

Share of energy consumption from renewable sources in final energy consumption

Dimension - Environment

Associated Key Factor:

Energy use and prices

Data Source:

International Environmental Agency

Eurostat, Statistical Office of the European Communities
Unit D4 (Energy Statistics)
Postal: L-2920 Luxembourg.

<http://europa.eu.int/comm/eurostat/structuralindicators>

<http://www.iea.org>

General Availability:

Reporting unit: per cent

Reporting level: national

Reporting period: regularly

Data available from 1990 to 2002

Availability by country:

1990 - 2002: EU-15+AC

The indicator:

Is the ratio between the electricity produced from renewable energy sources and the gross national electricity consumption calculated for a calendar year. It measures the contribution of electricity produced from renewable energy sources to the national electricity consumption.

1. Renewable energy sources.

They are defined as renewable non-fossil energy sources : wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.

2. Electricity produced from renewable energy sources.

It comprises of the electricity generation from hydro plants (excluding pumping), wind, solar, geothermal and electricity from biomass/wastes. Biomass/wastes electricity comprises of electricity generated from wood/wood wastes and other solid wastes of renewable nature (straw, black liquor) burning, municipal solid waste incineration, biogas (incl. landfill, sewage, farm gas) and liquid bio fuels.

How is it measured?

Data is compiled through annual Joint Questionnaires (one for electricity and another one for renewable energy sources). These questionnaires are called « joint » because they are shared by Eurostat and the International Energy Agency (IEA, part of the OECD). The methodology is fully harmonised between both organisations. Estimations are not normally necessary since annual data are complete. EU-15 figures are calculated simply by the addition of national data.

What is the policy relevance of the indicator?

Fossil fuel consumption is directly linked with CO₂ (the primary greenhouse gas). The links with other pollutant emissions (e.g. NO_x, HC, NMVOC, etc.) and noise also depend on vehicle technology (Euro and noise classes) and trip conditions, as well as the type of fuel. Therefore fuel taxes, originally instruments of fiscal policy, are also seen as instruments to reduce emissions from transport, in particular CO₂. First, fuel taxes stimulate reductions of fuel consumption, e.g. by stimulating fuel efficiency within all modes. Secondly, they can stimulate a shift towards cleaner fuels, for example from leaded towards unleaded petrol, or to low-sulphur fuels (see the fact sheet 'Internalisation of external costs'). Reduction of the impacts of fossil fuel consumption by transport can be achieved by reducing energy use per transport movement (through improvement of energy efficiency and by shifting transport demand towards less energy consuming modes, such as, for example, rail and shipping) and by increasing the share of alternative sources of energy (bio fuels, wind and solar energy) (TERMS 2002).

The Indicator is relevant for the following pathways of the FORESIGHT FOR TRANSPORT exercise: