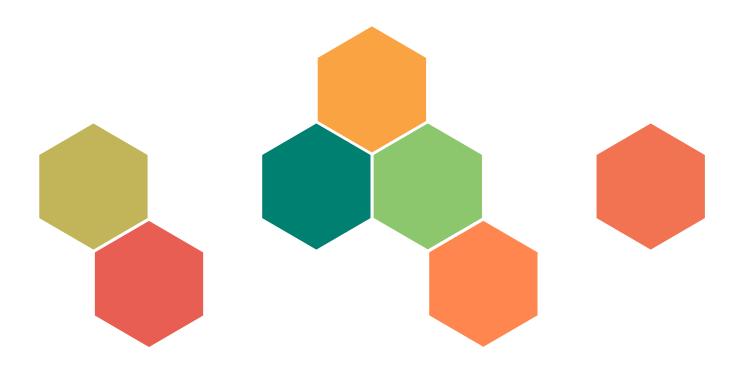
## **Methodology note**

# G7 fossil fuel subsidy scorecard

Shelagh Whitley, Han Chen, Alex Doukas, Ipek Gençsü, Ivetta Gerasimchuk, Yanick Touchette and Leah Worrall

June 2018











## Introduction

Every year since 2009, the G7 and G20 countries¹ have reiterated a commitment to eliminate inefficient fossil fuel subsidies (G7, 2017; G20, 2017). And in 2016, G7 leaders suggested a deadline of 2025 to meet it (G7, 2016). ODI's G7 fossil fuel subsidy scorecard report and accompanying G7 country scorecards aim to track each of the G7

ODI's G/ fossil fuel subsidy scorecard report and accompanying G/ country scorecards aim to track each of the G/ countries' progress in phasing out fossil fuel subsidies by reviewing progress in ending fiscal support and public finance to fossil fuel production and consumption.

## **Defining subsidies**

In its Agreement on Subsidies and Countervailing Measures, the World Trade Organization (WTO) defines a subsidy as *(paraphrased)*: any financial contribution by a government, or agent of a government, that is recipient-specific and confers a benefit on its recipients in comparison to other market participants (WTO, 1994: section 1.1). This definition has been accepted by the 164 WTO Member States including all G7 countries, and encompasses the following subsidy categories:

- a. direct transfer of funds (e.g. budgetary transfers, grants, loans and equity infusion), and potential direct transfers of funds or liabilities (e.g. loan guarantees), below market value
- b. government revenue that is otherwise due, foregone or not collected (e.g. fiscal incentives such as tax expenditures)
- c. government provision of goods or services other than general infrastructure, or purchase of goods, below market value
- d. income or price support.

For our G7 fossil fuel subsidy scorecard, we focus on a subset of categories (a) and (b) in the WTO definition, which we re-group as: (1) fiscal support (budgetary transfers and tax expenditures); and (2) public finance (grants, loans, equity infusions and guarantees).<sup>2</sup> See Annex 1 for a full list of public finance institutions considered.

We have not included information under categories (c) and (d) of the WTO definition in this analysis. The scorecard therefore excludes any G7 government provision of goods and services below market value, including through state-owned enterprises (SOEs) (e.g. state-owned coal, oil or gas companies, as well as state-owned utilities that produce fossil fuel-powered electricity); and any G7 government price and income support for fossil fuels (e.g. the provision of fossil fuel-based electricity at a lower price for specific groups or sectors, such as households or industry).

## **Fiscal support (national and subnational)**

Fiscal support is provided by national and subnational governments through budgetary transfers (e.g. direct spending on research and development for fossil fuel exploration), and tax expenditures (e.g. tax breaks for diesel use in transport). Fiscal support provided at the subnational level is also covered in this analysis, and can be significant. However, such information is difficult to access, and therefore it is likely that our findings on subnational support are not fully comprehensive.

## **Public finance**

Public finance is where governments provide support, and take on liability, for fossil fuel production – either via financial institutions they own outright or in which they hold a majority stake (50% or more). These majority publicly owned financial institutions include bilateral development, development finance institutions and export credit agencies. They provide public finance in the form of grants, loans, equity, insurance and guarantees both domestically and internationally. Investments by public finance institutions are backed by the government through direct investment using public funds and through creditworthiness.

- The G7 countries are: Canada, France, Germany, Italy, Japan, United Kingdom (UK) and the United States (US). The European Union (EU) is also represented at the G7 summit. The G20 countries include all the G7 countries as well as Argentina, Australia, Brazil, China, India, Indonesia, Mexico, Russia, Turkey, Saudi Arabia, South Africa, South Korea and the EU.
- 2 The Organisation of Economic Co-operation and Development (OECD) estimates that the subsidy element of loans provided by governments i.e. the revenue foregone because the governments provide such credit support below market value can constitute up to 20% of their face value (OECD, 2018a). However, such estimates are not reported for the G7 countries. Instead, this report uses the data on the principal amount disbursed for direct loans or loan guarantees under the category 'public finance'.

## Scoring

The scorecard tracks progress against seven indicators (based on several sub-indicators):

- Indicator 1, transparency, examines the comprehensiveness of government reporting on fiscal support and public finance to oil, gas and coal.
- Indicator 2, pledges and commitments, captures high-level political commitments (beyond existing G7 and G20 pledges) to phase out fiscal support and public finance to fossil fuels.
- Indicators 3–7 look at progress by G7 governments in ending support for fossil fuel exploration, coal mining, oil and gas production, fossil fuel-based power, and fossil fuel use (Figure 1).

Further information on all indicators and sub-indicators is provided in Section 3 of this methodology note, which also details the definitions, sources and scoring process used in the scorecard.

### **Quantitative indicators**

All quantitative sub-indicators (the unshaded cells in Table 1) have numerical values. Most of them are based on the scale of fiscal support and public finance provided (annual average for 2015 and 2016, and per unit of gross domestic product – GDP). One sub-indicator is a percentage (1E) and two sub-indicators are whole numbers (2A and 2B).

In the scoring of each quantitative sub-indicator related to fiscal or public finance support (e.g. all sub-indicators except for 1E, 2A and 2B), where the analysis identified no relevant fiscal or public finance support, a country was awarded a perfect score of 4 points for the relevant sub-indicator. Remaining countries (that is, those without a perfect score and giving some fiscal or public finance support per unit of GDP) were awarded a score for the relevant sub-indicator based on the quartile into which they fell. Those in the lowest quartile were awarded a 3; those in the middle two quartiles were awarded a 2 and a 1 respectively; and those in the highest quartile (that is, those giving the most fiscal or public finance support per unit of GDP) were given a 0. For percentages in sub-indicator 1E, the countries were once again scored in relation to one another. Countries with a score of 100 were awarded a 'perfect score' of 4. The rest of the countries were then grouped into quartiles, scoring between a 0 and a 3, with 0–25 scoring a 0, 26–50 scoring a 1, 51–75 scoring a 2 and 76–100 scoring a 3.

Finally, for whole numbers in sub-indicators 2A and 2B, there is no such thing as a 'perfect score'. This was because the sub-indicators count the number of pledges to phase out subsidies and public finance for fossil fuels, respectively, and no 'perfect' number of pledges could be identified. The country with the highest number of pledges was awarded 3, and the rest were scored based on which tercile their number of pledges fell into, in relation to one another. Scores in the highest tercile (but with less than the top country score) were awarded a 2; scores in the middle tercile were awarded a 1; and scores in the lowest tertial were awarded a 0.

Exploration Coal mining Fossil fuel power Fossil fuel use Rusiness and industry Households

Exploration Oil and gas production Fossil fuel power Fossil fuel use Transport (excluding and industry Households Agriculture)

Figure 1 Stages of fossil fuel production and consumption (linked to indicators 3–7)

Source: author's elaboration

Table 1 Overview of the main indicators and sub-indicators used in the G7 fossil fuel subsidy scorecard

			INDICATORS			
1. Transparency	2. Pledges and commitments	3. Ending support for fossil fuel exploration	4. Ending support for coal mining	5. Ending support for oil and gas production	6. Ending support for fossil fuel- based power	7. Ending support for fossil fuel use
			SUB-INDICATORS			
1A Government has officially reported that it provides inefficient fossil fuel subsidies (Y/N)	2A Number of pledges to phase out subsidies to fossil fuels (beyond G7 and G20 commitment) (count)	3A Scale of domestic public finance for oil and gas exploration (no coal identified) (2015 and 2016 average per unit of GDP, \$)	<b>4A</b> Scale of fiscal support for coal mining (2015 and 2016 average per unit of GDP, \$)	<b>5A</b> Scale of domestic public finance for oil and gas production (2015 and 2016 average per unit of GDP, \$)	6A Scale of international public finance for coal-fired power (no domestic identified) (2015 and 2016 average per unit of GDP, \$)	<b>7A</b> Scale of fiscal support for fossil fuels use in industry (2015 and 2016 average per unit of GDP, \$)
1B Comprehensive and specific government reporting of fiscal support for fossil fuels (regular or irregular) (Y/N/Partial)	2B Number of pledges to end public finance for fossil fuels (count)	<b>3B</b> Scale of international public finance for oil, gas and coal exploration (2015 and 2016 average per unit of GDP, \$)	4B Scale of international public finance for coal mining (no domestic identified) (2015 and 2016 average per unit of GDP, \$)	<b>5B</b> Scale of international public finance for oil and gas production (2015 and 2016 average per unit of GDP, \$)	6B Scale of domestic and international public finance for gas-fired power (2015 and 2016 average per unit of GDP, \$)	<b>7B</b> Scale of fiscal support for fossil fuel use in transpor (2015 and 2016 average per unit of GDP, \$)
<b>1C</b> Taking part or committing to take part in peer reviews (Y/N)	2C Evidence of backtracking on existing pledges (Y/N)	3C Scale of fiscal support for exploration (coal, oil and gas) (2015 and 2016 average per unit of GDP, \$)	4C New fiscal support for coal mining provided since the end of 2016 (Y/N)	<b>5C</b> Scale of fiscal support for oil and gas production (2015 and 2016 average per unit of GDP, \$)	6C Scale of fiscal support for fossil fuel power (2015 and 2016 average per unit of GDP, \$)	7C Scale of fiscal support for fossil fuel use by households (2015 and 2016 average per unit of GDP, \$)
1D At least half of public finance institutions provide transaction-level data that appears to be comprehensive and specific (Y/N/Partial)		<b>3D</b> New fiscal support for fossil fuel exploration provided since the end of 2016 (Y/N)	<b>4D</b> New public finance for coal mining provided since the end of 2016 (Y/N)	<b>5D</b> New fiscal support for oil and gas production provided since the end of 2016 (Y/N)	6D New fiscal support for fossil fuel-based power provided since the end of 2016 (Y/N)	<b>7D</b> Scale of other fiscal support for fossil fuel use (agriculture etc.) (2015 and 2016 average per unit of GDP, \$)
1E Percentage of measures in OECD analysis of fossil fuel support that have been quantified (%)		<b>3E</b> New public finance for exploration provided since the end of 2016 (Y/N)	4E Evidence of removal of subsidies to coal mining provided since the end of 2016 (Y/N)	<b>5E</b> New public finance for oil and gas production provided since the end of 2016 (Y/N)	<b>6E</b> New public finance for fossil fuel-based power provided since the end of 2016 (Y/N)	<b>7E</b> New fiscal support for fossil fuel consumption provided since the end of 2016 (Y/N)
		<b>3F</b> Evidence of removal of fiscal support for exploration (since the end of 2016) (Y/N/Partial)		5F Evidence of removal of fiscal support for oil and gas production since the end of 2016) (Y/N/Partial)	6F Evidence of removal of fiscal support for fossil fuel-based power since the end of 2016) (Y/N)	7F Evidence of removal of fiscal support for fossil fuel consumption since the end of 2016) (Y/N)
					<b>6G</b> Capacity mechanism to fossil fuel-based power (Y/N/Partial)	

Note: Light grey cells indicate qualitative information, white cells indicate quantitative information. Included in brackets is the type of scoring used for each sub-indicator.

### **Qualitative indicators**

All qualitative sub-indicators (the shaded cells in Table 1) are based on 'Yes' and 'No' answers (with 'Partial' also a possible response for 1B, 1D, 3F, 5F, and 6G). Where 'Yes' was a positive development or outcome regarding subsidy phase-out, a 'Yes' received a perfect score of 4 and a 'No' received 0. Where 'Yes' was a *negative* development or outcome (i.e. new evidence of subsidies was found), the scoring was the inverse: 'Yes' received a 0 and 'No', a 4. Where there was partial removal (or reform) of measures, a country scored 2.

## Weighting and overall report scoring

Each indicator from 1 to 7 was given equal weighting in determining the final score (with two overarching indicators on transparency and commitments, three indicators on fossil fuel production, and two indicators on fossil fuel consumption). Each sub-indicator was given equal weighting within each indicator. Scores for each indicator (by country) are calculated by adding up the values for each sub-indicator, dividing that by the perfect score for that sub-indicator and multiplying this by 100, to give a score out of 100. For example, for indicator 1 (transparency), there are five sub-indicators (1A–E), each with a perfect score of 4, so a perfect score overall would be 20. The score for each country on indicator 1 (transparency) was then divided by 20 and multiplied by 100, to give a score out of 100.

## Data and sources for indicators and sub-indicators

## **Indicator 1: transparency**

This indicator looks at government recognition of and reporting on fiscal support and public finance to fossil fuels. Five sub-indicators are used for this indicator.

**1A** Government has officially reported that it provides inefficient fossil fuel subsidies (Y/N)

This sub-indicator captures whether a government has officially recognised it provides inefficient fossil fuel subsidies, including through the G20 or Asia-Pacific Economic Cooperation processes, in the last 10 years.

**1B** Comprehensive and specific government ministry or agency reporting on fossil fuel subsidies (regular or irregular) (Y/N/Partial)

This sub-indicator captures whether the government has reported publicly (through ministries or agencies) and specifically on the subsidies they provide to fossil fuels, in the last 10 years. Reports from Auditor-General or equivalent are not considered as they do not represent the position of the rest of the government. See G7 fossil fuel subsidy scorecard and accompanying G7 country scorecards for reports considered.

### Note on scoring

A G7 country was scored 'Yes' if they have (regularly or irregularly) reported on fossil fuel subsidies, through specific reports on fossil fuel subsidies, environmentally harmful subsidies, sustainable development-related subsidies, or energy subsidies. A country was scored 'No' if there was no evidence of this reporting. Finally, a country was scored 'Partial' if there was some reporting, but this was in the form of high-level support estimates (to coal, oil and gas), as opposed to comprehensive reporting on individual fiscal support measures.

**1C** Taking part or committing to take part in peer reviews (Y/N)

This sub-indicator captures whether a government has taken, or committed to take part, in the G20's fossil fuel subsidy peer review process.

**1D** At least half of public finance institutions provide transaction-level data that appears to be comprehensive and specific (Y/N/Partial)

This sub-indicator aims to capture the transparency of reporting of public finance institutions (national and bilateral development banks, export credit agencies etc.) of the G7 countries, in 2015 and 2016. It looks at whether at least half of a given G7 country's public finance institutions provide transaction-level information with sufficient detail to indicate the amount of public finance provided for fossil fuels. See Annex 1 for a full list of public finance institutions considered.

#### Note on scoring

A 'Yes' was recorded if all public finance institutions reviewed provide transaction-level data that appears to be comprehensive and specific. A 'No' was recorded if there was no evidence of such reporting. Finally, 'Partial' was recorded if some, but not all, public finance institutions provide transaction-level data that appears to be comprehensive and specific.

**1E** Percentage of measures in OECD analysis of fossil fuel support that have been quantified (%)

This sub-indicator reflects the extent to which measures captured by the Organisation for Economic Cooperation and Development's (OECD) analysis of fossil fuel support (database on budgetary transfers and tax expenditures) have been quantified, in 2015 and 2016. The analysis only includes active subsidies, excluding any subsidies that the OECD has described as terminated (in 'Information'). Active subsidies are counted as *unquantified* where the OECD data description cites 'No data available'. It is worth noting that, for some G7 countries, several of the measures listed in the OECD database have not been quantified, and the amount is reported as zero (even though they are confirmed to still be active).

## **Indicator 2: pledges and commitments**

This indicator looks at the government pledges to end fiscal support and public finance, and whether they have backtracked on these by making any high-level announcements that go against those pledges. Three sub-indicators are used for this indicator.

**2A** Number of pledges to phase out subsidies to fossil fuels (beyond the G7 commitment) (count)

This captures the pledges made by governments to phase out subsidies to fossil fuels, which go beyond the G7 pledge (in terms of ambition), in the last ten years. Pledges that duplicate existing commitments in other forums have been discounted: for example, we do not consider the G20 and Asia-Pacific Economic Cooperation commitments since they repeat the G7 pledge without its 2025 deadline.

The pledges we have identified that go beyond the G7 ambition are those made by: the EU Member States to phase out subsidies to hard coal mining by 2018 and to phase out environmentally harmful subsidies (including fossil fuel subsidies) by 2020; and commitments made by signatories to the Convention on Biological Diversity to comply with its Aichi target 3 on phasing out environmentally harmful subsidies by 2020 (European Council, 2010; European Commission, 2011; European Commission, 2017; Convention on Biological Diversity, 2010). In the case of EU countries in the G7, the EU commitment to phase out environmentally harmful subsidies by 2020 duplicates the Convention on Biological Diversity Aichi target 3, and so where a country made both pledges they were counted as one.

2B Number of pledges to end public finance for fossil fuels (count)

Similarly to 2A, this sub-indicator captures the pledges made by public finance institutions of the G7 countries – including national and bilateral development banks, export credit agencies, etc. – to phase out financing for fossil fuels, in the last 10 years. It includes pledges made at government level to phase out development finance to fossil fuels, as well as pledges and commitments made by individual public finance institutions.

**2C** Evidence of backtracking on existing pledges (Y/N)

This sub-indicator looks at whether any governments have backtracked on the pledges under 2A and 2C by announcing to continue fiscal support or public financing for fossil fuels, in the last 10 years.

## Indicator 3: ending support for fossil fuel exploration

This indicator reviews G7 fiscal support and public finance to exploration for coal, oil and gas.

**3A** Scale of domestic public finance for oil and gas exploration (no coal identified) (2015 and 2016 average per unit of GDP)

This sub-indicator is the annual average amount of financing provided by public finance institutions for domestic oil and gas exploration projects in 2015 and 2016 per unit of GDP. No financing was identified for domestic coal exploration projects.

### Calculation approach

The total amount of public finance provided includes any project whose financing was agreed in 2015 and 2016, and then dividing the total project amount by two (i.e. across the two years). The data is then divided by the relevant country's GDP, to normalise the data according to economy size and allow for comparison across countries.

### Sources of information

The report uses the information made publicly available by majority government-owned financial institutions. This data can be found in Oil Change International's 'Shift the Subsidies' database, which includes information provided by public finance institutions, from the Infrastructure Journal Global database, and Natural Resource Defence Council's 'Power Shift' report database (OCI, 2018; IJ Global, 2018; Chen and Schmidt, 2017).

**3B** Scale of international public finance for oil, gas and coal exploration (2015 and 2016 average per unit of GDP)

This sub-indicator is the annual average amount of financing provided by public finance institutions for international oil, gas and coal exploration projects in 2015 and 2016 per unit of GDP.

## Calculation approach and sources of information See 3A.

**3C** Scale of fiscal support for exploration (coal, oil and gas) (2015 and 2016 average per unit of GDP)

This sub-indicator quantifies the annual average scale of fiscal support provided for coal, oil and gas exploration, in 2015 and 2016 per unit of GDP.

#### Calculation approach

The total amount of fiscal support provided by the government, through budget transfers and tax expenditures in 2015 and 2016, and divided by two. The data is then divided by the relevant G7 country's GDP, to normalise the data for economy size and allow for comparison across countries. The expression of fossil fuel subsidies per unit of GDP is consistent with the Sustainable Development Goals Indicator 12.C.1 (United Nations, 2015).

#### Sources of information

For all countries, the main source of information for fiscal support was the OECD's analysis of fossil fuel support (OECD, 2018b). In addition, we reviewed information from the International Energy Agency (IEA) on government energy technology research and development budgets (IEA, 2017). Data was obtained in January 2018 (between 8th and 12th), so any changes made after that date will not be reflected in our analysis. The country-level data was also supplemented with additional data captured in other sources:

- Canada. Fiscal support as published in the *Empty Promises* report was used to complement the OECD data, for the qualitative sub-indicators only (as no data is available for 2015 or 2016 in the report) (Touchette, 2015).
- France, Germany, Italy and the UK. Fiscal support data as published in the *Phase-out 2020: monitoring Europe's fossil fuel subsidies* report was used to complement the OECD data (Gençsü et al., 2017).
- Japan. Additional research was conducted to review the budget documents of Japan, including review of official documents in Japanese from the Ministry of Finance and the Ministry of Economy Trade and Industry (METI, 2013; 2014; 2015; 2016; 2017; and NRDC, 2017).
- US. Fiscal support data as published in the *Dirty energy dominance: dependent on denial* report was used to complement the OECD data (OCI, 2017).

**3D** New fiscal support for fossil fuel exploration provided since the end of 2016 (Y/N)

This sub-indicator captures whether any new fiscal support has been provided for coal, oil or gas exploration between January 2017 and March 2018.

#### Sources of information

Government documents and other public sources of information (e.g. news articles).

**3E** New public finance for exploration provided since the end of 2016 (Y/N)

This sub-indicator captures whether any new coal, oil or gas exploration has been financed by public finance institutions between January 2017 and March 2018.

#### Sources of information

Reports by public finance institutions and other public sources of information (e.g. news articles).

**3F** Evidence of removal of fiscal support for fossil fuel exploration since the end of 2016 (Y/N/Partial)

This sub-indicator captures evidence of countries removing any fiscal support for coal, oil and gas exploration in between January 2017 and March 2018.

#### Sources of information

See 3D.

#### Note on scoring

A 'Yes' was recorded if there was evidence of a fiscal support measure being removed from a G7 country's public budget. A 'No' was recorded if there was no such evidence. Finally, a 'Partial' was recorded if a fiscal support measure underwent reform, in a manner that reduced its scale or coverage, but without completely phasing out the measure.

## Indicator 4: ending support for coal mining

This indicator reviews G7 fiscal support and public finance to coal mining, throughout the different stages of production. This does not include exploration for coal (already captured under Indicator 3), this rather includes: access, development, extraction and transportation. The subsidies captured by this indicator *do not* include those being provided for transitioning *away* from coal, such as support for workers and communities and to rehabilitation of coal mining sites (though these make up a significant part of the support).

**4A** Scale of fiscal support for coal mining (2015 and 2016 average per unit of GDP)

This sub-indicator quantifies of the annual average fiscal support provided for coal mining in 2015 and 2016 per unit of GDP.

## Calculation approach and sources of information

See 3C.

**4B** Scale of international public finance for coal mining (no domestic identified) (2015 and 2016 average per unit of GDP)

This sub-indicator quantifies the annual average amount of international finance provided by public finance institutions of the G7 countries for coal mining, in 2015 and 2016 per unit of GDP. Although included in our review process, no public financing was identified for domestic coal mining projects.

## Calculation approach and sources of information See 3A.

see sa.

**4C** New fiscal support for coal mining provided since the end of 2016 (Y/N)

This sub-indicator captures any new fiscal support introduced for coal mining between January 2017 and March 2018.

#### Sources of information

See 3D.

**4D** New public finance for coal mining provided (since the end of 2016) (Y/N)

This sub-indicator captures whether any new coal mining has been financed by public finance institutions between January 2017 and March 2018.

#### Sources of information

See 3E.

**4E** Evidence of removal of fiscal support for coal mining (Y/N)

This sub-indicator captures evidence of countries removing any fiscal support measures for coal mining between January 2017 and March 2018.

#### Sources of information

See 3D.

## **Indicator 5: ending support for oil and gas production**

This indicator looks at G7 fiscal and public finance support for oil and gas production. This does not include exploration for oil and gas (already captured under Indicator 3), but rather includes the following stages of production: development, extraction and preparation; pipelines and storage; as well as aid to gas stations.

**5A** Scale of domestic public finance for oil and gas production (2015 and 2016 average per unit of GDP)

This sub-indicator is the annual average amount of domestic finance provided by public finance institutions for oil and gas production, in 2015 and 2016 per unit of GDP.

## Calculation approach and sources of information

See 3A.

**5B** Scale of international public finance for oil and gas production (2015 and 2016 average per unit of GDP)

This sub-indicator is the annual average amount of international finance provided by public finance institutions for oil and gas production, in 2015 and 2016 per unit of GDP.

## Calculation approach and sources of information

See 3A.

**5C** Scale of fiscal support for oil and gas production (2015 and 2016 average per unit of GDP)

This sub-indicator quantifies annual average fiscal support provided for oil and gas production, in 2015 and 2016, per unit of GDP.

## Calculation approach and sources of information

See 3C.

**5D** New fiscal support for oil and gas production provided since the end of 2016 (Y/N)

This sub-indicator captures any new fiscal support introduced for oil and gas production between January 2017 and March 2018.

#### Sources of information

See 3D.

**5E** New public finance for oil and gas production provided since the end of 2016 (Y/N)

This sub-indicator captures whether any new oil and gas production has been financed by public finance institutions between January 2017 and March 2018.

#### Sources of information

See 3E.

**5F** Evidence of removal of fiscal support for oil and gas production (since the end of 2016) (Y/N/Partial)

This sub-indicator captures evidence of countries removing any fiscal support measures for oil and gas production between January 2017 and March 2018.

#### Sources of information

See 3D.

#### Note on scoring

A 'Yes' was recorded if there was evidence of a fiscal support measure being removed from the public budget. A 'No' was recorded if there was no such evidence. Finally, a 'Partial' was recorded if a fiscal support measure underwent reform, in a manner that reduced its scale or coverage, but without completely phasing out the measure.

## **Indicator 6: ending support for fossil fuel-based power**

This indicator looks at G7 fiscal support and public finance to fossil fuel-based power, including co-generation of electricity and heat from coal, oil and gas. This includes construction of power plants, and power generation.

**6A** Scale of international public finance for coal-fired power (no domestic identified) (2015 and 2016 average per unit of GDP)

This sub-indicator is the annual average amount of international finance provided by public finance institutions for coal-fired power, in 2015 and 2016 per unit of GDP. No public financing was identified for domestic coal-fired power.

## Calculation approach and sources of information

See 3A.

**6B** Domestic and international public finance for oil and gas-fired power (2015 and 2016 average per unit of GDP)

This sub-indicator is the average amount of domestic and international finance provided by public finance institutions for oil and gas-fired power, in 2015 and 2016 per unit of GDP.

## Calculation approach and sources of information

See 3A.

6C Scale of fiscal support for fossil fuel power (2015 and 2016 average per unit of GDP)

This sub-indicator quantifies the annual average fiscal support provided for fossil fuel-based power, in 2015 and 2016, per unit of GDP.

## Calculation approach and sources of information

See 3C.

**6D** New fiscal support for fossil fuel-based power provided since the end of 2016 (Y/N)

This sub-indicator captures any new fiscal support introduced for fossil fuel-based power between January 2017 and March 2018.

#### Sources of information

See 3D.

**6E** New public finance for fossil fuel-based power provided since the end of 2016 (Y/N)

This sub-indicator captures whether any new fossil fuel-based power has been financed by public finance institutions between January 2017 and March 2018.

#### Sources of information

See 3E.

**6F** Evidence of removal of fiscal support for fossil fuel-based power (since the end of 2016) (Y/N)

This sub-indicator captures evidence of countries removing any fiscal support measures for fossil fuel-based power between January 2017 and March 2018.

#### Sources of information

See 3D.

**6G** Capacity mechanism to fossil fuel-based power (Y/N/Partial)

This sub-indicator captures evidence of domestic capacity mechanisms supporting fossil fuel-based power. This includes both national and subnational capacity mechanisms, in place as of 2018. It hence excludes any capacity support mechanisms that are in the planning stages.<sup>3</sup>

#### Sources of information

Online sources of information (e.g. government agency websites, news articles).

#### Note on scoring

A 'Yes' was recorded if there is a national capacity mechanism in place as of 2018, which provides significant support for fossil fuel-based power. A 'No' was recorded if there was no evidence of a national or subnational capacity mechanism being in place in 2018. Finally, a 'Partial' was recorded if there were subnational capacity mechanisms (i.e. in states or provinces) that supported fossil fuels.

## Indicator 7: ending support for fossil fuel use

This indicator looks at fiscal support for fossil fuel use in different sectors (outside of electricity generation, which is already covered under Indicator 6). Note that no public finance for fossil fuel use has been identified, except for specific support for the petrochemical industry, which is not included in our analysis of public finance.

7A Scale of fiscal support for fossil fuel use in industry (2015 and 2016 average per unit of GDP)

This sub-indicator quantifies annual average fiscal support provided for fossil fuel use in industry, in 2015 and 2016, per unit of GDP. These estimates may include support for petrochemicals, where this cannot be disaggregated from wider support for energy-intensive industries.

## Calculation approach and sources of information

See 3C.

<sup>3</sup> For example, Japan is reviewing the option of a national capacity mechanism to come into force in 2020. The province of Alberta in Canada also plans to introduce a subnational capacity mechanism to come into force in 2021. These were therefore not counted under the sub-indicator's methodology.

**7B** Scale of fiscal support for fossil fuel use in transport (2015 and 2016 average per unit of GDP)

This sub-indicator quantifies annual average fiscal support provided for fossil fuel use in transport (e.g. support for road, rail, aviation or maritime transport), in 2015 and 2016 per unit of GDP.

## Calculation approach and sources of information

See 3C.

**7C** Scale of fiscal support for fossil fuel use by households (2015 and 2016 average per unit of GDP)

This sub-indicator quantifies annual average fiscal support provided for fossil fuel use by households (e.g. household electricity or heating support), in 2015 and 2016 per unit of GDP.

It should be noted that fiscal support measures to households can be important in addressing inequality in access to services (such as electricity and heat). However, such support can also lead to increased use of fossil fuels. In reforming in fossil fuel subsidies, newly available public resources can be made available for enhancing energy efficiency and to reduce wider household costs including for other services such as public transportation.

## Calculation approach and sources of information

See 3C.

**7D** Scale of other fiscal support for fossil fuel use (e.g. agriculture, etc.) (2015 and 2016 average per unit of GDP)

This sub-indicator quantifies the scale of fiscal support provided for fossil fuel use by other sectors (e.g. agriculture and fishing), in 2015 and 2016 per unit of GDP.

## Calculation approach and sources of information

See 3C.

**7E** New fiscal support for fossil fuel consumption provided since the end of 2016 (Y/N)

This sub-indicator captures any new fiscal support introduced to fossil fuel consumption between January 2017 and March 2018.

### Sources of information

See 3D.

**7F** Evidence of removal of fiscal support for fossil fuel consumption (since the end of 2016) (Y/N)

This sub-indicator captures any new fiscal support introduced to fossil fuel consumption between January 2017 and March 2018.

#### Sources of information

See 3D.

## References

- Chen, H. and Schmidt, J. (2017) 'Power shift: shifting G20 International public finance from coal to renewables', nrdc.org, 3 December (www.nrdc.org/resources/power-shift-g20-international-public-finance-from-coal-to-renewables)
- European Commission (2011) 'A roadmap for moving to a competitive low carbon economy in 2050', COM(2011) 112. Brussels: European Commission (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52011DC0571 &from=EN)
- European Commission (2017) Second report on the state of the energy union. Brussels: European Commission (https://ec.europa.eu/commission/sites/beta-political/files/2nd-report-state-energy-union\_en.pdf)
- European Council (2010) Council decision of 10 December 2010 on state aid to facilitate the closure of uncompetitive coal mines (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010D0787&from=EN)
- Convention on Biological Diversity (2010) Decision adopted by the Conference of the Parties to the Convention on Biological Diversity at its tenth meeting (www.cbd.int/doc/decisions/cop-10/cop-10-dec-02-en.pdf)
- G7 (2016) G7 Ise-Shima Leaders' Declaration, 26-27 May. Ishe-Sima: G7 (www.mofa.go.jp/files/000160266.pdf)
- G7 (2017) Chair's Summary: G7 Rome Energy Ministerial Meeting, 9–10 April. Rome: G7 (www.g7italy.it/sites/default/files/documents/energy\_chairs\_summary.pdf)
- G8 (2009) G8 Leaders' Declaration, 8–10 July. L'Aquila: G8 (www.g7germany.de/Content/DE/StatischeSeiten/Breg/G7G20/Anlagen/G8-erklaerung-aquila-2009-en.html)
- G20 (2017) G20 Hamburg Climate and Energy Action Plan for Growth (www.g20.utoronto.ca/2017/2017-g20-climate-and-energy-en.pdf)
- Gençsü, I., McLynn, M., Runkel, M., Trilling, M., van der Burg, L., Worrall, L., Whitley, S. and Zerzawy, F. (2017) Phase-out 2020: monitoring Europe's fossil fuel subsidies. ODI Report. London: Overseas Development Institute (www.odi.org/sites/odi.org.uk/files/resource-documents/11762.pdf)
- IEA International Energy Agency (2017) 'IEA Energy Technology RD&D Statistics' (dataset, OECD) (www.oecd-ilibrary.org/energy/data/iea-energy-technology-r-d-statistics\_enetech-data-en)
- IJ Global (2018) 'Database'. London: IJ Global: Infrastructure Journal and Project Finance Magazine. (www.ijonline.com/data) METI Ministry of Economy Trade and Industry (2013) Action Plan for METI Public Project Review 2013 (Heisei 29 Nendo Keizaisangyousyo Gyousei Jigyou Rebhu Koudou Keikaku) in Japanese (www.meti.go.jp/information\_2/publicoffer/review2013/index.html)
- METI (2014) Action Plan for METI Public Project Review 2014 (Heisei 29 Nendo Keizaisangyousyo Gyousei Jigyou Rebhu Koudou Keikaku) in Japanese (www.meti.go.jp/information\_2/publicoffer/review2014/index.html)
- METI (2015) Action Plan for METI Public Project Review 2015 (Heisei 29 Nendo Keizaisangyousyo Gyousei Jigyou Rebhu Koudou Keikaku) in Japanese (www.meti.go.jp/information\_2/publicoffer/review2015/index.html)
- METI (2016) Action Plan for METI Public Project Review 2016 (Heisei 29 Nendo Keizaisangyousyo Gyousei Jigyou Rebhu Koudou Keikaku) in Japanese (www.meti.go.jp/information\_2/publicoffer/review2016/index.html)
- METI (2017) Action Plan for METI Public Project Review 2017 (Heisei 29 Nendo Keizaisangyousyo Gyousei Jigyou Rebhu Koudou Keikaku) in Japanese (www.meti.go.jp/information\_2/publicoffer/review2017/html/index.html)
- OCI Oil Change International (2017) Dirty energy dominance: dependent on denial how the US fossil fuel industry depends on subsidies and climate denial. Washington DC: OCI (http://priceofoil.org/content/uploads/2017/10/OCI\_US-Fossil-Fuel-Subs-2015-16\_Final\_Oct2017.pdf)
- OCI (2018) 'Shift the subsidies database' (dataset, OCI, requested via http://priceofoil.org/shift-the-subsidies)
- OECD Organisation for Economic Co-operation and Development (2018a) OECD companion to the inventory of support measures for fossil fuels 2018. Paris: OECD (www.oecd.org/environment/oecd-companion-to-the-inventory-of-support-measures-for-fossil-fuels-2018-9789264286061-en.htm)
- OECD (2018b) 'OECD inventory of support measures for fossil fuels 2018' (dataset, OECD) (www.oecd.org/site/tadffss/data) Touchette, Y. (2015) G20 Subsidies to oil, gas and coal production: Canada. ODI Report. London: Overseas Development Institute (www.odi.org/publications/10091-g20-subsidies-oil-gas-and-coal-production-canada)
- United Nations (2015) *Transforming our world: the 2030 Agenda for Sustainable Development*, UN Doc A/RES/70/1, adopted 25 September 2015 (http://www.un.org/ga/search/view\_doc.asp?symbol=A/RES/70/1&Lang=E)
- Whitley, S. and van der Burg, L. (2015) Fossil fuel subsidy reform in sub-Saharan Africa: from rhetoric to reality. London and Washington DC: New Climate Economy (http://newclimateeconomy.report/workingpapers/workingpaper/fossil-fuel-subsidy-reform-in-sub-saharan-africa-from-rhetoric-to-reality-2)
- World Bank (2018) 'World development indicators 2018' (dataset, DataBank, World Bank) (http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators). Accessed 8–12 January
- WTO World Trade Organization (1994) *Agreement on Subsidies and Countervailing Measures* (www.wto.org/english/docs\_e/legal\_e/24-scm.pdf)

# **Annex 1 List of public finance institutions reviewed**

Country	Public finance institutions
Canada	<ul> <li>Export Development Canada (EDC)</li> <li>PPP Canada</li> <li>Business Development Bank of Canada (BDC)</li> </ul>
France	<ul> <li>Agence Française de Development (AFD)</li> <li>BPI Française / Compagnie Française d'Assurance pour le Commerce Extérieur (Coface)</li> <li>Proparco</li> <li>Caisse des Dépôts (CDC) Group</li> </ul>
Germany	<ul> <li>Deutsche Investitions- und Entwicklungsgesellschaft (DEG)</li> <li>Euler Hermes</li> <li>KfW Bank</li> <li>KfW-Export Finance (IPEX) Bank</li> </ul>
Italy	<ul> <li>Cassa Depositi e Prestiti (CDP)</li> <li>Servizi Assicurativi del Commercio Estero (SACE)</li> </ul>
Japan	<ul> <li>Development Bank of Japan (DBJ)</li> <li>Japan Oil, Gas and Metals National Corporation (JOGMEC)</li> <li>Japan Bank for International Corporation (JBIC)</li> <li>Nippon Export and Investment Insurance (NEXI)</li> <li>Japan International Cooperation Agency (JICA)</li> </ul>
UK	<ul> <li>CDC Group plc (CDC)</li> <li>Department for International Development (DFID)</li> <li>UK Export Finance (UKEF)</li> </ul>
US	<ul> <li>Overseas Private Investment Corporation (OPIC)</li> <li>Export-Import Bank of the United States (EXIM)</li> </ul>









ODI is an independent, global think tank, working for a sustainable and peaceful world in which every person thrives. We harness the power of evidence and ideas through research and partnership to confront challenges, develop solutions, and create change.

NRDC **Oil Change International** 203 Blackfriars Road 40 West 20th Street 111 Lombard Avenue, Suite 325 714 G Street SE, Suite 202 London SE1 8NJ New York NY 10011 Washington DC 20003 Winnipeg MN, Canada R3B 0T4 +1 212 727 2700 +44 (0)20 7922 0300 +1 204 958 7700 +1 202 518 9029 info@odi.org +1 212 727 1773 +1 202 330 5952 odi.org iisd.org odi.org/facebook priceofoil.org nrdc.org odi.org/twitter nrdcinfo@nrdc.org info@iisd.org info@priceofoil.org

Readers are encouraged to reproduce material from ODI publications for their own outputs, as long as they are not being sold commercially. As copyright holder, ODI requests due acknowledgement and a copy of the publication. For online use, we ask readers to link to the original resource on the ODI website. The views presented in this paper are those of the author(s) and do not necessarily represent the views of ODI.