



**An  
Phríomh-Oifig  
Staidrimh**

Central  
Statistics  
Office

# **Standard SIMS Report: Fossil Fuel Subsidies**



# Single Integrated Metadata Structure (SIMS) Report

## For

# Fossil Fuel Subsidies

This documentation applies to the reporting period:

**2000-2020**

Last edited: 25/04/2022



## 1. Table of Contents

1.	Table of Contents.....	3
2.	Introduction .....	5
3.	Contact.....	5
4.	Metadata Update.....	5
4.1.	Metadata last certified.....	5
4.2.	Metadata last posted .....	5
4.3.	Metadata last update .....	5
5.	Statistical Presentation.....	6
5.1.	Data Description .....	6
5.2.	Classification System.....	6
5.3.	Sector Coverage.....	6
5.4.	Statistical Concepts and definitions .....	6
5.5.	Statistical Unit.....	6
5.6.	Statistical Population .....	6
5.7.	Reference Area .....	6
5.8.	Time Coverage .....	6
5.9.	Base period .....	6
6.	Unit of Measure.....	6
7.	Reference Period .....	7
8.	Institutional Mandate .....	7
8.1.	Legal Acts and other agreements .....	7
8.2.	Data Sharing.....	7
9.	Confidentiality.....	7
9.1.	Confidentiality – policy .....	7
9.2.	Confidentiality – data treatment .....	7
10.	Release Policy .....	7
10.1.	Release Calendar.....	7
10.2.	Release calendar access.....	7
10.3.	User access.....	7
11.	Frequency of Dissemination .....	8
12.	Accessibility and clarity .....	8
12.1.	News release.....	8
12.2.	Publications .....	8
12.3.	On-line database .....	8
12.3.1.	AC 1. Data tables -consultations .....	8
12.4.	Micro-data Access .....	8
12.5.	Other.....	8
12.5.1.	AC2. Metadata consultations .....	8
12.6.	Documentation on Methodology .....	8
12.6.1.	AC3 – Metadata completeness – rate .....	8
12.7.	Quality Documentation .....	8
13.	Quality Management .....	8
13.1.	Quality Assurance .....	8
13.2.	Quality Assessment .....	9
14.	Relevance .....	9
14.1.	User Needs.....	9
14.1.1.	Main National Users .....	9
14.1.2.	Principal External Users.....	9
14.2.	User Satisfaction .....	9
14.3.	Data Completeness .....	9
14.3.1.	Data Completeness rate .....	9
15.	Accuracy and reliability.....	9
15.1.	Overall accuracy .....	9
15.2.	Sampling Error.....	9
15.2.1.	A1.Sampling error indicator .....	9
15.3.	Non-sampling Error.....	9
15.3.1.	Coverage error .....	9
15.3.2.	Measurement error .....	9
15.3.3.	Non-Response Error .....	10
15.3.4.	Processing error.....	10
15.3.5.	Model assumption error .....	10
16.	Timeliness and punctuality .....	10
16.1.	Timeliness .....	10
16.1.1.	TP1. Time lag – First results .....	10



16.1.2.	TP2. Time lag – Final results.....	10
16.2.	Punctuality .....	10
16.2.1.	TP3. Punctuality – Punctuality - delivery and publication .....	10
17.	Comparability .....	10
17.1.	Comparability – Geographical .....	10
17.1.1.	CC1. Asymmetry for mirror flow statistics.....	10
17.2.	Comparability over time .....	10
17.2.1.	Length of Comparable Time series .....	10
17.3.	Coherence – cross domain.....	10
17.3.1.	Coherence – Sub annual and annual statistics .....	10
17.3.2.	Coherence with National Accounts .....	10
17.4.	Coherence – internal .....	11
18.	Cost and Burden .....	11
19.	Data Revision.....	11
19.1.	Data Revision Policy.....	11
19.2.	Data Revision Practice .....	11
19.2.1.	Data Revision – Average size .....	11
20.	Statistical processing .....	11
20.1.	Source Data.....	11
20.1.1.	Population and sampling frame.....	11
20.1.2.	Sampling design .....	11
20.1.3.	Survey size .....	11
20.1.4.	Survey technique .....	11
20.2.	Frequency of data collection.....	11
20.3.	Data Collection .....	12
20.3.1.	Type of Survey/Process.....	12
20.3.2.	Questionnaire (including explanations) .....	12
20.3.3.	Survey Participation .....	12
20.3.4.	Data Capture.....	12
20.4.	Data Validation .....	12
20.5.	Data Compilation .....	12
20.5.1.	Imputation (for Non-Response or Incomplete Data Sets) .....	12
20.5.2.	Grossing and Weighting.....	12
20.6.	Adjustment.....	12
	Not applicable.....	12
20.6.1.	Seasonal Adjustment.....	12
21.	Comment.....	12



## 2. Introduction

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.

### 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 CSO release also 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.

## 3. Contact

<b>Contact Organisation:</b>	Central Statistics Office
<b>Contact Organisation Unit:</b>	Environment Statistics
<b>Contact Name:</b>	Clare O'Hara
<b>Contact person function:</b>	Statistician
<b>Contact Mail address:</b>	Central Statistics Office, Ardee Road, Rathmines, Dublin 6.D06FX52
<b>Contact email address:</b>	<a href="mailto:environment@csso.ie">environment@csso.ie</a>
<b>Contact Phone Number:</b>	(+353) 1 498 4000
<b>Contact Fax Number:</b>	(+353) 1 895 1398

## 4. Metadata Update

### 4.1. Metadata last certified

25/04/2022

### 4.2. Metadata last posted

25/04/2022

### 4.3. Metadata last update

25/04/2022



## 5. Statistical Presentation

### 5.1. Data Description

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 2000-2020. Data on direct and indirect fossil fuel subsidies are presented for the years 2000-2020.

### 5.2. Classification System

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

### 5.3. Sector Coverage

Road Transport, Rail Transport, Air Transport, Water Transport, Electricity Generation, Industry, Services, Households, Electricity Consumption, Fossil Fuel Production.

### 5.4. Statistical Concepts and definitions

The OECD 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 is likely to incentivise fossil fuel activities.

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. This definition includes tax expenditures such as tax rebates, tax repayments and reduced tax rates, as well as direct subsidies. Tax expenditures are estimated using the revenue foregone method.

The OECD maintains a database of national energy taxes called the Taxing Energy Use database and uses it to report effective carbon rates for different sectors and fuels in OECD countries. We used similar concepts to the OECD but developed our own methodology for this release.

### 5.5. Statistical Unit

Data refer to fossil fuel subsidies to economic units in Ireland, including households; and on effective carbon rates paid by economic units in Ireland, including households.

### 5.6. Statistical Population

The statistical population consists of all economic units in the national economy that produce or consume fossil fuels, including households.

### 5.7. Reference Area

State.

### 5.8. Time Coverage

2000-2020

### 5.9. Base period

Not applicable.

## 6. Unit of Measure

The appropriate units of measure are specified in the release tables. The main two units of measure used are:

- Euro per tonne of carbon emitted
- Euro (million)



## 7. Reference Period

2020

## 8. Institutional Mandate

### 8.1. Legal Acts and other agreements

Not applicable.

### 8.2. Data Sharing

Not applicable.

## 9. Confidentiality

### 9.1. Confidentiality – policy

All information supplied to the CSO is treated as strictly confidential. The Statistics Act, 1993 sets stringent confidentiality standards: Information collected may be used only for statistical purposes, and no details that might be related to an identifiable person or business undertaking may be divulged to any other government department or body.

These national statistical confidentiality provisions are reinforced by the following EU legislation: Council Regulation (EC) No 223/2009 on European statistics for data collected for EU statistical purposes. Further details are outlined in the CSO's Code of Practice on Statistical Confidentiality.

For more information on the CSO confidentiality policy please visit:

<https://www.cso.ie/en/aboutus/lgdp/csodatapolicies/statisticalconfidentiality/>

### 9.2. Confidentiality – data treatment

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

## 10. Release Policy

### 10.1. Release Calendar

The date of dissemination of all statistics released by CSO can be found in the Release Calendar published in CSO.ie. This calendar is regularly updated.

### 10.2. Release calendar access

The release calendar can be accessed via the CSO website, [www.cso.ie](http://www.cso.ie), or directly from this link:

<https://www.cso.ie/en/csolatestnews/releasecalendar/>

### 10.3. User access

In accordance with Principle 6 of the European Statistics Code of Practice all users of CSO statistics have equal access via the CSO website at the same time of 11 am. Any privileged pre-release access to any outside user is limited, controlled and publicised. In the event that leaks occur, pre-release arrangements are revised so as to ensure impartiality.

The CSO recognises that in very limited circumstances a business need for pre-release access may be substantiated. Any form of pre-release access is a privilege and a strict CSO pre-release access policy is adhered to for these special requests. The full pre-release access policy can be accessed at

<https://www.cso.ie/en/aboutus/lgdp/csodatapolicies/csopolicyonpre-releaseaccess/>

The various results are published nationally in statistical release format as well as on the CSO website ([www.cso.ie](http://www.cso.ie)). Selected extracts from the results are posted on the CSO's data dissemination database, PXStat.



## 11. Frequency of Dissemination

Annual.

## 12. Accessibility and clarity

### 12.1. News release

<https://www.cso.ie/en/csolatestnews/pressreleases/2021pressreleases/presstatementfossilfuelsubsidies2020/>

### 12.2. Publications

The data are published to the CSO website. The latest publication can be accessed from the following link:  
<https://www.cso.ie/en/statistics/environmentaccounts/fossilfuelsubsidies/>

### 12.3. On-line database

Data are available through CSO's dissemination database, PxStat via the following link:  
<https://data.cso.ie/product/FFES>

#### 12.3.1. AC 1. Data tables - consultations

The data tables have received a total of 2,948 consultations, with 1,445 of those being unique.

### 12.4. Micro-data Access

Not applicable.

### 12.5. Other

#### 12.5.1. AC2. Metadata consultations

Not known

### 12.6. Documentation on Methodology

The UN System of Environmental-Economic Accounting (SEEA) is a statistical system that brings together economic and environmental information into a common framework to measure the condition of the environment, the contribution of the environment to the economy, and the impact of the economy on the environment. The SEEA contains an internationally agreed set of standard concepts, definitions, classifications, accounting rules and tables to produce internationally comparable statistics.

Further documentation on the methodology used can be obtained through the following link:  
<https://www.cso.ie/en/methods/environment/fossilfuelsubsidies/>

#### 12.6.1. AC3 – Metadata completeness – rate

Not applicable.

### 12.7. Quality Documentation

Quality information relating to the Fossil Fuel Subsidies can be obtained from the CSO website via the following link: <https://www.cso.ie/en/methods/environment/fossilfuelsubsidies/>

## 13. Quality Management

### 13.1. Quality Assurance

#### Quality Management Framework

The CSO avails of an office wide Quality Management Framework (QMF). This framework allows all CSO processes and outputs to meet the required standard as set out in the European Statistics Code of Practice (ESCAP). The QMF foundations are based on establishing the UNECE's Generic Statistical Business Process





Model (GSBPM) as the operating statistical production model to achieve a standardised approach to Quality Management. All and any changes implemented to CSO processes and outputs require adherence to the QMF.

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

## **13.2. Quality Assessment**

Not assessed.

## **14. Relevance**

### **14.1. User Needs**

The data are used mainly by Eurostat and national policy makers to inform policy on fossil fuel reform.

#### **14.1.1. Main National Users**

National users include the environment sector, the government, the media, educational institutions and the public.

#### **14.1.2. Principal External Users**

International users include Eurostat, the European Environment Agency and the OECD.

### **14.2. User Satisfaction**

Not measured.

### **14.3. Data Completeness**

Not applicable.

#### **14.3.1. Data Completeness rate**

Not applicable.

## **15. Accuracy and reliability**

### **15.1. Overall accuracy**

Data are collected directly from government accounts and Revenue and are considered to be of good quality and accuracy.

### **15.2. Sampling Error**

Not applicable.

#### **15.2.1. A1. Sampling error indicator**

Not applicable.

### **15.3. Non-sampling Error**

Not applicable.

#### **15.3.1. Coverage error**

Not applicable.

##### **15.3.1.1. A2. Over coverage rate**

Not applicable.

##### **15.3.1.2. A3. Common units – proportion**

Not applicable.

#### **15.3.2. Measurement error**

Not applicable.



### **15.3.3. Non-Response Error**

Not applicable.

#### **15.3.3.1. Unit non-response rate**

Not applicable.

#### **15.3.3.2. Item non-response rate**

Not applicable.

### **15.3.4. Processing error**

Not applicable.

### **15.3.5. Model assumption error**

Not applicable.

## **16. Timeliness and punctuality**

### **16.1. Timeliness**

The data are published to the CSO website, within 18 months of the end of the reference year.

#### **16.1.1. TP1. Time lag – First results**

Not applicable.

#### **16.1.2. TP2. Time lag – Final results**

+18 months.

### **16.2. Punctuality**

Published on 27 April 2022, 11am.

#### **16.2.1. TP3. Punctuality – Punctuality - delivery and publication**

Delivered in advance of deadline.

## **17. Comparability**

### **17.1. Comparability – Geographical**

Effective carbon rates (ECRs) can be compared internationally. ECRs are not measured against benchmarks of the national tax system, unlike tax expenditures, hence they are suitable for international comparison.

#### **17.1.1. CC1. Asymmetry for mirror flow statistics**

Not applicable.

### **17.2. Comparability over time**

Data have been collected for the years 2000-2020 so a time series is available for comparison across years.

#### **17.2.1. Length of Comparable Time series**

21 Years.

### **17.3. Coherence – cross domain**

The inclusion or exclusion of certain programmes has been compared with the approaches taken in international reports on environmentally harmful subsidies.

#### **17.3.1. Coherence – Sub annual and annual statistics**

Not applicable.

#### **17.3.2. Coherence with National Accounts**

Not applicable.



## 17.4. Coherence – internal

Not applicable.

## 18. Cost and Burden

Estimates of Cost and Burden can be obtained from the Response Burden Barometer  
<https://www.cso.ie/en/statistics/multisectoral/responseburdenbarometer/>

Survey specific information is available via CSO's dissemination database PxStat.  
<https://data.cso.ie/product/RBB>

## 19. Data Revision

### 19.1. Data Revision Policy

Revisions refer to changes made to published statistical data when the information used in its production has been updated or corrected. This information includes all data used in compiling the statistic e.g. respondent data, administrative data, weights and factors, methodology, classifications, definitions, modifications to survey questionnaires, survey scope and data collection methods.

### 19.2. Data Revision Practice

#### Effective Carbon Rates

Minor revisions were carried out to the effective carbon rates calculated in this release.

#### Fossil Fuel Subsidies

This release includes estimates of a number of fossil fuel subsidies for which data were previously unavailable. These are the VAT exemption on jet kerosene, the reduced VAT rate on energy products, NORA Levy exemptions and relief from the carbon tax increase on farm diesel. The effect of including these subsidies is to increase the total value of fossil fuel subsidies by roughly €400 million in most years although in 2020 the increase was smaller at €281 million. In 2020 this was 15% of the total while in previous years it was approximately 20%.

#### 19.2.1. Data Revision – Average size

See above.

## 20. Statistical processing

### 20.1. Source Data

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.

#### 20.1.1. Population and sampling frame

Not applicable.

#### 20.1.2. Sampling design

Not applicable.

#### 20.1.3. Survey size

Not applicable.

#### 20.1.4. Survey technique

Not applicable.

### 20.2. Frequency of data collection

Annual.



## 20.3. Data Collection

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.

The CSO uses the revenue foregone approach to calculating tax expenditures in this release. A number of tax expenditures are due to reduced Excise Duty rates on certain fuels or on fuels used by certain sectors of the economy.

### 20.3.1. Type of Survey/Process

Administrative data.

### 20.3.2. Questionnaire (including explanations)

Not applicable.

### 20.3.3. Survey Participation

Not applicable.

### 20.3.4. Data Capture

Not applicable.

## 20.4. Data Validation

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 substances.

## 20.5. Data Compilation

Not applicable.

### 20.5.1. Imputation (for Non-Response or Incomplete Data Sets)

Not applicable.

#### 20.5.1.1. A7. Imputation rate

Not applicable.

### 20.5.2. Grossing and Weighting

Not applicable.

## 20.6. Adjustment

Not applicable.

### 20.6.1. Seasonal Adjustment

Not applicable.

## 21. Comment