CEP council on economic policies

Fossil Fuel Tax Expenditures

DATA GAPS AND REPORTING GUIDELINES

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Background

Rationalizing inefficient fossil fuel subsidies was included as Sustainable Development Goal (SDG) 12 "Ensure sustainable consumption and production patterns", within the 2030 Agenda on Sustainable Development. Against this backdrop, SDG indicator 12.c.1 calls for countries to report on the "Amount of fossil fuel subsidies per unit of GDP (production and consumption)". This indicator is under the custodianship of the UN Environment Programme (UNEP).

In order to measure fossil fuel subsidies (FFSs) at the national, regional and global level, three sub-indicators are recommended for reporting on this indicator: 1) direct transfer of government funds; 2) induced transfers (price support); and as an optional sub-indicator 3) tax expenditure (TE), other revenue forgone, and underpricing of goods and services (UNEP and IISD, 2019).

TEs are one of the main subsidy categories used by governments worldwide to support the production and consumption of fossil fuels. Indeed, TEs made up 63% of the $178 billion USD spent on FFSs in 2019 by the countries included in the OECD FFSs Inventory (OECD, 2021). Indeed, the global figures on FFS TEs are much higher, given that this inventory only covers fifty countries who are either OECD members or partner countries and does not cover most developing countries.

To shed more light on the global usage patterns of FFS TEs, the Global Tax Expenditures Database (GTED) was used to extract FFS TEs information for the countries not included in the OECD Inventory.[1] This exercise gathered data for more than 200 FFS TE provisions, across thirty-nine countries, totaling more than $6 billion USD between 2015 and 2020, averaging 0.3% of GDP and reaching as high as 4.9% of GDP in Niger in 2019 (Redonda et al., 2022).

However, this exercise also uncovered serious data gaps on FFS TE reporting in those thirty-nine countries that likely understate the true size and reach of FFS TEs which, in turn, makes analyses of the cost and benefits of FFS TEs exceedingly difficult.

This document intends to point out existing gaps in FFS TE data while also providing best-practice guidelines on how to address those gaps. It is addressed to policy-makers who wish to conduct a self-evaluation of their tax system as well as international or local organizations who wish to assess the quality of government reporting on FFS TEs. The document groups the data gaps into seven key problem areas, each with a set of indicators which can assess the countries' performance against each other. These indicators assess core TE reporting issues (which also affect FFS TEs) as well as specific issues on FFS TE

[1] The Global Tax Expenditures Database (GTED) is a joint initiative by the Council on Economic Policies (CEP) and the German Institute of Development and Sustainability (IDOS), and is freely accessible on www.GTED.net.

reporting. They also allow for comparisons of countries publishing TE data with varying levels of quality and scope. This document also offers concrete guidelines for reporting on FFS TEs and addressing the issues uncovered by the indicators.

The remainder of this report provides a list of those indicators, the rationale behind their construction, the scoring methodology for each indicator, as well as reporting guidelines which can be used to improve each country's score for those indicators. The complete list of identified problem areas and indicators is provided in Annex 1, while Annex 2 provides a check-list of best reporting practices.

Data Gap Indicators and Reporting Guidelines

1. Lack of Detail in TE Reporting

A key problem area with FFS TEs reporting is the lack of detail. The type of information countries publish on their TE reports can range from detailed provision-level data including information on the tax type, its intended beneficiaries, its stage of support and its policy objective; to overall estimates only detailing the revenue forgone over a limited set of broad categories (e.g., overall estimates by tax type or by policy objective).

Publishing provision-level data is crucial not only for improving government's transparency vis-à-vis its citizens, but also for allowing the government or independent researchers to evaluate the effectiveness and efficiency of individual TEs (Heady and Mansour, 2019).[2] It is crucial to assess the effectiveness of TE provisions seeking to directly influence the production and consumption of fossil fuels (e.g., TE provisions targeting energy stability) and, at the same time, to evaluate side effects of TE provisions that support other policy goals (i.e., employment, education, health, etc.) but indirectly affect the consumption or production of fossil fuels. Yet, without provision-level data, TE evaluations are difficult (if not impossible) to be produced.

Table 1: Problem Area 1 Indicators

Problem Area 1: Lack of Detail in TE Reporting	Scoring
Indicator 1.1: Data type	**Provision-level**; **Aggregate**

Indicator 1.1 is the only indicator assessing countries' performance in this problem area (Table 1). The option "provision-level" is used for countries publishing data which provides revenue forgone and complementary information at the individual TE provision level. The option "aggregate" denotes countries publishing revenue forgone figures in a format other than at the provision-level. Such cases could use different aggregation methods (i.e., by tax type, by sector, by policy objective, etc.) and they may not always be detailed enough to offer any meaningful FFSs TE data.

[2] The term "provision-level data" refers to reporting of individual tax expenditure provisions, each with revenue forgone estimates and other descriptive information (such as tax type, TE type, beneficiaries, policy objective, legal reference, etc.).

Figure 1: Problem Area 1 Reporting Guidelines

☑ Reporting provision-level data.

2. Absence of Key TE Information

While the first indicator assesses the level of disaggregation of the TE data, indicators in Problem Area 2 evaluate whether the TE data published by countries contains the key quantitative and qualitative information needed to analyze revenue forgone trends and evaluate whether TEs are working as intended.

Table 2: Problem Area 2 Indicators

Problem Area 2: Absence of Key TE Information	Scoring
Indicator 2.1: Share of provisions with revenue forgone estimates	**0% - 100%; N/A**
Indicator 2.2: Share of revenue forgone with tax-type information	**0% - 100%**
Indicator 2.3: Share of revenue forgone with TE-type information	**0% - 100%**
Indicator 2.4: Share of revenue forgone with beneficiary information	**0% - 100%**
Indicator 2.5: Share of revenue forgone with policy-objective information	**0% - 100%**
Indicator 2.6: Share of revenue forgone with legal references	**0% - 100%**

Revenue forgone estimates are the most important piece of information about a TE provision since they offer insights on their fiscal cost. Yet, for varied reasons (e.g., data availability, confidentiality issues, etc.), this information is not always available for all TE provisions included in a TE report. Indicator 2.1 assesses the share of TE provisions (in the latest TE report) which contains revenue forgone estimates and is hence only applicable to countries publishing provision-level data.

Reporting individual TE-provisions and their revenue forgone allows the government to have useful information on the cost of TE provisions. However, to get a full picture of the cost and the intended benefits of a TE, reporting should also include information on the tax type from which the revenue is forgone (e.g. Personal Income Tax, Corporate Income Tax, Value Added Tax, etc.), the design or type of the specific TE (e.g. deduction, exemption, tax credit, etc.), its intended beneficiary group (e.g. businesses, households, etc.), a TE's policy objective (e.g. to promote investment in a specific sector, to support a specific sub-group of the population, etc.), and the legal act on which the TE is based.

Indicators 2.2 to 2.6 assess the share of revenue forgone estimates (in the latest TE report) that can be attributed to a tax type, a TE type, a beneficiary type, a policy objective, or a legal reference; respectively. This qualitative information is key to evaluate the effectiveness and efficiency of any TE provision, including FFS TEs (Kassim and Mansour, 2018; and Redonda and Neubig, 2018). Without such information, for instance, it is impossible to make informed decisions on potentially needed TE reform.

Figure 2: Problem Area 2 Reporting Guidelines

- ☑ Estimating and reporting the revenue forgone from each TE provision.
- ☑ Reporting a tax type for each TE provision.
- ☑ Reporting a TE type for each TE provision.
- ☑ Reporting the intended beneficiaries of each TE provision.
- ☑ Reporting the policy objective of each TE provision.
- ☑ Reporting the legal reference of each TE provision.

3. Incomplete Coverage of the TE Report

Regardless of the kind of TE data countries publish (provision-level or aggregate) or the level of detail a TE report offers, the true size of FFS TEs for a country cannot be accurately assessed if the country's TE report only covers one or a few tax types, sectors, activities, or policy goals. For example, a TE report only covering TEs granted through corporate income tax (CIT) may offer information on FFS TEs channeled through the CIT system, but it will not provide information on any FFS TEs granted through personal income tax (PIT) or value added tax (VAT) systems. Similarly, a TE report only covering tax incentives for the manufacturing sector will not provide information for any FFS TE in the transport sector, the energy sector, etc.

Table 3: Problem Area 3 Indicators

Problem Area 3: Incomplete Coverage of the TE Report	Scoring
Indicator 3.1: Number of tax types covered by the TE report	**1 < X < 5+**
Indicator 3.2: Report only covers one sector/activity/policy goal	**Yes; No**

Indicator 3.1 counts the number of tax types included in a TE report. Countries only publishing TE information on one or two tax types score the lowest, those covering three or four tax types get a medium score, and those covering more than five tax types get the highest score. Indicator 3.2, in contrast, is a dummy variable depicting whether a country's TE report only covers one sector/activity/policy goal. While the number of available tax types is more standardized across countries – most economies have forms of CIT, PIT, VAT, Customs, and Excises which can have their specific TEs – the number of sectors, activities, or policy goals which countries choose to support through their TE regime can vary widely. Hence, Indicator 3.2 only looks for those cases in which a country only covers a specific sector activity, or policy goal (e.g., only tax incentives for investment, or only TEs in the mining sector), and scores them low. Both indicators are based on the latest TE report of each country, which can differ from the overall share of TE provisions with estimates.

Figure 3: Problem Area 3 Reporting Guidelines

- ☑ Reporting information for the entire TE regime.
- ☑ Clearly defining the benchmark tax system used in the TE report.
- ☑ Reporting structural reliefs/deviations not considered TE.

A good TE report should provide information for the entire TE regime, and not only a sub-section of it. However, since TE regimes can vary widely from country to country, the report should clearly define the benchmark tax system. The term *benchmark*, used here, refers to the standard tax system, deviations from which constitute TEs (Surrey, 1976). For example, if the standard VAT rate for a country is 18 percent, then any provision allowing for reduced VAT rates (deviations from the benchmark) or exemptions from VAT targeting distinct groups of people/sectors/activities could constitute TEs. TE reports should provide a detailed description of the approach used to define the benchmark, by tax type. It should also list any deviations from the standard tax rate that a country considers as a structural part of its tax system and does not consider to be a TE (e.g., lower VAT rates on food items considered to be part of the benchmark in Germany). In terms of FFS TEs, this will ensure full transparency of governments' support to fossil fuels through their tax systems, no matter whether certain deviations are classified as a TE or not.

4. Changes in TE Reporting Methodology

While the first three problem areas focus on cross-sectional aspects of TE reporting, Problem Area 4 deals with data continuity issues across time. Time-series information is crucial to assess the cost and benefits of TE provisions. Frequent changes in revenue forgone estimation methodology or reporting structure limit the usefulness of TE data for cost estimation and effectiveness/efficiency evaluations.

While data continuity is crucial for cost/benefit analyses, TE reporting is also an exercise that takes time to perfect. Newly reporting countries may find the need to improve or otherwise update their benchmarking approach or their revenue forgone estimation methodology between their first few reports. In such cases, the report should provide a clear description of the methodological changes and the rationale behind them. Ideally, the report should also provide updated estimates for the previous years using the most recent methodology to ensure data continuity.

Table 4: Problem Area 4 Indicators

Problem Area 4: Incomplete Coverage of the TE Report	Scoring
Indicator 4.1: Number of benchmark changes (5 years)	0 < 1+
Indicator 4.2: Number of changes in reporting structure	0 < 1+; N/A

Indicator 4.1 counts the number of *benchmark* changes a country reported during the past 5 years. If the benchmark changes frequently, revenue forgone estimates lose their comparability across years and make cost-benefit analyses difficult. Indicator 4.2 is only applicable to countries choosing to report aggregated data (not at the provision-level) who make frequent changes in the classification they use throughout their TE reports. It counts the number of changes in the reporting structure (e.g., aggregation categorizations used) across years. For example, some countries may only aggregate TE data across tax

types for some years, but later only aggregate their data across policy objectives without providing any revenue forgone estimates by tax type. Similarly, countries may group different sectors/activities together in some reports and group other sectors/activities in subsequent reports. These and other similar practices are labelled as changes in reporting structure. They also all make the comparability of data across years impossible as well as cost-benefit analyses difficult.

Figure 4: Problem Area 4 Reporting Guidelines

- ☑ Clarifying any benchmark changes between TE reports.
- ☑ Clarifying any other methodology changes between TE reports.
- ☑ Updating past estimates after methodology changes.

5. Time-Series Gaps in TE Reporting

Another time-series problem area is the complete lack of TE data for certain years. Reporting data yearly is a minimum requirement both for transparency reasons and for evaluation purposes. TEs are an integral part of government spending and should be reported yearly, together with a country's budget. Even if a country misses one TE report due to extraordinary circumstances, the subsequent report should contain RF estimates and other TE data for the previous year.

Some countries do not publish TE reports for certain years because they have never estimated revenue forgone for those years, or simply chose to not make the revenue forgone estimates for those years public. This breaks the continuity of the data and makes cost-benefit analyses difficult.

Table 5: Problem Area 5 Indicators

Problem Area 5: Incomplete Coverage of the TE Report	Scoring
Indicator 5.1: Number of years without TE estimates since start, until 2020	**0** < **1+**

Indicator 5.1 counts the number of years for which a country does not publish TE estimates since it first started reporting. For this indicator, any value above zero is undesirable.

Figure 5: Problem Area 5 Reporting Guidelines

- ☑ Reporting RF estimates and other TE data yearly.

6. Absence of key information on FFS TEs

While the previous five problem areas focus on overall TE reporting issues which are also applicable to FFS TEs, this problem area focuses on FFS TEs-specific issues. These categorizations are based on information requested specifically for FFS TEs through the SDG 12.c.1 Indicator reporting template (UNEP and IISD, 2019).

Detailed information on FFS TEs is especially important, given the potential environmentally and socially harmful effects of such TEs. Reporting individual FFS TE-provisions and their revenue forgone allows the government to have some information on the cost of TE provisions. However, beyond the information required in Problem Area 2, the reporting of such TEs should also contain information on the fuel type (e.g., petroleum or natural gas), the recipient stage of the TE support (e.g., consumption, production, or both), the support stage of the FFS TEs (e.g., extraction, transportation, use of fossil fuels in electricity generation, etc.), and the incidence of each FFS TE provision (e.g., direct consumption, output returns, enterprise income, etc.).

Table 6: Problem Area 6 Indicators

Problem Area 6: Absence of Key TE Information	Scoring
Indicator 6.1: Share of FFS TE provisions with revenue forgone information	0% - 100%; N/A
Indicator 6.2: Share of revenue forgone with information on fuel type	0% - 100%
Indicator 6.3: Share of revenue forgone with information on recipients	0% - 100%
Indicator 6.4: Share of revenue forgone with information on support stage	0% - 100%
Indicator 6.5: Share of revenue forgone with information on incidence	0% - 100%

Similarly, to indicator 2.1, indicator 6.1 measures the share of FFS TE provisions with revenue forgone estimates in the latest report, and is only applicable to countries publishing provision-level data. Indicators 6.2 to 6.5 assess the share of revenue forgone estimated in the latest TE report that can be attributed to a fuel type, different recipients, a support stage, and a specific incidence, respectively. This qualitative information is key to determine what type of taxpayers or activities benefit from FFS TEs, and to design any evaluation studies.

Figure 6: Problem Area 6 Reporting Guidelines

- ☑ Estimating and reporting the revenue forgone from each FFS TE provision.
- ☑ Reporting a fuel type for each FFS TE provision.
- ☑ Reporting the recipient stage of each FFS TE provision.
- ☑ Reporting the support stage of each FFS TE provision.
- ☑ Reporting the incidence of each FFS TE provision.

7. Proliferation of FFS TEs

Lastly, Problem Area 7 focuses on the proliferation of FFS TEs. This problem area focuses on how wide-spread FFS TEs are, in general, and how much they are embedded into different types of incentives not related to fossil-fuel extraction or energy incentives.

While the proliferation of FFS TEs should be avoided, full transparency on existing FFS TEs is crucial for public discourse and potential reform. Beyond reporting clear and obvious cases of FFS TEs, governments should also make an effort to identify and report cases in which other incentives include fossil fuel support (e.g. education-related incentive including an exemption of school buses from the fuel tax). This will improve the government's transparency on the topic and could eventually lead to a more focused and overall better-designed TE regime.

Table 7: Problem Area 7 Indicators

Problem Area 7: Incomplete Coverage of the TE Report	Scoring
Indicator 7.1: Number of FFS TE provisions	**0 < 1+**
Indicator 7.2: Number of FFS TEs mixed with other types of incentives	**0 < 1+; N/A**

Indicator 7.1 counts the overall number of FFS TE provisions in the latest TE report for a country, revealing how widespread FFS TEs are. Indicator 7.2, instead, counts the number of FFS TEs mixed with other types of incentives. The latter includes any FFS TE that embedded into other (not necessarily related to the consumption or production of fossil fuels) incentives such as VAT exempt diesel for farmers included in agricultural incentives, or any provision covering a wide range of incentives and including FFS TEs (e.g. a provision on educational materials, office equipment, and fuel for non-profits). This distinction is important because TE provisions covering multiple incentives are hard to evaluate and even to quantify.

Figure 7: Problem Area 7 Reporting Guidelines

☑ Identification and reporting of FFS TEs included in other incentives.

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Annex 1: Summary of Data Gap Indicators

Table 8: Problem Area 7 Indicators

Problem Area 1: Lack of Detail in TE Reporting	Scoring
Indicator 1.1: Data type	Provision-level; Aggregate
Problem Area 2: Absence of Key TE Information	**Scoring**
Indicator 2.1: Share of provisions with revenue forgone estimates	0% - 100%; N/A
Indicator 2.2: Share of revenue forgone with tax-base information	0% - 100%
Indicator 2.3: Share of revenue forgone with TE-type information	0% - 100%
Indicator 2.4: Share of revenue forgone with beneficiary information	0% - 100%
Indicator 2.5: Share of revenue forgone with policy-objective information	0% - 100%
Indicator 2.6: Share of revenue forgone with legal references	0% - 100%
Problem Area 3: Incomplete Coverage of the TE Report	**Scoring**
Indicator 3.1: Number of tax types covered by the TE report	1 < X < 5+
Indicator 3.2: Report only covers one sector/activity/policy goal	Yes; No
Problem Area 4: Incomplete Coverage of the TE Report	**Scoring**
Indicator 4.1: Number of benchmark changes (5 years)	0 < 1+
Indicator 4.2: Number of changes in reporting structure	0 < 1+; N/A
Problem Area 5: Incomplete Coverage of the TE Report	**Scoring**
Indicator 5.1: Number of years without TE estimates since start, until 2020	0 < 1+
Problem Area 6: Absence of Key TE Information	**Scoring**
Indicator 6.1: Share of FFS TE provisions with revenue forgone information	0% - 100%; N/A
Indicator 6.2: Share of revenue forgone with information on fuel type	0% - 100%
Indicator 6.3: Share of revenue forgone with information on recipients	0% - 100%
Indicator 6.4: Share of revenue forgone with information on support stage	0% - 100%
Indicator 6.5: Share of revenue forgone with information on incidence	0% - 100%
Problem Area 7: Incomplete Coverage of the TE Report	**Scoring**
Indicator 7.1: Number of FFS TE provisions	0 < 1+
Indicator 7.2: Number of FFS TEs mixed with other types of incentives	0 < 1+; N/A

Annex 2: Summary of Reporting Guidelines

Table 9: FFS TE Reporting Best-Practice Checklist

Checkbox:	Reporting Best Practice:
☐	Reporting provision-level data.
☐	Estimating and reporting the revenue forgone from each TE provision.
☐	Reporting a tax type for each TE provision.
☐	Reporting a TE type for each TE provision.
☐	Reporting the intended beneficiaries of each TE provision.
☐	Reporting the policy objective of each TE provision.
☐	Reporting the legal reference of each TE provision.
☐	Reporting information for the entire TE regime.
☐	Clearly defining the benchmark tax system used in the TE report.
☐	Reporting structural reliefs/deviations not considered TE.
☐	Reporting RF estimates and other TE data yearly.
☐	Estimating and reporting the revenue forgone from each FFS TE provision.
☐	Reporting a fuel type for each FFS TE provision.
☐	Reporting the recipient stage of each FFS TE provision.
☐	Reporting the support stage of each FFS TE provision.
☐	Reporting the incidence of each FFS TE provision.
☐	Identification and reporting of FFS TEs included in other incentives.