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 Germany and Denmark**

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 first half of 2021 were highest in Germany (EUR 0.3193 per kWh), Denmark (EUR 0.2900 per kWh), Belgium (EUR 0.2702 per kWh) and Ireland (EUR 0.2555 per kWh); see Figure 1. The lowest electricity prices were in Hungary (EUR 0.1003 per kWh), Bulgaria (EUR 0.1024 per kWh) and Malta (EUR 0.1279 per kWh). The price of electricity for household consumers in Germany was more than three times higher than the price in Hungary and 45.6 % higher than the EU average price.

The EU average price in the first semester of 2021 — a weighted average using the most recent (2021) data for electricity by household consumers — was EUR 0.2192 per kWh.¹

¹At the time of publishing this article, the 2021 data for Sweden has not yet been reported to Eurostat. Sweden is therefore missing from all the figures that refer to 2021. The EU aggregate was calculated using an estimate for Swedish data.
Figure 1: Electricity prices for household consumers, first half 2021 (EUR 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 EUR 0.1338 per kWh. From 2014 to 2019, it remained relatively stable. In the first semester 2021 it stood at EUR 0.1329 per kWh, slightly up from EUR 0.1282 per kWh in the previous semester. The weight of the taxes has increased by 8.8 percentage points over the last 13 years, from 31.2 % in the first half of 2008 to 39.4 % in the first half of 2021.

For the prices adjusted for inflation, the total price for household consumers, i.e. including all taxes, was 0.1914 EUR per kWh in the first half of 2021 compared to 0.1604 EUR per kWh in the first half of 2008. We observe that 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
(EUR per kWh)

Figure 2: Development of electricity prices for household consumers, 2008-2021 (EUR 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 first half of 2021 was smallest in the Netherlands, where the values were in fact negative (-5.5 %). The Netherlands provide a refund (allowance), and thus reported a negative share of other taxes and levies in this collection. The allowance has indeed increased over time. It is not COVID-19 related. The government uses this instrument to move the tax burden from households to non-households. The relative share of taxes was highest in Denmark, making up 64.1 % of the total price. The average share of taxes and levies on the EU level was 39.4 %. The VAT in the EU represents 15.5 % of the total price. It ranges from 4.8 % in Malta to 21.3 % in Hungary.
Largest drops in electricity prices in the Netherlands, Cyprus and Lithuania

Figure 4 shows the percentage change in electricity prices for household consumers including all taxes and VAT in the first half of 2020 to the first 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 fell in ten EU Member States. The biggest decrease is observed in the Netherlands (-10.2 %), followed by Cyprus (-7.4 %). Tax decreases mainly drove the reduction in the Netherlands, where the refund (allowance) increased. All components contributed to the decrease in Cyprus. Slovenia (14.8 %) and Poland (7.9 %) recorded the highest relative price increase. All components contributed to these increases.
Electricity prices in purchasing power standard

In Map 1, electricity prices for household consumers in the first half of 2021 are shown in purchasing power standard (PPS) grouping the available countries in six categories, with electricity price categories ranging from above 25 PPS per 100 kWh to below 15 PPS per 100 kWh. The final burden for the consumer depends on their own consumption. Electricity prices based on purchasing power standard are highest in Romania (29) and Germany (28). The lowest electricity prices based on the purchasing power standard are observed in the Netherlands (11) and Finland (14).
Share of transmission & distribution costs for non-household electricity consumers

Figure 5 presents the share of transmission & distribution costs for household electricity consumers. Transmission and distribution costs are only reported once a year, at the end of the second semester. Therefore this section refers to 2020 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 in 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 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.

In 2020, Luxembourg, Slovakia and Finland have the highest share of distribution costs, with 100%, 91.8% and 90% respectively. In 2020, Cyprus, Lithuania and Croatia have the highest share of transmission costs with 30.0 %, 29.6 % and 26.5 % respectively.
Electricity prices for non-household consumers

Electricity prices highest in Germany and Italy

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 first half of 2021 were highest in Germany (EUR 0.1813 per kWh) and Italy (EUR 0.1584 per kWh). We observe the lowest price in Finland (EUR 0.0676 per kWh) and Denmark (EUR 0.0797 per kWh). The EU average price in the first semester of 2021 was EUR 0.1283 per kWh. The aggregates are weighted averages taking into consideration the average consumption in each band.
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 EUR 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 EUR 0.0781 per kWh, whereas in the second half of 2020 it increased and stood at EUR 0.0822 per kWh, which is still lower than the 2008 first semester price. In the first half of 2021 the increase continued, with the price without taxes now at EUR 0.0857 per kWh.

The weight of the taxes has increased considerably by 19.4 percentage points over the last 13 years, from 13.8 % in the first half of 2008 to 33.2 % in the first half of 2021. Therefore, if we look at the non-household total price, i.e. including the non-recoverable taxes, for the first half of 2021, it increased (32.5 %) compared to the 2008 first half price adjusted for inflation from EUR 0.0968 per kWh to EUR 0.1283 per kWh.

For the prices adjusted for inflation, the total price for non-household consumers, i.e. including taxes, was EUR 0.1155 per kWh in the first half of 2021 compared to 0.0968 EUR per kWh in the first half of 2008. We observe that this price is lower than the actual price including taxes. The total price for non-household consumers, i.e. without taxes, was EUR 0.0995 per kWh in the first half of 2021 compared to 0.0834 EUR per kWh in the first half of 2008. We observe that this price is higher than the actual price excluding taxes.
Development of electricity prices for non-household consumers, EU27, 2008-2021
(EUR per kWh)

Figure 7: Development of electricity prices for non-household consumers, 2008-2021 (EUR per kWh) Source: Eurostat (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 first half of 2021, the share of taxes was highest in Germany and Italy, where non-recoverable taxes and levies made up 49.9% and 40.7% of the total price respectively. The share of taxes for the EU is 33.2%.
Figure 8: Share of taxes and levies paid by non-household consumers for electricity, first half 2021 (%)

Source: Eurostat (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 first half of 2020 to the first half of 2021. For comparison purposes the national currencies were used. These prices dropped in eleven EU Member States. The biggest decreases were recorded in Slovenia (-6.5 %) and Portugal (-5.2 %), closely followed by Romania (-5.1 %). It increased in the other sixteen EU Member States. We recorded by far the largest increase in Denmark (29.8 %), with Bulgaria in the second place (18.0 %), followed by Estonia (16.3 %). Other countries with an increase of 10.0 % or more are Ireland (14.0 %), Lithuania (10.9 %) and Greece (10.0 %).
Change in electricity prices for non-household consumers compared with previous year, same semester, first half 2021 (%)

Figure 9: Change in electricity prices for non-household consumers compared with previous year’s same semester, first 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. Therefore this section refers to 2020 data. As for households 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 in long distances. The distribution network is usually where the consumers are connected. The distribution network is denser than the transmission network, therefore, its share at the costs are expected to be higher.

Countries with lower population density 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-households consumers can be directly connected to the transmission network or use part of the distribution network (medium voltage only). Therefore, transmission cost share can be higher when compared to households consumers.

In 2020, Luxembourg, Czechia and Sweden have the highest share of distribution costs, with 91%, 90.8%
(estimated) and 87.8% respectively. In 2020, Belgium, Italy and Denmark have the highest share of transmission costs with 57.6 %, 54.2 % and 48.0 % respectively.

![100% vertical stacked bar chart on the share of transmission and distribution costs paid by non-household consumers for electricity in 2020 in the EU Member States and some EFTA countries, candidate countries, potential candidates and other countries. Each bar shows the share of transmission costs and the share of distribution costs.](image)

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<th>Share of transmission and distribution costs paid by non-household consumers for electricity, second half 2020 (%)</th>
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Figure 10: Share of transmission and distribution costs paid by non-household consumers for electricity, second half 2020 (latest available data) (%) Source: non-published Eurostat data

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)

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)
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 (EUR per kWh).

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. The energy prices evolution in the second semester 2021 will be available as European official statistics level in April 2022.

The EU has acted to liberalize electricity and gas markets since the second half of the 1990s. Directives adopted in 2003 established common rules for internal markets for electricity and natural gas. Up to now, significant barriers to entry remain in many electricity and natural gas markets as seen through the number of markets still dominated by (near) monopoly suppliers.

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 fourth report on energy prices and costs was published in October 2020, as part of the 2020 State of the energy union report, which focuses on progress made on the EU’s policies on the energy transition policies and initiatives related to the European Green Deal. It also assesses the impact of the COVID-19 pandemic on the recent and expected evolution of the analyzed indicators. The 2021 State of the Energy Union report is expected to be published at the end of October 2021.

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