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

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September 2017

France

Key findings

Leading on phasing out fossil fuel subsidies by:

- In January 2017 France's Ministry of Environment, Energy and Sea released a report on environmental taxation in France, with a focus on transport, energy, pollution and resource taxation. It includes some reference to fossil fuel subsidies.
- Financial support to domestic coal production is very low in France. There are still five coal-fired power stations in France, but President Emmanuel Macron's government advocates the phase-out of coal-fired power by 2022.
- France has taken steps to shrink the taxation gap between diesel and petrol by 2021.
- France introduced some policy measures to reduce domestic fossil fuel consumption, including a carbon tax on the consumption of fossil fuels.

Lagging on phasing out fossil fuel subsidies by:

- The government introduced a capacity reserve mechanism in January 2017, with an estimated 9% of certificates awarded to fossil fuel generation capacity.
- Support to oil and gas remains high, with consumption in the transport sector being the greatest beneficiary (through tax breaks to diesel vehicles and fuel and to commercial aviation).
- France's state-owned energy company, Électricité de France (EDF), is supporting the development of new gas-related infrastructure (including gas-fired power plants and a gas terminal).
- France provided international support in 22 countries for fossil fuel production and electricity infrastructure, worth €395 million per year, 22% of which funds exploration and extraction activities.

Status of the energy transition in France

Given the low domestic production of oil and gas, France is reliant on imports. Between 2005 and 2015, domestic gas and oil production fell by 99% and 29% respectively (International Energy Agency (IEA), 2016). The French government is preparing to introduce new legislation in autumn 2017 which will ban further oil and gas exploration activities (Dearden, 2017; Edmond, 2017). However, the latest version of the relevant law presented to the National Assembly did not include the restriction of non-conventional fossil energy sources (Dearden, 2017; Edmond, 2017; RAC France, 2017). France does not produce coal domestically, since the closure of its last coal mine, La Houve, in 2004 (Lichfield, 2004). In 2015, coal imports reached 14.5 million tonnes (IEA, 2016).

The French electricity market is dominated by Électricité de France (EDF), which is 84% government-owned (Deloitte, 2015; EDF, 2017a). Energy prices are set freely by the market, except for electricity and gas, which are protected and regulated through tariffs. However the Council of the State¹ recently decided gas tariff-setting is illegal under European law (Sainteny, 2017).

France has the second-largest electricity generation capacity in the European Union (EU) and in 2014 it exported 13% of its electricity (7% if imports are taken into account) (Deloitte, 2015; IEA, 2016; RTE, 2016). Nuclear resources made up 77% of electricity generation in 2015 (World Development Indicators (WDI), 2017). The low level of greenhouse gas (GHG) emissions that result from nuclear generation make France a leader in energy decarbonisation in Europe, with fossil fuels only accounting for 6% of electricity generation (WDI, 2017). France's coal-fired power capacity has declined since 2012, with the closure of 15 coal-fired power plants to comply with the emissions limits of the EU Large Combustion Plant Directive (IEA, 2016). France's last five coal units are operated by EDF and Uniper (IEA, 2016; Réseau de Transport D'électricité (RTE), 2015). Following the 2017 elections the newly appointed French government announced the 'Climate Plan' and the closure of remaining coal-fired power plants in France by 2022 (Ministère de la Transition Écologique et Solidaire, 2017).

The national energy policy guiding France's energy sector is the law on the energy transition for green growth.² The policy's decarbonisation objectives internalise the commitments of Europe's 2020 Strategy and Roadmap 2050 (European Commission (EC), 2017; Roadmap 2050, 2017). See further information in the summary report *Phase-out 2020: Monitoring Europe's fossil fuel subsidies*.

France is not on track, however, to produce 40% electricity from renewables by 2020 (RAC-France, 2017). Action is also required in decarbonisation of the transport sector, which is responsible for the majority of emissions (42% of total carbon dioxide emissions in 2014) (WDI, 2017). The French Environment Minister, Nicolas Hulot, has announced plans to ban all diesel and petrol vehicles in France by 2040, under President Macron's plans for France to become carbon neutral by 2050 (Farand, 2017).

Status of fossil fuel subsidy phase-out in France

The European Union (EU) including all its Member States have committed to phasing out environmentally harmful subsidies, including those to fossil fuels, by 2020 (EC, 2011). In addition, EU Member States are committed to phasing out subsidies to hard coal mining by 2018. As party to the Paris Agreement, France has also committed to '[m]aking finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development' (United Nations Framework Convention on Climate Change (UNFCCC), 2015). As a member of the EU bloc that is party to the G7, France has committed to phasing out its 'inefficient' fossil fuel subsidies, and called on all countries to do so as well, by 2025 (G7, 2016). As a member of the EU, and therefore a part of the G20, France has repeated its commitment to phase out fossil fuel subsidies every year since 2009 (G20, 2017). With nearly 40 other countries and hundreds of companies, France also signed a communiqué in 2015 calling on countries to eliminate inefficient fossil-fuel subsidies (Friends of Fossil Fuel Subsidy Reform (FFFSR), 2015).

Under the 2015 Finance Law, the taxation gap between diesel and petrol was reduced, lowering the level of subsidies provided to diesel (EC, 2017a). More recently, under the 2017 Finance Law, the French government announced the introduction of a national carbon price floor, excluding natural gas, though the ambition for this was subsequently scaled back and eventually scrapped (de Tannenberg, 2016; IEA, 2016; RAC-France, 2017). In 2014, the government introduced a carbon component within the consumer excise tax for fossil fuels, which will gradually increase up to 2030³ (IEA, 2016; RAC-France, 2017).

In 2015 the then French Minister for Ecology, Ségolène Royal, took a first step in reducing public finance for fossil fuels by announcing a restriction on bilateral support to coal in developing countries (Barbière, 2015).

1 A ruling in July 2017 by the 'Conseil d'Etat' deemed the gas tariff-setting as illegal.

2 This is known as 'Loi relative à la transition énergétique pour la croissance verte'. Targets under the policy include a reduction in GHG emissions by 40% to 2030; the reduction of final energy consumption by 20% to 2030; reducing fossil-fuel consumption by 30% to 2030; increasing the share of renewables to 40% of electricity generation; and reducing nuclear electricity capacity to 50% by 2025 (IEA, 2016).

3 The taxation is steadily increasing from €7/tCO₂ in 2014 to €30.5/tCO₂ in 2017 and €100/tCO₂ in 2030. The government announced in July 2017 it would raise the tax to €86/tCO₂ in 2022, though this has yet to be confirmed in the budget law (published in autumn 2017).

Restrictions are also being placed on export credits for coal plants without carbon capture and storage (Oil Change International (OCI) et al., 2017).

Overview of fossil fuel subsidies by France

The government of France does not publish an inventory of its fossil fuel subsidies or environmentally harmful subsidies. This contrasts with Germany which demonstrates higher transparency in publishing such inventories regularly (see Whitley et al., 2017). In the absence of systematic government reporting or a roadmap for the phase out of fossil fuel subsidies, it is challenging to assess whether France is on track to meet its subsidy phase out commitments.

That said, annual public reporting by French public finance institutions, state-owned enterprises (SOEs) and ministries provides a good overview of France's fossil fuel subsidies. Moreover, the French Ministry of Environment, Energy and Sea (2017) published an inventory of its energy, transport, pollution and resource taxes earlier this year. This includes some fossil fuel subsidies.

Due to limited transparency, our research found no data for 35% of the fiscal support instruments, and 50% of the state-owned enterprise (SOE) investments, identified for this report.

Despite France's commitments to phase out fossil fuel subsidies, all sectors reviewed in this analysis continue to receive domestic support, and France is still providing support to oil, gas and coal abroad.

Following a review of energy, transport, pollution and resource taxes, budgetary expenses that harm the environment were estimated to be three times higher than

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*.

those that are beneficial to the environment – equivalent to €7.1 billion and €2.3 billion respectively, in 2015 (Ministry of Environment, Energy and Sea, 2017). Another estimate by the Court of Audit are that fiscal expenditures unfavourable to 'sustainable development' objectives increased from €6.0 billion in 2010 to €6.9 billion in 2015 (Cours des Comptes, 2016). Despite the fact this study focuses exclusively on fossil fuel subsidies, our analysis finds that annual average fossil fuel subsidies are higher, with fiscal support of €10.8 billion, and public finance of €310 million, and investment by SOEs of €1.1 billion.

Based on available information Table 1 below provides an estimate of the scale of France's fossil fuel subsidies on average per year between 2014 and 2016 (using publicly available sources).

Most national subsidies are supporting fossil-fuel consumption in the transport sector, amounting to over €7 billion per year,⁴ and the industry and business sector, at over €2.1 billion per year between the years 2014 and 2016. Investment by EDF in oil, gas and fossil fuel-fired electricity is also relatively high, nearing €1.1 billion per year between 2014 and 2016.

Overall, national subsidies to domestic coal mining and coal-fired power remain very low compared to other EU

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

Activity / instrument	Production				Consumption					TOTAL
	Coal mining	Oil and gas	Electricity	Multiple activities or unclear	Transport	Industry and business	Households	Agriculture	Multiple activities or unclear	
Fiscal support (Budget expenditure + tax exemptions + price relief)	n/a	356	n/a	70	7,148	2,073	96	123	953	10,819
Public finance	0	258	53	0	0	0	0	0	0	310
<i>Domestic and EU</i>	0	0	0	0	0	0	0	0	0	0
<i>International</i>	0	258	53	0	0	0	0	0	0	310
State-owned enterprise investment	20	401	642	n/a	0	0	0	0	0	1,063

Note: For sources and data, see country data sheet available at odi.org/Europe-fossil-fuel-subsidies

4 This is similar to the figure reported by the French Government: €7.3 billion in fiscal support is provided to the transport sector, excluding fiscal support to diesel (République Française, 2017).

countries, with a very limited amount provided between 2014-2016, which indicates that there is potential for a complete phase-out of these subsidies (Whitley et al., 2017; Worrall and van der Burgh, 2017).

There is no domestic public finance supporting fossil-fuel production; however, France provided international public finance for fossil fuel production and electricity infrastructure in 22 countries, worth €395 million per year in between 2014 and 2016. Since 2014, 22% of these projects have supported exploration and extraction activities.

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.⁵

Coal mining

Domestic, and EU countries

In 2004, the closure of the last coal mine, La Houve, means that coal-mining activities no longer occur in France. The French government reached an agreement with the unions to provide retired miners with 85% of their salary until the age of 45 and 80% of their salary until retirement age, as well as free homes and health and social benefits (Lichfield, 2004). We could not find annual average estimates of this government support for the years 2014 and 2016 and it is unclear whether this is still being provided.⁶

International (outside the EU)

The French government has pledged to restrict bilateral public financing for coal and is placing restrictions on export credits for coal plants without carbon capture and storage (Barbière, 2015; OCI et al., 2017).

Oil and gas production

Domestic, and EU countries

France is providing national subsidies for the development of new infrastructure and oil and gas production. This includes excise tax exemptions for petroleum products and natural gas used for energy purposes by refiners (annual average of €153 million per year, 2014-2016) (Organisation for Economic Cooperation and Development (OECD), 2015; République Française, 2017). Natural gas producers received €3 million (2014) in excise tax reductions on energy products used for process energy in gas extraction and production (OECD, 2015a; Ministère de l'Environnement, de l'Énergie et de la Mer,

2017). Other support is granted through tax exemptions on tanker products used in refineries, which is estimated at €195 million per year (2015-2016) (Ministère de l'Environnement, de l'Énergie et de la Mer, 2017).

In terms of SOE investment, EDF's Dunkerque LNG is financing the development of a gas terminal in Dunkirk, in partnership with Fluxys and Total (EDF, 2015a; Dunkerque LNG, 2016). Total construction costs in 2011-2016 are estimated at €1.2 billion for the terminal, port construction and connection to the Pitgam compressor station (EDF, 2015a; Dunkerque LNG, 2016).

International (outside the EU)

The Compagnie Française d'Assurance pour le Commerce Extérieur (COFACE), Agence Française de Développement (AFD) and Proparco invested overall an annual average of €285 million in oil and gas infrastructure overseas between 2014 and 2016 (OCI, 2017). The countries where France is providing support to fossil-fuel production are Argentina, Bangladesh, Benin, Brazil, Cambodia, Cape Verde, Democratic Republic of the Congo, Egypt, French Polynesia, India, Indonesia, Kenya, Malaysia, Mauritania, Mozambique, Nigeria, Senegal, Sri Lanka, Tanzania, Tunisia, Uganda and Viet Nam. The highest amounts of investment were in Argentina, Egypt, India, Mauritania, Tunisia and Viet Nam (i.e. above €50 million in total project public financing). For example, in 2016 AFD provided a €108 million loan to the Tunisian Enterprise of Petroleum Activities for the exploitation of new gas fields and the enhancement of gas in Tunisia (OCI, 2017). In 2014, the AFD provided a €70 million loan to the Government of Egypt to extend city gas lines to poor areas (OCI, 2017). And in 2015, an €80 million loan made to the Government of Mauritania in 2015 supported natural gas-fired power plants for electricity production (OCI, 2017). This is in sharp contrast to the domestic policy banning exploration activities.

COFACE has provided numerous guarantees for the development of oil refineries overseas. These include a €288 million multi-year guarantee for the development of the Nghi Son refinery and petrochemical complex in Viet Nam, by Mitsubishi France (OCI, 2017); in 2014, a €72 million multi-year guarantee for the development of the Jamnagar Oil Refinery in India for the expansion of four industrial sites; and a €66 million multi-year guarantee for Prosernat for the financing of the Campana oil refinery in Argentina (OCI, 2017). In 2015, COFACE also provided a €66 million multi-annual guarantee for an oil-extraction and sulphur-processing unit project in Argentina (OCI, 2017).

SOE investments overseas include EDF's investments to secure operating interests in oil and gas fields through

5 Available at odi.org/Europe-fossil-fuel-subsidies

6 Estimates for 2011-2013 indicate that €0.2 million was allocated for research and development in coal mining (Worrall and van der Burg, 2017).

payments to host countries. EDF Edison's operating interests in the Abu Qir concession in the Nile Delta in Egypt decreased from €111 million in 2015 to €37 million in 2016, but taxes and royalties paid for operating interests in Pescara and Siracusa in Italy have increased from €48 million in 2015 to €191 million in 2016 (EDF, 2015; EDF, 2015b, EDF, 2016c).

Electricity production

Domestic, and EU countries

Despite the government's recent announcement to close all coal-fired power plants by 2022, there are new subsidies in place to support coal-power. The French electricity system's capacity mechanism,⁷ introduced in January 2017, provides payments to energy producers for the ability to respond to periods of peak demand (EC, 2016; Bilan Électrique, 2016). There are no estimates of the value of this support. Electricity producers have also received free emissions allowances under the EU Emissions Trading System (ETS), whilst households and industry receive domestic electricity subsidies. Mineral oils and natural gas burnt for co-generation are exempt from the excise tax levied on fuel sold in France (annual average of €1.2 million a year, 2014-2016) (OECD, 2015a).

In terms of SOE investment, the largest EDF investment by value is via a concession agreement⁸ with its subsidiary Dalkia, which EDF acquired in 2014 (EDF, 2015a; 2016a). Dalkia provides energy and heating services in France of which 67% are derived from fossil fuels (63% from gas, 3% from coal and 1% from oil) (Dalkia, 2017). Based on a pro-rata share, it is estimated that this support to fossil fuels was worth an average of €642 million per year.⁹

EDF has invested in the Bouchain combined heat and power (CHP) plant due to replace an expired coal-fired power unit in France, worth €200 million per year between 2015-2016 (EDF, 2015a; 2016b; 2017c). EDF has also invested since 2007 in coal-fired power infrastructure in France through a €450 million programme to upgrade three coal-fired units at the Cordemais and Le Havre power plants (each unit has 600 Megawatt (MW) capacity). These power plants have received an annual average investment of €16 million a year to 2035 (EDF, 2017b). A pilot carbon capture and storage project at the

Le Havre coal-fired power plant received an estimated investment of €4.4 million in 2014 (or €22 million in total during 2010-2014) (Giger and Chopin, 2015; EDF, 2015).

International (outside the EU)

During the period 2014 to 2016, the development finance institutions AFD, Proparco and COFACE committed an annual average of €111 million in public financing for fossil-fuel electricity infrastructure (OCI, 2017).¹⁰ (In the case of transmission infrastructure, this was determined per the contributions of fossil fuels to total electricity capacity; WDI, 2017.)

Public loans provided by Proparco in 2014-2015 have, for example, supported the development of gas-fired power in Nigeria, including a €41 million investment for the development of a new gas-fired power plant in 2014, and a €24 million investment to support the development of the Azura-Edo gas-fired power plant in 2015 (OCI, 2017).

AFD has invested significant public finances in electricity power plants and grids overseas between 2014 and 2016. This includes a €100 million loan to the Government of Bangladesh to expand and improve the efficiency of Dhaka's electricity grid, of which €99 million is estimated to have supported fossil-fuel based electricity transmission (based on 99% electricity being derived from fossil fuel reserves) (OCI, 2017; WDI, 2017). It also includes a €50 million loan to the Perusahaan Listrik Negara, Sarawak Electricity Supply Corporation (SESCO) for the strengthening of the west Kalimantan power grid in Malaysia and Indonesia in 2014, of which €44 million is estimated to have supported fossil-fuel based electricity transmission (based on 89.5% of electricity being derived from fossil fuel reserves) (OCI, 2017; WDI, 2017).

Although estimates for SOE investment overseas are not available, it includes EDF's support to the closure of 10 coal-fired power units in Europe during 2013-2015, with a total capacity of 2,850 MW, to comply with increasingly stringent emissions standards imposed by the EC (EDF, 2017b). EDF Asia is a 49% investor in the development of new coal-fired power plants in Jiagnxi Province, China, in construction between 2014 and 2016 (EDF, 2015; EDF Asia, 2017). EDF Poland is also investing in emission control technologies to extend the lifespan of coal-fired power capacity in Poland (Le Billon, 2017).

7 Capacity mechanisms (CM): 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).

8 A contract established between EDF (Dalkia) and the government that provides the right to operate within France.

9 €580 million in 2015 (67% of the total €865 invested that year) and €704 million in 2016 (67% of the total €1.1 billion invested that year) (Dalkia, 2017).

10 This excludes an €80 million multi-year loan to the Government of Mauritania in 2014 by AFD, to avoid double counting. The loan was used to encourage gas-based production and is therefore included in the 'Oil and Gas' 'International' section.

Transport

Subsidies to the transport sector are provided through government tax expenditures, and diesel fuel is a major recipient of such support. The reduced rate of tax on diesel under the condition of employment¹¹ accounts for an annual average expenditure of €1.8 billion in 2015-2016 (République Française, 2017). There is also a reduction on the rate of consumption tax of diesel used by certain types of trucks,¹² though estimates are not available for this (République Française, 2017). The Ministry of Economy and Finance provides tax expenditure from excise tax refunds for diesel used in public transportation, which was estimated at an annual average of €62 million during 2014-2016 (OECD, 2015a; Commission des Finances, 2017; République Française, 2017). A partial refund on excise for diesel used in freight transport, which applies to heavy vehicles and other European freight companies,¹³ averages €427 million in forgone revenue per year between 2014 and 2016 (OECD, 2015a, Commission des Finances, 2017). French companies receive value-added tax (VAT) reimbursements for the purchase of diesel cars and fuel, with fuel receiving up to 80% in VAT reductions (Sainteny, 2017).

A reduced price is applied to super-fuel – defined as a fuel with prescribed lead and ethanol contents – with a tax break of €64 million in 2016 (République Française, 2017). A reduced rate of domestic consumption tax on butanes and propane is applied under the condition of employment, equivalent to €103 million a year during 2015-2016 (République Française, 2017). The government also provides tax deductions for the acquisition of large vehicles¹⁴ reliant on natural gas and biomethane, and tax exemptions on handicap vehicles, but estimates are not available (République Française, 2017).

The aviation and maritime sectors receive substantial levels of subsidies. The domestic commercial aviation sector gets consumption tax exemption on energy products, which in 2015 alone was estimated at €2.8 billion (Ministry of Environment, Energy and Sea, 2017). An excise-tax exemption for domestic aviation is also provided on the purchase of kerosene fuels, with €310 million of revenue forgone per year (excluding private aircrafts) (OECD, 2015a; Commission des Finances, 2017).¹⁵ The Ministry of Environment, Energy and Sea provides support to marine transport. Excise tax exemptions for fuel used in maritime navigation and fishing boats have been in place

since 1928 and are estimated at €303 million a year 2014-2015 (OECD, 2015a; Commission des Finances, 2017). Fluvial-freight navigation receives excise-tax exemptions, worth €35 million per year 2014-2016 (OECD, 2015a; Commission des Finances, 2017). Other measures include taxable income deductions for maritime transport companies, based on the tonnage of their vessels (worth €60 million in 2015) and exemptions on the domestic consumption tax of fuel products for the transport of goods on inland waterways (€37 million on average 2015-2016) (République Française, 2017).

Exemptions apply to the maritime transport of goods and people in Guadeloupe, French Guiana, Martinique and La Réunion, with a tax expenditure of €1 million a year during 2015-2016 (République Française, 2017). Between 2014 and 2016, Corsica benefitted from 13% reductions in VAT rates on petroleum products, estimated at €5.4 million a year, and a reduced rate of excise tax on gasoline, worth €1 million a year (Commission des Finances, 2017; OECD, 2015a; Ministry of Environment, Energy and Sea, 2017). Tax exemptions for maritime and aviation apply to the transport of goods and people to and from Corsica, equivalent to €5 million a year 2015-2016 (République Française, 2017).

Of all the support identified for consumption of fossil fuels in transport, only 0.8% were targeted at public transport.

Industry and business

Tax breaks for the off-road use of diesel fuel (excluding for agriculture and farming) were introduced in 1970, including diesel used as heating oil and for construction purposes (OECD, 2015a).¹⁶ This support was estimated at €1.8 billion in 2016 alone (OECD, 2015a; Commission des Finances, 2017).

Whilst a standard VAT rate of 20% applies to energy products and services, some segments of electricity supply, natural gas and liquefied petroleum gas (LPG) benefit from a lower VAT rate of 5.5%. This concession is determined by the magnitude of use and thus favours large energy users, such as businesses and industries (OECD, 2016). Reduced rates of excise tax on energy products, natural gas and coal applied to energy intensive installations were equivalent to €155 million per year 2015-2016, although it was subject to GHG emissions allowances (République

11 French citizens who are currently employed (Index 20 of Table B of Article 265 of the Code of Customs).

12 Those whose engines remain on at a stop.

13 Vehicles heavier than 7.5 tonnes.

14 Vehicles heavier than 3.5 tonnes.

15 This measure has been applied since 1928 by the Commissioner General to Sustainable Development under the French tax 'Customs code' Article 265 (OECD, 2015a; Commission des Finances, 2017).

16 As of January 2015, this off-road diesel fuel still attracted a reduced rate of fuel tax of €10.84 per hectolitre, compared with €44.82 per hectolitre for regular diesel fuel.

Française, 2017). Energy-intensive industries at risk of significant carbon leakage¹⁷ received €105 million per year 2015-2016 in domestic consumption tax reductions (République Française, 2017).

Reduced 'contributions for the public service of electricity'¹⁸ were also applied to electricity consumed by industrial facilities, hyper-electricity intensive facilities and other industrial complexes (currently in operation), resulting in an annual average expenditure of €555 million in 2015-2016 (or €33 million per year given that fossil fuels contribute 6% of electricity generation (République Française, 2017; WDI, 2017). Other tax exemptions awarded to energy-intensive industries included tax waivers on the final consumption of electricity¹⁹ for the use of electricity in certain industrial processes, such as metallurgical and chemical processes, and in geographies where energy is produced²⁰ (Commission des Finances, 2017). This support was estimated at €746 million in 2016, or €45 million for fossil fuel-based electricity (according to 6% contribution of fossil fuels to electricity) (Ecofys, 2014; Douane et Droits Indirects, 2013; Commission des Finances, 2017; WDI, 2017).

There are two carbon pricing mechanisms in place in France: the regional EU Emissions Trading System (ETS) and the French carbon tax, under which industries are required to pay for their emissions. Certain exceptions apply however, including free allocation of EU ETS permits. Our analysis was not able to identify the total worth of the free permits allocated. In addition, industrial actors and electricity producers in France have received profits from the over allocation of EU ETS emissions allowances, estimated at an annual average of €100 million in 2008-2015 (Bruyn et al., 2016). We did not include this in the total amount of support provided by the French government, as it is an indirect form of support.

Other support includes exemptions from fuel excise tax for certain small-town retail merchants, whilst small gas stations in remote areas are directly subsidised for upgrading their infrastructure. In the energy sector, biomass producers are also granted tax exemptions in coal worth an annual average of €7 million per year during 2014-2016 (OECD, 2015a; Commission des Finances, 2017).

Some products, raw materials and oil are exempted from tax in the French territories of Guadeloupe,

Martinique and Réunion (République Française, 2017). This support is estimated at €158 million a year during 2015-2016 (République Française, 2017).

Households

In 2013, under the Brottes Law France more than doubled the number of households benefitting from social tariffs on gas and electricity (Sainteny, 2017). This support is provided through excise tax exemptions (OECD, 2015a). Excise tax exemptions for natural gas were estimated at €96 million per year (2014-2015) (OECD, 2015a; Commission des Finances, 2017). This subsidy is expected to end, however, as natural-gas rates start increasing in line with the phased introduction of the carbon component of excise taxes under the Climate Energy Contribution²¹ (OECD, 2015b).

Under the 2015 Transition Law, social tariffs are being replaced by an 'energy check': as of 2018, subsidies will be provided to 4 million households for the consumption of natural gas, electricity and biomass (RAC-France, 2017). It is however unclear as of yet whether the support will be significant, with some early analysis indicating the mechanism will generate net losses for households (RAC-France, 2017).

Overseas French territories receive tax exemptions on fossil fuel consumption. These are concentrated on the purchase of petroleum products by the geographically and economically disadvantaged. Since 1969, Guadeloupe, French Guiana, Martinique and La Réunion have received VAT exemptions that average €711 million per year 2014-2016 (OECD, 2015a).

Of all the support measures identified for households, 50% are targeted at a particular segment of the population.

Agriculture

Farmers benefit from tax breaks on purchases of diesel fuel, heavy fuel oil and natural gas, worth €123 million a year between 2014 and 2016 (OECD, 2015a). This support is provided through partial refunds of the excise tax that is normally levied on most sales of energy products in France (OECD, 2015a).

17 Carbon leakage is described as the geographical shift of energy-intensive industries to countries with less stringent environmental (emissions) standards.

18 La Contribution au Service Public de l'Electricité

19 TCFE are taxes on final electricity consumption (Taxes sur la Consommation Finale d'Electricité).

20 A full list: metallurgical processes, chemical reduction or electrolysis; mineralogical non-metal production; in geographic areas where the production of energy products takes place; and where electricity is more half than of the cost of the final product.

21 Known as the 'Contribution Climat Énergie'.

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

The authors are grateful for support and advice on this country brief from Guillaume Sainteny (GS Conseil), Meike Fink and Caroline Brun (Réseau Action Climat (RAC) France), Lucy Kitson (IISD), Federico de Luca (OECD).

The authors would also like to thank Sophie Kershaw for editorial support, Chris Little and Charlie Zajicek for communications support, and Ipek Gencsu, Shelagh Whitley and Florian Zerzawy for their comments.

This country 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*, available at odi.org/Europe-fossil-fuel-subsidies

For the purposes of this country study and accompanying country 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 country study and the accompanying country data sheet to improve the accuracy and transparency of information on fossil fuel subsidies.



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