Household electricity prices increased in all but two EU Member States in the second half of 2021, compared with the second half of 2020.

Household electricity prices in the EU show sharpest increase in Estonia (50.2 %) and biggest decrease in Slovakia (-5.8 %) in the second half of 2021.

Non-household electricity prices in the EU highest in Greece (€ 0.22 per kWh) and lowest in Finland (€ 0.08 per kWh) in the second half of 2021.

This article highlights the development of electricity prices both for household and non-household consumers within the European Union (EU). When available, it also includes price data from Iceland, Liechtenstein, Norway, Montenegro, North Macedonia, Albania, Serbia, Turkey, Bosnia and Herzegovina, Kosovo*, Moldova, Georgia and Ukraine. The price of energy in the EU depends on a range of different supply and demand conditions, including the geopolitical situation, the national energy mix, import diversification, network costs, environmental protection costs, severe weather conditions, or levels of excise and taxation. Note that the prices presented in this article include taxes, levies and VAT for household consumers, but exclude refundable taxes and levies for non-household consumers.

*This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.
Electricity prices for household consumers

Highest electricity prices in Denmark and Germany

For household consumers in the EU (defined for the purpose of this article as medium-sized consumers with an annual consumption between 2 500 kWh and 5 000 kWh), electricity prices in the second half of 2021 were highest in Denmark (€ 0.3448 per kWh), Germany (€ 0.3234 per kWh), Belgium (€ 0.2994 per kWh) and Ireland (€ 0.2974 per kWh); see Figure 1. The lowest electricity prices were in Hungary (€ 0.1001 per kWh), Bulgaria (€ 0.1091 per kWh) and Croatia (€ 0.1313 per kWh). A kilowatt-hour for Danish household consumers cost 45.5 % more than the EU average price, whereas households in Germany had to pay 36.5 % more than the EU average.

The EU average price in the second semester of 2021 — a weighted average using the most recent (2021) data for electricity by household consumers — was € 0.2369 per kWh.

Figure 1: Electricity prices for household consumers, second half 2021 (€ per kWh) Source: Eurostat (nrg_pc_204)
Figure 2 depicts the development of electricity prices for household consumers in the EU since the first half of 2008. The price without taxes, i.e. the energy, supply and network, increased slightly faster than the overall inflation rate (HICP) until the second half of 2013 when it was € 0.1338 per kWh. From 2014 to 2019, it remained relatively stable. In the second half of 2021, the highest ever price observed in the collection is recorded. The weight of the taxes has increased by 4.8 percentage points over the last 13 years, from 31.2 % in the first half of 2008 to 36.0 % in the second half of 2021, but decreased compared with the first half of 2021.

For the prices adjusted for inflation, the total price for household consumers, i.e. including all taxes, was € 0.1958 per kWh in the second half of 2021 compared to € 0.1604 per kWh in the first half of 2008. This price is lower than the actual price including taxes, whereas the actual price excluding taxes is approximately on the same level as the 2008 price adjusted for inflation.

![Development of electricity prices for household consumers, EU, 2008-2021](image)

**Development of electricity prices for household consumers, EU, 2008-2021**
(EUR per kWh)

- **prices including taxes**
- **prices excluding taxes**
- **2008S1 prices including taxes adjusted for inflation**
- **2008S1 prices excluding taxes adjusted for inflation**

*Source: Eurostat (online data codes: nrg_pc_204)*

Figure 2: Development of electricity prices for household consumers, 2008-2021 (€ per kWh) Source: Eurostat (nrg_pc_204)
Weight of taxes and levies differs greatly between Member States

Figure 3 shows the proportion of taxes and levies in the overall electricity retail price for household consumers. In the EU, the share of taxes in the second half of 2021 was smallest in the Netherlands, where the values were in fact negative (-3.0 %). The Netherlands gives an allowance to consumers, which is used as a tool to transfer the taxation burden from households to non-households. The relative share of taxes was highest in Denmark, making up 56.9 % of the total price. The average share of taxes and levies at EU level was 36.0 %, a decrease of 3.4 % when compared with 2021S1. The VAT in the EU represents 14.5 % of the total price. It ranges from 4.8 % in Malta to 21.2 % in Hungary.

Figure 3: Share of taxes and levies paid by household consumers for electricity, second half 2021 (%)

Source: Eurostat (nrg_pc_204)
Largest increase in electricity prices in Estonia, Sweden and Cyprus

Figure 4 shows the percentage change in electricity prices for household consumers including all taxes and VAT from the second half of 2020 compared with the second half of 2021. For comparison purposes the national currencies were used. For energy prices, comparing year on year instead of semester on semester is most meaningful to avoid seasonal effects. Year on year, the total prices increased in all except two EU Member States. The biggest increase is observed in Estonia (50.2 %), followed by Sweden (49.3 %) and Cyprus (35.7 %). Energy and supply costs mainly drove the increase. Slovakia (-5.8 %) and Hungary (-0.13 %) were the only two EU countries to record decreases. Prices in Slovakia and Hungary are regulated.

Change in electricity prices for household consumers compared with previous year, same semester, second half 2021 (%)

(*) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo Declaration of Independence.
Source: Eurostat (online data codes: nrg_pc_204)

Figure 4: Change in electricity prices for household consumers compared with previous year’s same semester, second half 2021 (%) Source: Eurostat (nrg_pc_204)
Electricity prices in purchasing power standard

In Map 1, electricity prices for household consumers in the second half of 2021 are shown in purchasing power standard (PPS) grouping the available countries in six categories, with electricity price categories ranging from above 26.9 PPS per 100 kWh to below 15.3 PPS per 100 kWh. The final burden for the consumer depends on their own consumption. Electricity prices based on purchasing power standard were highest in Romania (31.0) and Spain (30.0). The lowest electricity prices based on the purchasing power standard were observed in the Netherlands (12.5) and Finland (14.5).

Electricity prices for household consumers, 2021S2

Map 1: Electricity prices for household consumers, second half 2021 (PPS per 100 kWh) Source: Eurostat (nrg_pc_204)
Share of transmission and distribution costs for household electricity consumers

Figure 5 presents the share of transmission and distribution costs for household electricity consumers. Transmission and distribution costs are only reported once a year, at the end of the second semester. This section refers to 2021 data. Distribution costs account for the largest share by far, when compared to the transmission costs. This is normal for all types of networks including the electricity system.

Transmission network is used for transmitting bulk amounts of energy over long distances. The distribution network is usually the part of the system where the consumers are connected. The distribution network is denser than the transmission network, therefore, its share in the costs is expected to be higher.

Countries with lower population density require a more extensive transmission network to meet their needs. Its costs are higher when compared with the countries with higher population density. Smaller, densely populated countries use mostly their distribution network.

In 2021, Luxembourg (100.0 %), Slovakia (91.3 %) and Finland (90.0 %) had the highest shares of distribution costs. On the other hand, Estonia (37.0 %), Poland (30.4 %) and Cyprus (29.1 %) had the highest shares of transmission costs in 2021.

Figure 5: Share of transmission and distribution costs paid by household consumers for electricity, 2021 (%)

Source: non-published Eurostat data
Electricity prices for non-household consumers

Electricity prices highest in Greece and Cyprus

Non-household consumers are defined for the purpose of this article as medium-sized consumers with an annual consumption between 500 MWh and 2 000 MWh. As depicted in Figure 6, electricity prices in the second half of 2021 were highest in Greece (€ 0.2238 per kWh) and Cyprus (€ 0.1946 per kWh). The lowest prices were observed in Finland (€ 0.0800 per kWh) and Czechia (€ 0.0905 per kWh). The EU average price in the second semester of 2021 was € 0.1445 per kWh. The aggregates are weighted averages taking into consideration the average consumption in each band.

Figure 6: Electricity prices for non-household consumers, second half 2021 (EUR per kWh)

(*1) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo Declaration of Independence.

Source: Eurostat (online data codes: nrg_pc_205)
Figure 7 shows the development of electricity prices for non-household consumers in the EU since the first half of 2008. The price without taxes, i.e. the energy, supply and network, was increasing similarly to the overall inflation until 2012, when it peaked at €0.0943 per kWh in the first semester. Afterwards it was on the decrease until 2020. In the second semester of 2019, for example, it was at €0.0781 per kWh, whereas in the second half of 2020 it increased and stood at €0.0820 per kWh, which is still lower than the 2008 first semester price. By contrast, in the second half of 2021, there is a steep increase, with the price without taxes standing at €0.1032 per kWh, the highest value since this data collection started.

The weight of the taxes has increased considerably, by 14.7 percentage points, over the last 13 years, from 13.8% in the first half of 2008 to 28.5% in the second half of 2021. Looking at the non-household total price, i.e. including the non-recoverable taxes, for the second half of 2021, it increased (49.3%) compared with the 2008 first half price adjusted for inflation from €0.0968 per kWh to €0.1445 per kWh.

For the prices adjusted for inflation, the total price for non-household consumers, i.e. including taxes, was €0.1182 per kWh in the second half of 2021 compared to €0.0968 per kWh in the first half of 2008. This price is lower than the actual price including taxes. The total price for non-household consumers, i.e. without taxes, was €0.1018 per kWh in the second half of 2021 compared to €0.0834 per kWh in the first half of 2008. This price is higher than the actual price excluding taxes.

**Development of electricity prices for non-household consumers, EU, 2008-2021**

(EUR per kWh)

Source: Eurostat (online data codes: nrg_pc_205)
Proportion of non-recoverable taxes and levies in electricity prices

Figure 8 presents the proportion of non-recoverable taxes and levies in the overall electricity price for non-household consumers. In the second half of 2021, the share of taxes was highest in Germany, followed by Poland and the Netherlands, where non-recoverable taxes and levies made up 48.0 %, 38.0 % and 29.0 % of the total price respectively. The share of taxes for the EU stood at 28.6 %.

Figure 8: Share of taxes and levies paid by non-household consumers for electricity, second half 2021 (%)

(%) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo Declaration of Independence.

Source: Eurostat (online data codes: nrg_pc_205)
Development of electricity prices for non-household consumers

Figure 9 shows the change in electricity prices for non-household consumers including all non-recoverable taxes and levies from the second half of 2020 to the second half of 2021. For comparison purposes the national currencies were used. These prices include all except one EU Member State. The biggest increases were recorded in Bulgaria (114.4 %) and Greece (111.3 %), followed by Estonia (74.8 %). In 16 EU Member States the increase was above 10%. The only decrease was recorded in Malta (-0.2 %).

Change in electricity prices for non-household consumers compared with previous year, same semester, second half 2021 (%)

(*) This designation is without prejudice to positions on status, and is in line with UNSCIR 1244/1999 and the ICJ Opinion on the Kosovo Declaration of Independence.
Source: Eurostat (online data codes: nrg_pc_205)

Figure 9: Change in electricity prices for non-household consumers compared with previous year’s same semester, second half 2021 (%) Source: Eurostat (nrg_pc_205)
Share of transmission & distribution costs for non-household electricity consumers

Figure 10 presents the share of transmission & distribution costs for non-household electricity consumers. Transmission and distribution costs are only reported once a year, at the end of the second semester. This section refers to 2021 data. As for household consumers, distribution costs account for the largest share, compared to transmission costs. This is normal for all types of networks including the electricity system. Transmission network is used for transmitting bulk amounts of energy over long distances. The distribution network is usually where the consumers are connected. The distribution network is denser than the transmission network, therefore, its share in the costs are expected to be higher.

Countries with lower population density require a more extensive transmission network to meet their needs. Its costs are higher, when compared to the countries with higher population density. Smaller, densely populated countries use mostly their distribution network.

However, several non-household consumers can be directly connected to the transmission network or use part of the distribution network (medium voltage only). Therefore, the share of transmission costs can be higher when compared with household consumers.

In 2021, Czechia, Sweden and Austria had the highest shares of distribution costs, with 91.2 % (estimated), 88.3 % and 84.1 % (estimated), respectively. On the other hand, Denmark, Belgium and Italy had the highest shares of transmission costs in 2021, with 58 %, 57.5 % and 56.4 %, respectively.
Source data for tables and graphs

- Electricity price statistics tables and graphs

Data sources

Defining household consumers

Throughout this article, references to household consumers relate to the medium standard household consumption band with an annual electricity consumption between 2 500 and 5 000 kWh. All figures are consumer retail prices and include taxes, levies and VAT. The full datasets for electricity prices for households consumers are available at:

- Electricity prices for household consumers - bi-annual data (from 2007 onwards) (nrg_pc_204)
- Electricity prices components for household consumers - annual data (nrg_pc_204_c)

and

- Share for transmission and distribution in the network cost for gas and electricity - annual data (nrg_pc_206)

Defining non-household consumers

Throughout this article, references to non-household consumers relate to the medium standard non-household consumption band with an annual consumption of electricity between 500 and 2 000 MWh. In this article, prices correspond to the price for electricity production, its supply, the network costs and includes all non-recoverable taxes and levies. The full datasets for electricity prices for non-households consumers are available at:

- Electricity prices for non-household consumers - bi-annual data (from 2007 onwards) (nrg_pc_205)
- Electricity prices components for non-household consumers - annual data (nrg_pc_205_c)

and

- Share for transmission and distribution in the network cost for gas and electricity - annual data (nrg_pc_206)

Methodology

Prices in national currencies are converted into euro using the average exchange rate of the period for which the prices were reported.

Prices are always compared with the prices of the same semesters (i.e. year on year) in order to avoid seasonal effects.

In 2016, Regulation (EU) 2016/1952 entered into force. It defines the obligation for the collection and dissemination of electricity prices for household and non-household consumers. Until 2016, the domain of non-household consumers was defined as industrial consumers, but reporting authorities were allowed to include other non-household consumers. Regulation (EU) 2016/1952 changed the definition from industrial to non-household consumers to have a unique methodology for all reporting countries. Until January 2017, the reporting authorities provided their price data for the household sector on a voluntary basis.

Electricity tariffs or price schemes vary from one supplier to another. They may result from negotiated contracts, especially for large non-household consumers. For smaller consumers, they are generally set according to a number of characteristics including the amount of electricity consumed. Most tariffs also include some form of fixed charge. There is, therefore, no single price for electricity. In order to compare prices over time and between EU Member States, this article shows information for consumption bands for household consumers and for non-household consumers. Electricity prices for household consumers are divided into five annual consumption bands and, for non-household consumers, into seven different consumption bands.

The prices collected cover average prices over a period of six months (a half-year or semester) from January to June (first semester) and from July to December (second semester) of each year. Prices include the basic price of electricity, transmission and distribution charges, meter rental, and other services. Electricity prices for household consumers presented in this article include taxes, levies, non-tax levies, fees and value added tax (VAT) as this generally reflects the total price paid by household consumers. As non-household consumers are usually able to recover VAT and some other taxes, prices for non-household consumers are shown without VAT and other recoverable taxes/levies/fees. The unit for electricity prices is that of euro per kilowatt-hour (€ per kWh).
Allowances in the reference period 2021 Semester 2

Bulgaria: In response to the increase in electricity prices on the liberalized electricity market, the government has introduced a temporary compensation scheme for non-household end consumers. Under this scheme, non-household consumers receive a monthly compensation, calculated specifically for each individual consumer, through their electricity supplier. The amount of the compensation is deducted from the total final price after VAT has been charged on each monthly invoice. For the electricity price reporting, this compensation is included as a negative value in the final price with all taxes and levies included. Respectively in the annual reporting on price components and sub-components, the compensation is reported under “All other taxes, fees, levies and charges”. Household electricity prices are set and regulated by the Energy and Water Regulatory Commission and are not affected of the dynamically changing market situation. The government has imposed a moratorium on prices for household customers for the period 16.12.2021-31.03.2022.

Czechia: In addition to introducing a compensation scheme for electricity and natural gas prices, the government granted a temporary waiver of VAT on natural gas (LPG included) and electricity. The waiver applies to all supplies in November and December 2021.

Estonia: Household consumers can apply for an energy cost reimbursement (up to 80% of the price increase). However, at the time of reporting of 2021 prices, the scope of this measure was still unknown, and it was not taken into account in the reporting. In addition, in the period from October 2021 to December 2021, the electricity network fee was reimbursed in the amount of 50% to electricity consumers. This was automatically reflected in the electricity bills as a lower cost towards the network service.

Greece: For the months of September, October, November and December 2021, low-voltage electricity consumers received compensation, calculated on the basis of their consumption. VAT and all other taxes were charged on this reduced price. Given that the compensation is not directly related to reduction or return of any kind of tax, in the reporting of 2021 semester 2 prices it was deducted from the subcomponent Energy and Supply.

Spain: The Government of Spain has adopted measures during 2021 to cushion this increase and these measures have focused on the "taxes, fees and charges" component. Thus, the Government has significantly reduced the charges during the second half of 2021. Additionally, it has reduced the applicable rate of VAT and the Special Electricity Tax, so if their weight in the final prices is compared with that of the rest of the components, one can see that it has been smaller and, therefore, the evolution of these subcomponents of electricity prices has been less noteworthy.

Cyprus: Based on Cyprus Energy Regulatory Authority (CERA) Decision 294/2021, a discount of 65% was imposed on the Regulated Tariffs for the usage of Transmission and Distribution Systems for a total period of four (4) months, November-December 2021 & January-February 2022.

Netherlands: The government provides a refund (allowance) to all electricity consumers. It is envisaged as a tax relief primarily for low-consumption household consumers, since electricity consumption is recognised as a basic need.

Portugal: The government provided an extraordinary and temporary financial support to all consumers of electricity, with contracted power up to 6.9 kVA. This allowance is intended to cover the additional costs caused by the sharp drop of temperature and for the vulnerable consumers, it was a relief associated to confinement measures. Additionally, a social tariff for the vulnerable consumers was established and VAT for consumers with contracted power lower than 3,45 kVA was reduced.

Sweden: In Sweden, the government has decided to introduce compensation for high electricity prices for household customers. The compensation depends on the consumption of electricity by the households during December 2021 and January-March 2022 and will be distributed through reduced cost in the invoices. Hence, in the prices reporting, the compensation has been deducted from the final price with all taxes and levies included.

Norway: The government of Norway introduced a temporary support scheme from December 2021 onwards where all households receives given amount of support per kWh used, in all months where the wholesale electricity price is above a certain threshold. This support is paid to household consumers by lowering their electricity bill. The temporary electricity support scheme for households is expected to last for at least one year. The compensation is reported as a reduction in the final prices with all taxes and levies included in Table 1 (0,143 NOK in the second half of 2021)
and, in Table 2, on an annual basis, the compensation is reported as part of ‘All other taxes, fees, levies and charges’.

**Context**

The price and reliability of energy supplies, electricity in particular, are key elements in a country’s energy supply strategy. Electricity prices are of particular importance for international competitiveness, as electricity usually represents a significant proportion of total energy costs for industrial and service-providing businesses. Contrary to the price of fossil fuels, which are usually traded on global markets with relatively uniform prices, electricity prices vary widely among EU Member States. The price of primary fuels and, more recently, the cost of carbon dioxide (CO2) emission certificates influence, to some degree, the price of electricity.

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Tackling rising energy prices: a toolbox for action and support, COM2021(0660) final, points out the observed increase of wholesale energy prices. It is expected that it will be reflected in the final consumer prices in the official statistics for this reference period.

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, REPowerEU: Joint European Action for more affordable, secure and sustainable energy, COM2022(108) final, paves the way to reach independence from Russian gas well before the end of the decade.

In 2019, the European Commission presented the Clean energy for all Europeans package. The Commission completed a comprehensive update of its energy policy framework to facilitate the transition away from fossil fuels towards cleaner energy and to deliver on the EU’s Paris Agreement commitments for reducing greenhouse gas emissions. The Fit for 55 legislative proposals cover a wide range of policy areas including climate, energy, transport and taxation, setting out the ways in which the Commission will reach its updated 2030 target in real terms.

Regulation (EU) No 2016/1952 tackles data weaknesses led to the recommendation to improve the detail, transparency and consistency of energy price data collection. An energy prices and costs report would be prepared every 2 years. The European Commission thus published such a report also in 2016 and 2018.

The sixth report on energy prices and costs, as part of the 2021 State of the energy union report was published in 26 October 2021. The 2021 report is the first state of the energy union report since the adoption of the European Climate Law and the second since the adoption of the European Green Deal. It gives emphasis to the sharp spike in gas and electricity prices.

Increased transparency for gas and electricity prices should help promote fair competition, by encouraging consumers to choose between different energy sources (oil, coal, natural gas and renewable energy sources) and different suppliers. Energy price transparency is more effective when publishing and broadcasting as widely as possible prices and pricing systems.

**Other articles**

- Energy production and imports
- Natural gas price statistics

**Main tables**

- Energy (t_nrg), see

Energy statistics - main indicators (t_nrg_indic)
Electricity prices by type of user (ten00117)

Database

- Energy (nrg), see:
  - Energy statistics - prices of natural gas and electricity (nrg_price)
    - Energy statistics - natural gas and electricity prices (from 2007 onwards) (nrg_pc)
    - Energy statistics - natural gas and electricity prices (until 2007) (nrg_pc_h)

Dedicated section

- Energy

Methodology

- Energy statistics — electricity prices for domestic and industrial consumers, price components (ESMS metadata file — nrg_pc_204_esms)

Visualisations

- Energy price visualisation

External links

- Eurelectric
- Europe’s Energy Portal
- European Commission — Energy

- Weekly oil bulletin (weekly pump prices)
  - State of the energy union reports (State of the energy union reports)

- International Energy Agency (IEA) — Prices and taxes statistics