

*Data from January 2019  
Planned article update: February 2020*

### Energy efficiency targets for 2020 and 2030

The [European Union \(EU\)](#) has committed itself to a 20 % reduction of energy consumption by the year 2020 compared to baseline<sup>1</sup>projections. This objective is also known as the 20 % energy efficiency target. In other words, the EU-28 has committed<sup>2</sup>itself to have a primary energy consumption of no more than 1 483 Mtoe and a final energy consumption of no more than 1 086 Mtoe in 2020. For 2030 the binding target is at least 32.5 % reduction. This translates into a primary energy consumption of no more than 1 273 Mtoe and a final energy consumption of no more than 956 Mtoe in 2030.

This article provides statistical evaluation of the energy consumption trends in relation to these objectives and describes the statistical method for its measurement.

### Primary energy consumption and distance to 2020 and 2030 targets

[Primary energy consumption](#) (shown in Table 1 and Figure 1) increased for the third consecutive year since 2014. In 2017 it was 0.9 % higher than in 2016 and 3.3 % higher than in 2014. The gap between the actual level of primary energy consumption and the target level in 2020 increased from 1.9 % in 2014 to 5.3 % in 2017. The distance to the 2030 target was 22.6 % in 2017.

**Primary energy consumption and distance to 2020 and 2030 targets, EU-28**

	2006	2014	2015	2016	2017
Energy consumption (Mtoe)	1 729.2	1 511.1	1 537.3	1 546.7	1 561.0
Index (2005=100)	100.5	87.9	89.4	89.9	90.8
Distance to 2020 target (Mtoe)	246.2	28.1	54.3	63.7	78.0
Distance to 2020 target (%)	16.6	1.9	3.7	4.3	5.3
Distance to 2030 target (Mtoe)	456.2	238.1	264.3	273.7	288.0
Distance to 2030 target (%)	35.8	18.7	20.8	21.5	22.6

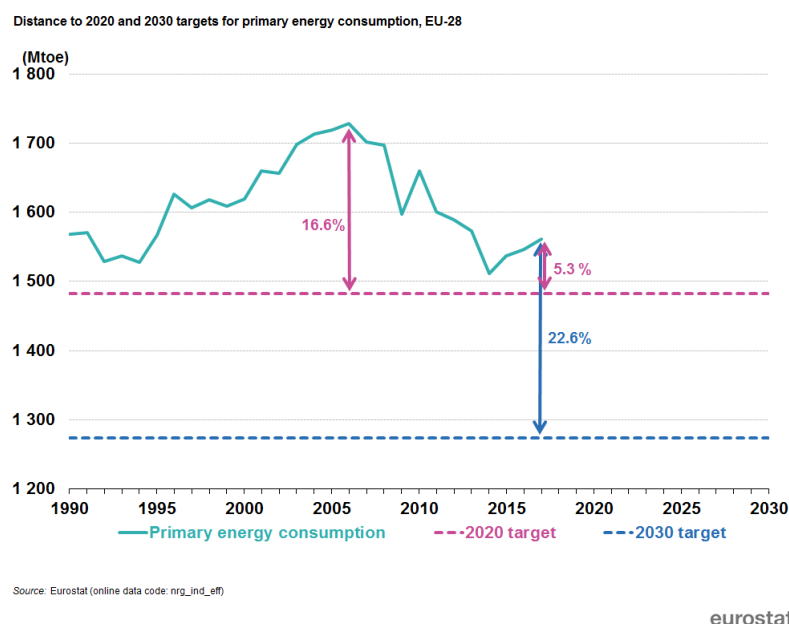
Source: Eurostat (online data code: nrg\_ind\_eff)

eurostat 

**Table 1: Primary energy consumption and distance to 2020 and 2030 targets, EU-28** Source: Eurostat (nrg\_ind\_eff)

<sup>1</sup>Projections made in years 2007 for energy consumption in year 2020. The target was set as 20% reduction from the projected value.

<sup>2</sup>see Article 3 of Directive 2012/27/EU on energy efficiency



**Figure 1: Distance to 2020 and 2030 targets for primary energy consumption, EU-28** Source: Eurostat (nrg\_ind\_eff)

Since 1990, the first year for which data are available, consumption has fallen by 0.4 %. However, over the years, the primary energy consumption has fluctuated greatly. It peaked in 2006 (1 729 Mtoe representing a 16.6 % gap from the 2020 target), while a record low was reached in 2014 (1 511 Mtoe representing a 1.9 % gap from the 2020 target). Since its all time peak in 2006 the primary energy consumption decreased by 9.7 %.

## Final energy consumption and distance to 2020 and 2030 targets

**Final energy consumption** (shown in Table 2 and in Figure 2) increased for the third consecutive year since 2014. In 2017 it was 1.1 % higher than in 2016 and 5.3 % higher than in 2014. While in 2014 the final energy consumption was 1.9 % below the 2020 target level, in 2017 it was 3.3% above the 2020 target level. The distance to the 2030 target was 17.4 % in 2017.

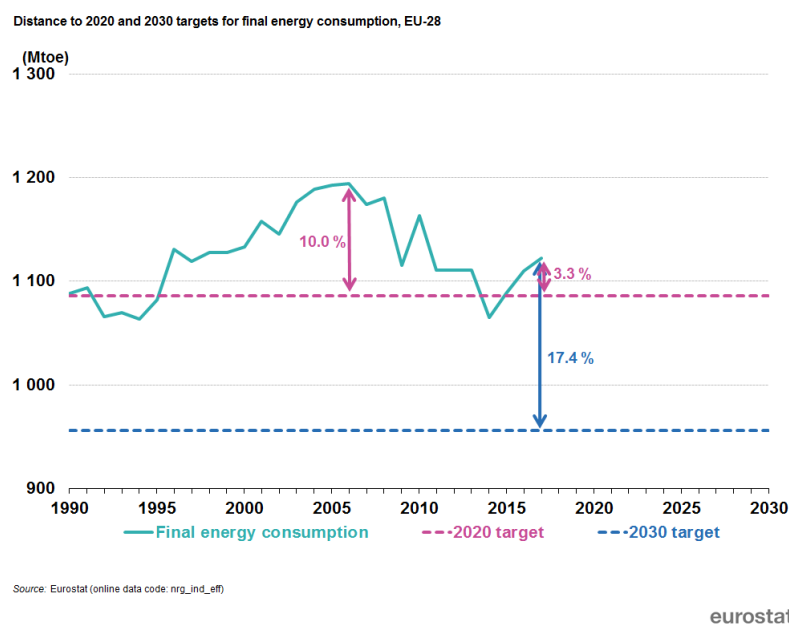
**Final energy consumption and distance to 2020 and 2030 targets, EU-28**

	2006	2014	2015	2016	2017
Energy consumption (Mtoe)	1 194.8	1 065.3	1 088.0	1 109.8	1 122.3
Index (2005=100)	100.2	89.3	91.2	93.0	94.1
Distance to 2020 target (Mtoe)	108.8	-20.7	2.0	23.8	36.3
Distance to 2020 target (%)	10.0	-1.9	0.2	2.2	3.3
Distance to 2030 target (Mtoe)	238.8	109.3	132.0	153.8	166.3
Distance to 2030 target (%)	25.0	11.4	13.8	16.1	17.4

Source: Eurostat (online data code: nrg\_ind\_eff)

eurostat

**Table 2: Final energy consumption and distance to 2020 and 2030 targets, EU-28** Source: Eurostat (nrg\_ind\_eff)



**Figure 2: Distance to 2020 and 2030 targets for final energy consumption, EU-28** Source: Eurostat (nrg\_ind\_eff)

Since the beginning of the new millennium, the lowest level of final energy consumption was recorded in 2014 (1 065 Mtoe, 1.9 % below the 2020 target). Since its all time peak in 2006 the final energy consumption decreased by 6.1%.

## Source data for tables and graphs

- [Energy savings - Excel file](#)

## Data sources

Data from [energy balances](#) have been used for all calculations. Data are available for all 28 EU Member States and for all time periods from 1990. The most recent data available are for 2017. In general, data are complete, recent and highly comparable across countries. This results in high accuracy and accountability of EU aggregate figures.

## Methodology

The target values for 2020 and 2030 are fixed in Article 3 of [Directive 2012/27/EU](#) :

- the Union's 2020 energy consumption has to be no more than 1 483 Mtoe of primary energy or no more than 1 086 Mtoe of final energy
- the Union's 2030 energy consumption has to be no more than 1 273 Mtoe of primary energy and/or no more than 956 Mtoe of final energy

The primary energy consumption used for monitoring progress towards 2020 and 2030 targets is taken from [energy balances](#) : Primary energy consumption (Europe 2020-2030) [code: PEC2020-2030]. The primary energy consumption has to be measured in Mtoe.

The final energy consumption used for monitoring progress towards 2020 and 2030 targets is taken from [energy balances](#) : Final energy consumption (Europe 2020-2030) [code: FEC2020-2030]. The final energy consumption has to be measured in Mtoe.

The distance to target in absolute terms (Mtoe) is calculated as a difference between the observed energy consumption in a given year to the absolute primary and final energy consumption targets in 2020 or 2030 according to Directives 2012/27/EU.

The distance to target in relative terms (as percentage) is calculated as a ratio of the distance in a given year to primary and final energy consumption target in 2020 or 2030 according to Directive 2012/27/EU.

## Context

Europe cannot afford to waste energy. Energy efficiency is the most cost effective way to reduce emissions, improve energy security, enhance competitiveness and make energy consumption more affordable for all consumers. Energy efficiency is also one of the key factors in achieving our long-term energy and climate goals.

The [European Council](#) adopted in 2007 energy and climate change objectives for 2020:

- to reduce [greenhouse gas](#) emissions by 20 %
- to increase the share of renewable energy to 20 %
- to make a 20 % improvement in energy efficiency.

The [European Parliament](#) has continuously supported more ambitious goals.

On 25 October 2012, the EU adopted Directive 2012/27/EU on energy efficiency. This Directive establishes a common framework of measures for the promotion of energy efficiency within the Union in order to ensure the achievement of the 20 % headline target on energy efficiency.

On 11 December 2018, the EU amended Directive 2012/27/EU on energy efficiency and set a 2030 target of 32.5 %, also with a possible upward revision in 2023.

## Other articles

- [Smarter, greener, more inclusive - indicators to support the Europe 2020 strategy](#)
- [Statistics for European policies and high-priority initiatives](#)
- [Energy statistics - an overview](#)
- [Europe 2020 indicators - climate change and energy](#)

## Database

- [Energy \(nrg\)](#) , see:

Energy statistics - quantities, annual data (nrg\_quant)

Energy indicators (nrg\_ind)

Energy efficiency (nrg\_ind\_eff)

## Dedicated section

- [Energy](#)
- [Europe 2020](#)
- [Sustainable Development Goals](#)

## Publications

- [Smarter, greener, more inclusive? - Indicators to support the Europe 2020 strategy \(2018 edition\)](#)
- [Sustainable development in the European Union — Monitoring report on progress towards the SDGs in an EU context \(2018 edition\)](#)
- [Shedding light on energy in the EU - A guided tour of energy statistics \(2018 edition\)](#)
- [Energy balance sheets - 2016 data \(2018 edition\)](#)
- [Energy, transport and environment indicators \(2018 edition\)](#)

## Methodology

- [Energy efficiency \(nrg\\_inf\\_eff\)](#)
- [Energy statistics - quantities \(nrg\\_quant\)](#)
- [Energy balances \(nrg\\_bal\)](#)

## Legislation

- [Directive 2012/27/EU on energy efficiency](#)
- [Directive 2018/2002 amending Directive 2012/27/EU on energy efficiency](#)
- [Regulation \(EC\) No 1099/2008 on energy statistics](#)

## External links

- [European Commission - DG Energy - Energy Strategy and Energy Union](#)
- [European Commission - DG Energy - Energy Efficiency](#)
- [Concerted Action - Energy Efficiency Directive](#)
- [ODYSSEE indicators on energy efficiency](#)
- [MURE database on energy efficiency policies and measures](#)
- [International Partnership for Energy Efficiency Cooperation](#)