

<b>Indicator (definition)</b>	<b>Energy intensity of the economy:</b> Ratio between the Gross Inland Consumption of Energy (coal, electricity, oil, natural gas and renewable energy sources – available for consumption) and the Gross Domestic Product (GDP) calculated for a calendar year and expressed in Millions of euro, chain-linked volumes, reference year 2000 (at 2000 exchange rates)
<b>Eurostat Unit</b>	Energy statistics National Accounts
<b>Other Commission DGs</b>	Energy, Economic and Financial affairs
<b>European Statistical System Working Group (WG)</b>	WG on Energy Statistics
<b>Date</b>	October 2010

**1. Overall assessment of accuracy and comparability** (Description of quality grades under the following link: [http://circa.europa.eu/Public/irc/dsis/structind/library?l=/general\\_information/quality\\_profiles/annex\\_enpdf/EN\\_1.0\\_&a=d](http://circa.europa.eu/Public/irc/dsis/structind/library?l=/general_information/quality_profiles/annex_enpdf/EN_1.0_&a=d))

A     
  B     
  C     
  Indicator to be Developed

Data is collected from reliable sources applying high standards with regard to the methodology ensuring a high degree of comparability over time. Because of the GDP chain-linked volumes at 2000 exchange rates the comparability across countries is limited.

### 2. Objective and relevance of the indicator:

The indicator measures energy consumption per unit of GDP. The GDP figures are taken at chain-linked volumes, reference year 2000. The indicator gives a picture of the decoupling of energy use from GDP growth. This decoupling of economic growth from gross inland energy consumption was likely due to a range of factors, including: structural changes, such as the shift from industry towards services and a shift within industry to less energy-intensive activities; the closure of inefficient, high-polluting units; or end-use efficiency gains, such as lower energy-consuming appliances.

A shift from gas and solid fuel to lower carbon sources is one of the major climate goals of Europe 2020. Furthermore, this indicator is a proxy to measure the improvement of energy efficiency by 20% in 2020.

In order to promote sustainable development it is necessary to ensure improvement of energy efficiency in relevant sectors of the national economy (Kyoto protocol, Article 2).

The Barcelona European Council (2002) agreed on the need for the European Union to show substantial progress in enhancing energy efficiency by 2010.

The Brussels European Council (2003) invited Member States to accelerate progress towards meeting the Kyoto Protocol targets, including increased energy efficiency, inviting the Environment Council to examine setting indicative targets in a cost-efficient manner and with minimum distortionary effects.

Sustainable energy is at the heart of the EU's long-term economic and climate change strategy. The EU has set itself 3 goals for 2020: reduce greenhouse gases by 20%, improve energy efficiency by 20% and increase the share of renewables in our consumption to 20%.

**Restriction of the indicator's relevance and other characteristics which may lead to restrictions in using it in monitoring and reporting**

### 3. Data availability: details

( $t_1$ : earliest reference year available;  $t_2$ : latest reference year available in October 2010)

	Member States	Candidate and Acceding Countries	US and Japan	EEA-EFTA <sup>1</sup>
t <sub>1</sub>	1990: BE, CZ, DK, IE, EL, ES, FR, IT, CY, LV, LT, LU, NL, AT, PT, SI, FI, SE, UK 1991: BG, DE, HU, MT, PL, RO, 1992: SK 1993: EE	1990: TR 1995: HR	1990: US 1991: Japan	1990: IS, CH, NO
t <sub>2</sub>	2008	2008	2008	2006: IS 2008: CH, NO

*Comments (including information on time series):* The data for Malta from 1991 to 1999 and Romania from 1991 to 1998 are provisional.

#### 4. Overall accuracy

High



The overall accuracy can be considered as high.

Data on energy is submitted on the basis of five Annual Joint Questionnaires (Eurostat/IEA/UNECE) employing an internationally agreed methodology. Eurostat receives disaggregated data which are used to countercheck the results and to ensure consistency with the total amount of energy consumption. The accuracy of the basic data depends on the quality of the national statistical systems and may vary from country to country.

In several countries and for most energy commodities data provision by the energy-producing companies is required by law. However, emerging liberalization process in some countries may to some extent negatively affect accuracy in some cases. From time to time detailed surveys targeted to single subitems (e.g. Wood consumption in households) are carried out to improve the methodology.

At European level, accuracy of GDP is regularly monitored in the framework of the Gross National Income Committee and technical aspects are regularly analysed in several working groups and technical committees and ensures high quality.

Restricted

(sources, errors, methodology, etc.)



#### 5. Comparability across countries

High



Restricted



The comparability across countries is limited. GDP chain linked volumes at 2000 exchange rate affects the comparability across countries.

The data of Gross Inland Consumption of Energy is fully comparable due to the use of the joint questionnaires. Eurostat verifies to the highest possible extent if the reported data respect the prescribed methodology. The underlying data collection methods are however the responsibility of the Member States. The methodology is harmonised for all EU and OECD countries, including the United States and Japan.

#### 6. Comparability over time

High



Fully comparable data on energy consumption. The data is subject to annual revisions. From time to time specific actions targeted to selected items to improve the methodology – including the time series are carried out. Backwards calculations are made in case of any changes in the methodology.

The national accounts transmission programme (Regulation

<sup>1</sup> While being a member of the EFTA, Liechtenstein has complete or partial exemptions from several statistical requirements due to its size. Thus, Liechtenstein is excluded from this overview as most of the data for structural indicators are missing.

No 1392/2007 of the European Parliament and of the Council) requires coherent long time series for GDP which are produced by the EU Member States. The new Member States are in general not required to send as long time series as the original EU-15 countries.

Restricted



**7. Development perspective for improving the quality of this indicator (including as far as possible an indication of the burden on Member States and respondents.)**

**8. Contribution to the coherence of the set/potential to qualify for an integrated policy analysis**

Energy intensity of the economy is a key indicator for measuring the Lisbon Process and its successor Europe 2020. This indicator is the main indicator for assessing the efficiency of energy supply to GDP. It helps identifying whether there is a decoupling between energy consumption and economic growth.

**Relevant European legislation**

Regulation (EC) No 1099/2008 of the European Parliament and of the Council of 22 October 2008 on energy statistics

Regulation No 1392/2007 of the European Parliament and of the Council of 13 November 2007 amending Council Regulation (EC) No 2223/96 with respect to the transmission of national accounts data

[Top of the page](#)