

# Energy Statistics

## 2017 edition



COMPACT  
GUIDES

eurostat 

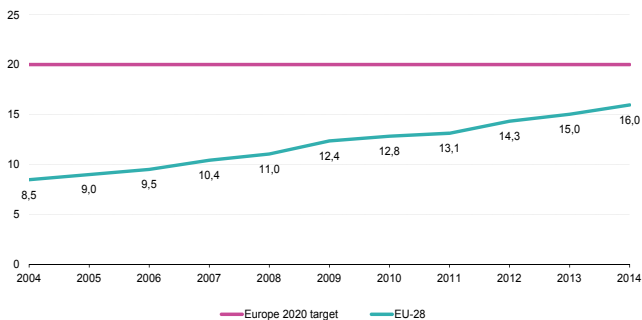
# Energy Union

Lighting, heating, transport, industrial output: without energy we would have none of these essential day-to-day services that make we and our business function. Our stocks of fossil fuels (oil, gas and coal) will not, however, last forever. They need to be judiciously managed while we look into new sources of renewable energy. Europe's countries are well aware of the advantages of coordinated action in such a strategic field. That has led to the adoption of the Energy Union package in 2015.

**The Energy Union strategy has five mutually-reinforcing and closely interrelated dimensions designed to bring greater energy security, sustainability and competitiveness:**

- Energy security, solidarity and trust;
- A fully integrated European energy market;
- Energy efficiency contributing to moderation of demand;
- Decarbonising the economy, and
- Research, Innovation and Competitiveness.

**Figure 1:** Share of energy from renewable sources in gross final consumption of energy, EU-28, 2004-14 (%)



Source: Energy (online data code: [nrg\\_ind\\_335a](#))



# Energy Statistics

Detailed, complete, timely and reliable statistics are essential to monitor the energy situation at European level. Energy statistics on supply, trade, stocks, transformation and consumption are indeed the basis for any sound energy policy decision.

## Annual data

Eurostat provides annual energy statistics generally available from 1990 onwards and monthly data from 2008 onwards. Annual data are used to study the structure of energy markets, whereas monthly data provides information on more recent trends.

We provide information on:

- **Energy mix:** Supply, transformation and consumption of solid fuels, oil, gas, electricity, heat and renewable energies.
- **Energy security:** Stocks and how long they will secure our consumption, diversification of suppliers.
- **Energy dependence:** Imports and exports by country of origin and destination.
- **Energy efficiency:** Energy consumption, energy intensity, combined heat & power generation.
- **Energy savings:** Primary and final energy consumption and savings.
- **Renewable energies:** Hydro, wind, geothermal, heat and solar energy, solid and liquid biofuels, share of renewables in energy consumption.
- **Transparency of the energy market:** Natural gas and electricity end-user prices, taxes and costs, competition indicators.
- **Energy infrastructure:** Electricity generation capacities, nuclear energy facilities, biofuel production capacities, solar collector's surface.

## Monthly data

Monthly energy statistics are limited to the supply side of the economy (production, imports and exports, and stock changes).

## Primary energy production by fuel, 2014 (%)

Over the past decade (2004–14), there was a decrease in the primary energy production for fossil fuels and nuclear energy. Production of petroleum products accounted for the biggest decrease (52.0 %) while gas production fell by 42.9 %. However, there was an important increase (73.1%) in production of renewable energies over the same period.

**Figure 2: Primary energy production, by fuel, 2014**

	Total production (Mtoe)	Share of each fuel to total production				
		Coal	Crude oil	Natural gas (%)	Nuclear	Renewable
<b>EU-28</b>	770.7	18.4	8.4	15.2	29.3	25.4
<b>EA-19</b>	465.1	11.5	2.6	13.8	37.4	30.6
<b>Belgium</b>	12.2	0.0	0.0	0.0	71.2	23.4
<b>Bulgaria</b>	11.3	45.3	0.2	1.4	36.5	16.4
<b>Czech Republic</b>	29.1	58.0	0.5	0.7	27.0	12.6
<b>Denmark</b>	15.8	0.0	51.2	26.3	0.0	19.9
<b>Germany</b>	119.9	36.8	2.0	5.7	20.9	30.0
<b>Estonia</b>	5.8	0.0	0.0	0.0	0.0	20.3
<b>Ireland</b>	2.0	0.0	0.0	6.1	0.0	42.5
<b>Greece</b>	8.8	72.5	0.7	0.1	0.0	26.5
<b>Spain</b>	34.9	4.7	0.9	0.1	42.3	51.5
<b>France</b>	135.9	0.0	0.6	0.0	82.8	15.5
<b>Croatia</b>	4.4	0.0	12.6	33.2	0.0	52.7
<b>Italy</b>	36.8	0.1	16.0	15.9	0.0	64.2
<b>Cyprus</b>	0.1	0.0	0.0	0.0	0.0	94.2
<b>Latvia</b>	2.4	0.0	0.0	0.0	0.0	99.6
<b>Lithuania</b>	1.5	0.0	5.6	0.0	0.0	91.3
<b>Luxembourg</b>	0.2	0.0	0.0	0.0	0.0	78.8
<b>Hungary</b>	10.0	15.8	5.7	14.3	40.3	20.4
<b>Malta</b>	0.0	0.0	0.0	0.0	0.0	100.0
<b>Netherlands</b>	58.4	0.0	2.5	85.8	1.8	7.8
<b>Austria</b>	12.1	0.0	7.4	9.0	0.0	77.6
<b>Poland</b>	66.9	80.2	1.4	5.6	0.0	12.0
<b>Portugal</b>	6.0	0.0	0.0	0.0	0.0	97.6
<b>Romania</b>	26.6	16.7	15.3	33.0	11.3	22.9
<b>Slovenia</b>	3.7	22.2	0.0	0.1	44.6	32.0
<b>Slovakia</b>	6.3	9.2	0.1	1.3	64.1	22.8
<b>Finland</b>	18.1	0.0	0.0	0.0	33.7	55.8
<b>Sweden</b>	34.1	0.0	0.0	0.0	49.0	48.8
<b>United Kingdom</b>	107.6	6.3	35.6	30.6	15.3	9.0
<b>Iceland</b>	5.2	0.0	0	0.0	0.0	100.0
<b>Norway</b>	196.3	0.6	39.2	48.4	0.0	6.6
<b>Montenegro</b>	0.7	52.6	0.0	0.0	0.0	47.5
<b>FYR of Macedonia</b>	1.3	78.0	0.0	0.0	0.0	22.0
<b>Albania</b>	1.9	0.0	65.6	1.3	0.0	33.1
<b>Serbia</b>	9.4	60.8	11.9	4.7	0.0	22.0
<b>Turkey</b>	31.2	52.0	8.1	1.3	0.0	38.5
<b>Bosnia and Herzegovina</b>	6.0	62.3	0	0.0	0.0	37.7
<b>Kosovo (¹)</b>	1.6	83.6	0.0	0.0	0.0	16.4

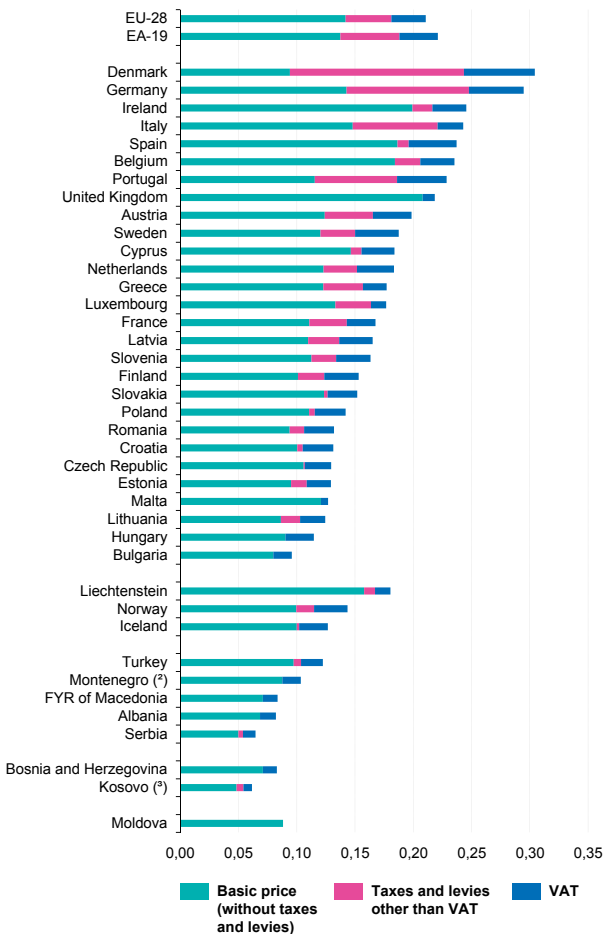
(¹) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: [nrg\\_107a](#))

## Electricity prices for household consumers, second half 2015 (EUR/kWh)

EU-28 and euro area (EA) electricity prices for households increased in 2008, remained stable or even decreased in 2009, but went up again as of 2010. Between the second half of 2014 and the second half of 2015, electricity prices for households decreased in 12 EU Member States.

**Figure 3:** Electricity prices for household consumers, second half 2015 <sup>(1)</sup>



(1) Annual consumption: 2 500 kWh < consumption < 5 000 kWh.

(2) Taxes and levies other than VAT are slightly negative and therefore the overall price is marginally lower than that shown by the bar.

(3) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: [nrg\\_pc\\_204](#))

## Energy dependence — All products 2010-2014 %

The decrease of primary energy production in the EU-28 over the past decades resulted in increased imports of primary energy and energy products. The quantity of imported natural gas nearly doubled over the period 1990–2014 to 320 million tonnes of oil equivalent (Mtoe), although there is a slight decrease since 2010. Crude oil ranked first in terms of quantities imported, though for 2014, the figure was 521 Mtoe, 16.9 % lower than 10 years ago.

**Figure 4: Energy dependence — All products 2005–14**

	2010	2011	2012	2013	2014
<b>EU-28</b>	<b>52.6</b>	<b>54.0</b>	<b>53.4</b>	<b>53.1</b>	<b>53.5</b>
<b>EA-19</b>	<b>62.0</b>	<b>62.4</b>	<b>61.1</b>	<b>60.1</b>	<b>60.3</b>
Belgium	77.9	75.5	76.1	77.4	80.1
Bulgaria	39.6	36.0	36.1	37.7	34.5
Czech Republic	25.6	28.0	25.3	27.9	30.4
Denmark	-15.7	-5.6	-2.6	13.3	12.8
Germany	60.1	61.6	61.3	62.6	61.6
Estonia	13.6	12.0	17.0	11.9	8.9
Ireland	86.6	90.0	85.1	89.3	85.3
Greece	69.2	65.1	66.5	62.2	66.2
Spain	76.7	76.3	73.1	70.4	72.9
France	49.1	48.7	48.1	48.0	46.1
Croatia	46.6	49.4	48.9	47.0	43.8
Italy	82.6	81.4	79.2	76.8	75.9
Cyprus	100.8	92.4	97.0	96.4	93.4
Latvia	45.5	59.9	56.4	55.9	40.6
Lithuania	81.8	81.7	80.3	78.3	77.9
Luxembourg	97.1	97.3	97.5	97.0	96.6
Hungary	58.2	51.8	52.1	52.1	61.7
Malta	99.0	101.3	101.0	104.2	97.7
Netherlands	30.3	30.1	30.6	26.1	33.8
Austria	62.8	70.2	64.4	61.6	65.9
Poland	31.3	33.4	30.6	25.6	28.6
Portugal	75.1	77.7	79.3	72.9	71.6
Romania	21.9	21.6	22.7	18.5	17.0
Slovenia	48.6	47.7	51.1	46.9	44.6
Slovakia	63.1	64.3	60.2	59.2	60.9
Finland	47.8	52.9	46.3	48.5	48.8
Sweden	36.6	36.2	28.6	31.6	32.1
United Kingdom	28.4	36.2	42.3	46.4	45.5
Iceland	18.5	17.9	13.7	13.3	14.0
Norway	-499.0	-590.9	-566.9	-470.3	-569.6
Montenegro	24.2	35.9	34.1	26.6	29.7
FYR of Macedonia	43.1	44.9	48.5	47.9	52.9
Albania	30.5	37.4	22.0	28.1	33.5
Serbia	33.2	30.4	27.8	23.7	27.5
Turkey	69.3	70.7	75.3	73.3	74.8
Bosnia and Herzegovina	6.0	12.1	12.7	7.6	21.4
Kosovo <sup>(1)</sup>	24.6	27.5	27.3	21.9	24.5

<sup>(1)</sup> This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo declaration of independence.

# Dissemination products

## Shedding light on energy in the EU — A guided tour of energy statistics

This is a new type of product that is targeted to non-expert users. The product is an interactive and pedagogic approach to official energy statistics. Short texts are accompanied by charts, maps, infographics and videos.

<http://ec.europa.eu/eurostat/cache/infographs/energy/>

The image displays four overlapping screenshots of an interactive infographic titled "Shedding light on energy in the EU".

- Top-left screenshot:** Titled "What are the priorities in the EU?". It contains text about energy security, efficiency, and sustainability. To the right is a donut chart titled "By Production 2014" showing the following data:

Source	Percentage
Coal	21.6%
Gas	15.6%
Oil	31.2%
Renewables	29.3%
Nuclear	11.3%
- Bottom-left screenshot:** Titled "WHAT IS THE ENERGY UNION ABOUT?". It lists key goals: Energy security, efficiency, and sustainability; Energy efficiency; Energy security, reliability and resilience; Energy efficiency; and Energy security, reliability and resilience.
- Bottom-right screenshot:** Titled "WHAT ENERGY IS AVAILABLE IN THE EU?". It features a video player with the title "#EnergyUnion" and a list of related content: "Communication - Energy Union Framework Strategy", "State of the Energy Union", and "The Energy Union in 'Track in Action' - Press release on the final State of the Energy Union Report".

# Statistics Explained

Statistics Explained is an official Eurostat website presenting articles on statistical topics in an easily and understandable way.

<http://ec.europa.eu/eurostat/statistics-explained>

The screenshot shows the Eurostat Statistics Explained homepage. At the top left is the Eurostat logo. The main heading is "Statistics Explained, your guide to European statistics". Below this is a navigation menu with categories like "All articles", "By country", "By theme", and "By publication". A search bar is located in the top right. The main content area features a "Did you know that..." section with a red lighthouse icon, followed by a grid of article thumbnails. A "Most viewed" list is also visible on the right side.

# Yearbook

[http://ec.europa.eu/eurostat/statistics-explained/index.php/Europe\\_in\\_figures\\_-\\_Eurostat\\_yearbook](http://ec.europa.eu/eurostat/statistics-explained/index.php/Europe_in_figures_-_Eurostat_yearbook)

The Eurostat Yearbook is containing a chapter entirely dedicated to energy statistics.

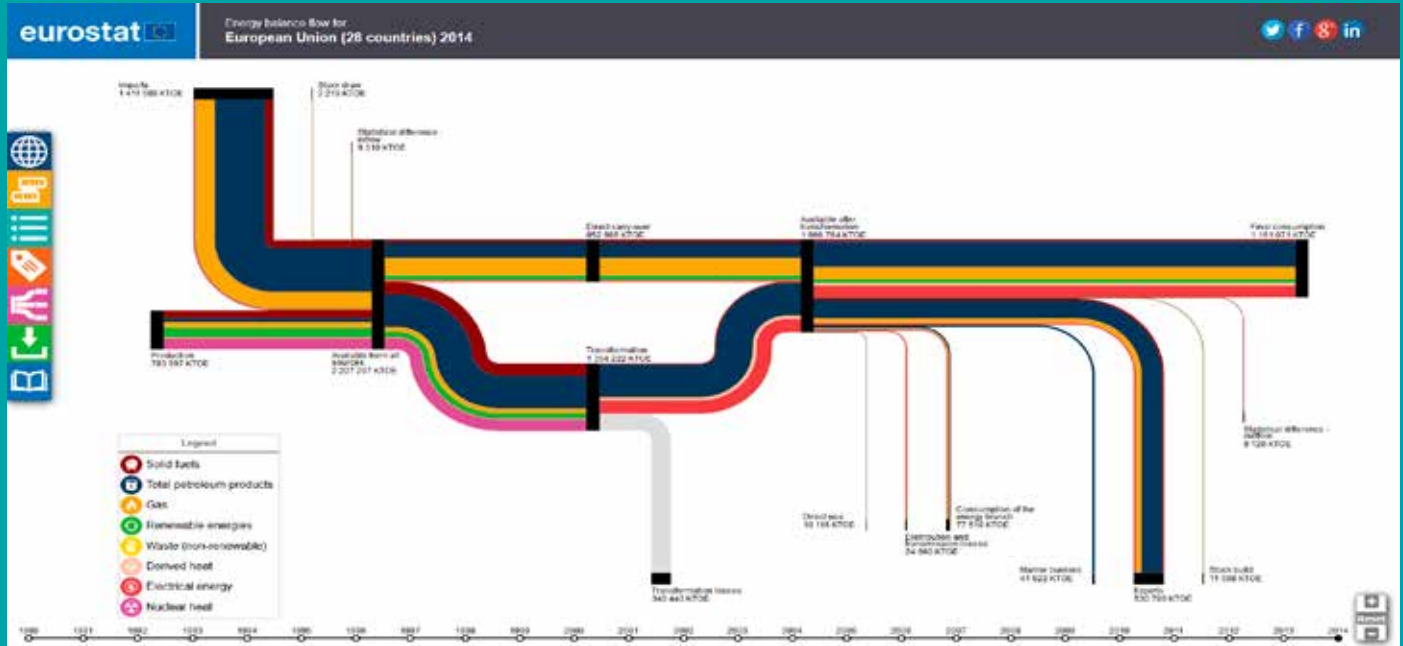
The screenshot shows the "Energy statistics introduced" page on the Eurostat website. The page features a large title, a sub-heading "Latest update of last: July 2016. Planned article update: June 2017", and a detailed "Contents" list. The list includes sections like "Energy in brief", "Energy and climate goals for 2030", "Energy security of supply", and "Energy efficiency". A map of Europe is displayed on the right side, with different countries highlighted in various colors. The page also includes a search bar and navigation links.



## Sankey diagrams

This interactive tool allows you to visualise energy data by means of flow diagrams (also called Sankey diagrams). This tool is useful at the same time for the general public (offering simplified overviews, pie charts and easily

comprehensible diagrams, etc.) and for advanced users (which can navigate into very complete and detailed views, historic time series, etc.). Build and customise your own diagram by playing with different options: change the country, the year, the units, expand or collapse the diagrams, navigate into different fuel families, etc.



## Tables

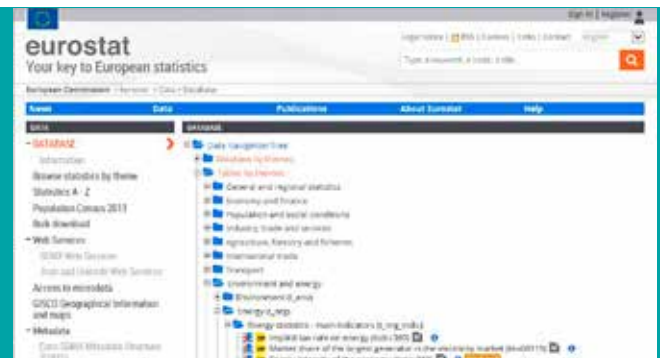
Tables on energy statistics are pre-defined insofar as the user cannot select additional indicators. All the tables on the website open using an application called TGM (Tables, Graphs and Maps)

<http://ec.europa.eu/eurostat/data/database>

## Database

Data on energy can also be viewed from multi-dimensional databases using Data Explorer. This tool allows users to select across all dimensions of a table (i.e. geography, time, measurement units).

<http://ec.europa.eu/eurostat/data/database>



## Energy balances

Energy commodities (fuels) are mainly bought for their heat-raising properties. They can also be converted into different products (derived fuels). Therefore it is useful to present the energy supply and energy consumption in energy units (terajoules or tonnes of oil equivalent). The format adopted is termed the energy balance.

The energy balance allows you to see the relative importance of the different fuels in their contribution to the economy. The energy balance is also the starting point for the construction of various indicators as well as analyses of energy efficiency. Eurostat's energy balance has a format identical to that of the commodity balance but expressed in an energy unit.

<http://ec.europa.eu/eurostat/web/energy/data/energy-balances>

## Statistical book

<http://ec.europa.eu/eurostat/web/products-statistical-books/-/KS-DK-16-001>

The objective of this publication is to provide an overview of the most relevant indicators on energy, transport and environment, with a particular focus on sustainable development. It presents data for the European Union, for the EU Member States as well as for the candidate countries and EFTA countries.

