



## Brief

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# Phase-out 2020: monitoring Europe's fossil fuel subsidies

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September 2017

## European Union

### Key findings

#### Leading on phasing out fossil fuel subsidies:

- The European Union (EU) has put environmentally harmful subsidies, including those for fossil fuels, and their reform on the political agenda for several years.
- The phase-out of fossil fuel subsidies is reflected in various EU policy strategies and processes such as the Europe 2020 Strategy, the 7th Environment Action Programme, the European Semester process, a 2010 Council decision on support for closing coal mines and, most recently, the 'EU 2030 Energy and Climate' governance framework.

#### Lagging on phasing out fossil fuel subsidies:

- Despite these multiple commitments the EU budget (Regional Development Fund, Connecting Europe Facility, Horizon 2020) and European public banks (European Investment Bank (EIB) and European Bank for Reconstruction and Development, EBRD) continue to finance fossil fuel production and consumption across the EU and internationally.
- This includes EU budget which has allocated in total over €2 billion in funding for gas infrastructure from 2014 to 2020; and over €6 billion of funding by the EIB, and €2.3 billion by the EBRD, in total in fossil fuel projects from 2014 to 2016.
- The European Fund for Strategic Investments also spent €1.2 billion on gas infrastructure in 2015 and 2016.
- Under the EU Emissions Trading Scheme (ETS) energy-intensive industries benefit from free CO<sub>2</sub> emission allowances, and some EU Member States have used loopholes to prolong the life of coal plants through the current ETS framework.
- Exemptions from EU competition law enable EU Member States to provide State aid for fossil fuel production and consumption, in particular through 'capacity mechanisms'.

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## EU climate and energy policies

In 2010 the EU adopted the ‘Europe 2020’ strategy (European Commission, 2010) with the following objectives: to shift the EU towards a low-carbon economy based on renewable energy sources and energy efficiency; to combat climate change and air pollution; to decrease its dependence on foreign fossil fuels; and to keep energy affordable for consumers and businesses. Under this strategy, the EU aims to reduce its greenhouse gas (GHG) emissions by at least 20%, increase the share of renewable energy to at least 20% of consumption, and achieve energy savings of 20% or more, by 2020. All EU Member States must also achieve a 10% share of renewable energy in their transport sector. In addition, the EU must achieve a further reduction of 3.1% in primary energy consumption from 2015 to 2020 to achieve the target of improving energy efficiency by 20% (EUROSTAT, 2017). Building on the 2020 goals established in 2010, the European Commission’s 2011 ‘Roadmap for moving to a low-carbon economy in 2050’ has set the long-term goal of reducing GHG emissions in the EU by 80%-95%, when compared to 1990 levels, by 2050 (European Commission, 2011a).

The EU is expected to exceed its 20% GHG emissions reduction target for 2020. In 2015 renewables provided 16.7% of gross final energy consumption. For further information on the EU’s energy transition see Chapter 2 of the summary report, *Phase-out 2020: monitoring Europe’s fossil fuel subsidies*.<sup>1</sup>

Currently, the EU is debating the successor to ‘Europe 2020’ to set out its climate and energy policies for 2030. Between June 2015 and November 2016, the European Commission (EC) has tabled a set of legislative proposals to develop further climate and energy policy after 2020 (European Commission, 2016a). Although these legislative proposals are still under negotiation, with the outcome expected in 2018/2019, the EC’s proposals have built on the targets agreed by EU Heads of State and Government in October 2014 (European Council, 2014). These targets envisage a 40% cut in GHG emissions, at least a 27% EU-wide share of renewable energy consumption, and at least 27% energy savings with a view to increase it to 30% by 2030.

This 2030 climate and energy legislative package is embedded into the ‘Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy’ or ‘Energy Union’, launched in February 2015 (European Commission, 2015b). The EU’s Energy Union strategy consists of five interrelated policy areas, each with a different set of priorities and legislations: providing energy security, completing the internal energy market, putting energy efficiency first, decarbonising the economy, and boosting research and innovation in energy matters.

With its ratification of the Paris Agreement in 2016, the EU has demonstrated its commitment to implementing the international climate objectives set out in the Agreement. It has also demonstrated its commitment to align its financial flows with low greenhouse gas and climate resilient development.

However, the EU’s current 2030 climate and energy targets were crafted and agreed before the Paris Agreement was adopted, targeting a decarbonisation goal that is not aligned with the objectives of the Paris Agreement. Therefore an upwards revision of the targets is required: according to the latest United Nations Environment Programme (UNEP) Emissions Gap Report, to keep temperature rise below 2°C, let alone 1.5°C, all countries will need to reduce their currently forecast 2030 emission levels by another 25% (UNEP, 2016). In addition, the EU needs to shift all of its financial support away from fossil fuels, and towards renewable energy and energy savings measures.

## EU governance of fossil fuel subsidies

Environmentally harmful subsidies, in particular fossil fuel subsidies, and their reform have been on the EU’s political agenda for several years. While fossil fuel subsidies are identified in various EU policies, strategies and processes as a problematic issue for enhancing the EU’s climate action, there is little or no overview of their scale and magnitude in the EU and its associated bodies and financial arms.

Several bodies in the European Commission and Parliament have conducted various pieces of research and reports on fossil fuel subsidies (European Commission, 2015d; European Parliament, 2017). Although this demonstrates the recognition by EU institutions that fossil fuel subsidies continue to be a problem both in Europe and internationally, no concrete steps or actions are identified for the EU to address its own subsidies.

**This report is one of the first attempts to compile and present these various EU policies, measures and actors that subsidise fossil fuels in different ways.**

In addition, there is no overarching process that seeks to facilitate and monitor fossil fuel subsidy phase-out in the EU. With that said, the following EU processes address the EU’s commitment to phase out fossil fuel subsidies, and the extent to which these commitments are being tracked and fulfilled.

The 7<sup>th</sup> Environment Action Programme (7<sup>th</sup> EAP, European Commission, 2013) aims at phasing out environmentally harmful subsidies by 2020. The requirements of the EAP apply to the EU and all Member States, which should report on progress via their annual National Reform Programmes under Europe 2020. Both the ‘Europe 2020 strategy’ (European Commission,

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1 Available at [odi.org/Europe-fossil-fuel-subsidies](http://odi.org/Europe-fossil-fuel-subsidies)

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2010) and the ‘Roadmap to a resource-efficient Europe’ (European Commission, 2011b) call for the phase-out of environmentally harmful subsidies by Member States by 2020. A Council decision (787/2010/EU) from 2010 requires the gradual phase-out by 2018 of state aid for the closure of uncompetitive coal mines.

The European Semester process, the EU’s macro-economic policy coordination framework, and its Annual Growth Survey tend to include country-specific recommendations on reforming environmentally harmful subsidies (Green Budget Europe, 2016). However, since 2015 the climate and energy related analysis has been substantially reduced (ibid.). The scope of assessment remains quite narrow, focusing mainly on taxation, and thus risks missing a high volume of financial support provided to fossil fuels, domestically and internationally.

The 2nd State of the Energy Union Report (European Commission, 2017a) recognises the need to step up efforts towards phasing out fossil fuel subsidies and to support only that energy infrastructure which is in line with the long-term clean energy policy. This reflection is captured most clearly in the Governance regulation of the Energy Union. The Governance regulation encapsulates two key elements that could stimulate a more comprehensive effort to monitor and phase out fossil fuel subsidies:

a) the monitoring and reporting framework established in the 2013 Greenhouse Gas Monitoring Mechanism Regulation (EU, 2013, ‘Regulation (EU) No 525/2013 on a mechanism for monitoring and reporting greenhouse gas emissions’); and

b) the ‘National Energy and Climate Plans’ (NECPs) which should ensure the accomplishment of EU’s 2030 climate and energy targets (European Commission, 2015c). The NECPs will cover planning, reporting and monitoring of all issues related to climate and energy, with an aim to provide a comprehensive overview of the low-carbon transition within and across all countries.

As part of the ‘Clean Energy for All Europeans’ package of energy and climate legislation, this legislative proposal on ‘Energy Union Governance’ is currently being negotiated among legislators. The EC’s initial proposal for Energy Union Governance was strengthened by the European Parliament, including the obligation for Member States to report on the status of fossil fuel subsidies, and to plan and report on the progress of the phasing-out process.

At the international level, the EU has committed to phasing out inefficient fossil fuel subsidies by 2025 through the G7 (G7, 2017). It has reiterated its commitment to phase out inefficient fossil fuel subsidies every year since 2009, as part of the G20 (G20, 2016). In addition, all EU countries have committed to the SDGs, which highlight

the phase-out of fossil fuel subsidies as a means of implementing Goal 12 to ‘ensure sustainable production and consumption patterns’ (UN, 2015). Under the Paris Climate Agreement the EU commits to ‘holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels’. Further on, signatories need to make ‘finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development’ (UN, 2015).

## Overview of fossil fuel subsidies by the EU

The European Union does not publish an inventory of fossil fuel subsidies or environmentally harmful subsidies provided through European financing institutions or EU financial instruments and policies. The absence of any overview or inventory reduces the ability for the EU to monitor and assess its progress to phase out fossil fuel subsidies, and for non-state actors to hold the EU and its Member States to account.

Based on available information, Table 1 overleaf provides an estimate of different types of contributions to the ongoing support for fossil fuels provided by EU financing institutions, financial instruments and EU policies across Member States, on average per year between 2014 and 2016 (using publicly available sources).

Our findings illustrate that subsidies are provided directly through the EU budget, European public banks and related financial instruments. We also find that subsidies are provided indirectly through the EU’s carbon market and exemptions from EU competition law – ‘systemic support for fossil fuels by EU policies’. These EU funds and policies fall into different policy areas and under various competencies in EU decision-making, and thus require more comprehensive oversight in relation to their contribution to overall support for fossil fuels in Europe.

Our analysis found that €515 million per year on average was provided by the EU budget for gas production, including infrastructure, between 2014-2016. In addition, EU public banks and financial instruments provided €3.2 billion for oil and gas production per year, with 72% of this financing (€2.3 billion) being provided to EU countries, and the remaining 28% (€896 million) being provided for projects in non-EU countries. Of the total public finance provided for oil and gas production, 75% (€2.4 billion) per year was for gas infrastructure. The following sections give more detail on subsidies provided to the production and consumption of oil, gas and coal, and to fossil fuel-powered electricity. The summary below is not comprehensive; the full list of subsidies can be found in the Datasheet.<sup>2</sup>

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2 Available at [odi.org/Europe-fossil-fuel-subsidies](http://odi.org/Europe-fossil-fuel-subsidies)

**Table 1. Subsidies to fossil fuel production and consumption in the EU, by activity (Euro millions, average 2014-2016)**

	Production				Consumption					Total
	Coal mining	Oil and gas, including infrastructure	Electricity	Multiple or unclear	Industry and business	Transport	Households	Agriculture	Multiple or unclear	
<b>EU budget</b>	0	515	0	0	0	0	0	0	0	<b>515</b>
<i>ERDF</i>	0	133	0	0	0	0	0	0	0	133
<i>CEF</i>	0	371	0	0	0	0	0	0	0	371
<i>Horizon 2020</i>	0	12	0	0	0	0	0	0	0	12
<b>EU public banks and financial instruments</b>	2	3,207	178	78	0	0	23	0	0	<b>3,487</b>
<i>Inside the EU</i>	0	2,311	23	70	0	0	23	0	0	2,428
<i>Outside the EU</i>	2	896	154	7	0	0	0	0	0	1,059
<b>State-owned enterprise investment*</b>	0	0	0	0	0	0	0	0	0	<b>0</b>

Note: For sources and data, see country data sheet and summary report available at [odi.org/Europe-fossil-fuel-subsidies](http://odi.org/Europe-fossil-fuel-subsidies)

\* There are no state-owned enterprises (SOEs) that fit the SOE definition adopted by this report.

For more information on the sources of data and the methodology used in this report, please refer to the Methodology chapter of the summary report, *Phase-out 2020: monitoring Europe's fossil fuel subsidies*.

## EU financing of fossil fuels

### EU budget

The EU's long-term budget, the Multiannual Financial Framework (MFF), defines the EU's spending priorities over a seven-year period. The current EU Budget for the period 2014-2020 is allocating €960 billion to the following sectors: European farmers and fishers; construction of energy and transport infrastructure; housing and waste management; small and medium-sized enterprises (SMEs); research and innovation; and the economic and social development of Europe's regions, as well as for its external action programmes and security and citizenship.

Within the MFF, there are three mechanisms through which support is provided to fossil fuels, mainly to oil and gas infrastructure projects: the European Regional Development Fund; the Connecting Europe Facility (CEF); and funding through the Horizon 2020 research and

innovation programme. More information on these is provided below (see Table 2 opposite).

### European Regional Development Fund (ERDF)

The ERDF accounts for around a quarter of the EU budget. However, its investment planning and project implementation lies in the hands of Member States' authorities. With the purpose to provide 'economic, social and territorial cohesion', the ERDF focuses its investments in key priority areas such as innovation and research, the digital agenda, SMEs and energy and transport infrastructure.

According to their long-term investment plans for the period 2014-2020<sup>3</sup> seven Member States and regions intend to spend €930 million in all for natural-gas infrastructure, in particular gas pipelines and storage. These are: Bulgaria (€38 million), Greece (€120 million), Lithuania (€84 million), Latvia (€18 million), Poland (€620 million), Portugal (€3 million), Romania (€47 million), and regions under the 'Territorial Cooperation' programme: €150,000 (European Commission, n.d.a).

### Connecting Europe Facility (CEF)

The CEF aims to enhance and expand cross-border infrastructure, connections and territorial cohesion in Europe. The CEF also identifies tackling climate change as part of its overall objectives. It has a total budget of approximately €30 billion, of which €5.4 billion is

<sup>3</sup> Planned allocations for the period 2014 -2020, available data based on 'Categories of Intervention' and projections. No data were available for the 2014 - 2016 only.

**Table 2: Overview of EU budgetary support for fossil fuels**

Budget Mechanism	Scope	Period/year for which data is available	Euro millions	Annual average in period of record, Euro millions
European Regional Development Fund (ERDF)	Natural-gas transport and storage infrastructure	2014-2020*	930	133
Connecting Europe Facility (CEF)	Studies and works for natural-gas interconnections	2014-2016	1113	371
Horizon 2020	Shale gas research	2015	11.5	11.5
<b>TOTAL EU budget</b>			<b>2055</b>	<b>515</b>

Note: For sources and data, see country data sheet and summary report.

\*This period goes beyond the timeframe of our analysis, but it is the only period for which data is available.

earmarked for energy. The CEF is managed by the EC, and the five calls for projects proposals for 2014-2016 have allocated €1.1 billion of CEF funding to gas projects. This includes 50 projects on ‘studies and works’ for natural-gas interconnections across Europe (European Commission, n.d.b).

### Research funding – Horizon 2020

Horizon 2020 is the EU’s primary Research and Innovation programme, with nearly €80 billion of funding available over seven years (2014-2020) (European Commission, n.d.c). In 2015 it granted €12 million to four shale gas research projects with the aim to encourage the exploitation of this type of ‘unconventional’ fossil fuels (European Commission, n.d.d).

### EU public banks and financial instruments

The European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD) – play an important role in the development and transformation of Europe’s energy infrastructure. In recent years, both the EIB and the EBRD have adopted strategies to increase support for sustainable energy and resource efficiency (EBRD, 2015) and to be consistent with EU policy objectives in the energy sector (EIB, 2013). However, the banks continue to channel a significant amount of funds into various aspects of fossil fuel production both inside and outside the EU. The level of support provided is further elaborated below (see Table 3).

#### The European Investment Bank (EIB)

The EIB was established in 1958 under the Treaty of Rome as the financial arm of the EU (EIB, n.d.a). It is

owned by the 28 EU Member States and, as the financing institution of the EU, the EIB is bound by EU policies and legislation. It provides loans to projects in EU countries and in about 140 partner countries, including to private or public companies. EIB is the biggest global public lender, with almost €75 billion of loans signed in 2016. EIB acts as a multiplier, usually providing around one third, but sometimes up to half, of the finances needed for a project.

Between 2014-2016 the EIB provided financing for two oil projects, one coal project and 27 gas projects in 12 EU Member States,<sup>4</sup> worth €5.3 billion. This includes exploration, consumption and distribution of fossil fuels. Fossil fuel support outside the EU, under EIB’s External Lending Mandate (ELM), was granted to one coal and five gas projects in five countries; Mongolia, Ukraine, Tunisia, Egypt, Moldova. This support was worth €976 million (EIB, n.d.; see also EU data sheet).

#### The European Fund for Strategic Investments (EFSI)

EFSI, launched in spring 2015 jointly by the EC and the EIB Group (EIB and the European Investment Fund), is an initiative to mobilise private investments and catalyse new projects that implement strategic, transformative and productive investments with high economic, environmental and societal added value. A €500 billion investment target is to be reached by 2020, with financing from EIB for projects carried out by private or public promoters. EFSI is based on a guarantee from the EU budget, complemented by allocation from the EIB’s own resources (EIB, n.d.b). EFSI operations are managed, implemented and accounted for by EIB. Additional to EIB’s fossil fuel financing (see above), EFSI supported eight gas distribution projects with €1.2 billion in its first two years of operation (2015 and 2016).

4 The member states where support was provided are: Estonia, Finland, France, Germany, Greece, Hungary, Italy, Lithuania, Netherlands, Slovakia, Spain and the UK

**Table 3: Overview of public finance support to fossil fuels (Euro millions)**

Public banks and financial instruments	2014	2015	2016	Sum 2014-2016	Annual average in period of record
EIB in EU Member States	2455	2159	679	5294	1765
EIB in non-EU countries	385	550	41	976	325
EFSI (EU)	0	360	815	1175	588
EBRD in EU Member States	20	21	114	155	52
EBRD in non-EU countries	719	695	786	2,200	733
Blending facilities	1.1	68	3	72	24
<b>TOTAL EU public banks and financial instruments</b>	<b>3581</b>	<b>3853</b>	<b>2439</b>	<b>9873</b>	<b>3487</b>

Note: For sources and data, see country data sheet and summary report.

### The European Bank for Reconstruction and Development (EBRD)

The EBRD is mandated to promote transition to market economies and sustainable development in the countries of Eastern Europe, former Soviet Union, the southern and eastern Mediterranean as well as Mongolia and Turkey. The bank is owned by 65 countries from across the world, the EU and its Member States and EIB. During 2014-2016 EBRD financed six fossil fuel projects in Estonia, Romania, Greece and Bulgaria, worth €209 million. In the same period EBRD contributed to 31 coal, oil and gas projects in the Caucasus, Central Asia and the Middle East, worth €2.3 billion.

### EU ‘blending facilities’ for external action

In the EU context ‘blending facilities’ are financial instruments combining EU grants with loans or equity from public and private financiers for achieving EU external policy objectives. The EU supports development banks’ projects with a grant element in order to attract additional financing for investments supporting the EU external policy objectives. In the past decade, the EC has set up a number of ‘blending facilities’, with a regional focus for Latin America, Asia, Africa, the Caribbean, EU Neighbourhood<sup>5</sup> and Western Balkans (European Commission, n.d.e). This EU grant contribution can take different forms to support investment projects: investment grant and interest rate subsidy, technical assistance, risk capital (i.e. equity and quasi-equity) and guarantees. From 2014 to 2016 the Neighbourhood Investment Facility

(NIF) supported one gas project and the Western Balkans Investment Framework (WBIF) three gas project, in total worth €72 million (European Commission, 2017c).

### Systemic support for fossil fuels by EU (not included in subsidy estimates at EU level)

In addition to direct financial support from the EU to fossil fuels, there are other EU policies and mechanisms which also benefit the fossil fuel industry. Although the policies and mechanisms in question are governed at the EU level, they have been calculated at country level for this analysis (see accompanying country briefs). The analysis includes support to fossil fuels through the EU ETS, and exemptions from State Aid rules which enable governments to support fossil fuels through capacity mechanisms.<sup>6</sup> The following section discusses both forms of support in turn. The EU also provides support to fossil fuels through the European Central Bank’s (ECB) purchase of bonds as part of its programme of quantitative easing – which is discussed in Box 1 opposite.

### The EU Emissions Trading Scheme (ETS)<sup>7</sup>

The EU ETS is the EU’s greenhouse gas emissions (GHG) trading scheme, covering more than 11,000 factories, power stations and other installations. Under the ‘cap and trade’ principle, a maximum (cap) is set on the total amount of GHGs that can be emitted by all participating installations. ‘Allowances’ for emissions are then auctioned off or allocated for free, and can subsequently be traded.

5 EU Neighbourhood refers to: 16 EU partner countries located to the East and South of the EU with which the EU is building a strategic partnership. Countries are: Algeria, Armenia, Azerbaijan, Belarus, Egypt, Georgia, Israel, Jordan, Lebanon, Libya, Moldova, Morocco, Syria, Palestine, Tunisia, Ukraine.

6 Capacity mechanisms: A mechanism that rewards market participants for available capacity, on top of revenues generated by selling electricity in the wholesale market. These payments are meant to ensure security of supply by incentivising sufficient investment in new capacity or preventing the retirement of existing capacity (van der Burg and Whitley, 2016).

7 See discussion in country briefs. Available at [odi.org/Europe-fossil-fuel-subsidies](http://odi.org/Europe-fossil-fuel-subsidies)



### Box 1: Additional government support to fossil fuels through European Central Bank (ECB) bond purchases

Our definition of subsidies does not cover ECB bond purchases, therefore it is not included in our analysis. It is worth noting, however, that European governments are also supporting fossil fuels through ECB bond purchases as part of wider quantitative easing programmes.

ECB is the central bank of the 19 EU Member States that have adopted the Euro. Its main task is to maintain price stability in the Euro area and so preserve the purchasing power of the single currency.

In June 2016 the ECB, as part of its ‘quantitative easing’ programme, began buying corporate bonds to provide money to corporations. Under this Corporate Sector Purchase Programme (CSPP), by June 2017 ECB had bought 950 corporate bonds from around 200 issuer groups, worth €92 billion. Among the corporations ECB invested in are oil and gas majors Shell, Total, Eni and Repsol. ECB has also used CSPP to invest in other high-carbon stocks such as oil trader Glencore and car manufacturer Volkswagen.

Recent analysis by the Corporate Europe Observatory shows that car manufacturers, oil and gas companies, energy companies and motorways account for 107 of the 271 different bonds bought between December 2016 and June 2017.

The ECB does not disclose how much money has been invested in each corporation.

Corporations benefiting from the programme can use the revenue from bond sales for several purposes, for example to pay shareholder dividend, to buy back shares, or to invest in new fossil fuel exploration or production.

The ECB argues that ‘to ensure the effectiveness of its monetary policy while maintaining a level playing field for all market participants and avoiding undue market distortions, there is no positive or negative discrimination in the CSPP-eligible bond universe based on environmental or social criteria’.

However, key experts have highlighted that these bond purchases stand counter to Europe’s climate commitments, and 41 Members of the European Parliament, from all political groups, have demanded transparency about selection criteria and the disclosure of the sums ECB has spent so far on the bonds of individual corporations.

*Sources: ECB, 2017; Corporate Europe Observatory, 2017, 2016; The Guardian, 2016; Financial Times, 2017b, 2017c*

The ETS in its current design provides a considerable amount of support to carbon-intensive operators in the form of free allowances. Under the ETS, economic operators are required to obtain emission permits or allowances for each tonne of CO<sub>2</sub> they emit. Although auctioning is supposed to be the default mode for acquiring emission allowances, close to half the total allowances are still handed out to polluters for free. Issuing free allowances to industry undermines the ETS’s main objective to achieve cost-effective reduction of GHG emissions, infringes the ‘polluter pays’ principle, and impedes necessary investments into low-carbon infrastructure. Adding up the total documented and projected market value of estimated free allowances and exemptions under the ETS from 2008 to 2030, support provided to fossil fuels through the ETS amount to almost €496 billion. (See Annex 1 for overview).

There are **three main sources of subsidies** facilitated under the ETS:

- The first is the **free allocation of allowances to the manufacturing industry**, worth over €380 billion. While the power sector – with the notable exception of Article 10c discussed below – has to obtain all its allowances through auctioning since 2012, other industry sectors receive a considerable share of their allowances for free. This means that recipient polluters do not pay for their emissions. Currently, installations receive free allowances either based on the benchmark approach or because they belong to a sector which is deemed to face the risk of

carbon leakage. Under the benchmark approach the best performing 10% of the installations in a specific product category are handed allowances for free.

- The second source of subsidy is the **free allocation of allowances to low-income countries**. Since the beginning of the third trading phase in 2013, the power generation sector has to buy all its allowances by auctioning. An exception is made however for low-income countries, which may issue free allowances to their domestic electricity providers for a transitional period, pursuant to Article 10c of the ETS Directive. The recipient operators in turn are supposed to invest at least the equivalent monetary amount in low-carbon technology and the modernisation of their installations. There is however concerning evidence that large parts of the investments fund fossil fuel infrastructure; under Article 10c the level of fossil fuel subsidies will amount to a total of almost €22 billion for the period of 2013-2030 from the transitional free allowances to the electricity sector in Central and Eastern European countries.
- Finally, **emissions from international air transport only partially fall under ETS**, and shipping is currently not included in the ETS. These specific provisions lead to a financial benefit of €11 billion for the aviation sector and €80 billion for the maritime sector.

The implications of providing free ETS allowances to polluters can pose significant challenges to the longer term clean energy transition of European economies. For example,

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the free ETS allowances may have enabled Poland to extend the lifespan of lignite and hard-coal power generation. Poland's biggest coal plant, Bełchatów, is one such example. The power plant has received support through the ETS, despite evidence showing that some of its units should shut down due to problems such as local air pollution and negative health impacts. The support for Bełchatów marks an untenable use of resources that could be otherwise used to increase renewable energy capacity and support a just transition away from coal power (Bankwatch, 2016; see also Poland country brief).

### **Exemptions from EU State Aid (competition legislation) for the benefit of fossil fuel production and consumption<sup>8</sup>**

The guarantee of full competition is one of the characteristics of the EU internal market. The EU has established a body of EU competition legislation, with the EC acting as competition authority and dealing with competition law issues. The aim of competition rules is to ensure that markets are not distorted by the practices of undertakings or policies of States thereby resulting in situations which harm consumers or the process of rivalry and innovation.

State aid law, as part of EU competition law, is intended to contribute to the proper functioning of the internal market, creating a level playing field between Member States, preventing a subsidy race and reducing the possibility of wasting public funds, for instance, by maintaining inefficient undertakings on the market. State aid law also aims to prevent situations where significant market power is built up with the help of State resources.<sup>9</sup>

However, State aid can be allowed exceptionally, and the Treaty of the Functioning of the EU (TFEU) empowers the EC to assess whether this is the case. There is a growing number of examples where the EC has decided to allow

State aid for governments supporting fossil fuels-related energy projects.<sup>10</sup> These include closure aid for inefficient coal mines,<sup>11</sup> regional aid for investments which theoretically and legally can be given to coal mines,<sup>12</sup> compensation for stranded assets in the electricity sector<sup>13</sup>, when the service is of general economic interest (SGEI),<sup>14</sup> and through rescue and restructuring aid in the energy sector.

'Capacity mechanisms' are a form of State aid and thus subject to EU State aid rules. Capacity mechanisms are support schemes that remunerate the availability of electricity generation at all times to avoid black-outs and ensure that electricity supply permanently meets demand. Capacity mechanisms take many different forms, but they generally offer payments to capacity providers on top of their income from revenues generated by selling electricity on the market. This is done as a means to prevent the shutdown of existing generation capacity or to incentivise investment in new resources.

A number of questions and concerns have arisen recently in relation to capacity mechanisms, namely whether they are as necessary for security of energy supply, as they are perceived to be by EU governments, and how their application may result in more subsidies for the fossil fuel sector through the back door (European Commission, 2016b). These concerns were further identified in a recent review of capacity mechanisms, which found that fossil fuels enjoyed unbalanced favouritism over low-carbon options to enhance security of supply (Whitley and van der Burg, 2016).

Capacity mechanisms may also interfere with cross-border trade and competition, close national markets, distort the location of generation, and finally increase costs for all Member States. Please see country studies for France, Germany, Hungary, Spain, Poland and the UK for more information about specific capacity mechanisms, and scale of support provided.

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8 See discussion in country briefs. Available at [odi.org/Europe-fossil-fuel-subsidies](http://odi.org/Europe-fossil-fuel-subsidies)

9 State aid is, as defined in the Article 107(1) of the Treaty of the Functioning of the EU (TFEU), '[...] any aid granted by a Member State through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States [...]'].

10 There is an explicit Council Decision (787/2010/EU), adopted in 2010, which allows some 'closure aid' to coal mining. However, mining aid under Council Decision 787/2010 is not straightforward as it is support (1) for the continued operation of mines, but only until a given closure date no later than 2018 and/or (2) 'exceptional costs' of mine closure, including for example the retraining of workers and rehabilitation of mining sites.

11 Guidelines on regional State aid for 2014-2020 *Official Journal* C 209/1 23.7.2013.

12 Commission communication relating to the methodology for analysing State aid linked to stranded costs. Adopted by the Commission on 26.07.2001, not published in the *Official Journal*.

13 Article 106(2) TFEU states that support may be given to services of special characteristics on the market. As regards the electricity sector, Article 15(4) of the current Directive 2009/72/EC stipulates that 'A Member State may, for reasons of security of supply, direct that priority be given to the dispatch of generating installations using indigenous primary energy fuel sources, to an extent not exceeding, in any calendar year, 15% of the overall primary energy necessary to produce the electricity consumed in the Member State concerned.'

14 Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty, *Official Journal* C 249/1, 31.07.2014.



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# Annex

**Table 4: Estimates of the value of fossil fuel subsidies (documented and projected) through the European Emissions Trading Scheme (Euro billions, 2008-2030)**

Overview of total fossil fuel subsidies under ETS (2008-2030)	Free allowance to manufacturing industry	Article 10c derogation	Exceptions for transport emissions		TOTAL
			Aviation	Shipping	
2nd Trading Phase (2008-2012)	139	-	1.3	13	<b>153</b>
3rd Trading Phase (2013-2020)	60	4.8	2.3	14	<b>81</b>
4th Trading Phase (2020-2030)	184	17	7.5	54	<b>262</b>
<b>TOTAL</b>	<b>383</b>	<b>22</b>	<b>11</b>	<b>80</b>	<b>496</b>

*Note: The figures identified in the table display estimated free allowances and exemptions until now (documented) as well as projections of those until 2030 to estimate the level of support provided on aggregate (see sources and methodology below). We have not used these numbers in calculations for this report, which instead is based on country-level data (see Methodology Section of Summary Report).*

## Sources and methodology:

The estimates outlined above are based on the value of free allocations to the manufacturing industry, derogations from Article 10c and the exemptions to international air transport and shipping include all countries and entities falling under ETS. They are based on historic data or are extrapolated based on trajectories.

- The number of free allowances for the second trading period 2008-2012 (2nd TP) is from Sandbag ‘EU ETS Dashboard’ (Sandbag, 2017), the corresponding carbon price from CE Delft (Bruyn et al., 2016).
- The number of free allowances for the third (2013-2020) (3rd TP) and fourth (2021-2030) (4th TP) trading period is based on our own calculations: the overall cap on total allowances is reduced by the linear reduction factor (1.74% for 3rd TP, 2.2% for 4th TP) and multiplied with the share of free allocations of 43% (3rd TP) and 45% (4th TP).
- The carbon price for the 3rd TP has been taken from the EC (2014) Impact Assessment on carbon leakage 2015-2019.
- The average EUA price for the 4th TP of EUR 25 is based on the EC (2015) Impact Assessment on the ETS reform proposal.
- Figures on Article 10c derogations assume a continuation of the current practice of transitional free allocation for low-income Member States as currently foreseen in the EC reform proposal of ETS.
- Figures for international aviation during the 2nd TP and 3rd TP are based on data of the European Environmental Agency (EEA) (2017). Projections for the 4th TP assume continuation of the stop-the-clock derogation for intercontinental flights as well as the application of a linear reduction factor of 1.74% on the aviation cap.
- Figures on shipping emissions, including projections, are based on Transport and Environment data from the 2016 Q&A on the Maritime Climate Fund.

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This material was funded by the KR Foundation, Oak Foundation and the Hewlett Foundation.

The authors are grateful for support and advice on this brief from Wendel Trio.

The authors would also like to thank Sophie Kershaw for editorial support, Nicolas Derobert, Chris Little and Charlie Zajicek for communications support, and Helena Wright and Sebastien Godinot for their comments.

This brief is part of a series of 11 country briefs and an EU-level brief, the findings of which are collated in the summary report *Phase-out 2020: Monitoring Europe's fossil fuel subsidies*.

For the purposes of this study and accompanying data sheet, fossil fuel subsidies include: fiscal support from governments (budgetary support, tax breaks, and price and income support), public finance, and investment by state-owned enterprises (SOEs). The years for which data was collected and analysed is 2014, 2015 and 2016, and findings are expressed in annual averages across this period.

The summary report *Phase-out 2020: Monitoring Europe's fossil fuel subsidies* provides a more detailed discussion of the methodology used for this country study. The authors welcome feedback on both this study and the accompanying data sheet to improve the accuracy and transparency of information on fossil fuel subsidies.

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