



An  
Phríomh-Oifig  
Staidrimh

Central  
Statistics  
Office

Standard Report on  
Methods and Quality for  
**Fossil Fuel Subsidies**  
2000–2019

# **Standard Report on Methods and Quality for Fossil Fuel Subsidies**

This documentation applies to the reporting period:  
**2000-2019**

Last edited: 25<sup>th</sup> March, 2021

CENTRAL STATISTICS OFFICE

Skehard Road, Cork

021 453 5000

[www.cso.ie](http://www.cso.ie)

# **Table of Contents**

## **1 Overview**

## **2 General Information**

- 2.1 Statistical Category
- 2.2 Area of Activity
- 2.3 Organisational Unit Responsible, Persons to Contact
- 2.4 Objectives and Purpose; History
- 2.5 Periodicity
- 2.6 Client
- 2.7 Users
- 2.8 Legal Basis

## **3 Statistical Concepts, Methods**

- 3.1 Subject of the Statistics
- 3.2 Units of Observation/Collection Units/Units of Presentation
- 3.3 Data Sources
- 3.4 Reporting Unit/Respondents
- 3.5 Type of Survey/Process
- 3.6 Characteristics of the Sample/Process
- 3.7 Survey Technique/Data Transfer
- 3.8 Questionnaire (including explanations)
- 3.9 Participation in the Survey
- 3.10 Characteristics of the Survey/Process and its Results
- 3.11 Classifications used
- 3.12 Regional Breakdown of Results

## **4 Production of the Statistics, Data Processing, Quality Assurance**

- 4.1 Data Capture
- 4.2 Coding
- 4.3 Data Editing
- 4.4 Imputation (for Non-Response or Incomplete Data Sets)
- 4.5 Grossing and Weighting
- 4.6 Computation of Outputs, Estimation Methods Used
- 4.7 Other Quality Assurance Techniques Used

## **5 Quality**

- 5.1 Relevance
- 5.2 Accuracy and Reliability
- 5.3 Timeliness and Punctuality
- 5.4 Coherence
- 5.5 Comparability
- 5.6 Accessibility and Clarity
  - 5.6.1 Assistance to Users, Special Analyses
  - 5.6.2 Revisions
  - 5.6.3 Publications
  - 5.6.4 Confidentiality

# 1 Overview

## Effective Carbon Rate

In this release we calculated the average effective carbon rates of different fossil fuels in different sectors of the Irish economy. 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 OECD<sup>1</sup> 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.

Clare O'Hara 01-498 4208  
Gerry Brady 01-498 4201

[environment@csso.ie](mailto:environment@csso.ie)

## 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

---

<sup>1</sup> Organisation for Economic Cooperation and Development.

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 2000-2019.

Data on direct and indirect fossil fuel subsidies are presented for the years 2000-2019.

## **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 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 2000-2019 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**

This 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**

Effective carbon rates can be compared internationally.

## **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.