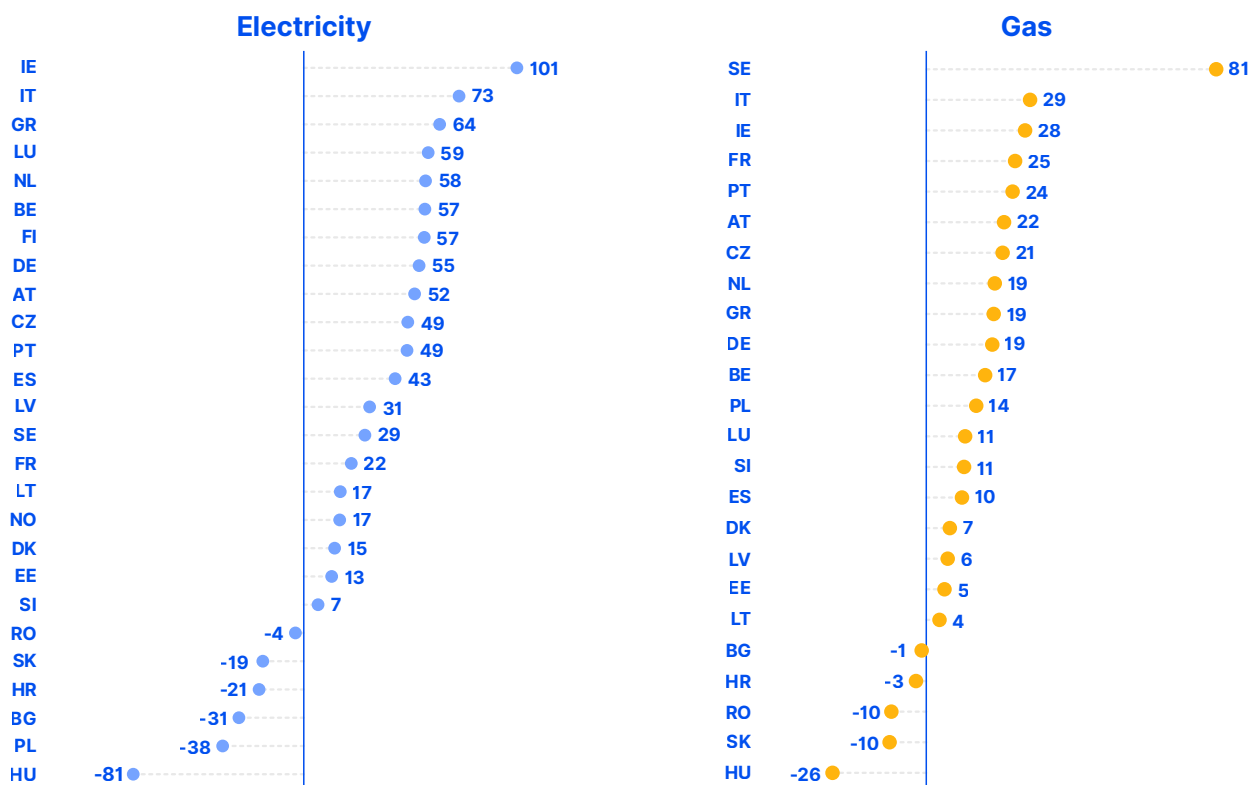


Note: The yearly delta between the data points represents the difference between the household energy and supply component and the annual wholesale benchmark. This difference is not a measure of supplier profitability. The two series reflect different procurement periods and cost coverage.

Source: ACER calculations based on Eurostat and ACER wholesale market data. EU-27 aggregates are used where available and Member State averages otherwise.

- 33 Household retail prices smooth out short-term wholesale market fluctuations. In 2022, the household energy and supply component rose less than the annual wholesale benchmark, limiting the immediate impact of the wholesale price spike. As wholesale prices subsequently declined, retail prices adjusted more gradually. By 2025, the difference between wholesale and retail was 41 EUR/MWh for electricity and 18 EUR/MWh for gas. Consumers were therefore partly protected at the peak but received the benefit of lower wholesale prices more gradually (Figure 8). Supplier purchasing schedules, hedging, contract price updates, regulation and support may contribute; this report does not quantify each effect.
- 34 The EU averages mask large national differences. In 2025, both the size and direction of the gap between wholesale benchmarks and household retail energy components varied significantly across Member States (Figure 9).

Figure 9: Difference between annual wholesale benchmarks and household retail energy and supply components across European markets, 2025 (EUR/MWh)



Note: Difference calculated as the household energy and supply component minus the annual wholesale benchmark. The results should not be interpreted as supplier profit margins or as a ranking of retail market efficiency. They are affected by procurement timing, hedging, contract structures, price regulation, national support measures and the wholesale benchmark applied.

Source: ACER calculations based on Eurostat and ACER wholesale market data. See Annex for methodology.

35 The variation was particularly pronounced for electricity. The difference ranged from 101 EUR/MWh in Ireland to -38 EUR/MWh in Poland and -81 EUR/MWh in Hungary.¹⁸ The range was narrower for gas, although substantial differences remained, from 81 EUR/MWh in Sweden to -26 EUR/MWh in Hungary. These results demonstrate that common wholesale-market developments are not reflected uniformly in household retail prices across Europe. Wide differences show that similar wholesale price trends do not necessarily translate into similar outcomes for households. In 2025, the retail energy and supply component remained above the annual benchmark in some markets and below it in others. These differences affect how quickly lower wholesale costs reach bills. They should not be directly interpreted as supplier profitability or measure of retail market efficiency.

36 Negative markups were concentrated in eastern and south-eastern Europe. Several of these markets have regulated or supported household prices, and all those with available data have concentrated retail markets. This suggests that price intervention and market structure may influence how wholesale costs reach consumers, although they do not fully explain the results. Again, procurement and hedging strategies, the timing of price adjustments and suppliers' actual purchasing costs may also contribute. Where comparable data are available, switching rates can provide further evidence of how actively consumers engage with these markets.

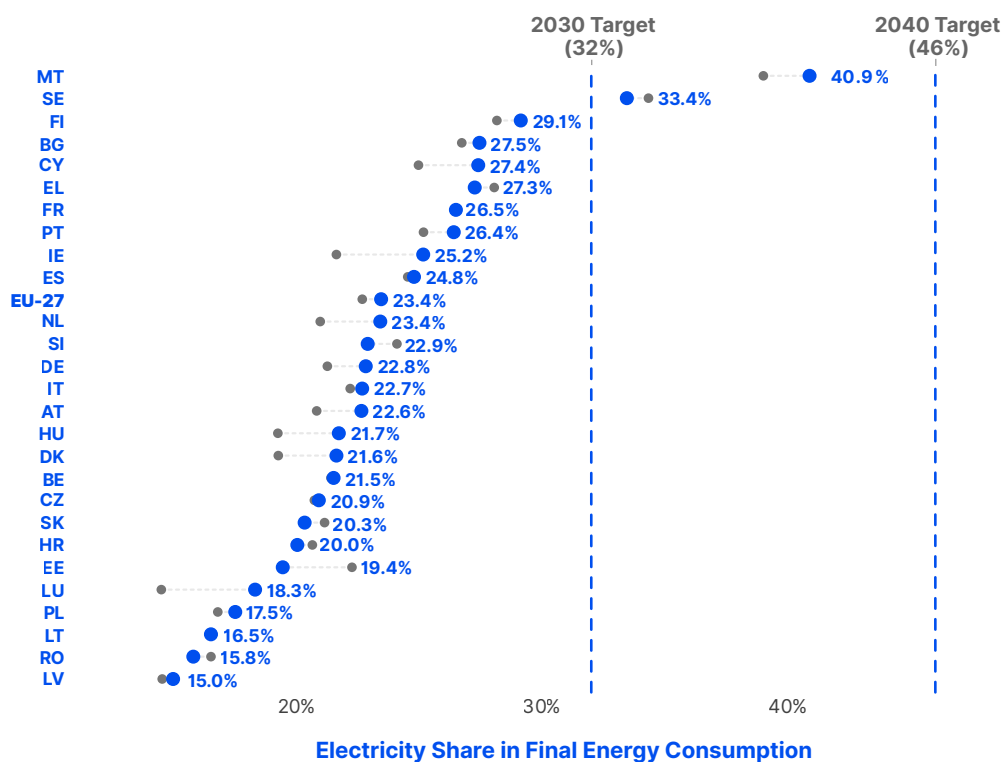
¹⁸ The negative differences in Poland and Hungary probably reflect regulated or supported household prices, which can remain below the annual wholesale benchmark. Differences in suppliers' procurement and hedging periods may also contribute. These values should therefore not be interpreted as negative retail prices or evidence of supplier losses.

- 37 Taken together, the EU and country-level results show that household retail prices adjust to wholesale market developments gradually and with a delay. Procurement practices, contract structures, price update mechanisms and national arrangements influence when changing wholesale conditions reach consumers.

1.2. Electrification and the conditions for consumer participation

- 38 Electrification is expected to deliver benefits to consumers, while supporting a more efficient and flexible energy system. The electrification of mobility or heating services such as EVs and heat pumps can reduce consumer costs, but, for consumers, unfavourable price signals and uneven retail market maturity may weaken the case for switching from fossil fuel to electricity. Realising the benefits requires relative prices, infrastructure and contract choice that enable consumers to participate.
- 39 The European Commission's electrification action plan identifies a greater role for electricity in final energy consumption as an important part of the EU's energy transition. It establishes a reference level of 32 % by 2030, an increase of about 9 pp within six years from the existing 23 %, and a doubling of the existing electrification rate to 46 % by 2040. Reaching these levels would mean greater reliance on electricity across homes, transport and business. EV and heat pump uptake shows where electricity is replacing fossil fuels in transport and heating.

Figure 10: Electricity's share of final energy consumption across EU markets, 2019 and 2024, with the electrification action plan's 2030 and 2040 reference levels (%)

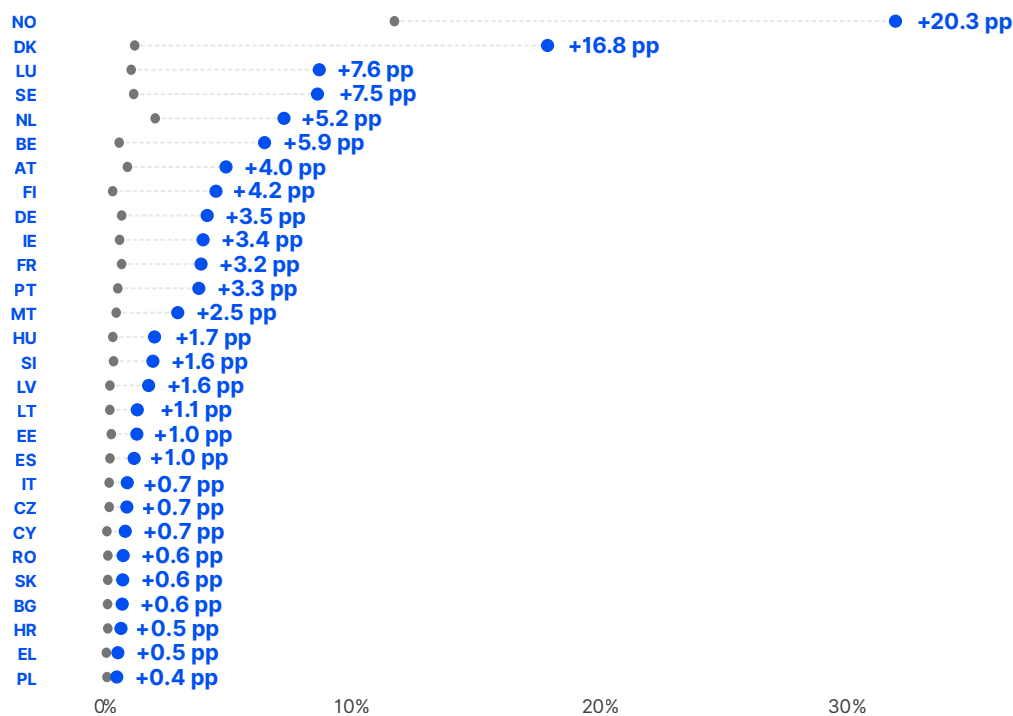


Note: The figure covers final energy consumption across all sectors. Grey points represent 2019 and blue points represent 2024. The reference lines show the electrification action plan's 32 % reference level for 2030 and 46 % indicative target for 2040. The figure does not measure household electrification or the uptake of individual technologies.

Source: ACER calculations based on Eurostat energy balance dataset nrg_bal_c. Data available up to 2024.

- 40 Electricity's share of final energy consumption increased in 19 of the 28 markets shown (Figure 10). The largest increases were recorded in Luxembourg, at 3.8 pp, Ireland, at 3.5 pp, and Hungary, at 2.5 pp. Despite these increases, Luxembourg and Hungary remained below the EU average of 23.4 % in 2024, while Ireland was above it at 25.2 %. Electricity's share declined in eight markets, most notably Estonia, by 2.8 pp, Slovenia, by 1.2 pp, and Sweden, by 0.9 pp. The overall level of electrification is therefore increasing across much of Europe, but the pace of change is not uniform, reflecting differences across national economies. Changes in the share can reflect developments in both electricity consumption and total final energy consumption, including economic activity and changes in the energy mix. The indicator therefore shows the pace of electrification but does not, by itself, explain the drivers of national developments.
- 41 Aggregate energy shares do not show which technologies are driving electrification. However, EVs provide a more direct measure of the replacement of fossil fuels in transport. Figure 11 compares battery-only electric passenger cars as a share of the passenger car fleet in 2020 and 2025.

Figure 11: Battery-only electric passenger cars as a share of the passenger-car fleet across European markets, 2020 and 2025 (%)

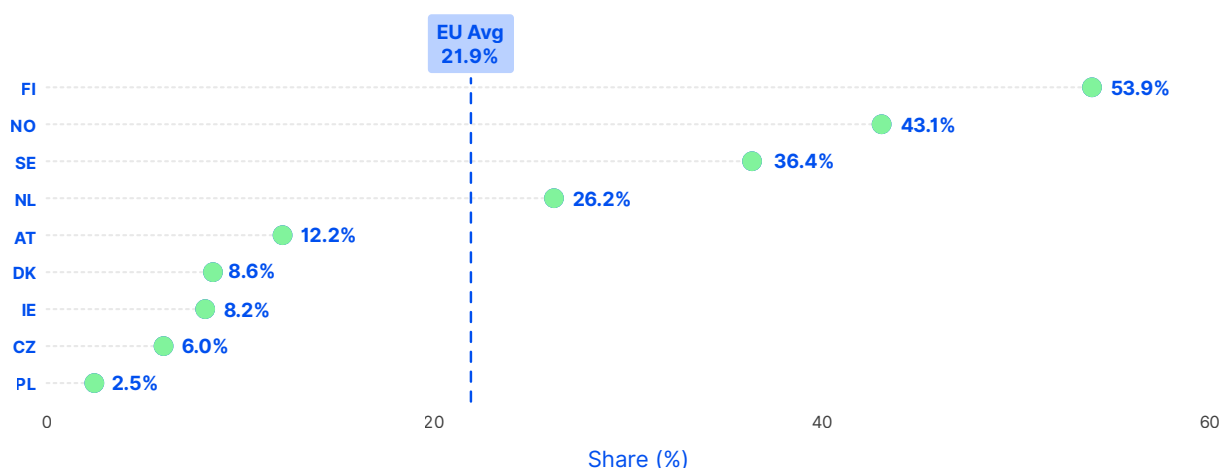


Note: The figure shows battery-only electric passenger cars as a share of the total passenger car fleet. It does not include plug-in hybrid vehicles. Results cover reporting markets with comparable observations for 2020 and 2025.

Source: ACER calculations based on Eurostat road transport dataset road_eqs_carpda.

42 EV penetration increased in every reporting market shown between 2020 and 2025, although both the starting points and the pace of adoption differed substantially. The largest increases were recorded in Norway, Denmark, Luxembourg and Sweden, while increases remained below 1 pp in nine markets. This trend is continuing; battery-only EVs accounted for 17.4 % of new EU car registrations in 2025, up from 13.6 % in 2024.¹⁹ For consumers, growing EV adoption shifts part of transport expenditure from petrol and diesel to the electricity bill. This can reduce total mobility costs but also increases household electricity consumption, making the price and timing of charging, and therefore access to appropriate retail contracts and smart charging, increasingly important. Therefore, access to flexible retail contracts can allow consumers to shift charging to lower-priced periods; Chapter 2 examines the potential savings from doing so for household consumers. Heat pump deployment ([Figure 12](#)) provides a corresponding measure of electrification in heating.

Figure 12: Heat pump penetration across reporting European markets, 2025 (% of household metering points)



Note: The figure shows reported heat-pump installations as a percentage of household metering points. National definitions, data coverage and reporting methods may differ. Results should therefore be interpreted as an indication of relative penetration across reporting markets. The figure covers only the countries that reported heat pump data. No data are shown for the remaining countries, as their national regulatory authorities did not provide this information.

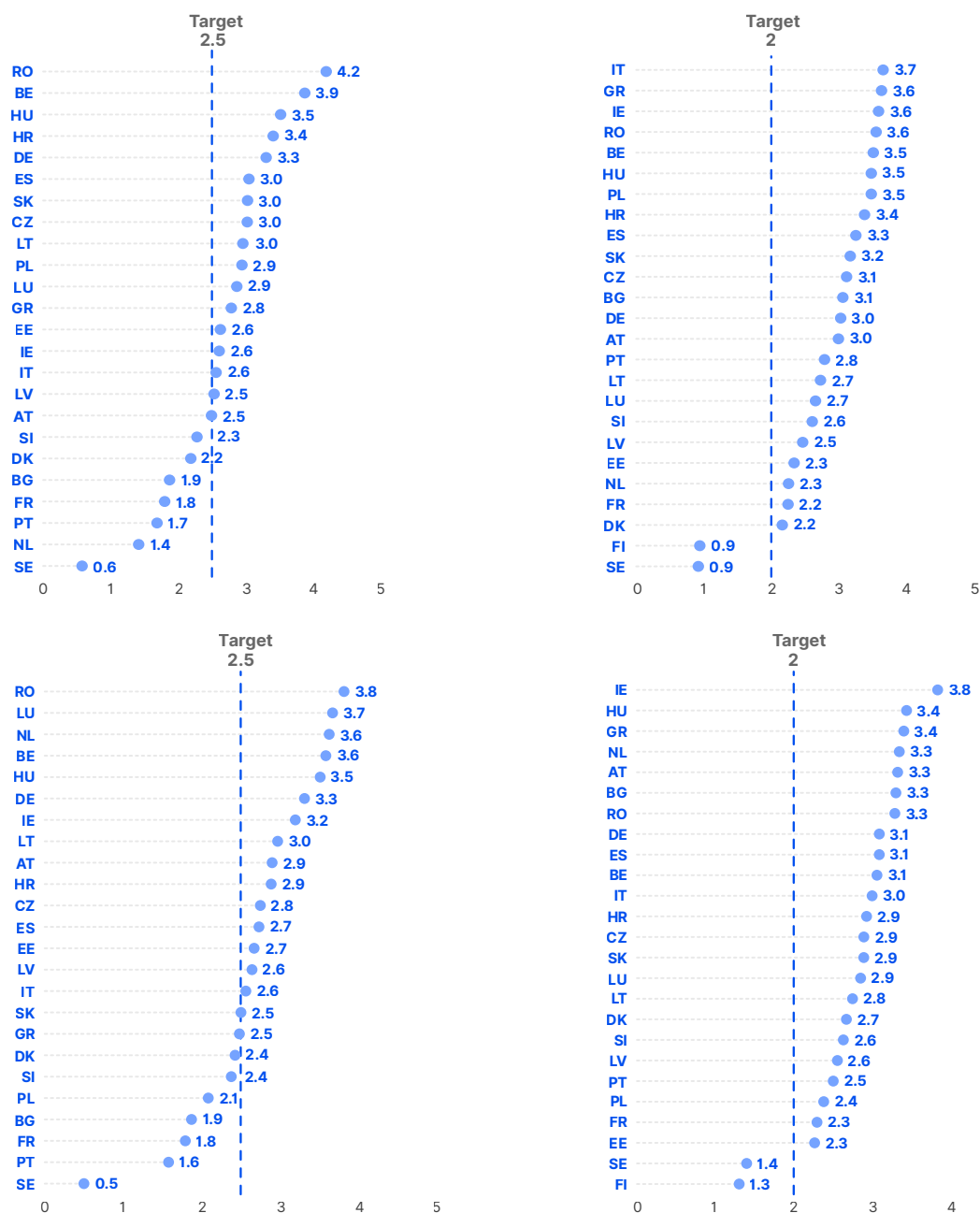
Source: ACER, based on data provided by national regulatory authorities.

43 Whether households and businesses have an economic incentive to electrify depends partly on the relative prices of electricity and fossil fuels for heating and transport. As shown earlier, the electricity-to-gas price difference reflects not only energy and supply costs but also the allocation of network costs and taxes, fees, levies and charges. The [Electrification Action Plan](#) aims to reduce national electricity-to-gas price ratios by 2030 to a maximum of 2.5 for households and 2 for industry. [Figure 13](#) compares the 2025 ratios for households and non-households, both for total prices and for taxes, fees, levies and charges, indicating the distance from these targets and the contribution of fiscal components to the relative price signal.

¹⁹ European Automobile Manufacturers Association (ACEA), 'New car registrations: + 1.8 % in 2025; battery-electric 17.4 % market share (27 January 2026)', press release, ACEA website, 27 January 2026, <https://www.acea.auto/pc-registrations/new-car-registrations-1-8-in-2025-battery-electric-17-4-market-share>.

- 44 Electrification changes both the volume and profile of household electricity demand. A household adopting a heat pump or EV may use more electricity while purchasing less gas, petrol or diesel. Because EVs and heat pumps are generally more energy efficient than fossil fuel alternatives, they can reduce the amount of purchased energy needed to heat a home or travel a given distance. Whether they reduce consumer costs depends on relative prices and technology performance. Electricity expenditure should therefore not be considered in isolation. The relevant comparison is the total cost of delivering the same energy service.

Figure 13: Electricity and gas price ratios for household (left) and non-household (right) consumers with taxes, fees, levies and charges (top) and without taxes, fees, levies and charges (bottom), 2025

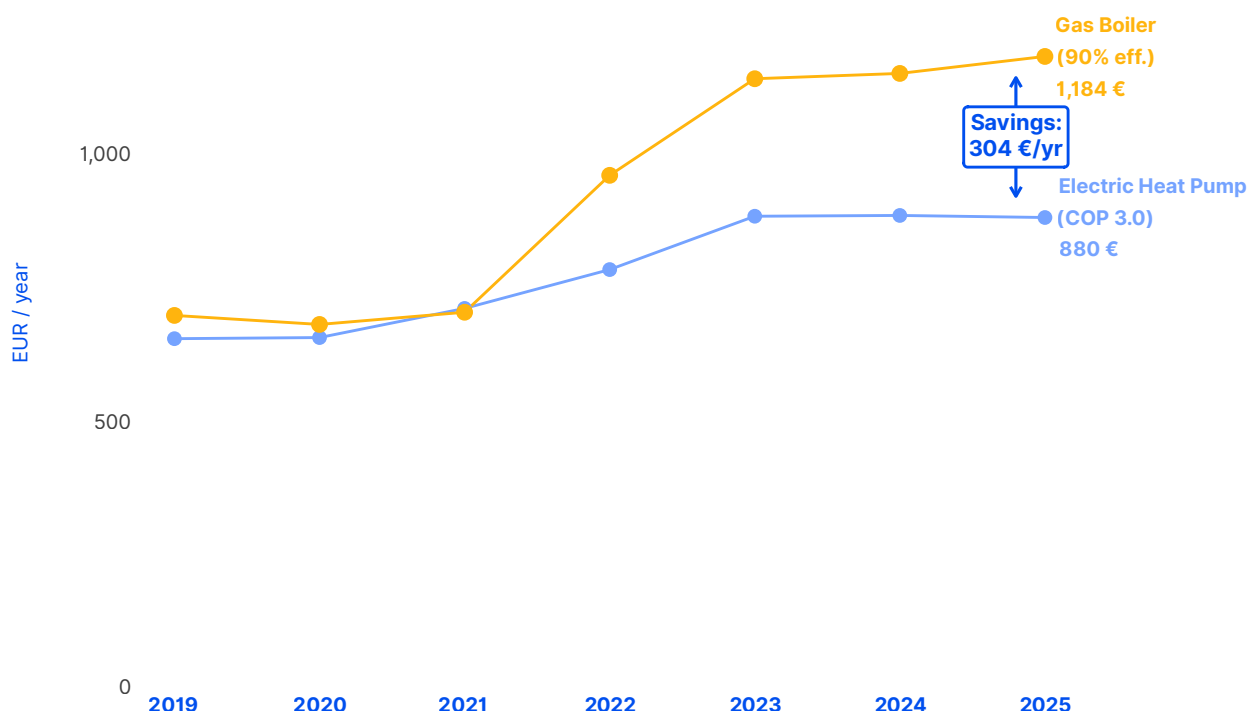


Note: The charts at the top present the total household electricity price divided by the total household gas price. The ones at the bottom present the same ratio computed on prices excluding taxes, fees, levies and charges. Ratios above 1 indicate that the electricity price or component is higher per unit of purchased energy. The 2.5 reference line represents the Electrification Action Plan's 2030 household benchmark it is shown in the bottom chart for comparison only. The comparison concerns purchased energy and does not account for differences in technology efficiency.

Source: ACER calculations based on Eurostat datasets *nrg_pc_204_c* and *nrg_pc_202_c*, household consumers, band all, 2025.

- 45 In 2025, household electricity prices exceeded 2.5 times gas prices in 15 of the 24 markets. The ratio equalled 2.5 in Austria and Latvia and was below it in seven markets. The ratio ranged from 0.6 in Sweden to 4.2 in Romania. Households therefore faced markedly different relative price signals when considering a switch from gas to electricity.
- 46 Taxes, fees, levies and charges can widen or narrow the electricity-to-gas price gap. Excluding them, however, the household ratio exceeded the 2.5 benchmark in 15 of the 24 reporting markets. The weak relative price signal for electrification is therefore not attributable to taxation alone; in most markets the energy and network components on their own place the ratio above the benchmark.
- 47 Unit price ratios do not determine whether electrification reduces the cost of an energy service. A household adopting a heat pump or EV may consume more electricity while reducing its purchases of gas, petrol or diesel. The relevant comparison is therefore the cost of delivering the same service, such as heating a home or travelling a given distance.
- 48 Heating illustrates this distinction. Electricity is generally more expensive than gas per unit of purchased energy, but a heat pump can convert one unit of electricity into several units of useful heat. A gas boiler delivers less than one unit of useful heat from each unit of gas consumed. [Figure 14](#) therefore compares the estimated energy cost of producing nine MWh of useful heat.

Figure 14: Cost of useful heat from a gas boiler and an electric heat pump in the EU-27, 2019–2025 (EUR/MWh of useful heat)

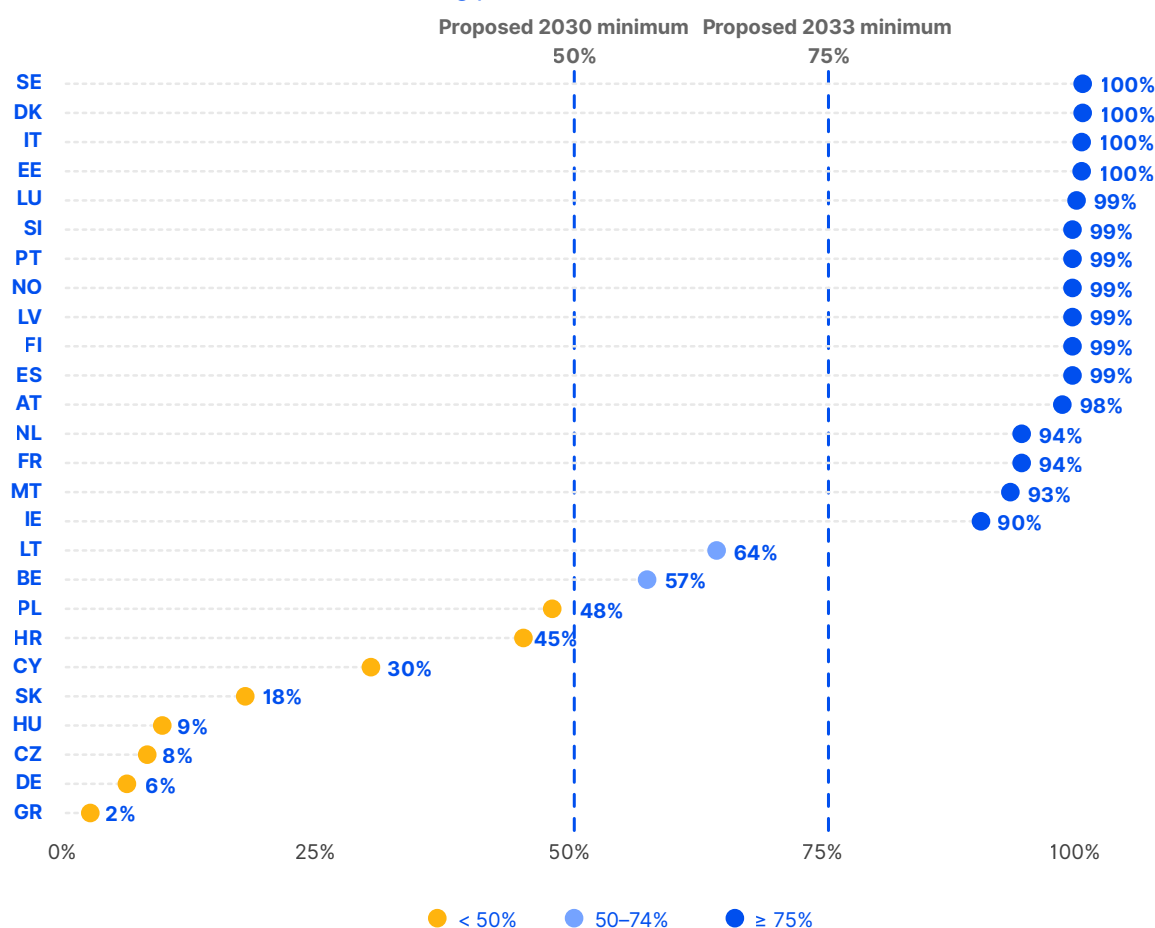


Note: COP, coefficient of performance. The comparison is based on the annual consumer cost, including taxes, of delivering 9 000 kWh of useful heat for space and water heating. The heat pump is assumed to consume 3 000 kWh of electricity per year, based on a seasonal coefficient of performance of 3.0. The gas boiler is assumed to consume 10 000 kWh of gas per year, based on an efficiency of 90 %. Equipment, installation, maintenance and building renovation costs are excluded.

Source: ACER calculations based on data provided by national regulatory authorities, the French Agency for Ecological Transition and Eurostat (nrg_pc_204_c, nrg_pc_202_c, consumption band all).

- 49 Under these assumptions, the energy and network costs were EUR 634 for the heat pump and EUR 830 for the gas boiler. Including taxes, fees, levies and charges increases the respective operating costs to EUR 880 and EUR 1 184, leaving the heat pump EUR 304, or 26 %, cheaper. The result illustrates how greater technological efficiency can offset a higher electricity price, but it is an EU-average scenario rather than a finding for every household. Actual savings depend on national prices, tariffs, climate and building performance, while the overall financial case must also account for equipment, installation and renovation costs to improve building energy performance.²⁰ The Energy Performance of Buildings Directive recognises upfront renovation costs as a barrier and requires Member States to facilitate access to financial support, with financial incentives prioritising vulnerable households and those affected by energy poverty.²¹
- 50 The financial case for electrification is only one condition for consumer participation. As electricity use grows, consumers also need the technical means to respond to changing prices where they choose to do so. Smart meters provide part of this enabling infrastructure.

Figure 15: Household smart-meter penetration and recent roll-out progress across European markets, 2025 (% of household metering points)



Note: The chart shows household smart-meter penetration in 2025. The dashed vertical lines correspond to the minimum deployment levels proposed in the Commission's legislative proposal to amend Regulation (EU) 2019/943 (COM(2026) 600 final): at least 50 % of final electricity customers by 2030 and at least 75 % by 2033. As the proposal applies to all final electricity customers, the household-only data shown here provide an indicative rather than direct assessment of progress towards these levels. The proposed levels remain subject to the legislative process. In Germany, the installation of a smart meter for end consumers is only mandatory if their annual consumption over 6 000 kWh. The smart-meter penetration shown refers to all end customers, regardless of whether installation is mandatory by consumption or not. In cases where installation is mandatory, the penetration is significantly higher. Additional country-level information is available through the ACER Retail Energy Markets Dashboard.

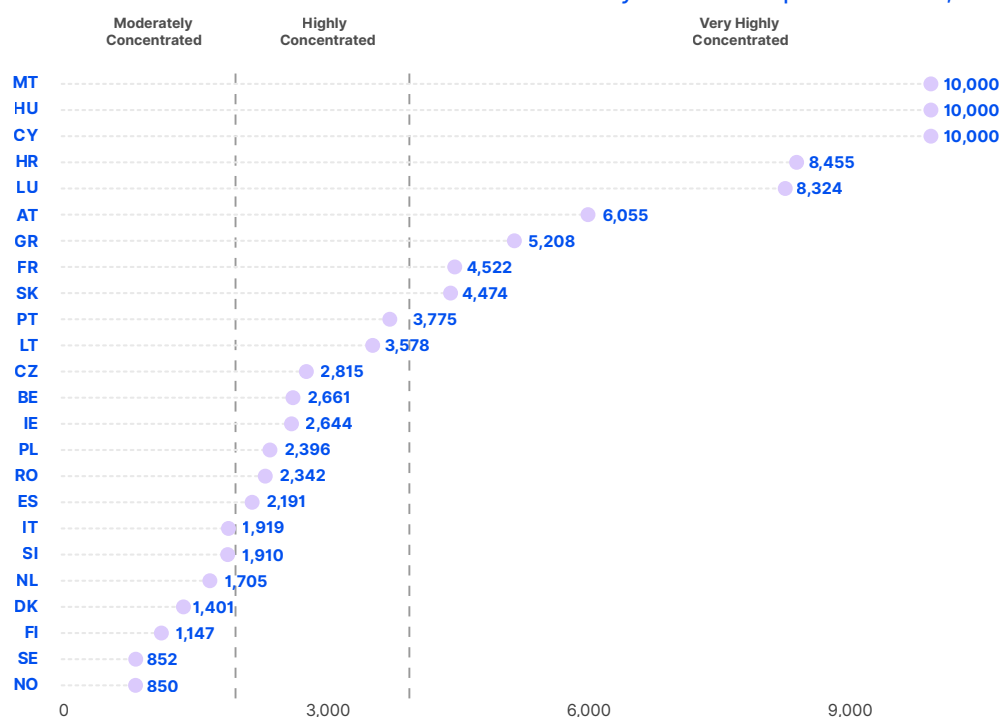
Source: ACER, based on data provided by national regulatory authorities.

20 See International Energy Agency (IEA), 'Key findings', IEA website, https://www.iea.org/reports/heat-pump-monitor-2026/key-findings_for_information_regarding_heat_pump_cost-competitiveness.

21 Directive (EU) 2024/1275 of the European Parliament and of the Council of 24 April 2024 on the energy performance of buildings (recast) (OJ L, 2024/1275, 8.5.2024, ELI: <http://data.europa.eu/eli/dir/2024/1275/oj>).

- 51 Household smart-meter roll-out is largely complete in several markets, supporting the aim of enabling consumer participation in flexible electricity use. Of the 25 reporting countries, 16 had reached at least 75 % penetration by 2025, while roll-out remained substantially lower in several others.
- 52 Smart-meter penetration reflects technical readiness rather than actual consumer engagement. A smart meter does not by itself ensure that suppliers offer time-of-use pricing or dynamic pricing, or that consumers can easily access and make use of their energy data. These enabling conditions are increasingly important as electrification of transport and heating raises the value of demand-side flexibility.
- 53 Retail market structure is a complementary condition for more effective and flexible consumer participation. Consumers need access to suppliers and products offering meaningful choices between price stability and exposure to market signals. [Figure 16](#) presents retail household electricity market concentration using the Herfindahl–Hirschman index (HHI).

Figure 16: Household retail market concentration in electricity across European markets, 2025 (HHI)



Note: The HHI is calculated as the sum of the squared market shares of all suppliers. Under the thresholds applied in this report, values below 2 000 indicate moderate concentration, values from 2 000 to 4 000 indicate high concentration and values above 4 000 indicate very high concentration. HHI describes market structure but does not, by itself, measure competitive performance, product choice or service quality. Results cover reporting markets only. Non-household results and additional indicators are available in the Annex and through the ACER Retail Energy Markets Dashboard.

Source: ACER, based on data provided by national regulatory authorities.

- 54 Households are electrifying in markets that are often highly concentrated: 17 of the 24 reporting household electricity markets recorded an HHI above 2 000. As EVs and heat pumps increase consumers' reliance on electricity, effective supplier choice and access to suitable contracts become more important. The HHI should therefore be treated as a warning indicator and assessed alongside switching, market entry and contract uptake to determine whether competition is delivering for consumers.
- 55 The indicators should be read together rather than as a single ranking of national readiness. EV and heat pump adoption show where household demand is becoming more electrified. Smart meters indicate whether consumers have the technical capacity to respond to time-varying prices, while the HHI describes the structure of the markets supplying them.

- 56 Electrification can reduce the cost of some energy services, but its benefits depend on technology performance, relative prices, metering and the products available in the retail market. Chapter 2 therefore examines whether available contracts provide consumers with appropriate choice from a range of contracts with different degrees of exposure to wholesale market changes and different exposure to within-day price signals and assesses the benefits of consumption flexibility.

1.3. Conclusions

- 57 Chapter 1 shows that household electricity and gas prices remained above their pre-crisis levels in 2025. Wholesale price reductions reached retail prices gradually, while network costs and taxes, fees, levies and charges continued to shape final bills. Affordability, electricity-to-gas price ratios, smart-meter deployment and retail market concentration also varied widely across national markets. Three conclusions follow on affordability, the composition of final bills and the financial case for electrification.

Energy prices remain above pre-crisis levels, but inflation and household circumstances change the picture

- 58 At the EU level, household electricity and gas prices remained above their 2019 levels in 2025, in both nominal and inflation-adjusted terms. However, the estimated expenditure burden changed differently across markets: the electricity burden increased in nine markets, declined in 11 and remained broadly unchanged in three, while household gas expenditure increased in 14 of the 22 assessed markets. Affordability should therefore be tracked through household expenditure relative to income, rather than inferred from unit prices alone.

Lower wholesale energy costs did not translate fully into lower household bills

- 59 Household energy and supply costs declined between 2023 and 2025, but increases in network costs and taxes, fees, levies and charges offset almost all the reduction for electricity and more than offset it for gas. The difference between the retail energy and supply component and the annual wholesale benchmark reflects procurement timing, hedging, balancing and retail costs, contract structures and national arrangements; it should not be interpreted as supplier profit. Consumer outcomes must therefore be assessed across the whole bill, including how necessary network costs are recovered and how fiscal costs are allocated.

Relative prices can discourage electrification even where electric technologies are more efficient

- 60 Household electricity prices exceeded 2.5 times the price of gas in 15 of the 24 assessed markets in 2025, while taxes, fees, levies and charges were higher for electricity in all markets. Relative price signals therefore weakened the financial case for electrification in many countries. Unit prices alone do not, however, determine the cost of an energy service. Without assuming flexible consumption, the report's heat pump example delivered the same useful heat at a 26 % lower operating cost than a gas boiler, although equipment, installation and renovation costs were excluded. Whether consumers find that electrification pays ultimately depends on relative prices, technology efficiency and upfront costs. Technological efficiency can overcome an unfavourable electricity-to-gas price ratio. The heat pump example shows that a higher electricity unit price does not necessarily translate into a higher cost of heating, highlighting where efficient electric technologies can strengthen the financial case for electrification.

2. Retail electricity contract monitoring and the potential benefits of flexibility

- 61 Electrification will increase electricity demand from vehicles, heating and business processes. Renewable generation has created periods when electricity is more abundant and less expensive. Shifting flexible demand towards these periods can reduce consumer expenditure and support the electricity system. Retail contracts determine whether consumers receive such signals and, in turn, whether they have an incentive to shift their consumption. This chapter examines the available evidence on how contract prices are set and estimates how households' choice of contract and the times when they use electricity can affect their bills.
- 62 Chapter 1 showed that electrification, smart-meter deployment and retail market conditions differ widely across Europe. As EVs and heat pumps change when consumers use electricity and how much, their contract needs may also change. Some consumers will continue to value predictable bills, while others may benefit from contracts that reward flexibility. Section 2.1 examines the choices currently available, while Section 2.2 estimates the potential benefits and risks of greater price exposure.
- 63 ACER's [Key developments in European gas and wholesale electricity markets 2025](#) shows that solar power increasingly depresses midday prices, especially outside winter months. With daily price volatility approximately five times higher than in 2020, opportunities exist for consumers who choose to consume in response to power system signals. Consumer flexibility – direct or via an aggregator – is only one part of the response, alongside storage, flexible generation and networks to make flexibility available where it is most valued.²²

2.1. Monitoring retail contracts: are price signals reaching consumers?

- 64 Retail contracts serve as the primary interface between consumers and the electricity and gas markets, shaping how wholesale price fluctuations and system-wide changes translate into final bills. These contracts determine the degree to which consumers are exposed to market volatility, as well as their ability to benefit from dynamic pricing or stability mechanisms.
- 65 From a consumer perspective, well-designed contracts ensure affordability and fairness, protecting households from excessive price spikes while allowing them to benefit from lower wholesale costs. From an energy system standpoint, they can support demand response, grid stability and the integration of renewable energy.
- 66 Monitoring contracts is therefore essential to understand how energy market dynamics, including price volatility, policy interventions and structural changes, translate into real-world impacts on consumers. Contract monitoring enables us to evaluate whether markets deliver fair outcomes for consumers while also rewarding cost-effective, flexible energy use, and to formulate evidence-based policy directions to improve the functioning of retail markets.

22 ACER, Key Developments in European Electricity and Gas Markets – 2026 monitoring report.

- 67 This report explores a novel analysis of household electricity contracts and their essential pricing structure features. As a pilot, eight national regulatory authorities made data available, with a combined coverage of around 23 % of EU-27 and Norway household metering points.²³ To be representative, and adequate for monitoring market impacts, the monitored contracts must cover more of the market. However, as data coverage ranged from 24.8 % to 100 %, the analysis uses these data to illustrate the information that contract monitoring could provide rather than to draw representative conclusions on EU contract uptake. Given the exploratory nature of the exercise, the differences in data availability and coverage, and the limited number of countries included, the analysis illustrates the insights that contract monitoring could provide rather than drawing representative conclusions on contract uptake across the EU. This exploratory analysis of the monitoring of signed contracts faced data availability challenges: limited information is available to national regulatory authorities about the contracts and pricing structures that consumers have signed/accepted in the national retail markets across Europe. The results therefore provide an indicative rather than representative picture of EU contract uptake, while demonstrating the value of enhanced contract monitoring, which ACER intends to advance in future reporting.
- 68 [Figure 17](#) shows two dimensions of signed retail electricity contracts: variability of the price level and variability of the price over time within a day.²⁴ The first dimension captures the extent to which contract prices align with (wholesale) market price changes, ranging from fixed prices to full wholesale market indexation, for example based on hourly or quarter-hourly prices. The second dimension captures the extent to which contract prices vary during the day depending on time of use, ranging from a single price for the full day to day/night time-of-use prices or dynamic pricing with different hourly or quarter-hourly prices. These dimensions are independent: a fixed-price, fixed-term contract may still include time-varying prices, while a spot-linked monthly contract may only reflect average price changes without within-day signals.

Description of the conceptual data

Price variation by time of use

Flat: the same unit price applies regardless of when electricity is used.

Time of use: different prices apply during predefined periods, such as day and night or peak and off-peak.

Critical peak: higher prices apply during a limited number of peak periods announced in advance.

Dynamic: prices change hourly or more frequently in line with short-term wholesale prices.

Frequency of price updates

Fixed price, fixed term: the unit price remains unchanged for the duration of the contract.

Quarterly indexed: the price is updated every three months using an agreed index or formula.

Monthly indexed: the price is updated each month using an agreed index or formula.

Daily indexed: the price is updated each day using a market index or benchmark linked to daily wholesale prices.

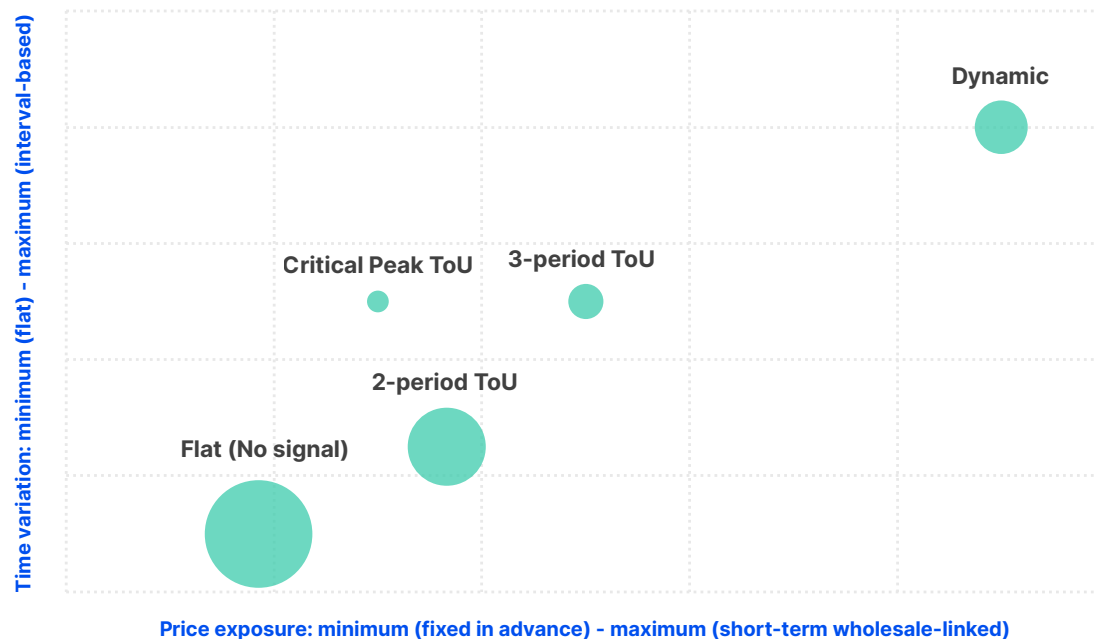
Dynamic pricing: the final retail price changes hourly or more frequently with short-term wholesale prices.

Other: the contract does not fit within the categories above, for example contracts under which the unit price does not vary in response to hourly or daily price signals but can be changed by the supplier during the duration of the contract. These features can be combined. For example, a time-of-use contract may have prices fixed for a set period or updated periodically.

23 Pilot sample data from France, Greece, Hungary, Ireland, Italy, Poland, Portugal and Spain.

24 Price intervention, referred to as 'regulated contracts', is a third, separate characteristic, as both regulated and market-based products can adopt any pricing structure.

Figure 17: Conceptual mapping of retail electricity contracts by frequency of price adjustments and within-day time-of-use pricing



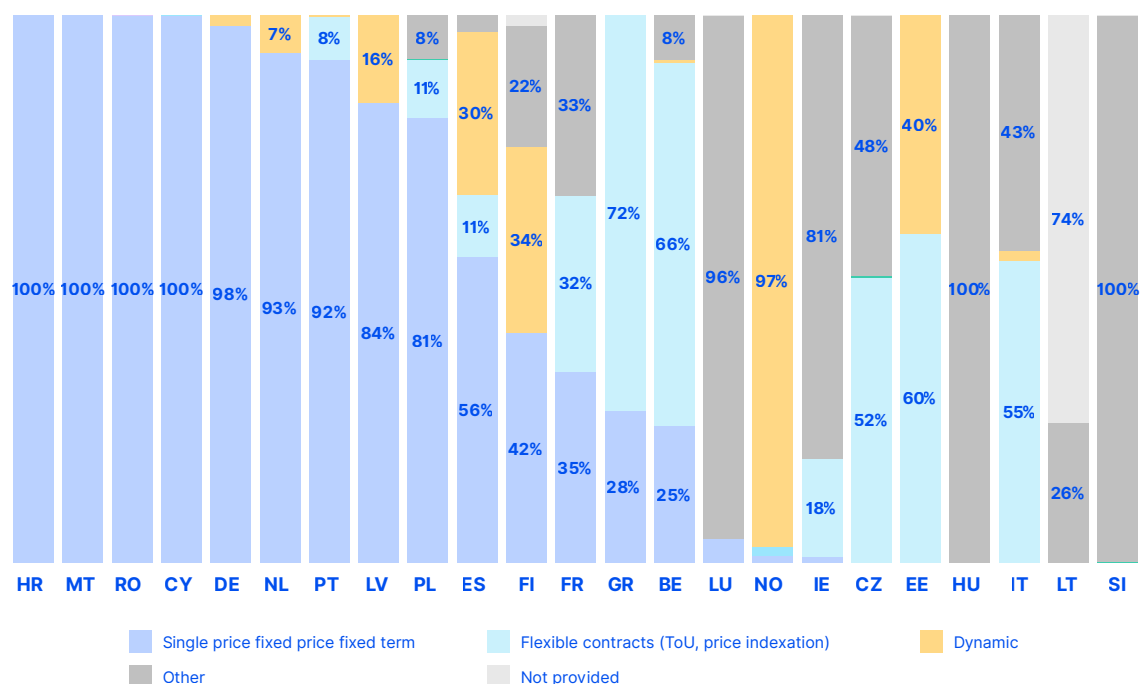
Note: ToU, time of use. The figure pools 56.4 million household metering points (around 23 % of EU-27 and Norway household metering points). Bubble area is proportional to the sample data. Contracts are positioned qualitatively from prices fixed in advance to short-term wholesale-linked prices on the horizontal axis, and from flat to interval-based pricing on the vertical axis. Positions do not indicate price, quality or consumer suitability, and the sample is not representative of the EU-27 and Norway retail markets.

Source: ACER, based on sample data provided by national regulatory authorities of France, Greece, Hungary, Ireland, Italy, Poland, Portugal and Spain.

- 69 The conceptual mapping of contracts according to their pricing structure makes it possible to see what kinds of price signals reach consumers (both dimensions) and how exposed the retail contracts are to wholesale market dynamics (horizontal axis).
- 70 ACER will further advance contract monitoring such as this exploratory pilot analysis, to raise transparency and improve the monitoring of market impacts on consumers. Contract monitoring will become even more important as electricity consumption rises and the power system has to become more flexible, given that the electrification action plan targets an EU electrification rate of 46 % by 2040.
- 71 [ACER's retail markets dashboard](#) publishes a simpler overview of contract types that consumers are on across national markets ([Figure 18](#)). The data provide a broad picture of contract uptake but cannot establish how many consumers receive a meaningful signal to shift consumption, or whether and how much they are exposed to wholesale market risks.
- 72 For consumers with EVs, heat pumps or shiftable business processes, the critical question is not how a contract is labelled or named. What matters is whether the price level can change during the contract, whether the price varies depending on the time of consumption and how it impacts the consumer who actively reacts or passively accepts. An indexed single-price contract may accelerate pass-through without encouraging shifting; a fixed-term, fixed-price time-of-use contract may encourage shifting while preserving price stability for the consumer.

- 73 Looking at the dashboard with the simpler contract overview, in nine of the markets analysed, single-price, fixed-price, fixed-term contracts accounted for more than 80 % of household contracts by metering points. These contracts provide price stability but do not reward consumers for using electricity when it is cheaper or more abundant. Consumers can benefit from access to both stable and time-varying contracts, as demonstrated by the flexibility benefits assessment in Section 2.2, which finds potential for positive benefits in those eight markets.

Figure 18: Household electricity contract types across Member States, 2025 (%)

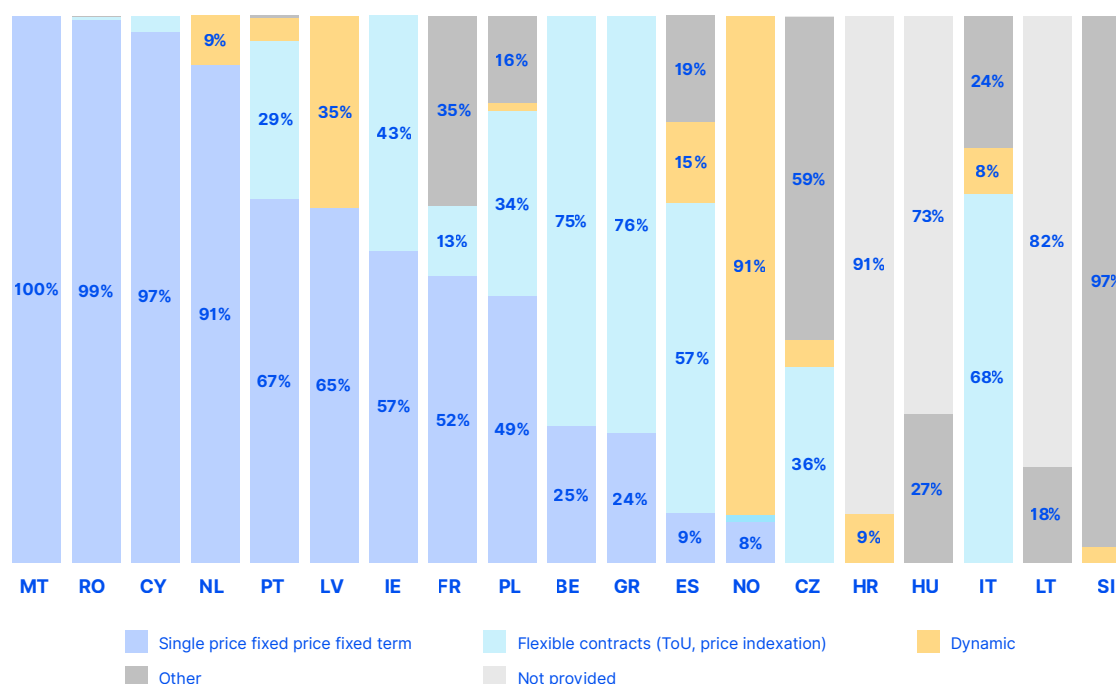


Note: Contract types reported by national regulatory authorities were consolidated and mapped into standardised ACER categories distinguishing market-based and regulated pricing, price update mechanisms and single-price or time-of-use structures. For presentation, these categories were aggregated into the broader groups shown. 'Other' covers reported arrangements outside the named groups, while 'Not provided' indicates missing data rather than zero uptake. See Section 1.3 of ACER, [Retail Energy Markets Dashboard – Methodology](#), 2026. In Sweden, contracts are monitored across the entire retail market merging both household and non-household contracts and as such are not included in Figures 18 and 19. Information on contracts in the Swedish retail electricity market can be found at <https://www.scb.se>. For Slovenia, most contracts reported under 'Other' correspond to time-of-use contracts due to the classification applied in the data collection.

Source: ACER, based on data provided by national regulatory authorities.

- 74 The 'Other' category accounted for all reported household contracts in Hungary and Slovenia, 96 % in Luxembourg and 81 % in Ireland. These results do not indicate the specific price signals provided by those contracts. Data coverage was also incomplete in Lithuania, where the contract type was not provided for 74 % of the reported total.
- 75 [Figure 19](#) shows a similar but slightly different picture for non-households. Non-household contracting is not uniformly more flexible. Fixed-term products accounted for more than 90 % of the reported mix in four markets and remained the largest category in several others. Norway again recorded extensive dynamic-contract uptake, while Spain reported a broader combination of time-of-use and dynamic products. The large shares of indexed products reported in Belgium and Greece may accelerate wholesale price pass-through, but single-price fixed-price fixed-term products provide no financial incentive to shift consumption between hours.

Figure 19: Electricity contract type breakdown for non-household consumers across reporting European markets, 2025 (%)

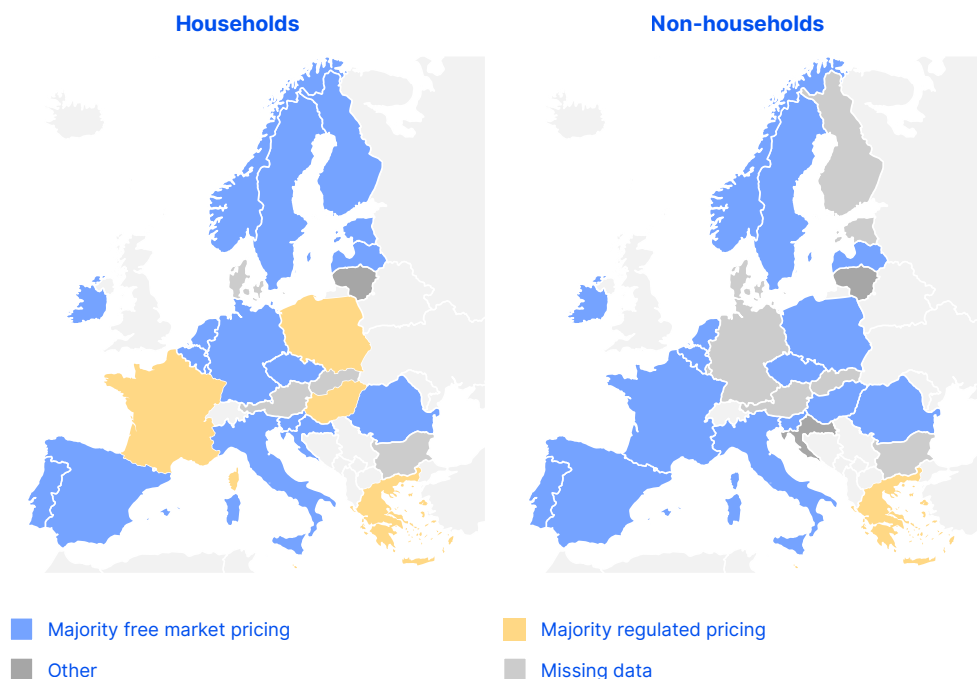


Note: Contract types reported by national regulatory authorities were consolidated and mapped into standardised ACER categories distinguishing market-based and regulated pricing, price update mechanisms and single-price or time-of-use structures. For presentation, these categories were aggregated into the broader groups shown. 'Other' covers reported arrangements outside the named groups, while 'Not provided' indicates missing data rather than zero uptake. See Section 1.3 of ACER, [Retail Energy Markets Dashboard – Methodology](#), 2026. For Slovenia, most contracts reported under 'Other' correspond to time-of-use contracts due to the classification applied in the data collection.

Source: ACER, based on data provided by national regulatory authorities.

- 76 Contract choice will become increasingly important as commercial and industrial consumers electrify vehicle fleets, heating and cooling, and production processes. Some of this demand can be scheduled or automated around periods of low prices; other processes have limited scope to move consumption periods. As with households, the appropriate outcome is therefore a range of contracts reflecting different operational needs.
- 77 Where single-price, fixed-price, fixed-term contracts predominate, consumers receive little reward for shifting EV charging, electric heating or other flexible demand away from periods of high prices.

Figure 20: Electricity contracts by presence of price intervention ('regulated contracts') for household (left) and non-household (right) consumers across European markets, 2025



Note: The maps identify the predominant status of supply contracts based on free pricing or subject to price intervention, as reported. They do not measure price flexibility, product availability or competitive performance. 'Other' covers countries where the largest reported share falls outside the two categories or is not specified. Countries shown as 'Missing data' did not report a contract breakdown. See [ACER Retail energy markets dashboard – 2025](#) for more information on contract uptake across Member States.

Source: ACER, based on data provided by national regulatory authorities.

78 These different starting points shape the potential cost savings assessed in Section 2.2. The analysis separates the supply contract structure effect of switching from a flat-price contract to a dynamic-price contract from the behavioural effect of shifting consumption to lower-priced hours once on a dynamic-price contract. The distinction is important: the supply contract structure effect may be greater where fixed-price contracts predominate, whereas regulated prices may limit or reverse that benefit. Conversely, greater wholesale price volatility can increase the behavioural effect where consumers have sufficient shiftable consumption. Section 2.2 quantifies these effects for the modelled household types and considers the accompanying exposure to price risk.

2.2. Flexible consumers can capture the benefits of volatility

79 As highlighted in ACER's [Key Developments in European Gas and Wholesale Electricity Markets 2025](#), the growing share of solar generation is deepening the daily "duck curve", widening the gap between low midday prices and higher prices in the morning and evening. This growing price differential within the day creates a clear opportunity: consumers who shift the times when they use electricity can benefit from low wholesale prices. This chapter examines the extent to which household consumers can capture that opportunity by becoming more active participants in the electricity market through demand-side flexibility. Network tariffs, which in some Member States also reward flexibility, are outside the scope of this chapter but may interact with the dynamics discussed here.²⁵

²⁵ The same appliances and smart technologies enable shifting regardless of whether the price signal comes from a network tariff or a retail contract, so the two may reinforce one another, a dynamic potentially strengthened by trends such as the electrification of transport and heating.

- 80 This section assesses potential benefits of flexibility across the EU-27 and Norwegian markets through an indicator that reflects how much household consumers can save by (a) switching from a flat-price to a dynamic-price contract and (b) additionally shifting some of their consumption in response to price signals. The analysis centres on 2025 findings while also tracking how these benefits have developed since 2020. The analysis of this section builds on ACER's [Rewarding flexibility: How retail contract choice can help unlock consumer flexibility – 2025 Retail Monitoring Report](#).
- 81 The opportunity to shift consumption lies in moving demand from high-priced hours to the lower-priced periods: night-time, when overall demand drops, and midday, when abundant solar generation depresses prices.²⁶ Seasonal and weekly variations create additional shifting opportunities. Summer days experience steeper midday price drops as solar generation peaks, while weekends and holidays experience, on average, lower wholesale prices throughout the day due to lower overall demand, both offering distinct windows for consumption flexibility.
- 82 The ease of participating in demand-side flexibility depends on whether household devices can be shifted without loss of comfort. Heat pumps illustrate this constraint well: since they are responsible for keeping indoor temperatures at a comfortable level, their operation cannot be shifted too far from the moment that comfort is required, restricting how much flexibility they can offer. However, this constraint is not absolute: a house, particularly a well-insulated one, has natural thermal inertia, so turning down a heat pump does not cause an immediate drop in indoor temperature.²⁷ This allows some room for shifting operation in response to price signals without a significant loss of comfort. EVs, by contrast, offer substantial flexibility: in most instances, charging can be shifted to night-time or weekend hours when prices are lowest.

26 It is worth recalling that, until recently, the opposite behaviour was encouraged in consumers: night was cheaper than the day. This reversal requires continued and reinforced promotion of the new (renewables-based) system reality.

27 Consumers can typically choose how much temperature variation they are willing to accept (e.g. allowing the indoor temperature to deviate by around 1 °C from the set point), which lets the heat pump respond more flexibly to price signals than if the temperature had to remain constant at all times. Modern heat pumps, and control devices that can be retrofitted to older units, can help automate this adjustment.

ACER's methodology

- 83 The analysis of this chapter builds on the methodology first introduced in [Rewarding Flexibility: How retail contract choice can help unlock consumer flexibility – 2025 retail monitoring report](#), pp. 28–30, which modelled four representative household types (base household, household with heat pump, household with EV, and household with EV and heat pump) and compared flat-price contracts with dynamic-price contracts across two effects: a supply contract structure effect and a behaviour effect (see definitions below). The flat price used is a modelled market-average benchmark, not a real fixed-price contract – the results should be read as reflecting market-wide conditions rather than the terms of any single offer.
- 84 Necessary simplifications and assumptions are applied regarding the example households' consumption levels, daily electricity consumption patterns and capability to shift in time certain amounts of demand. Readers seeking the full methodological detail (appliance-level assumptions, shifting windows) can consult the 2025 retail monitoring report, pp. 28–30.
- 85 The purpose of the analysis is not to compare different households across countries but rather to assess how the impacts on the example households vary between countries.
- 86 The results of the analysis should be read as indicative of the order of magnitude and direction of impacts rather than as precise and definitive values. The outcome of the modelling aims to provide insights for consumers and policymakers on how dynamic pricing can translate into measurable cost savings. Network tariffs and other non-energy components of the electricity bill are not included in the analysis, and their inclusion could further affect potential cost savings.

Representative example households

- 87 The analysis models four representative household types, reflecting different electrification pathways:
- base household (3 000 kWh/year) – representative of the average EU-27 and Norwegian household electricity consumption, with a typical hourly consumption profile;^{28, 29, 30}
 - Heat pump (HP) household (6 000 kWh/year) – base household with a heat pump installed; high consumption and limited flexibility due to comfort constraints;³¹
 - EV household (6 500 kWh/year) – base household with an EV; high consumption and high flexibility for demand shifting;

28 Based on national regulatory authority data for 2025, the average household median consumption across EU-27 and Norway was 2 400 kWh, though this figure rests on limited available data points. The average mean consumption was 3 770 kWh. For the analysis, the representative base household of 3 000 kWh electricity consumption per annum was picked.

29 The average hourly consumption profile for 2019 was taken, as further illustrated and explained in the 2025 report, to exclude EVs and heat pumps as much as possible from the different example household profiles.

30 An average consumption profile is used here for illustrative purposes. However, individual households' profiles differ from this average. A household whose consumption is concentrated in high-priced hours may benefit substantially more than the average suggests, while one concentrated in lower-priced hours may benefit less from shifting demand.

31 The consumption and flexibility levels assumed for the HP household depend significantly on the underlying assumptions used. In this analysis, the electricity consumption of the heat pump is based on Octopus Energy's estimate for the medium use of a 2- to 3-person household, and the demand-side flexibility assumptions are taken from NESTA. See [Table 2](#) in the Annex for further detail on these assumptions. Furthermore, installing smart technology to enable flexibility typically lowers a heat pump's overall energy use as well, through system optimisation; this effect is not accounted for in the analysis

- EV and heat pump (EV + HP) household (9 500 kWh/year) – base household with both an EV and a heat pump; very high consumption with moderate flexibility compared with the overall consumption level.

Detailed assumptions regarding shiftable consumption and timing are provided in the Annex, Table 2.

Cost comparison

88 The analysis evaluates two distinct effects of demand side flexibility.

- **Case 1: supply contract structure effect.** This models the financial impact of switching from a flat-price contract (proxied by Eurostat's energy and supply component prices, reflecting the average price across the mix of contract types in each country, including supplier costs, and hereinafter referred to as 'flat-price contract') to a dynamic-price contract (following day-ahead hourly wholesale prices).^{32, 33, 34} This comparison isolates the effect of the contract structure itself, holding consumption behaviour unchanged, by comparing a household's estimated electricity bill under the two contract types without assuming any shift in when electricity is used. The analysis overestimates gains, as supplier costs are excluded from the dynamic-price contract.³⁵
- **Case 2: behavioural effect.** Building on case 1 (i.e. assuming the household has already switched to a dynamic-price contract), this case measures the financial benefit of shifting consumption to lower-priced hours compared with a no-shifting scenario on a dynamic-price contract. This comparison isolates the incremental effect of active demand-side shifting from the effect of the contract switch itself.

Analytical clustering based on market characteristics

89 Countries are grouped into three clusters based on electricity price characteristics: wholesale price volatility and the average energy and supply component price, which is closely linked to the contract type mix in the specific country. These groupings serve as analytical categories reflecting shared market structures rather than geographical proximity, though the resulting clusters broadly align with geographical patterns, which is why they are labelled by region for simplicity; individual countries may deviate from their cluster's typical characteristics and they should not be read as strictly defined by geography. [Figure 21](#) illustrates the clustering of European markets into three analytical groups: western and southern Europe, northern Europe and eastern and south-eastern Europe, as follows.

- The western and southern European cluster (Austria, Belgium, Czechia, Denmark, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain) predominantly comprises countries with medium wholesale price volatility and relatively high energy and supply component prices due to a large share of fixed-price contracts, which carry a hedging premium.

32 Eurostat data on electricity price components for household consumers (nrg_pc_204_c).

33 The average 'energy and supply' prices reflect the mix of all contract types in each country, including dynamic and regulated contracts, with a higher share of these contracts tending to lower the average price.

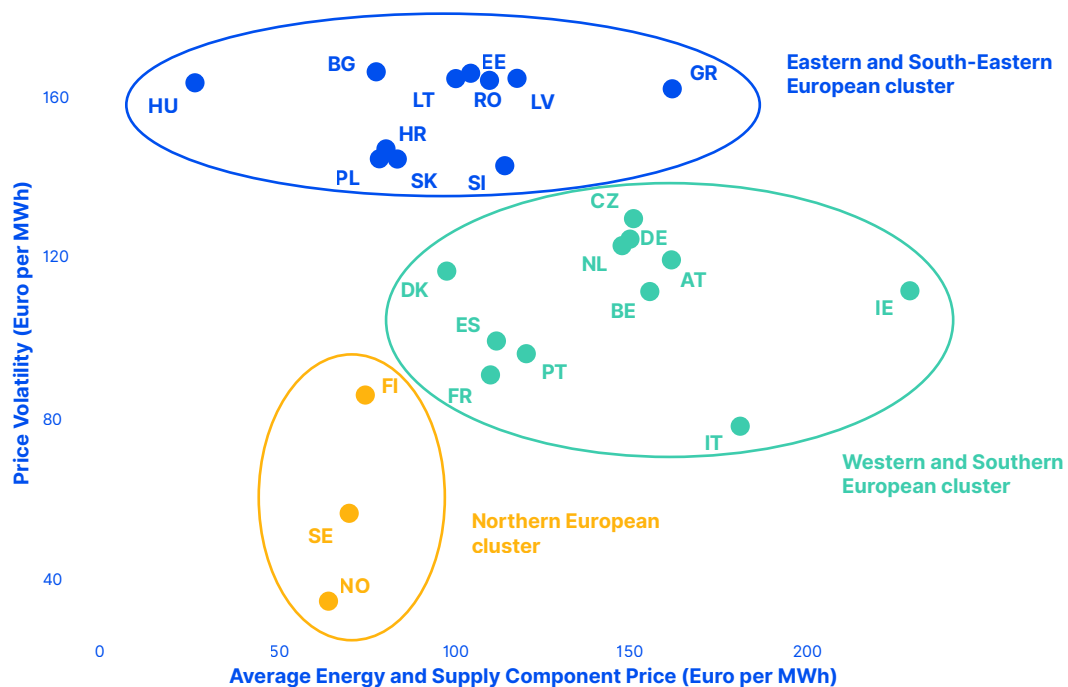
34 According to responses to ACER's national regulatory authority questionnaire, nine countries (Austria, Bulgaria, Croatia, Cyprus, France, Hungary, Ireland, Malta, Spain) report that no or not all suppliers with more than 200 000 customers offered dynamic-price contracts to household consumers in 2025 in their respective countries despite Directive (EU) 2019/944 establishing this consumer right.

35 In practice, suppliers include a supply cost covering administration, billing and risk management, which reduces the potential gains for consumers. These supply-related costs vary among countries and suppliers. For example, [Tibber](#) – a Nordic energy company that allows consumers to purchase electricity at wholesale prices – charges a standing fee of approximately EUR 6 per month, or EUR 72 per year.

- The northern European cluster (Finland, Norway and Sweden) predominantly comprises countries with relatively low wholesale price volatility and relatively low energy and supply component prices due to a large share of flexible contracts, which already track wholesale prices relatively closely.
- The eastern and south-eastern European cluster (Bulgaria, Croatia, Estonia, Greece, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia) predominantly comprises countries with relatively high wholesale price volatility and relatively low energy and supply component prices due to a large share of regulated contracts.

For simplicity, throughout the chapter, the clusters are called 'western and southern Europe', 'northern Europe' and 'eastern and south-eastern Europe'.³⁶

Figure 21: Clustering of three distinct geographical areas based on average wholesale price volatility and average retail energy and supply component price



Source: ACER calculation based on data from the ENTSO-E Transparency Platform.

36 Germany and Luxembourg are treated as a single market in this analysis, as they share the same bidding zone and therefore the same wholesale price curve. Combined with the use of EU-average example household load profiles, this means the modelled results for the two countries are identical.

Results

90 Figure 22 presents the potential benefits for the base household in 2025, breaking down the supply contract structure effect and the behavioural effect separately.³⁷ Figure 23 shows the flexibility potential of the behavioural effect for each analysed household type in 2025. Figure 24 shows the changes in the combined supply structure and behavioural effects in 2020–2025. For simplicity, results are presented by cluster, with distinctions by household type where relevant, with the base household serving as the default representation. Detailed country-specific results for each household type are provided in Table 3 (base household), Table 4 (HP household), Table 5 (EV household) and Table 6 (EV + HP household) in the Annex. Results are depicted as shares of the final annual electricity bill as well as in absolute numbers.³⁸

91 The results reveal three key takeaways.

Takeaway 1: households largely benefited from flexibility in 2025, with both the contract structure and behavioural effects contributing to potential savings

92 Figure 22 shows that the combined impact of flexibility – the supply contract structure effect plus the behavioural effect – is positive for the base household in all three clusters. However, the size of the benefit differs sharply by region and ranges from 23 % (EUR 213) of the annual electricity bill in the western and southern European cluster to 8 % (EUR 47) in the eastern and south-eastern European cluster. Breaking the combined effect down into its two components shows that the drivers of flexibility benefits differ markedly by region.

93 The supply contract structure effect – the impact of switching from the average flat contract (the market-average benchmark, not a specific contract) to a dynamic contract – shows a relatively large positive impact for the base household in the western and southern European cluster. Many households remain on fixed-price contracts and pay the hedging premiums built into them.³⁹ Consequently, switching to a dynamic-price contract unlocks the largest potential gains. In the eastern and south-eastern European cluster, by contrast, many households remain on regulated, subsidised prices that sit below actual market energy costs, making a switch to a dynamic price more expensive. Meanwhile, many households in the northern European cluster are already on flexible contracts, leaving more moderate benefits from contract switching than in the western and southern European cluster, since retail market prices there are already close to wholesale prices.

94 For the base household, this effect is worth 19 % of the annual electricity bill (EUR 174) in the western and southern European cluster and 12 % (EUR 86) in the northern European cluster, but costs 1 % of the annual electricity bill in the eastern and south-eastern European cluster.⁴⁰ This pattern holds across all household types analysed: the effect ranges from 14–19 % in the western and southern European cluster, through 10–12 % in the northern European cluster, to –1 % to –10 % in the eastern and south-eastern European cluster.

37 For further detail on the definitions and methodology underlying the supply contract structure and behavioural effects, see ACER's methodology, p. 36.

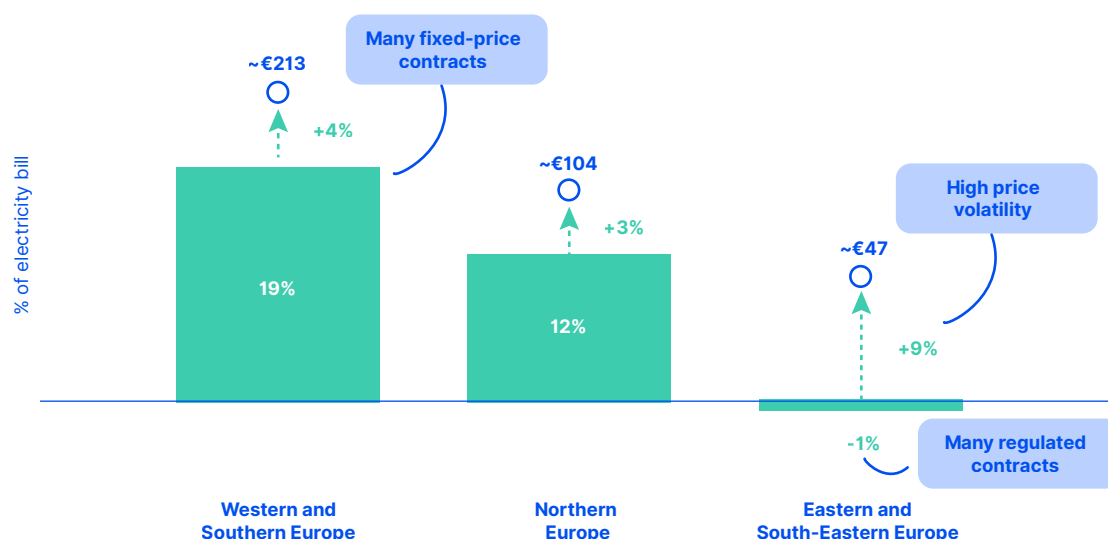
38 The overall electricity bill figures used for this comparison reflect the average retail price for the 2 500–5 000 kWh/year consumption band (Eurostat, nrg_pc_204), including taxes, subsidies and rebates. The same consumption band is used for the energy and supply component price, ensuring all household types are compared against consistent reference prices.

39 See Section 1.1 for the corresponding retail markup analysis, which shows the same regional pattern: positive markups concentrated in northern, western and southern Europe and negative markups concentrated in eastern and south-eastern Europe.

40 Note that absolute and relative figures diverge across clusters, since the average electricity bill level differs by country; the same saving in euro may represent a different share of the bill depending on that baseline.

- 95 The behavioural effect – whereby consumers on dynamic contracts move their usage towards lower-priced hours – provides additional benefits beyond the supply contract structure effect. In the eastern and south-eastern European cluster, this effect flips the combined impact from negative to positive.
- 96 The behavioural shift effect tracks wholesale-price volatility directly: average daily price swings in 2025 were 57.7 EUR/MWh in northern Europe, 108.5 EUR/MWh in western and southern Europe and 156.6 EUR/MWh in eastern and south-eastern Europe. The more a region's wholesale price swings within a day, the more there is to gain from shifting consumption to cheaper hours. Accordingly, the behavioural effect for the base household is largest in eastern and south-eastern Europe, at 9 % (EUR 55) annually, compared with 4 % (EUR 39) in the western and southern European cluster and 3 % (EUR 39) in the northern European cluster, in addition to the contract structure savings above.

Figure 22: Estimated flexibility benefits from contract structure and behavioural effects on the electricity bill, by cluster, 2025 (base household)



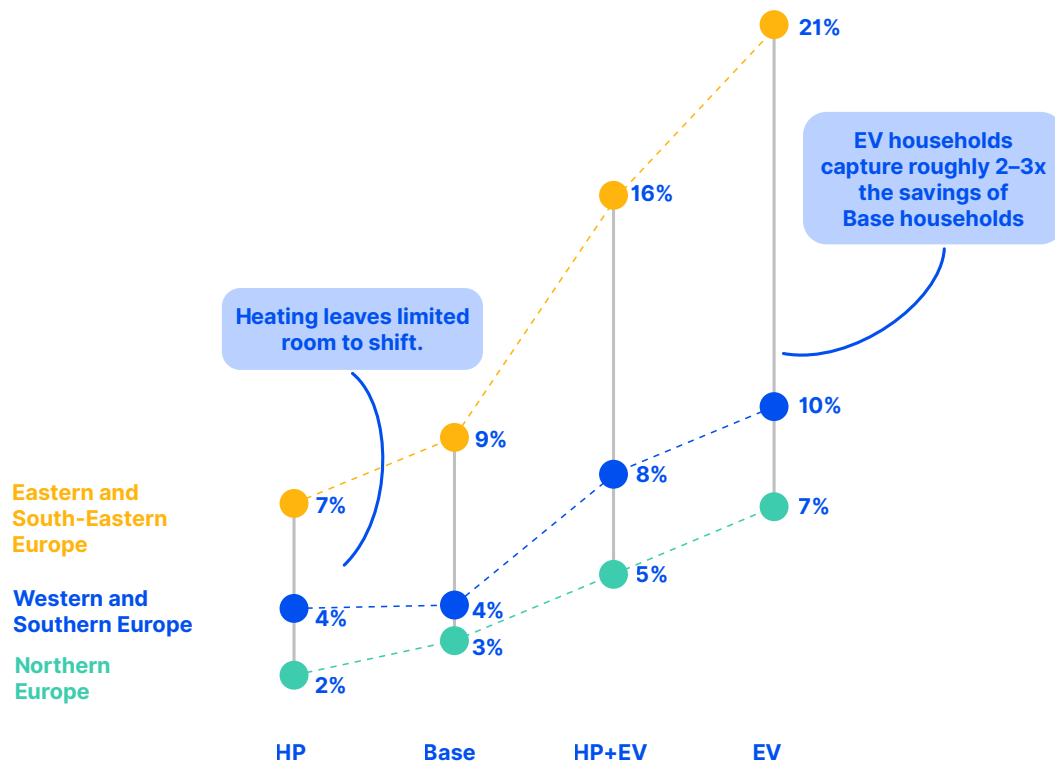
Source: ACER calculation based on the methodology provided and wholesale price data from the ENTSO-E Transparency Platform.

Takeaway 2: appliance-level shiftability determines how much of the flexibility potential a household can actually capture

- 97 While volatility sets the size of the opportunity, capturing it depends on how much of a household's consumption can actually be shifted to cheaper hours. The base household has few appliances it can shift; other household types, explored next, offer very different flexibility options that change the size of the behavioural effect considerably.
- 98 Figure 23 illustrates the saving potential for all four household types analysed, showing that the ability to shift consumption strongly shapes the outcome: while benefits for the base household remain limited, the EV household's relative gains are more than double in each cluster.
- 99 In the eastern and south-eastern European cluster, shifting consumption hours with a dynamic contract is worth up to 21 % of the final annual electricity bill for an EV household (EUR 279), compared with 10 % (EUR 204) in the western and southern European cluster and 7 % (EUR 102) in the northern European cluster – well above the 3–9 % for the base household. These large gains stem from the large amount of EV consumption that can be relatively freely shifted, not just to night-time hours but also to weekend days, when prices are lowest, on average.

100 A heat pump household, by contrast, has much less room to shift: heating can only be shifted by a few hours without a loss of comfort. This constraint shows up clearly in the figure. Shifting consumption yields more modest benefits of 2–7 % of the annual electricity bill, depending on the cluster. As with the other results in this chapter, this range depends strongly on the underlying assumptions.⁴¹

Figure 23: Estimated financial benefits from behavioural effect, by household flexibility and cluster, 2025



Note: The percentage is relative to each household's estimated total electricity bill. Therefore, higher-consumption households with limited additional shiftability may show a smaller percentage benefit than households with less overall consumption but more shiftable load.

Source: ACER calculation based on the methodology provided and wholesale price data from the ENTSO-E Transparency Platform.

41 Other sources, which account for network tariffs and reduced overall energy use alongside wholesale price shifting, point to substantially larger gains from smart heat pump control. For example, a 2025 Swedish study ([RISE, 'När elbilen flyttar in!'](#)) found that coordinated control of heat pumps and EV charging could reduce a household's total annual electricity costs by up to SEK 5 000, with roughly two thirds of the saving coming from avoided network power tariffs and one third from shifting to cheaper price hours. Separately, Ngenic (['Ngenic Tune minskar energibehovet mest när vintern släpper taget'](#), Ngenic website, 3 June 2026), found average energy savings of 11–21% depending on the season, driven partly by reduced overall energy use rather than price shifting alone. These figures are not directly comparable with the results in this chapter, as they capture network tariff and energy efficiency effects that fall outside its scope, but they illustrate that a household's realisable flexibility benefit can be considerably larger once these additional effects are taken into account.

Takeaway 3: the 2022 crisis left a lasting mark on potential flexibility gains

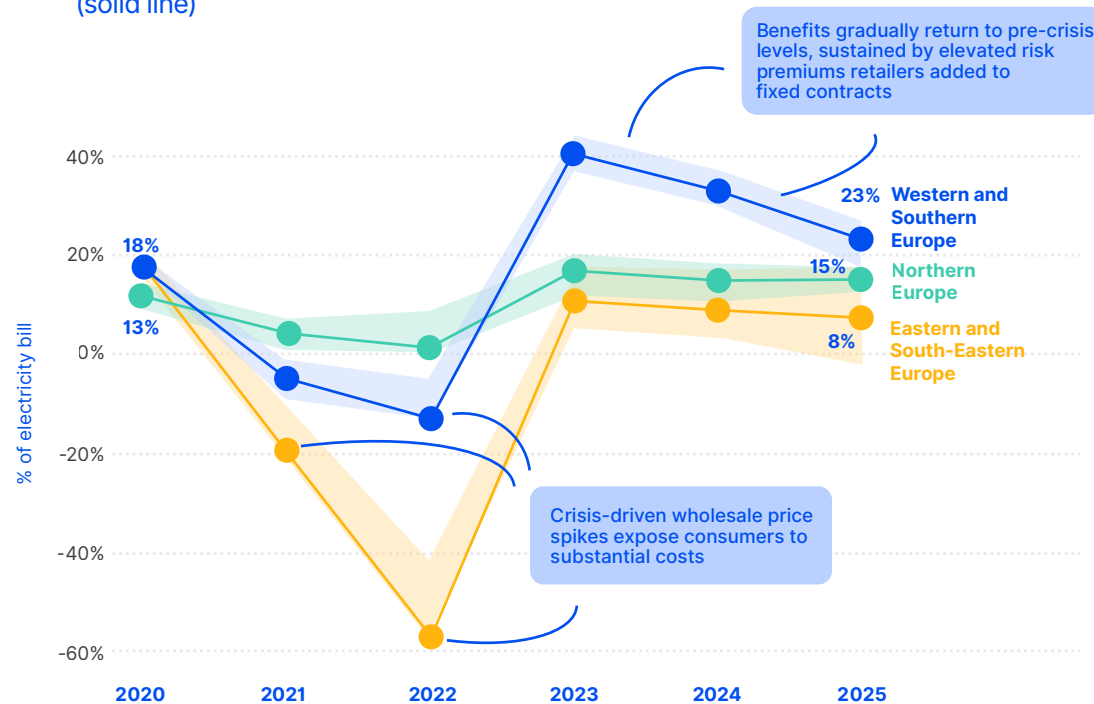
- 101 Figure 24 shows the impact of the 2022 energy crisis on the combined flexibility benefit: all three clusters swing sharply, with the eastern and south-eastern European cluster affected the most, where the combined estimated benefit for the base household fell to –57 % of the electricity bill.
- 102 This decline was driven by the supply contract structure effect. As wholesale prices spiked roughly six- to sevenfold between 2020 and 2022 (e.g. from 33 EUR/MWh to 235 EUR/MWh in the western and southern European cluster, and from 38 EUR/MWh to 245 EUR/MWh in the eastern and south-eastern European cluster), dynamic contracts briefly became far more expensive than prevailing non-flexible contracts, because dynamic contracts pass through wholesale price movements to consumers in near real time, whereas fixed-price contracts had locked in rates before the spike and continued to shield consumers from it, at least until those contracts came up for renewal.⁴² This turned the contract structure effect sharply negative during the crisis.
- 103 The behavioural effect moved in the opposite direction: the same price spike also widened intraday volatility – average daily price swings roughly doubled from 2021 to 2022 across all three clusters (from 51.1 EUR/MWh to 127.0 EUR/MWh in the northern European cluster, from 75.5 EUR/MWh to 164.6 EUR/MWh in the western and southern European cluster and from 81.8 EUR/MWh to 210.8 EUR/MWh in the eastern and south-eastern European cluster) – making the behavioural effect unusually large and positive during the crisis. This gain, however, was not large enough to offset the much larger costs from the supply contract structure effect.
- 104 Comparing 2025 with pre-crisis levels shows that, in the example of the base household, the combined flexibility benefit has recovered to, and even exceeded, its pre-crisis level in the western and southern European and northern European clusters, while it remains below its pre-crisis level in the eastern and south-eastern European cluster. In the western and southern European cluster, the combined benefit rose from 18 % of the annual electricity bill in 2020 to 23 % in 2025, though this recovery was gradual rather than immediate. In the northern European cluster, the combined benefit rose from 13 % to 15 %. In the eastern and south-eastern European cluster, by contrast, the combined benefit fell from 18 % in 2020 to 8 % in 2025.⁴³
- 105 This divergence is driven primarily by the supply contract structure effect. In the northern European cluster, the effect has remained essentially unchanged, at 12 % of the annual electricity bill in both 2020 and 2025. In the western and southern European cluster, the effect rose sharply during the post-crisis years, from 17 % in 2020 to a peak of 36 % in 2023, before gradually easing back to 19 % in 2025, as the elevated hedging premiums retailers built into fixed-price contracts after the crisis have only slowly come down as those contracts are renewed. The eastern and south-eastern European cluster shows the opposite development. As discussed in Section 2.1, regulated and subsidised household prices in six countries sit below actual market energy costs, producing negative markups on average, resulting in a contract structure effect of –1 % in 2025. This was not the case in 2020, when the energy and supply component was on average higher than wholesale prices, delivering a gain of 15 % from switching.

42 Conversely, when wholesale prices decline sharply, this same lock-in mechanism works in the opposite direction: consumers on fixed-price contracts remain bound to their previously agreed (higher) rates and cannot immediately benefit from falling prices, whereas consumers on dynamic contracts see the price decrease passed through in near real time.

43 See Annex Tables 3–6 for detailed estimated benefits, split into the contract structure effect and the behavioural effect, for all four example households from 2020 to 2025, for each analysed country and cluster.

106 The behavioural effect, by contrast, has increased the gains from shifting consumption to lower-priced hours consistently across all three analysed clusters and in every individual Member State and Norway over the same period. For the base household, it rose from 2 % of the annual bill in 2020 to 4 % in 2025 in the western and southern European cluster, from 1 % to 3 % in the northern European cluster, and from 3 % to 9 % in the eastern and south-eastern European cluster, making active demand-side shifting a steadily more valuable source of savings.

Figure 24: Changes in estimated overall flexibility benefits, the combined contract structure and behavioural effects, 2020–2025, households analysed (range) including base household (solid line)



Source: ACER calculation based on the methodology provided and wholesale price data from the ENTSO-E Transparency Platform.

2.3. Conclusions

- 107 Despite the importance of demand-side flexibility to the energy transition and its cost-saving potential for consumers, many household consumers remain passive.⁴⁴ As a result, a large share of electricity demand remains untapped potential for demand-side flexibility.
- 108 Fixed-price contracts continue to predominate in many Member States today. While they shield consumers from market volatility, this comes at a cost: consumers on fixed-price contracts can also be locked into higher prices when wholesale prices fall, and, more importantly for the transition, such contracts block the price signals needed to nudge consumers towards more flexible behaviour. Often this is not a real choice, as the offer diversity may have diminished since the crisis, and ultimately that lack of true choice can impede progress on decarbonising the energy system in a cost-efficient way when consumers miss out on incentives to use power when it is cheapest and greenest.⁴⁵
- 109 Looking ahead to 2030, with variable renewables approaching approximately 50 % of electricity generation, these lower-priced opportunities will expand further as midday solar generation become more frequent. However, price spikes will not disappear, and extreme events may still occur. Flexible products should therefore come with built-in guardrails, such as time-of-use contracts, while consumers on dynamic contracts should either be regularly informed about the best or worst time to consume electricity or have automation in place to avoid consumption during peak price periods and to enable access to lower prices.
- 110 Flexible and dynamic pricing models will be essential in meeting the diverse needs of consumers and the power system. However, not all consumers can adapt to frequent changes in pricing or consumption patterns. It is important to recognise that consumers need broad choice: it should not simply be a choice between a fixed-price contract and a full dynamic-price contract.
- 111 While EU law ensures electricity consumers have the right to a fixed-price, fixed-term contract or a full dynamic-price contract, electricity suppliers may innovate their products to match them with diverging consumer interests. Where barriers to supply innovation or market transparency exist, policymakers must take action to remove these barriers in the interest of consumers.
- 112 Finally, enhanced monitoring of contracts held by consumers in both the household and non-household sectors is essential to monitor effective market impacts on consumers, flexibility potentials and, over time, contract and service innovation across Europe. More complete and comparable information on the contracts consumers hold, rather than those simply offered, enables the assessment of the price signals and market exposure that consumers face and whether available choices continue to meet their needs as electricity uses change.

44 While the report focuses on household consumers, it is important to note that the non-household sector accounts for a larger share of demand. This implies a greater potential for demand-side flexibility, suggesting that initiatives to promote demand-side flexibility should also target non-household consumers.

45 Fixed-price contracts may also carry other indirect effects on network tariffs, flexibility investment and how costs are shared among consumers, which are not further explored in this report.

Annex

Table 1: Values used to build the affordability and expenditure charts, electricity (top) and gas (bottom), 2025

Electricity			
Country	Median income (EUR)	Unit price (EUR/MWh)	Average consumption (MWh)
AT	56 142	313	3.124
BE	48 082	357	2.634
BG	13 618	132	2.925
CY	37 016	300	3.969
CZ	24 065	313	3.025
DE	41 662	402	2.330
DK	50 484	294	3.269
GR	19 076	253	2.942
ES	34 149	284	2.627
FI	41 486	191	7.996
FR	39 400	255	4.180
HR	25 967	170	2.946
HU	13 930	113	2.061
IE	62 254	328	4.030
IT	33 892	351	1.892
LT	18 845	212	1.935
LU	79 238	261	3.523
NO	60 528	119	13.333
PL	26 247	275	2.018
PT	23 584	259	2.563
RO	13 750	234	1.612
SE	41 208	217	7.326
SI	33 286	196	4.302

Gas			
Country	Median income (EUR)	Unit price (EUR/MWh)	Average consumption (MWh)
AT	56 142	125	13.677
BE	48 082	92	11.167
BG	13 618	71	7.673
CZ	24 065	104	8.352
DE	41 662	122	19.192
DK	50 484	135	21.142
EE	25 529	81	7.222
GR	19 076	91	8.529
ES	34 149	93	3.987
FR	39 400	141	9.294
HR	25 967	51	10.324
HU	13 930	32	11.238
IE	62 254	126	8.468
IT	33 892	137	7.113
LT	18 845	72	4.064
LU	79 238	91	27.497
LV	21 129	105	6.252
NL	51 447	170	19.265
PL	26 247	94	7.957
PT	23 584	152	2.180
RO	13 750	56	8.261
SI	33 286	86	8.609

Markup methodology

This annex contains a short description of the methodology used for the construction of country-level markups for electricity and natural gas. The description encompasses the context and justification of the methodology, the used data and the followed analytical steps.

Context

The previous version of the markup methodology applied by ACER dates from 2015. At the time, a separate strategy was developed for each commodity due to the essential differences between the electricity and the gas markets. However, both the data landscape and the main characteristics of the markets differed considerably from the current situation in three ways. First, the Dutch Title Transfer Facility (TTF) was not yet consolidated as the main European trading hub for gas, something that has only taken off after 2019 (Heather 2025⁴⁶). Second, the availability of standardised national data on retail prices was limited, with Eurostat only starting to offer semestrial retail price statistics per country from 2017. Third, wholesale price data collected through the Regulation on Energy Market Integrity and Transparency (REMIT) was not yet available.

Taking the above into account, the old methodology for the markup calculation is currently being revamped by ACER on a progressive basis, in which Eurostat and REMIT data take a central role. The developments affect electricity and gas in separate ways:

- a) For electricity, the procedure underpinning the methodology is considered robust enough, so that only the sources have been updated, with REMIT data now being used to calculate wholesale prices.
- b) For gas, the methodology is being simplified to account for the growing importance of TTF, so in addition to the use of REMIT data the way in which the referential procurement strategy is constructed has been simplified. As said above, this calculation will be further refined.

Calculation of electricity markup

The electricity retail mark-up follows the methodology set out in Annex 1 of ACER's 2014 Market Monitoring Report,⁴⁷ incorporating all consumption bands. The underlying methodology remains unchanged, while wholesale price inputs have been updated using REMIT data.

Calculation of natural gas markup

The gas markup includes the following components:

- a) Retail prices. The energy component of the household gas prices (reported as "energy supply") is extracted from the relevant Eurostat table (nrg_pc_202). This ensures that all price components that vary from member state to member state are excluded from the comparison.

46 https://www.oxfordenergy.org/wpcms/wp-content/uploads/2025/06/NG198-European-Traded-Gas-Hubs.pdf?utm_source=research.massifcap.com&utm_medium=referral&utm_campaign=real-asset-chartbook-week-10

47 https://acer.europa.eu/sites/default/files/documents/Publications/ACER_Market_Monitoring_Report_2014.pdf

b) Wholesale prices. The wholesale prices are calculated using a referential procurement strategy. Ideally, the traded gas prices per supplier should be weighed with the volumes they traded, and aggregated per country. This is however not realistic due to the fact that the REMIT data is still lacking in quality, especially for the smaller hubs. Therefore, an alternative strategy was devised, in which the REMIT prices and volumes are calculated for a reference hub (TTF). The strategy is described in detail below.

Referential procurement strategy

Assumptions

The strategy assumes the following:

- a) Companies active in smaller hubs hedge in TTF.
- b) Spreads between smaller hubs and TTF move more or less together. The inclusion of these spreads is planned as one of the methodology refinements as mentioned above.
- c) Companies active in the wholesale market are also booking transportation capacity.

Data

The strategy used REMIT traded volumes and prices table 1 data, with delivery point TTF, for all trades conducted at all entities related to the two largest exchanges serving that point, i.e. the Intercontinental Exchange (ICE), which focuses on forward contracts, and the European Energy Exchange (EEX), where the largest share of spot products is traded. Several filters are applied to the data:

- a) Only futures, forward and spot products with physical delivery that are traded, leaving out options, spreads and swaps.
- b) Only orderbook trades are included, leaving out brokered, cleared, prearranged and registered trades.
- c) Only bought volumes are included (it should be noted, nevertheless, that the bought and sold volumes are largely in equilibrium).
- d) All market participants were included.⁴⁸

⁴⁸ Regarding the market participants included, two variations were initially tried out. In the first one, all market participants trading at ICE and EEX in the conditions described above were included. In the second one, only market participants (and beneficiaries) who have booked transportation capacity at least once in the period under analysis were included. This was done to filter out those companies doing exclusively financial trading (especially extra-EU companies), assuming that their strategies might be different than retail suppliers. This seems however not to be the case, as the prices do not significantly differ.

Calculation

The REMIT data were cleaned of illogical observations regarding trading dates, and only valid transactions as defined within the REMIT data exchange system were taken into account. The calculation using the filtered and cleaned data followed several steps:

a) Market segment and product classifications were developed following an algorithm that used a combination of exchanges' contract naming conventions, duration dates and time differences between the products' delivery dates and their procurements. The following segments were defined: forwards, spot within day, spot day ahead, spot hour, spot weekend, spot Saturday, spot Sunday, spot balancing, spot storage and other. For the purposes of the markup calculation, the product classification grouped all of the spot contracts as one category, and divided the forward segment into month ahead, quarter ahead, season ahead and year ahead.

b) In those cases where durations in hours were wrongly reported, a proxy duration was assigned: with spot weekend products lasting 48 hours, spot within-day, day-ahead, balancing, stored, other, Saturday, Sunday and individual day products lasting 24 hours, and spot hour products lasting 1 hour. The duration of forwards was well reported, with the exception of ICE's monthly futures, which were automatically assigned a duration of one month.⁴⁹

c) In the cases of on-standard products such as two-month contracts for February and March bought in December, these were grouped together with the most similar product (e.g. two-month contracts with month-ahead, three-month contracts with quarter ahead and five-month with season ahead). Balance-of-month products were grouped with month-ahead if their duration exceeded 0.5 months, and otherwise with day-ahead.⁵⁰

d) The classified data were further aggregated within the database to facilitate their export. First a simple average of the prices of all transactions belonging to each contract transacted on a specific day, for a specific delivery period was calculated. The volumes traded at that price, operationalized as the notional contract quantities (i.e. capacity multiplied by duration) were summed up.

e) The data were further grouped by month, with products lasting more than one month being spread in equal shares across the duration. For example, a season-ahead product going from November 2022 through March 2023 was divided by six, and each of those six parts was assigned to each month of the delivery. The prices and volumes were further aggregated following the same procedure as described in c).

f) The data were aggregated by semester and month, with a volume-weighted average calculated using the summed volumes per product (spot, month ahead, quarter ahead, season ahead, year ahead, forward other). It should be noted that the volume-weighted prices were largely similar to the non-weighted prices, with the exception of some semesters in the years 2022 and 2023.

g) The data were merged with the retail data to produce the markup.

49 A future improvement for the duration of within-day products is to calculate it as the difference between the time of transactions and the end of the gas day.

50 ICE gas daily futures, for which a certain day or month can be bought in advance regardless of the time to delivery, were classified as spot products if traded up to two days before delivery. Otherwise they were classified as "forward other".

Table 2: Assumptions regarding the example households' shiftable consumption and the typical and shifted time of consumption

Appliance / shiftable load	Typical time of consumption (before shifting)	Shifted time of consumption (after shifting)
Water heating ^(a) (640 kWh per year)	Weekdays: 06:00–09:00 and 17:00–23:00 Weekends: 06:00–23:00	02:00–04:00 and 12:00–14:00 (daily)
Laundry (240 kWh per year)	Weekdays: 17:00–23:00 Weekends: 06:00–23:00	02:00–04:00 (one weekday use) 12:00–14:00 (one weekend use)
Dishwasher (150 kWh per year)	Weekdays: 17:00–23:00 Weekends: 06:00–23:00	02:00–04:00 (daily)
Heat pump ^(b) (3 000 kWh per year)	Only in heating period (November–March) Weekdays: 06:00–09:00 and 17:00–23:00 Weekends: 06:00–23:00	04:00–06:00 and 15:00–17:00 (daily, November–March, before waking up and when coming back from work/school)
Electric vehicle ^(c) (3 500 kWh per year)	Weekdays: 06:00–09:00 and 17:00–23:00 Weekends: 06:00–23:00	02:00–04:00 (one weekday charge) 12:00–14:00 (one weekend charge)

^(a) We assume that the boiler can store hot water for several hours, meaning two uses per day are sufficient.

^(b) The medium use of a two- to three-person household with a heat pump, according to [Octopus Energy](#), is 3 000 kWh per year. We assume a pre-heating/pre-cooling strategy in a well-insulated building, enabling room temperatures to be maintained for long periods without the need for continuous heating or cooling. Assumptions regarding the demand-side flexibility of the heat pump are taken from [Nesta](#). These include a pre-heating phase of two hours, followed by a flexibility period of two hours during which the heat pump can be switched off. A normal level of energy consumption follows the flexibility period. The electricity use and the shiftable of heat pump operation depend on factors such as house efficiency, room size, type of heat pump and storage options. In the modelling, a simplification is applied with two flexibility periods: during the morning and evening peak wholesale price hours, when the device is switched off. Heat pump consumption is primarily for heating during the heating season. For the modelling, heat pump usage is assumed to take place during active household hours from November to March.

^(c) We assume that the EV is driven 15 000 km per year and uses around 20 kWh per 100 km. The EV is primarily used for commuting, short weekend trips and shorter daily distances such as shopping or leisure activities.

Note: In the modelling, household appliances are assumed to be used evenly across the specified time periods throughout the year. This does not mean they are operated continuously or every day within those periods. In the modelling, no leave days or holidays are considered.

Source: ACER assumptions.

Table 3: Estimated cost savings for base household (3 000 kWh) of a change in contract and change in consumption behaviour per country and cluster between 2020 and 2025 (EUR and relative to estimated annual electricity bill)

Country/ cluster	2020		2021		2022		2023		2024		2025	
	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour
Eastern and south-eastern Europe	EUR 61 (15 %)	EUR 13 (3 %)	- EUR 116 (- 26 %)	EUR 31 (7 %)	- EUR 408 (- 72 %)	EUR 86 (15 %)	EUR 19 (3 %)	EUR 44 (7 %)	- EUR 2 (0 %)	EUR 55 (10 %)	- EUR 8 (- 1 %)	EUR 55 (9 %)
BG	EUR 46 (11 %)	EUR 14 (3 %)	- EUR 155 (- 35 %)	EUR 38 (9 %)	- EUR 618 (- 109 %)	EUR 105 (18 %)	- EUR 158 (- 27 %)	EUR 52 (9 %)	- EUR 119 (- 21 %)	EUR 71 (12 %)	- EUR 99 (- 16 %)	EUR 64 (11 %)
EE	EUR 26 (6 %)	EUR 14 (3 %)	- EUR 41 (- 9 %)	EUR 30 (7 %)	- EUR 207 (- 36 %)	EUR 87 (15 %)	EUR 55 (9 %)	EUR 45 (8 %)	EUR 56 (10 %)	EUR 54 (9 %)	EUR 56 (9 %)	EUR 57 (9 %)
GR	EUR 168 (40 %)	EUR 13 (3 %)	- EUR 4 (- 1 %)	EUR 33 (7 %)	EUR 161 (28 %)	EUR 89 (16 %)	EUR 387 (65 %)	EUR 48 (8 %)	EUR 159 (28 %)	EUR 60 (11 %)	EUR 166 (28 %)	EUR 62 (10 %)
HR	EUR 56 (14 %)	EUR 13 (3 %)	- EUR 179 (- 40 %)	EUR 31 (7 %)	- EUR 640 (- 113 %)	EUR 83 (15 %)	- EUR 108 (- 18 %)	EUR 44 (7 %)	- EUR 81 (- 14 %)	EUR 54 (9 %)	- EUR 84 (- 14 %)	EUR 52 (9 %)
HU	- EUR 15 (- 4 %)	EUR 14 (3 %)	- EUR 248 (- 56 %)	EUR 37 (8 %)	- EUR 754 (- 133 %)	EUR 88 (16 %)	- EUR 239 (- 40 %)	EUR 46 (8 %)	- EUR 241 (- 42 %)	EUR 65 (11 %)	- EUR 257 (- 43 %)	EUR 58 (10 %)
LT	EUR 37 (9 %)	EUR 13 (3 %)	- EUR 131 (- 29 %)	EUR 30 (7 %)	- EUR 396 (- 70 %)	EUR 88 (16 %)	EUR 129 (22 %)	EUR 45 (8 %)	EUR 65 (11 %)	EUR 52 (9 %)	EUR 30 (5 %)	EUR 56 (9 %)
LV	EUR 62 (15 %)	EUR 13 (3 %)	- EUR 59 (- 13 %)	EUR 29 (7 %)	- EUR 229 (- 40 %)	EUR 89 (16 %)	EUR 243 (41 %)	EUR 44 (7 %)	EUR 120 (21 %)	EUR 52 (9 %)	EUR 82 (14 %)	EUR 56 (9 %)
PL	- EUR 2 (0 %)	EUR 6 (1 %)	- EUR 134 (- 30 %)	EUR 16 (4 %)	- EUR 359 (- 63 %)	EUR 56 (10 %)	- EUR 179 (- 30 %)	EUR 28 (5 %)	- EUR 115 (- 20 %)	EUR 40 (7 %)	- EUR 86 (- 14 %)	EUR 44 (7 %)
RO	EUR 61 (15 %)	EUR 15 (4 %)	- EUR 134 (- 30 %)	EUR 42 (9 %)	- EUR 307 (- 54 %)	EUR 103 (18 %)	- EUR 75 (- 13 %)	EUR 52 (9 %)	- EUR 104 (- 18 %)	EUR 73 (13 %)	- EUR 7 (- 1 %)	EUR 64 (11 %)
SI	EUR 78 (19 %)	EUR 12 (3 %)	- EUR 155 (- 35 %)	EUR 31 (7 %)	- EUR 588 (- 103 %)	EUR 80 (14 %)	- EUR 5 (- 1 %)	EUR 41 (7 %)	EUR 37 (7 %)	EUR 50 (9 %)	EUR 19 (3 %)	EUR 50 (8 %)
SK	EUR 94 (23 %)	EUR 12 (3 %)	- EUR 133 (- 30 %)	EUR 30 (7 %)	- EUR 570 (- 100 %)	EUR 86 (15 %)	- EUR 66 (- 11 %)	EUR 42 (7 %)	- EUR 28 (- 5 %)	EUR 51 (9 %)	- EUR 67 (- 11 %)	EUR 49 (8 %)

Country/ cluster	2020		2021		2022		2023		2024		2025	
	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour
Northern Europe	EUR 63 (12 %)	EUR 6 (1 %)	EUR 10 (2 %)	EUR 16 (3 %)	- EUR 38 (- 6 %)	EUR 45 (7 %)	EUR 100 (15 %)	EUR 15 (2 %)	EUR 86 (13 %)	EUR 16 (2 %)	EUR 86 (12 %)	EUR 19 (3 %)
FI	EUR 71 (17 %)	EUR 12 (3 %)	- EUR 60 (- 13 %)	EUR 25 (6 %)	- EUR 212 (- 37 %)	EUR 73 (13 %)	EUR 141 (24 %)	EUR 19 (3 %)	EUR 117 (20 %)	EUR 24 (4 %)	EUR 93 (15 %)	EUR 26 (4 %)
NO	EUR 48 (12 %)	EUR 1 (0 %)	EUR 48 (11 %)	EUR 7 (2 %)	EUR 55 (10 %)	EUR 22 (4 %)	EUR 68 (12 %)	EUR 10 (2 %)	EUR 59 (10 %)	EUR 9 (2 %)	EUR 66 (11 %)	EUR 11 (2 %)
SE	EUR 69 (17 %)	EUR 6 (1 %)	EUR 42 (10 %)	EUR 14 (3 %)	EUR 42 (7 %)	EUR 40 (7 %)	EUR 92 (15 %)	EUR 16 (3 %)	EUR 82 (14 %)	EUR 14 (3 %)	EUR 98 (16 %)	EUR 19 (3 %)
Western and southern Europe	EUR 114 (17 %)	EUR 12 (2 %)	- EUR 64 (- 9 %)	EUR 30 (4 %)	- EUR 177 (- 21 %)	EUR 68 (8 %)	EUR 341 (36 %)	EUR 36 (4 %)	EUR 265 (29 %)	EUR 34 (4 %)	EUR 174 (19 %)	EUR 39 (4 %)
AT	EUR 117 (28 %)	EUR 12 (3 %)	- EUR 104 (- 23 %)	EUR 30 (7 %)	- EUR 456 (- 80 %)	EUR 71 (13 %)	EUR 306 (52 %)	EUR 38 (6 %)	EUR 350 (61 %)	EUR 36 (6 %)	EUR 180 (30 %)	EUR 42 (7 %)
BE	EUR 137 (33 %)	EUR 13 (3 %)	- EUR 66 (- 15 %)	EUR 35 (8 %)	- EUR 58 (- 10 %)	EUR 84 (15 %)	EUR 397 (67 %)	EUR 41 (7 %)	EUR 254 (44 %)	EUR 38 (7 %)	EUR 211 (35 %)	EUR 43 (7 %)
CZ	EUR 121 (29 %)	EUR 11 (3 %)	- EUR 16 (- 4 %)	EUR 29 (7 %)	- EUR 388 (- 68 %)	EUR 80 (14 %)	EUR 246 (42 %)	EUR 38 (6 %)	EUR 230 (40 %)	EUR 40 (7 %)	EUR 154 (26 %)	EUR 44 (7 %)
DE	EUR 78 (19 %)	EUR 13 (3 %)	- EUR 56 (- 13 %)	EUR 31 (7 %)	- EUR 328 (- 58 %)	EUR 82 (14 %)	EUR 307 (52 %)	EUR 40 (7 %)	EUR 256 (45 %)	EUR 40 (7 %)	EUR 173 (29 %)	EUR 44 (7 %)
DK	EUR 40 (10 %)	EUR 11 (3 %)	- EUR 46 (- 10 %)	EUR 27 (6 %)	EUR 74 (13 %)	EUR 75 (13 %)	EUR 237 (40 %)	EUR 33 (6 %)	EUR 108 (19 %)	EUR 34 (6 %)	EUR 40 (7 %)	EUR 39 (7 %)
ES	EUR 58 (14 %)	EUR 7 (2 %)	EUR 51 (11 %)	EUR 22 (5 %)	EUR 13 (2 %)	EUR 37 (7 %)	EUR 125 (21 %)	EUR 29 (5 %)	EUR 142 (25 %)	EUR 26 (5 %)	EUR 136 (23 %)	EUR 36 (6 %)
FR	EUR 111 (27 %)	EUR 11 (3 %)	- EUR 117 (- 26 %)	EUR 35 (8 %)	- EUR 545 (- 96 %)	EUR 77 (14 %)	EUR 111 (19 %)	EUR 39 (7 %)	EUR 278 (49 %)	EUR 35 (6 %)	EUR 139 (23 %)	EUR 40 (7 %)
IE	EUR 205 (49 %)	EUR 15 (4 %)	- EUR 55 (- 12 %)	EUR 38 (8 %)	- EUR 5 (- 1 %)	EUR 57 (10 %)	EUR 777 (131 %)	EUR 33 (6 %)	EUR 564 (99 %)	EUR 34 (6 %)	EUR 334 (56 %)	EUR 40 (7 %)
IT	EUR 154 (37 %)	EUR 14 (3 %)	- EUR 43 (- 10 %)	EUR 28 (6 %)	- EUR 220 (- 39 %)	EUR 76 (13 %)	EUR 324 (55 %)	EUR 38 (6 %)	EUR 207 (36 %)	EUR 34 (6 %)	EUR 191 (32 %)	EUR 32 (5 %)

Country/ cluster	2020		2021		2022		2023		2024		2025	
	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour
NL	EUR 134 (32 %)	EUR 12 (3 %)	- EUR 78 (- 18 %)	EUR 33 (7 %)	- EUR 134 (- 24 %)	EUR 85 (15 %)	EUR 495 (84 %)	EUR 44 (7 %)	EUR 277 (49 %)	EUR 40 (7 %)	EUR 177 (29 %)	EUR 44 (7 %)
PT	EUR 107 (26 %)	EUR 7 (2 %)	- EUR 122 (- 27 %)	EUR 22 (5 %)	- EUR 114 (- 20 %)	EUR 37 (6 %)	EUR 334 (56 %)	EUR 27 (5 %)	EUR 213 (37 %)	EUR 24 (4 %)	EUR 158 (26 %)	EUR 33 (5 %)

Source: Estimates based on ACER assumptions and calculations including wholesale-price data from ENTSO-E Transparency Platform and energy and supply costs from Eurostat.

Table 4: Estimated cost savings for heat pump household (6 000 kWh) of a change in contract and change in consumption behaviour per country and cluster between 2020 and 2025 (EUR and relative to estimated annual electricity bill)

Country/ cluster	2020		2021		2022		2023		2024		2025	
	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour
Eastern and south-eastern Europe	EUR 100 (12 %)	EUR 24 (3 %)	- EUR 285 (- 32 %)	EUR 60 (7 %)	- EUR 758 (- 67 %)	EUR 143 (13 %)	- EUR 19 (- 2 %)	EUR 75 (6 %)	- EUR 4 1 (- 4 %)	EUR 78 (7 %)	- EUR 1 14 (- 9 %)	EUR 87 (7 %)
BG	EUR 61 (7 %)	EUR 28 (3 %)	- EUR 371 (- 42 %)	EUR 82 (9 %)	- EUR 1 211 (- 107 %)	EUR 188 (17 %)	- EUR 3 92 (- 33 %)	EUR 99 (8 %)	- EUR 2 90 (- 25 %)	EUR 108 (9 %)	- EUR 3 19 (- 27 %)	EUR 116 (10 %)
EE	EUR 44 (5 %)	EUR 30 (4 %)	- EUR 129 (- 14 %)	EUR 64 (7 %)	- EUR 409 (- 36 %)	EUR 153 (13 %)	EUR 62 (5 %)	EUR 80 (7 %)	EUR 80 (7 %)	EUR 90 (8 %)	EUR 11 (1 %)	EUR 107 (9 %)
GR	EUR 294 (35 %)	EUR 32 (4 %)	- EUR 72 (- 8 %)	EUR 76 (9 %)	EUR 356 (31 %)	EUR 166 (15 %)	EUR 676 (57 %)	EUR 89 (8 %)	EUR 278 (24 %)	EUR 95 (8 %)	EUR 214 (18 %)	EUR 111 (9 %)
HR	EUR 85 (10 %)	EUR 22 (3 %)	- EUR 410 (- 46 %)	EUR 53 (6 %)	- EUR 1 208 (- 106 %)	EUR 129 (11 %)	- EUR 2 72 (- 23 %)	EUR 67 (6 %)	- EUR 1 97 (- 17 %)	EUR 65 (6 %)	- EUR 2 57 (- 21 %)	EUR 67 (6 %)
HU	- EUR 61 (- 7 %)	EUR 23 (3 %)	- EUR 552 (- 62 %)	EUR 57 (6 %)	- EUR 1 443 (- 127 %)	EUR 132 (12 %)	- EUR 5 37 (- 45 %)	EUR 67 (6 %)	- EUR 5 15 (- 45 %)	EUR 71 (6 %)	- EUR 6 12 (- 51 %)	EUR 73 (6 %)
LT	EUR 66 (8 %)	EUR 29 (4 %)	- EUR 314 (- 35 %)	EUR 68 (8 %)	- EUR 699 (- 61 %)	EUR 160 (14 %)	EUR 216 (18 %)	EUR 81 (7 %)	EUR 100 (9 %)	EUR 88 (8 %)	- EUR 4 0 (- 3 %)	EUR 105 (9 %)

Country/ cluster	2020		2021		2022		2023		2024		2025	
	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour
LV	EUR 117 (14 %)	EUR 29 (4 %)	- EUR 166 (- 19 %)	EUR 64 (7 %)	- EUR 368 (- 32 %)	EUR 159 (14 %)	EUR 446 (38 %)	EUR 79 (7 %)	EUR 210 (18 %)	EUR 88 (8 %)	EUR 64 (5 %)	EUR 104 (9 %)
PL	- EUR 7 (- 1 %)	EUR 9 (1 %)	- EUR 296 (- 33 %)	EUR 22 (2 %)	- EUR 681 (- 60 %)	EUR 69 (6 %)	- EUR 3 80 (- 32 %)	EUR 44 (4 %)	- EUR 2 41 (- 21 %)	EUR 48 (4 %)	- EUR 2 36 (- 20 %)	EUR 57 (5 %)
RO	EUR 89 (11 %)	EUR 32 (4 %)	- EUR 331 (- 37 %)	EUR 87 (10 %)	- EUR 572 (- 50 %)	EUR 190 (17 %)	- EUR 2 26 (- 19 %)	EUR 99 (8 %)	- EUR 2 55 (- 22 %)	EUR 109 (10 %)	- EUR 1 33 (- 11 %)	EUR 116 (10 %)
SI	EUR 127 (15 %)	EUR 21 (3 %)	- EUR 364 (- 41 %)	EUR 54 (6 %)	- EUR 1 103 (- 97 %)	EUR 125 (11 %)	- EUR 6 8 (- 6 %)	EUR 64 (5 %)	EUR 36 (3 %)	EUR 64 (6 %)	- EUR 4 8 (- 4 %)	EUR 66 (6 %)
SK	EUR 166 (20 %)	EUR 19 (2 %)	- EUR 323 (- 36 %)	EUR 49 (5 %)	- EUR 1 062 (- 93 %)	EUR 129 (11 %)	- EUR 1 91 (- 16 %)	EUR 65 (5 %)	- EUR 1 04 (- 9 %)	EUR 64 (6 %)	- EUR 2 33 (- 19 %)	EUR 63 (5 %)
Northern Europe	EUR 117 (11 %)	EUR 11 (1 %)	- EUR 18 (- 1 %)	EUR 33 (3 %)	- EUR 76 (- 6 %)	EUR 78 (6 %)	EUR 129 (10 %)	EUR 32 (2 %)	EUR 119 (9 %)	EUR 30 (2 %)	EUR 137 (10 %)	EUR 34 (2 %)
FI	EUR 136 (16 %)	EUR 24 (3 %)	- EUR 179 (- 20 %)	EUR 58 (7 %)	- EUR 419 (- 37 %)	EUR 128 (11 %)	EUR 212 (18 %)	EUR 45 (4 %)	EUR 168 (15 %)	EUR 52 (5 %)	EUR 153 (13 %)	EUR 51 (4 %)
NO	EUR 82 (10 %)	EUR 1 (0 %)	EUR 68 (8 %)	EUR 15 (2 %)	EUR 140 (12 %)	EUR 39 (3 %)	EUR 57 (5 %)	EUR 21 (2 %)	EUR 73 (6 %)	EUR 18 (2 %)	EUR 95 (8 %)	EUR 22 (2 %)
SE	EUR 134 (16 %)	EUR 8 (1 %)	EUR 57 (6 %)	EUR 25 (3 %)	EUR 50 (4 %)	EUR 67 (6 %)	EUR 119 (10 %)	EUR 29 (2 %)	EUR 117 (10 %)	EUR 21 (2 %)	EUR 164 (14 %)	EUR 30 (3 %)
Western and southern Europe	EUR 209 (15 %)	EUR 21 (2 %)	- EUR 180 (- 12 %)	EUR 53 (4 %)	- EUR 320 (- 19 %)	EUR 116 (7 %)	EUR 628 (33 %)	EUR 66 (3 %)	EUR 482 (27 %)	EUR 55 (3 %)	EUR 262 (14 %)	EUR 67 (4 %)
AT	EUR 216 (26 %)	EUR 20 (2 %)	- EUR 279 (- 31 %)	EUR 52 (6 %)	- EUR 833 (- 73 %)	EUR 112 (10 %)	EUR 553 (47 %)	EUR 60 (5 %)	EUR 638 (56 %)	EUR 51 (4 %)	EUR 263 (22 %)	EUR 58 (5 %)
BE	EUR 255 (31 %)	EUR 24 (3 %)	- EUR 205 (- 23 %)	EUR 61 (7 %)	- EUR 82 (- 7 %)	EUR 145 (13 %)	EUR 728 (61 %)	EUR 77 (6 %)	EUR 443 (39 %)	EUR 63 (6 %)	EUR 335 (28 %)	EUR 74 (6 %)
CZ	EUR 221 (27 %)	EUR 19 (2 %)	- EUR 90 (- 10 %)	EUR 49 (6 %)	- EUR 699 (- 61 %)	EUR 117 (10 %)	EUR 440 (37 %)	EUR 62 (5 %)	EUR 406 (36 %)	EUR 52 (5 %)	EUR 222 (18 %)	EUR 63 (5 %)
DE	EUR 143 (17 %)	EUR 22 (3 %)	- EUR 170 (- 19 %)	EUR 54 (6 %)	- EUR 580 (- 51 %)	EUR 127 (11 %)	EUR 567 (48 %)	EUR 67 (6 %)	EUR 472 (41 %)	EUR 56 (5 %)	EUR 264 (22 %)	EUR 65 (5 %)

Country/ cluster	2020		2021		2022		2023		2024		2025	
	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour
DK	EUR 76 (9 %)	EUR 17 (2 %)	- EUR 133 (- 15 %)	EUR 47 (5 %)	EUR 245 (22 %)	EUR 116 (10 %)	EUR 426 (36 %)	EUR 55 (5 %)	EUR 182 (16 %)	EUR 48 (4 %)	EUR 15 (1 %)	EUR 61 (5 %)
ES	EUR 97 (12 %)	EUR 17 (2 %)	EUR 64 (7 %)	EUR 55 (6 %)	- EUR 56 (- 5 %)	EUR 88 (8 %)	EUR 216 (18 %)	EUR 69 (6 %)	EUR 226 (20 %)	EUR 58 (5 %)	EUR 177 (15 %)	EUR 84 (7 %)
FR	EUR 203 (24 %)	EUR 24 (3 %)	- EUR 323 (- 36 %)	EUR 69 (8 %)	- EUR 1 004 (- 88 %)	EUR 142 (12 %)	EUR 153 (13 %)	EUR 76 (6 %)	EUR 470 (41 %)	EUR 66 (6 %)	EUR 165 (14 %)	EUR 82 (7 %)
IE	EUR 382 (46 %)	EUR 24 (3 %)	- EUR 119 (- 13 %)	EUR 52 (6 %)	- EUR 28 (- 2 %)	EUR 102 (9 %)	EUR 1 489 (126 %)	EUR 58 (5 %)	EUR 1 103 (97 %)	EUR 53 (5 %)	EUR 579 (48 %)	EUR 67 (6 %)
IT	EUR 279 (34 %)	EUR 26 (3 %)	- EUR 143 (- 16 %)	EUR 52 (6 %)	- EUR 336 (- 30 %)	EUR 124 (11 %)	EUR 573 (48 %)	EUR 70 (6 %)	EUR 396 (35 %)	EUR 54 (5 %)	EUR 317 (26 %)	EUR 51 (4 %)
NL	EUR 248 (30 %)	EUR 22 (3 %)	- EUR 213 (- 24 %)	EUR 52 (6 %)	- EUR 229 (- 20 %)	EUR 140 (12 %)	EUR 925 (78 %)	EUR 79 (7 %)	EUR 506 (44 %)	EUR 60 (5 %)	EUR 271 (23 %)	EUR 70 (6 %)
PT	EUR 195 (23 %)	EUR 13 (2 %)	- EUR 277 (- 31 %)	EUR 39 (4 %)	- EUR 301 (- 26 %)	EUR 60 (5 %)	EUR 646 (55 %)	EUR 47 (4 %)	EUR 378 (33 %)	EUR 40 (3 %)	EUR 238 (20 %)	EUR 54 (4 %)

Source: Estimates based on ACER assumptions and calculations including wholesale-price data from ENTSO-E Transparency Platform and energy and supply costs from Eurostat.

Table 5: Estimated cost savings for electric vehicles household (6 500 kWh) of a change in contract and change in consumption behaviour per country and cluster between 2020 and 2025 (in EUR and relative to estimated annual electricity bill)

Country/ cluster	2020		2021		2022		2023		2024		2025	
	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour
Eastern and south-eastern Europe	EUR 121 (13 %)	EUR 68 (8 %)	– EUR 279 (– 29 %)	EUR 165 (17 %)	– EUR 972 (– 79 %)	EUR 449 (36 %)	– EUR 5 (0 %)	EUR 234 (18 %)	– EUR 68 (– 5 %)	EUR 279 (23 %)	– EUR 84 (– 6 %)	EUR 279 (21 %)
BG	EUR 89 (10 %)	EUR 76 (8 %)	– EUR 371 (– 38 %)	EUR 189 (20 %)	– EUR 1 450 (– 118 %)	EUR 523 (42 %)	– EUR 400 (– 31 %)	EUR 270 (21 %)	– EUR 342 (– 28 %)	EUR 343 (28 %)	– EUR 299 (– 23 %)	EUR 315 (24 %)
EE	EUR 46 (5 %)	EUR 77 (9 %)	– EUR 116 (– 12 %)	EUR 163 (17 %)	– EUR 535 (– 43 %)	EUR 463 (38 %)	EUR 68 (5 %)	EUR 235 (18 %)	EUR 55 (4 %)	EUR 274 (22 %)	EUR 50 (4 %)	EUR 289 (22 %)
GR	EUR 350 (39 %)	EUR 65 (7 %)	– EUR 41 (– 4 %)	EUR 160 (17 %)	EUR 250 (20 %)	EUR 445 (36 %)	EUR 784 (61 %)	EUR 246 (19 %)	EUR 267 (22 %)	EUR 287 (23 %)	EUR 274 (21 %)	EUR 295 (23 %)
HR	EUR 111 (12 %)	EUR 69 (8 %)	– EUR 413 (– 43 %)	EUR 167 (17 %)	– EUR 1 466 (– 119 %)	EUR 444 (36 %)	– EUR 277 (– 22 %)	EUR 241 (19 %)	– EUR 233 (– 19 %)	EUR 279 (23 %)	– EUR 240 (– 18 %)	EUR 270 (21 %)
HU	– EUR 46 (– 5 %)	EUR 76 (8 %)	– EUR 570 (– 59 %)	EUR 192 (20 %)	– EUR 1 718 (– 139 %)	EUR 473 (38 %)	– EUR 563 (– 44 %)	EUR 248 (19 %)	– EUR 592 (– 48 %)	EUR 326 (26 %)	– EUR 622 (– 48 %)	EUR 298 (23 %)
LT	EUR 70 (8 %)	EUR 72 (8 %)	– EUR 311 (– 32 %)	EUR 163 (17 %)	– EUR 952 (– 77 %)	EUR 464 (38 %)	EUR 231 (18 %)	EUR 238 (19 %)	EUR 75 (6 %)	EUR 267 (22 %)	– EUR 6 (0 %)	EUR 285 (22 %)
LV	EUR 124 (14 %)	EUR 73 (8 %)	– EUR 155 (– 16 %)	EUR 159 (17 %)	– EUR 589 (– 48 %)	EUR 467 (38 %)	EUR 479 (37 %)	EUR 235 (18 %)	EUR 194 (16 %)	EUR 268 (22 %)	EUR 107 (8 %)	EUR 285 (22 %)
PL	– EUR 9 (– 1 %)	EUR 32 (4 %)	– EUR 302 (– 31 %)	EUR 80 (8 %)	– EUR 845 (– 69 %)	EUR 255 (21 %)	– EUR 417 (– 32 %)	EUR 150 (12 %)	– EUR 295 (– 24 %)	EUR 208 (17 %)	– EUR 242 (– 19 %)	EUR 228 (18 %)
RO	EUR 118 (13 %)	EUR 77 (9 %)	– EUR 329 (– 34 %)	EUR 210 (22 %)	– EUR 773 (– 63 %)	EUR 519 (42 %)	– EUR 220 (– 17 %)	EUR 271 (21 %)	– EUR 312 (– 25 %)	EUR 354 (29 %)	– EUR 98 (– 8 %)	EUR 317 (24 %)
SI	EUR 157 (17 %)	EUR 67 (7 %)	– EUR 361 (– 37 %)	EUR 167 (17 %)	– EUR 1 349 (– 110 %)	EUR 434 (35 %)	– EUR 52 (– 4 %)	EUR 230 (18 %)	EUR 28 (2 %)	EUR 262 (21 %)	– EUR 15 (– 1 %)	EUR 263 (20 %)
SK	EUR 193 (21 %)	EUR 63 (7 %)	– EUR 315 (– 33 %)	EUR 163 (17 %)	– EUR 1 316 (– 107 %)	EUR 467 (38 %)	– EUR 186 (– 14 %)	EUR 229 (18 %)	– EUR 115 (– 9 %)	EUR 267 (22 %)	– EUR 200 (– 15 %)	EUR 258 (20 %)

Country/ cluster	2020		2021		2022		2023		2024		2025	
	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour
Northern Europe	EUR 131 (12 %)	EUR 36 (3 %)	EUR 9 (1 %)	EUR 89 (7 %)	– EUR 123 (– 9 %)	EUR 250 (17 %)	EUR 204 (14 %)	EUR 91 (6 %)	EUR 170 (12 %)	EUR 91 (6 %)	EUR 165 (11 %)	EUR 102 (7 %)
FI	EUR 145 (16 %)	EUR 70 (8 %)	– EUR 150 (– 16 %)	EUR 143 (15 %)	– EUR 524 (– 43 %)	EUR 394 (32 %)	EUR 288 (22 %)	EUR 114 (9 %)	EUR 227 (18 %)	EUR 134 (11 %)	EUR 172 (13 %)	EUR 141 (11 %)
NO	EUR 104 (12 %)	EUR 5 (1 %)	EUR 98 (10 %)	EUR 44 (5 %)	EUR 99 (8 %)	EUR 125 (10 %)	EUR 140 (11 %)	EUR 63 (5 %)	EUR 118 (10 %)	EUR 55 (4 %)	EUR 133 (10 %)	EUR 63 (5 %)
SE	EUR 144 (16 %)	EUR 34 (4 %)	EUR 80 (8 %)	EUR 81 (8 %)	EUR 55 (4 %)	EUR 232 (19 %)	EUR 184 (14 %)	EUR 96 (7 %)	EUR 164 (13 %)	EUR 83 (7 %)	EUR 191 (15 %)	EUR 102 (8 %)
Western and southern Europe	EUR 236 (16 %)	EUR 60 (4 %)	– EUR 166 (– 11 %)	EUR 157 (10 %)	– EUR 455 (– 24 %)	EUR 369 (20 %)	EUR 700 (34 %)	EUR 196 (10 %)	EUR 535 (27 %)	EUR 183 (9 %)	EUR 327 (16 %)	EUR 204 (10 %)
AT	EUR 243 (27 %)	EUR 64 (7 %)	– EUR 252 (– 26 %)	EUR 165 (17 %)	– EUR 1 057 (– 86 %)	EUR 388 (32 %)	EUR 624 (49 %)	EUR 213 (17 %)	EUR 720 (58 %)	EUR 204 (17 %)	EUR 342 (26 %)	EUR 230 (18 %)
BE	EUR 285 (32 %)	EUR 66 (7 %)	– EUR 178 (– 19 %)	EUR 186 (19 %)	– EUR 217 (– 18 %)	EUR 466 (38 %)	EUR 817 (64 %)	EUR 221 (17 %)	EUR 507 (41 %)	EUR 202 (16 %)	EUR 404 (31 %)	EUR 227 (17 %)
CZ	EUR 251 (28 %)	EUR 64 (7 %)	– EUR 61 (– 6 %)	EUR 162 (17 %)	– EUR 920 (– 75 %)	EUR 440 (36 %)	EUR 494 (38 %)	EUR 215 (17 %)	EUR 455 (37 %)	EUR 218 (18 %)	EUR 282 (22 %)	EUR 239 (18 %)
DE	EUR 157 (17 %)	EUR 74 (8 %)	– EUR 152 (– 16 %)	EUR 173 (18 %)	– EUR 799 (– 65 %)	EUR 457 (37 %)	EUR 621 (48 %)	EUR 222 (17 %)	EUR 510 (41 %)	EUR 219 (18 %)	EUR 320 (25 %)	EUR 233 (18 %)
DK	EUR 75 (8 %)	EUR 63 (7 %)	– EUR 127 (– 13 %)	EUR 149 (15 %)	EUR 79 (6 %)	EUR 414 (34 %)	EUR 476 (37 %)	EUR 184 (14 %)	EUR 195 (16 %)	EUR 186 (15 %)	EUR 36 (3 %)	EUR 204 (16 %)
ES	EUR 120 (13 %)	EUR 36 (4 %)	EUR 87 (9 %)	EUR 112 (12 %)	– EUR 15 (– 1 %)	EUR 196 (16 %)	EUR 233 (18 %)	EUR 161 (12 %)	EUR 271 (22 %)	EUR 140 (11 %)	EUR 239 (18 %)	EUR 181 (14 %)
FR	EUR 229 (26 %)	EUR 62 (7 %)	– EUR 285 (– 30 %)	EUR 186 (19 %)	– EUR 1 258 (– 102 %)	EUR 422 (34 %)	EUR 199 (16 %)	EUR 215 (17 %)	EUR 562 (45 %)	EUR 182 (15 %)	EUR 249 (19 %)	EUR 198 (15 %)
IE	EUR 431 (48 %)	EUR 68 (8 %)	– EUR 149 (– 15 %)	EUR 171 (18 %)	– EUR 64 (– 5 %)	EUR 273 (22 %)	EUR 1 649 (128 %)	EUR 156 (12 %)	EUR 1 188 (96 %)	EUR 169 (14 %)	EUR 681 (52 %)	EUR 195 (15 %)

Country/ cluster	2020		2021		2022		2023		2024		2025	
	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour
IT	EUR 320 (36 %)	EUR 72 (8 %)	– EUR 120 (– 12 %)	EUR 144 (15 %)	– EUR 553 (– 45 %)	EUR 406 (33 %)	EUR 660 (51 %)	EUR 200 (16 %)	EUR 411 (33 %)	EUR 176 (14 %)	EUR 376 (29 %)	EUR 174 (13 %)
NL	EUR 278 (31 %)	EUR 62 (7 %)	– EUR 201 (– 21 %)	EUR 173 (18 %)	– EUR 381 (– 31 %)	EUR 473 (38 %)	EUR 1 025 (80 %)	EUR 245 (19 %)	EUR 555 (45 %)	EUR 224 (18 %)	EUR 327 (25 %)	EUR 235 (18 %)
PT	EUR 225 (25 %)	EUR 37 (4 %)	– EUR 286 (– 30 %)	EUR 113 (12 %)	– EUR 288 (– 23 %)	EUR 194 (16 %)	EUR 692 (54 %)	EUR 143 (11 %)	EUR 431 (35 %)	EUR 131 (11 %)	EUR 298 (23 %)	EUR 165 (13 %)

Source: Estimates based on ACER assumptions and calculations including wholesale-price data from ENTSO-E Transparency Platform and energy and supply costs from Eurostat.

Table 6: Estimated cost savings for heat pump and electric vehicle household (9 500 kWh) of a change in contract and change in consumption behaviour per country and cluster between 2020 and 2025 (in EUR and relative to estimated annual electricity bill)

Country/ cluster	2020		2021		2022		2023		2024		2025	
	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour
Eastern and south-eastern Europe	EUR 161 (12 %)	EUR 79 (6 %)	– EUR 448 (– 32 %)	EUR 194 (14 %)	– EUR 1 322 (– 73 %)	EUR 506 (28 %)	– EUR 43 (– 2 %)	EUR 265 (14 %)	– EUR 107 (– 6 %)	EUR 303 (17 %)	– EUR 190 (– 10 %)	EUR 312 (16 %)
BG	EUR 104 (8 %)	EUR 90 (7 %)	– EUR 587 (– 42 %)	EUR 233 (17 %)	– EUR 2 043 (– 113 %)	EUR 606 (34 %)	– EUR 634 (– 34 %)	EUR 317 (17 %)	– EUR 514 (– 28 %)	EUR 380 (21 %)	– EUR 519 (– 27 %)	EUR 368 (19 %)
EE	EUR 64 (5 %)	EUR 93 (7 %)	– EUR 203 (– 14 %)	EUR 197 (14 %)	– EUR 737 (– 41 %)	EUR 529 (29 %)	EUR 75 (4 %)	EUR 270 (14 %)	EUR 79 (4 %)	EUR 310 (17 %)	EUR 5 (0 %)	EUR 339 (18 %)
GR	EUR 477 (36 %)	EUR 84 (6 %)	– EUR 110 (– 8 %)	EUR 203 (14 %)	EUR 445 (25 %)	EUR 521 (29 %)	EUR 1 073 (57 %)	EUR 288 (15 %)	EUR 387 (21 %)	EUR 321 (18 %)	EUR 322 (17 %)	EUR 344 (18 %)
HR	EUR 139 (11 %)	EUR 78 (6 %)	– EUR 644 (– 46 %)	EUR 189 (13 %)	– EUR 2 033 (– 113 %)	EUR 490 (27 %)	– EUR 441 (– 24 %)	EUR 264 (14 %)	– EUR 349 (– 19 %)	EUR 290 (16 %)	– EUR 412 (– 22 %)	EUR 286 (15 %)
HU	– EUR 91 (– 7 %)	EUR 84 (6 %)	– EUR 873 (– 62 %)	EUR 212 (15 %)	– EUR 2 407 (– 134 %)	EUR 516 (29 %)	– EUR 861 (– 46 %)	EUR 270 (14 %)	– EUR 866 (– 48 %)	EUR 332 (18 %)	– EUR 977 (– 51 %)	EUR 313 (16 %)

Country/ cluster	2020		2021		2022		2023		2024		2025	
	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour
LT	EUR 99 (8 %)	EUR 88 (7 %)	– EUR 494 (– 35 %)	EUR 200 (14 %)	– EUR 1254 (– 70 %)	EUR 536 (30 %)	EUR 317 (17 %)	EUR 275 (15 %)	EUR 111 (6 %)	EUR 303 (17 %)	– EUR 75 (– 4 %)	EUR 334 (18 %)
LV	EUR 179 (14 %)	EUR 89 (7 %)	– EUR 262 (– 19 %)	EUR 194 (14 %)	– EUR 728 (– 40 %)	EUR 536 (30 %)	EUR 682 (36 %)	EUR 270 (14 %)	EUR 285 (16 %)	EUR 303 (17 %)	EUR 89 (5 %)	EUR 334 (18 %)
PL	– EUR 14 (– 1 %)	EUR 36 (3 %)	– EUR 464 (– 33 %)	EUR 86 (6 %)	– EUR 1166 (– 65 %)	EUR 269 (15 %)	– EUR 618 (– 33 %)	EUR 165 (9 %)	– EUR 421 (– 23 %)	EUR 216 (12 %)	– EUR 391 (– 21 %)	EUR 240 (13 %)
RO	EUR 146 (11 %)	EUR 94 (7 %)	– EUR 526 (– 37 %)	EUR 255 (18 %)	– EUR 1038 (– 58 %)	EUR 607 (34 %)	– EUR 371 (– 20 %)	EUR 318 (17 %)	– EUR 463 (– 26 %)	EUR 390 (22 %)	– EUR 224 (– 12 %)	EUR 369 (19 %)
SI	EUR 207 (16 %)	EUR 76 (6 %)	– EUR 571 (– 41 %)	EUR 190 (13 %)	– EUR 1864 (– 104 %)	EUR 479 (27 %)	– EUR 114 (– 6 %)	EUR 253 (13 %)	EUR 26 (1 %)	EUR 276 (15 %)	– EUR 81 (– 4 %)	EUR 280 (15 %)
SK	EUR 265 (20 %)	EUR 71 (5 %)	– EUR 504 (– 36 %)	EUR 182 (13 %)	– EUR 1808 (– 100 %)	EUR 510 (28 %)	– EUR 311 (– 17 %)	EUR 252 (13 %)	– EUR 191 (– 11 %)	EUR 280 (16 %)	– EUR 366 (– 19 %)	EUR 273 (14 %)
Northern Europe	EUR 186 (11 %)	EUR 42 (3 %)	– EUR 19 (– 1 %)	EUR 106 (5 %)	– EUR 162 (– 8 %)	EUR 283 (13 %)	EUR 233 (11 %)	EUR 107 (5 %)	EUR 203 (10 %)	EUR 105 (5 %)	EUR 217 (10 %)	EUR 118 (5 %)
FI	EUR 210 (16 %)	EUR 83 (6 %)	– EUR 269 (– 19 %)	EUR 176 (12 %)	– EUR 731 (– 41 %)	EUR 449 (25 %)	EUR 359 (19 %)	EUR 139 (7 %)	EUR 279 (15 %)	EUR 162 (9 %)	EUR 232 (12 %)	EUR 166 (9 %)
NO	EUR 138 (11 %)	EUR 5 (0 %)	EUR 118 (8 %)	EUR 51 (4 %)	EUR 184 (10 %)	EUR 142 (8 %)	EUR 128 (7 %)	EUR 74 (4 %)	EUR 132 (7 %)	EUR 64 (4 %)	EUR 161 (8 %)	EUR 74 (4 %)
SE	EUR 209 (16 %)	EUR 37 (3 %)	EUR 94 (7 %)	EUR 92 (7 %)	EUR 62 (3 %)	EUR 258 (14 %)	EUR 211 (11 %)	EUR 109 (6 %)	EUR 199 (11 %)	EUR 90 (5 %)	EUR 256 (13 %)	EUR 114 (6 %)
Western and southern Europe	EUR 331 (15 %)	EUR 70 (3 %)	– EUR 282 (– 12 %)	EUR 181 (8 %)	– EUR 599 (– 22 %)	EUR 416 (15 %)	EUR 986 (33 %)	EUR 225 (8 %)	EUR 752 (26 %)	EUR 204 (7 %)	EUR 416 (14 %)	EUR 232 (8 %)
AT	EUR 341 (26 %)	EUR 72 (5 %)	– EUR 427 (– 30 %)	EUR 187 (13 %)	– EUR 1435 (– 80 %)	EUR 429 (24 %)	EUR 872 (46 %)	EUR 236 (13 %)	EUR 1 008 (56 %)	EUR 219 (12 %)	EUR 425 (22 %)	EUR 247 (13 %)
BE	EUR 402 (31 %)	EUR 78 (6 %)	– EUR 317 (– 22 %)	EUR 212 (15 %)	– EUR 240 (– 13 %)	EUR 528 (29 %)	EUR 1 148 (61 %)	EUR 257 (14 %)	EUR 697 (39 %)	EUR 228 (13 %)	EUR 527 (28 %)	EUR 258 (14 %)

Country/ cluster	2020		2021		2022		2023		2024		2025	
	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour	Contract	Behaviour
CZ	EUR 352 (27 %)	EUR 71 (5 %)	– EUR 135 (– 10 %)	EUR 182 (13 %)	– EUR 1 231 (– 68 %)	EUR 478 (27 %)	EUR 688 (37 %)	EUR 239 (13 %)	EUR 631 (35 %)	EUR 230 (13 %)	EUR 350 (18 %)	EUR 258 (14 %)
DE	EUR 222 (17 %)	EUR 83 (6 %)	– EUR 266 (– 19 %)	EUR 196 (14 %)	– EUR 1 051 (– 58 %)	EUR 502 (28 %)	EUR 881 (47 %)	EUR 249 (13 %)	EUR 726 (40 %)	EUR 235 (13 %)	EUR 411 (22 %)	EUR 254 (13 %)
DK	EUR 111 (8 %)	EUR 69 (5 %)	– EUR 213 (– 15 %)	EUR 169 (12 %)	EUR 250 (14 %)	EUR 455 (25 %)	EUR 666 (35 %)	EUR 206 (11 %)	EUR 270 (15 %)	EUR 199 (11 %)	EUR 11 (1 %)	EUR 226 (12 %)
ES	EUR 158 (12 %)	EUR 47 (4 %)	EUR 100 (7 %)	EUR 145 (10 %)	– EUR 85 (– 5 %)	EUR 247 (14 %)	EUR 323 (17 %)	EUR 201 (11 %)	EUR 355 (20 %)	EUR 173 (10 %)	EUR 281 (15 %)	EUR 230 (12 %)
FR	EUR 321 (24 %)	EUR 74 (6 %)	– EUR 491 (– 35 %)	EUR 220 (16 %)	– EUR 1 717 (– 95 %)	EUR 487 (27 %)	EUR 241 (13 %)	EUR 252 (13 %)	EUR 753 (42 %)	EUR 212 (12 %)	EUR 275 (14 %)	EUR 241 (13 %)
IE	EUR 608 (46 %)	EUR 76 (6 %)	– EUR 213 (– 15 %)	EUR 185 (13 %)	– EUR 87 (– 5 %)	EUR 317 (18 %)	EUR 2 361 (126 %)	EUR 181 (10 %)	EUR 1 728 (96 %)	EUR 187 (10 %)	EUR 926 (49 %)	EUR 222 (12 %)
IT	EUR 445 (34 %)	EUR 84 (6 %)	– EUR 219 (– 16 %)	EUR 169 (12 %)	– EUR 670 (– 37 %)	EUR 455 (25 %)	EUR 910 (48 %)	EUR 232 (12 %)	EUR 599 (33 %)	EUR 196 (11 %)	EUR 503 (26 %)	EUR 193 (10 %)
NL	EUR 392 (30 %)	EUR 72 (6 %)	– EUR 336 (– 24 %)	EUR 192 (14 %)	– EUR 475 (– 26 %)	EUR 527 (29 %)	EUR 1 455 (77 %)	EUR 279 (15 %)	EUR 784 (43 %)	EUR 243 (13 %)	EUR 421 (22 %)	EUR 260 (14 %)
PT	EUR 313 (24 %)	EUR 42 (3 %)	– EUR 441 (– 31 %)	EUR 130 (9 %)	– EUR 475 (– 26 %)	EUR 218 (12 %)	EUR 1 004 (53 %)	EUR 163 (9 %)	EUR 596 (33 %)	EUR 146 (8 %)	EUR 379 (20 %)	EUR 185 (10 %)

Source: Estimates based on ACER assumptions and calculations including wholesale-price data from ENTSO-E Transparency Platform and energy and supply costs from Eurostat.

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