



EUROSTAT QUALITY PROFILE

Indicator (definition)	Energy intensity of the economy: 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 at constant prices, base year 1995 (ESA95).
Eurostat Unit	G4, Energy statistics C2, National Accounts
Other Commission DGs	DG ECFIN; DG ENV; DG TREN
European Statistical System Working Group (WG)	WG on Energy Statistics
Date	22 May 2007

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

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 across countries. Restrictions in comparability over time are related to the construction of the indicator as such rather than to shortcomings with regard to the underlying and are well documented and explained.

2. Objective and relevance of the indicator:

The indicator measures energy consumption per unit of GDP. The GDP figures are taken at constant prices to avoid the impact of inflation. The indicator gives a picture of the decoupling of energy use from GDP growth. Changes in the indicator reflect changes in energy efficiency and in the structure of the economy.

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.

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

The relevance is restricted as GDP is calculated in prices of 1995 i.e. a price structure and exchange rates of 1995 are used. This affects comparability over time as changes in price structure and exchange rates are not taken into account.

The relevance is restricted as GDP is calculated in Euro which affects comparability in particular with the US and Japan through exchange rate effects.

3. Data availability: details

(t₁: earliest reference year available; t₂: latest reference year available in May 2007)

	EU Member States	ACC/CC	USA and Japan	EFTA ¹
t ₁	1991: 23 member states 1992: SK 1993: EE	1991: BG, RO, TR 1995: HR MK: no data	1991	1991 CH: no data
t ₂	2004	2004 (excl MK)	2004	2004

Comments (including information on time series): The data is subject to continuous revisions.

4. Overall accuracy

High



The overall accuracy can be considered as high.

Data on energy is submitted on the basis of an Annual Joint Questionnaire 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 companies is required by law. However, emerging liberalisation process in some countries may to some extent negatively affect accuracy in some cases. From time to time detailed surveys targeted to single sub-items (e.g. Wood consumption in households) are carried out to improve the methodology.

Gross Domestic Product (GDP) is the value of all goods and services produced less the value of any goods or services used in their creation. GDP is a measure for the economic activity.

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.

Restricted



(sources, errors, methodology, etc.)

5. Comparability across countries

High



Fully comparable data due to the use of the joint questionnaire. Eurostat verifies to the extent possible 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 USA and Japan.

GDP comparability across countries is ensured by the application of the legal framework represented by the European System of Accounts (ESA 95) and the System of National Accounts (SNA 93).

Comparability of GDP for EU countries is regularly monitored in the context of the work of the Gross National Income Committee. International harmonisation of techniques and, to some extent, compilation tools is ensured by the work of the national accounts working groups (Eurostat, OECD, UN).

At present, some EU Member States are still in the implementation phase of ESA 95 that may affect comparability in some cases.

Restricted



6. Comparability over time

¹ 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.

High
Restricted



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.

ESA 95 requires coherent long time series for GDP which are produced by most of the EU Member States. In some countries, methodological breaks can affect time series (normally on a temporary basis). Methodological changes in the compilation of GDP imply a backward calculation of the time series to ensure full time coherence. However, due to the use of constant prices in the GDP calculation comparability over time is 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.)

The indicator is not covered by a legal basis which might be helpful to accelerate data provision by some countries through more discipline with regard to data transmission, thus improving timeliness of the indicator. The countries that are supposed to provide the data by T+10 in many cases provide the data by T+14 on average. Therefore the timeliness of the indicator is affected.

However, it should be noted that the more one moves away from that base year, the less precise the indicator becomes due to changes in the underlying price structure of a country.

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

This indicator is the main indicator for assessing the efficiency of energy supply to GDP.

Relevant European legislation:

Data are provided under a gentlemen's agreement on a voluntary basis using an Annual Joint Questionnaire based on internationally used methodology.

[Top of the page](#)