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Phríomh-Oifig
Staidrimh

Central
Statistics
Office

Standard Report on Methods and Quality for Fossil Fuel Subsidies 2000-2018

Standard Report on Methods and Quality for Fossil Fuel Subsidies

This documentation applies to the reporting period:
2000-2018

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1 Overview

Effective Carbon Rate

The release of carbon dioxide into the atmosphere through combustion of fossil fuels is the primary cause of global warming. Taxation of fossil fuels doesn't in general cover the cost of the environmental damage caused by fossil fuel combustion. In this release we calculated the average effective carbon rates of different fossil fuels in different sectors of the Irish economy. These effective carbon rates can be compared to a reference carbon price which may account for some or all of the environmental damage caused by fossil fuel combustion.

The average effective carbon rate for a fuel is defined as total energy taxes paid divided by the total amount of carbon dioxide emitted through combustion of the fuel. The energy taxes included were Excise Duty, Carbon Tax, Electricity Tax, the PSO (Public Service Obligation) Levy, the NORA (National Oil Reserves Agency) Levy and emission permit purchases under the EU Emissions Trading Scheme.

Fossil Fuel Subsidies

This release presents data on direct and indirect fossil fuel subsidies. Direct subsidies include direct payments from the government budget, while indirect subsidies are tax reliefs or revenue foregone due to reduced tax rates for certain sectors. Fossil fuel activities include exploration, extraction, manufacturing, refining and distribution of fossil fuels, research and development supporting any of the above, and fossil fuel consumption by all sectors of the economy.

This new CSO release provides data for Sustainable Development Goal (SDG) 12, specifically Indicator 12.c.1: Amount of fossil-fuel subsidies per unit of GDP (production and consumption) and as a proportion of total national expenditure on fossil fuels.

2 General Information

2.1 Statistical Category

The OECD¹ defines a subsidy as the result of a government action that confers an advantage on consumers or producers, in order to supplement their income or lower their costs. A subsidy is a fossil fuel subsidy if it supports fossil fuel activities.

2.2 Area of Activity

Environment accounts.

2.3 Organisational Unit Responsible, Persons to Contact

The Environment and Climate division of the CSO is responsible for compiling and publishing data on Fossil Fuel Subsidies.

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¹ Organisation for Economic Cooperation and Development.

2.4 Objectives and Purpose; History

Eurostat has developed a series of legal and voluntary environmental accounts modules based on the SEEA. The CSO has published statistical releases on the Eurostat Environmental Taxes and Environmental Subsidies and Similar Transfers modules. This new release complements those two releases as it enables users to compare the amount raised through environmental taxes with the amount spent on environmental subsidies and on fossil fuel subsidies.

This new CSO release provides data for SDG goal 12.

Target 12.c Rationalise inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimising the possible adverse impacts on their development in a manner that protects the poor and the affected communities.

Indicator 12.c.1 Amount of fossil-fuel subsidies per unit of GDP (production and consumption) and as a proportion of total national expenditure on fossil fuels.

The OECD produces a database and reports on taxation of energy use, which calculates effective carbon rates for OECD countries. This work uses similar concepts.

2.5 Periodicity

Annual.

2.6 Client

Eurostat, national policy-makers, media, environmental organisations and the public.

2.7 Users

National users include the environment sector, the government, the media, educational institutions and the public. International users include Eurostat, the European Environment Agency and the OECD.

2.8 Legal basis

The data in this release will be used to complete a new, voluntary Eurostat questionnaire on potentially environmentally harmful subsidies.

3 Statistical Concepts, Methods

3.1 Subject of the Statistics

Effective carbon rates by sector and fuel were calculated using Revenue data on Excise receipts and volumes in conjunction with SEAI Energy Balance data on energy use by sector and fuel, and are presented for the years 2000-2018.

Data on direct and indirect fossil fuel subsidies are presented for the years 2000-2018.

3.2 Units of Observation/Collection Units/Units of Presentation

Not applicable.

3.3 Data Sources

Revenue Excise volumes and receipts were the primary data source, along with SEAI Energy Balances on energy use by sector and fuel. Data on fossil fuel subsidies were also collected from the publicly available annual accounts of government departments and organisations, as well as through direct requests to Revenue and other organisations.

3.4 Reporting Unit/Respondents

Not applicable.

3.5 Type of Survey/Process

The process involves data collection from Revenue and from the annual accounts of government departments and organisations, estimation of certain tax expenditures, and classification according to type of support and activity supported.

3.6 Characteristics of the Sample/Process

See Section 3.5.

3.7 Survey Technique/Data Transfer

Not applicable.

3.8 Questionnaire (including explanations)

Not applicable.

3.9 Participation in the Survey

Not applicable.

3.10 Characteristics of the Survey/Process and its Results

The data will be provided to Eurostat for its new data collection on potentially environmentally damaging subsidies, and will be published in a national release.

3.11 Classifications used

Effective carbon rates are classified by sector and fuel. Fossil fuel subsidies are classified as direct or indirect supports.

3.12 Regional Breakdown of Results

Fossil fuel subsidies are reported for Ireland as a single regional unit.

4 Production of the Statistics, Data Processing, Quality Assurance

4.1 Data Capture

Not applicable.

4.2 Coding

Not applicable.

4.3 Data Editing

Not applicable.

4.4 Imputation (for Non-Response or Incomplete Data Sets)

Not applicable.

4.5 Grossing and Weighting

Not applicable.

4.6 Computation of Outputs, Estimation Methods Used

Effective carbon rates are calculated using information on tax receipts, rates and reliefs along with data on emissions by sector.

For certain indirect fossil fuel subsidies, calculations of revenue foregone due to a reduced tax rate on a certain good or service, or for a certain type of industry or activity, were calculated. The revenue foregone approach calculates the reduction in tax revenue, relative to a benchmark, due to the introduction of a tax expenditure, assuming no behavioural change.

4.7 Other Quality Assurance Techniques Used

Data have been collected for the years 2000-2018 so a time series is available for comparison across years. Where possible, estimates have been checked against figures available from parliamentary questions or research studies. The inclusion or exclusion of certain programmes has been compared with the approaches taken in a number of international reports on environmentally harmful subsidies.

Effective carbon rates have been compared to the OECD Taxing Energy Use results for Ireland and found to be inline with those independently produced estimates.

5 Quality

5.1 Relevance

The data in this release will be used to complete a new Eurostat questionnaire on potentially environmentally harmful subsidies.

This new CSO release provides data for SDG goal 12.

Target 12.c Rationalise inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimising the possible adverse impacts on their development in a manner that protects the poor and the affected communities.

Indicator 12.c.1 Amount of fossil-fuel subsidies per unit of GDP (production and consumption) and as a proportion of total national expenditure on fossil fuels.

5.2 Accuracy and Reliability

Data are collected directly from government accounts and Revenue using a bottom-up approach.

5.3 Timeliness and Punctuality

The data are published to the CSO website, within 24 months of the end of the reference year.

5.4 Coherence

Data are reviewed in relation to amounts from previous years to assess consistency. Where possible, estimates have been checked against figures available from parliamentary questions or research studies. The inclusion or exclusion of certain programmes has been compared with the approaches taken in international reports on environmentally harmful subsidies.

5.5 Comparability

The data will be used to complete the new Eurostat questionnaire on potentially environmentally damaging subsidies. They can then be compared with figures from other EU countries.

5.6 Accessibility and Clarity

5.6.1 Assistance to Users, Special Analyses

Background notes are provided with each release on the CSO website.

5.6.2 Revisions

The figures are subject to revision on an ongoing basis. Further potential fossil fuel subsidies, which have not been included in the two release tables due to lack of data availability at present, are listed in the Background Notes.

5.6.3 Publications

The data will be published to the CSO website and on the CSO Statbank database.

5.6.4 Confidentiality

All confidential data are treated in accordance with Part V of the Statistics Act 1993.