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

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Spain

Key findings

Leading on phasing out fossil fuel subsidies:

- A significant proportion of support to coal mining in Spain is for the socioeconomic and environmental transition of mining regions.
- This study identified no subsidies to fossil fuel production or consumption through Spain's state-owned enterprises (SOEs).

Lagging on phasing out fossil fuel subsidies:

- Spain's transparency and reporting on fossil fuel subsidies is relatively poor compared with other European countries including France, Germany and Italy. The fossil fuel estimates in this study are therefore likely to be underestimates.
- Spain provides significant support to fossil fuel power, with an annual average of €470 million funded through the country's capacity market.
- In the farming and mining sectors, the value of subsidies through foregone excise-tax revenue on petroleum products was estimated at €380 million per year.
- In the transport sector, value-added-tax (VAT) exemptions on fuel in aviation, maritime and rail were worth €339 million per year.

Status of the energy transition in Spain

In line with European Union (EU) commitments, Spain legislated the phase-out of domestic coal mining by 2018 under the ‘Framework Plan for Coal Mines and Mining Communities 2013-2018’. Spain’s coal mining industry is already in decline, with hard and sub-bituminous coal production having fallen more than fivefold between 2009 and 2016, accompanied by declines in mining employment (Worrall and van der Burg, 2017; International Energy Agency (IEA), 2015; Greenpeace Spain, 2017). Most of Spain’s coal production is uneconomic, and the government determines minimum quantities of domestic coal to be burnt in local power plants each year, which helps support state-owned coal mining companies (Organisation for Economic Cooperation and Development (OECD), 2016). Domestic production of oil and gas is limited and Spain is partly reliant on imports, which account for 99% of its oil and natural gas supply (IEA, 2015; OECD, 2016).¹

A significant proportion of Spain’s electricity sector is derived from fossil fuels (almost 44% in 2015), with the remainder coming from renewables (35%) and nuclear (21%) (World Development Indicators (WDI), 2017). In 2016, coal was the third largest source of electricity in Spain (Red Eléctrica Española, 2017). Two coal-fired power plants, operated by Endesa, are likely to close, however, when indigenous coal mining subsidies expire in 2018 unless the government intervenes (Endesa, 2017).

Following the EU’s 2009 (Third) Internal Energy Market Package, the Spanish government has taken steps to increase competition in the electricity, oil and natural gas sectors,² and to encourage integration with neighbouring countries (IEA, 2015). Spain’s oil sector is entirely private and prices are set freely (IEA, 2015). The gas market is dominated by the transmission system operator Enagás, and the electricity and gas company Gas Natural, which accounts for half of Spain’s domestic sales and imports (IEA, 2015; Enagás, 2017).³

Spain has excess capacity in power generation and in its liquefied natural gas (LNG) terminals, in part due to declining energy demand in the wake of the economic recession (IEA, 2015). The Spanish government has put in place strong incentive mechanisms to encourage electricity infrastructure to respond to periods of peak energy demand, including the capacity mechanism. Wynn and Julve (2016) estimate that Spain’s supply capacity has now reached 1.4 times the level required for peak demand. Two Spanish non-governmental organisations (NGOs) – the Instituto Internacional de Derecho y Medio Ambiente and La Plataforma por un Nuevo Modelo Energético – have

started a court case challenging the mechanism and its compatibility with EU rules (Wynn, 2017).

Spain has invested billions of euros in gas infrastructure, even though the country has seven LNG plants operating below their limit three-quarters of the time (Euractiv, 2014; National Authority for Markets and Competition (CNMC); Greenpeace Spain, 2017). Recent developments include the Midcat gas pipeline project to connect France and Spain – with 50% of the costs (or €5.6 million) covered by European financing under the Connecting Europe Facility – and a third gas interconnector between Portugal and Spain (European Commission (EC), 2016c; Euractiv, 2014; Red Eléctrica de España (REN), 2014). Further information on EU fossil fuel investments is presented in the summary report, *Phase-out 2020: Monitoring Europe’s fossil fuel subsidies*.

Spain’s National Renewable Energy Action Plan 2010-2020 sets the target to increase the share of renewables to 20% of final energy consumption by 2020, in line with the EU’s decarbonisation objectives (Ministry of Industry, Trade and Tourism, 2010; EC, 2017a; Roadmap 2050, 2017). Funding to renewables stagnated in 2012 following the moratorium on new support to renewable energy installations. Whilst a Royal Decree has established the right to design a new support mechanism, this has yet to be introduced (Royal Decree 1/2012; Royal Decree 9/2013; Royal Decree 413/2014; Ministerial Order IET/1045/2014) (Greenpeace Spain, 2017).

Status of fossil fuel subsidy phase-out in Spain

The European Union (EU) including all its Member States have committed to phasing out environmentally harmful subsidies, including those to fossil fuels, by 2020 (European Commission, 2011). In addition, EU Member States are committed to phasing out subsidies to hard coal mining by 2018. As party to the Paris Agreement, Spain 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, Spain 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, Spain has repeated its commitment to phase out fossil fuel subsidies every year since 2009 (G20, 2017).

1. In 2014, Spain produced 305 kilotonnes of oil and 24 million cubic metres of gas (IEA, 2015).

2. Steps taken so far are insufficient. For example, in 2015 the three main suppliers of electricity had a 90% market share, with 80% of domestic consumers supplied by incumbents (Agency for the Cooperation of Energy Regulators data; referenced by Greenpeace Spain, 2017).

3. Only LPG prices are not set by the market (IEA, 2015).

The current government, led by Prime Minister Mariano Rajoy, has announced plans to increase the number of ‘negative externality’ taxes in Spain, which include a new tax on the use of hydrocarbons (González, 2016; 2017). Various taxes are already applied to carbon-intensive energy products sold in Spain, including the Oil Tax, Tax on Electricity and Tax on Coal (OECD, 2016).

Overview of fossil fuel subsidies by Spain

The government of Spain 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 (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 Spain is on track to meet its subsidy phase-out commitments.

Due to limited transparency, our research found no data for 56% of the fiscal support instruments and 20% of the projects and programmes supported through public finance, identified for this report.

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

Based on available information Table 1 below provides an estimate of the scale of Spain’s fossil fuel subsidies between 2014 and 2016 (using publicly available sources).

Domestically, most fiscal support identified goes to coal and electricity production, amounting to €473 million per year and €470 million per year respectively, between 2014 and 2016. Fiscal support to fossil fuel consumption by transport and agriculture sectors are equally high, with €339 million and €430 million per year (2014-2016) respectively. Our analysis also identified subsidies for consumption by households, though no estimates for these measures were available.

Spain provides international public finance for oil, gas and electricity production through the country’s export credit agency, Compañía Española de Seguros de Crédito a la Exportación (CESCE), worth €56 million on average per year between 2014 and 2016. The five countries benefiting from this support were Angola, Costa Rica, Kenya, Romania and Turkey.

This study did not identify any subsidies to fossil fuel production or consumption through Spain’s state-owned enterprises (SOEs) that fit the definition used in this report.

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

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*.

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

Activity / instrument	Production				Consumption					TOTAL
	Coal production	Oil and gas production	Electricity production	Multiple activities or unclear	Transport	Industry and business	Households	Agriculture	Multiple activities or unclear	
National subsidies (Budget expenditure + tax exemptions + price relief)	473	n/a	470	n/a	339	0	n/a	430	0	1,711
Public finance	0	50	6	0	0	0	0	0	0	56
<i>Domestic and EU</i>	0	0	2	0	0	0	0	0	0	2
<i>International (outside EU)</i>	0	50	5	0	0	0	0	0	0	54
State-owned enterprise investments	0	0	0	0	0	0	0	0	0	0

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

summary below is not comprehensive; the full list of subsidies can be found in the Datasheet.⁴

Coal mining

Domestic, and EU countries

In line with EU commitments, Spain aims to phase out coal production completely by the end of 2018. Under the ‘Framework Plan for Coal and Mining Communities 2013-2018’ it provides aid to support the transition away from coal mining.

Since 1998 the Ministry of Economy and Finance has been providing operating support to coal producers, including HUNOSA, a major state-owned producer of hard coal, to compensate for the gap between the cost of production and the coal prices negotiated with local power plants (OECD, 2015). This support declined from €153 million in 2013 to €53 million in 2014 (OECD, 2015). Spain has capped total support for coal production losses at €31 million in 2015, and €75 million in 2018 (EC, 2016).

Under the Framework Plan 2013-2018, economic stimulation aid is being directed to job creation and infrastructure projects in mining regions, with an annual expenditure of €44 million per year (2013-2021) (Instituto para la Reestructuración de la Minería del Carbón y Desarrollo Alternativo de las Comarcas Mineras (IRMC), 2013; 2017). The Ministry of Finance and Public Administration (2015), however, estimates that the support in 2015 amounted to €329 million.⁵ Meanwhile, subsidies to environmental rehabilitation have been estimated at €15 million per year between 2014 and 2021 (IRMC, 2013; 2017). Environmental aid in 2016 is estimated at €25 million (Ruiz-Bautista, 2017).

The state gives budgetary transfers to non-profit organisations and coal mining families to address the social costs of a declining coal industry (known as ‘Inherited Liabilities’) (OECD, 2015). Such support increased from €292 million in 2013 to €353 million in 2014 (OECD, 2015). In July 2017, a further €1 million in support was earmarked to help 339 former coal miners in the region of Castilla y León find alternative employment (European Parliament, 2017b). This estimate is not included in data calculations as it lies outside the years of focus for this study.

Oil and gas production

Domestic, and EU countries

Research, demonstration and development (RD&D) support is being provided to oil and gas production, though it is unclear precisely what this is for (it is classified as ‘unallocated’) (IEA, 2017). In 2013, RD&D expenditure was €1.7 million. Estimates are not available for 2014 to 2016 (IEA, 2017).

International (outside the EU)

In 2015, CESCE provided support for oil and gas infrastructure overseas. The company agreed €600 million in project financing for the STAR Refinery in Aliaga, Turkey, an 18-year project (CESCE, 2015). The same year it also provided €49 million in buyer credit for the development of four LNG storage tanks and connected works in the Moín Refinery, Costa Rica (CESCE, 2015).

Electricity production

Domestic, and EU countries

In 2014, government support for non-renewable generation, and transmission and distribution was worth €665 million and €1.6 billion respectively (European Parliament, 2017a). Given the low level of transparency in Spain’s public financing reporting, however, it has not been possible to identify what proportion of these investments was in fossil fuel infrastructure, so these estimates were not included in the total amount of subsidies.

The country’s capacity mechanism⁶ provides payments to energy producers for the ability to respond to periods of peak demand. This support is estimated at €470 million per year on average for fossil fuel generators between 2011 and 2015 (estimate based on the relative contributions of fossil fuels and hydropower to the grid) (Wynn and Julve, 2016). Estimates by regulators suggest that 80% of gas-fired power plants would not be viable without this support (Darby, 2016).

Subsidies are being provided to power plants for supporting the assembling of local coal stockpiles. These stockpiles were meant to guarantee more than 720 hours of power generation. Plants were specifically required to accumulate coal mined domestically (OECD, 2015). A Royal Decree by the government in 2012 resulted in the provision of subsidies for the environmental upgrades of coal-fired power plants (Wynn, 2016). Our analysis found no estimates for this support.

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

5. Under the budget allocated to the Institute for Restructuring of Coal Mining and Alternative Development of Mining Regions (‘Instituto para la Reestructuración de la Minería del Carbón y Desarrollo Alternativo de las Comarcas Mineras’)

6. Capacity mechanism: 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).

The Ministry of Finance and Public Administrations is supporting research for energy and carbon capture of storage through the Centre of Energy, Environmental and Technological Research and the Foundation of Energy (CIUDEN) (Ministerio de Hacienda y Administraciones Públicas, 2015). In 2015 this support was worth €101 million (Ministerio de Hacienda y Administraciones Públicas, 2015). This support was not included in the calculations of total subsidies, as the Ministry does not disaggregate this information sufficiently.

International (outside the EU)

CESCE provides support to electricity infrastructure abroad. In 2015, CESCE provided buyer credit for the development of a 400-kilovolts transmission line near Lake Turkana in Kenya (CESCE, 2015). Based on electricity contributions to the grid, it is estimated that €48 million is supporting the transmission of fossil fuel-powered electricity (which constitutes 19% of the electricity supply) (CESCE, 2015; WDI, 2017). Also in 2015, a 14-month CESCE bond was issued to support the renovation and expansion of the Tulcea distribution network and drainage system in Romania (CESCE, 2015). Total support to fossil fuel distribution is estimated at €9 million (based on 41% contributions of fossil fuels to electricity) (CESCE, 2015; WDI, 2017). CESCE provided insurance for the expansion of transmission and distribution networks in Angola, though our analysis found no estimates for this (CESCE, 2015).

Industry and business

The Spanish government provides energy subsidies to industries and business. In 2015, support to the industry and energy sectors was worth €5.7 billion (Ministerio de Hacienda y Administraciones Públicas, 2015). To avoid double-counting with other subsidy measures, and given a lack of clarity on what measures this expenditure relates to, this figure was not included in the calculation for Spain's annual average subsidies.

More recently, in May 2017, the Popular Party and Basque Nationalist Party reached an agreement on electricity tariff subsidies for industries in the Basque country (Gorospe and Garia, 2017). The national budget will subsidise electricity usage by the industry and energy sectors by approximately €50 million per year from January 2018 (Gorospe and Garia, 2017). This support was not included in the calculations for annual average subsidies, given that it occurs after the study period (2014-2016).

Under the EU Emissions Trading Scheme (ETS), economic operators (utilities and industry) are required to obtain emission permits or allowances for each tonne of

CO₂ 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. As a result, in its current design the EU ETS provides a considerable amount of subsidies to carbon-intensive operators in the form of free allowances. No data was available on the total value of the permits allocated. In addition, industries across the EU also profit from the ETS because of the overallocation of ETS permits, which they are able to sell off. This generated subsidies for the energy intensive industries worth €1624 million between 2008 and 2015, or €203 million per year (Bruyn et al., 2016). However, this value was not included support calculations as it is not a direct subsidy.

Agriculture

Since 2006, taxpayers have been eligible to partial refunds of the tax on hydrocarbons⁷ when diesel fuel is used for commercial activities such as farming or livestock (OECD, 2016). Given increases in prices, reimbursements are €78.71 per kilolitre of diesel fuel consumption (2006-2016) (OECD, 2016). While the OECD (2015) estimates this support at €97 million in 2014, the Ministry of Finance and Public Administration (2016) indicates it has dropped significantly since, with an estimate of €0.9 million in 2016. The farming and mining sectors also receive financial support through reduced rates of excise tax on purchases of petroleum products (OECD, 2015). The foregone tax revenue was estimated at €380 million in 2014 alone (OECD, 2015).

Transport

As in many other European countries, in Spain diesel is taxed at a lower rate than petrol; however, estimates for the total amount of subsidies resulting from this measure were not identified during our research (European Environment Agency (EEA), 2016). The Fundación ENT (2017) has commented that this support is likely to be in the billions of euros.

Fuel tax exemptions are applied to domestic and international aviation and maritime navigation, as well as to rail fuel (EC, 2014). These tax breaks were estimated at €339 million in 2014 (a breakdown across transport types is not available) (OECD, 2015). This is based on a benchmark rate of €0.08 reimbursed per litre of fuel. VAT benefits are also provided to commercial passenger transport services in the case of aviation and maritime transport, through exemptions and reductions of diesel rates to 10%, compared with the standard amount of 21% (Center for Economic and Social Research (CASE) et al., 2014).

7. Impuesto Especial sobre Hidrocarburos

Households

A 'social bonus' is provided to households to reduce the price of electricity, in the form of a tax break (Ecofys, 2014; Ministry of Energy, Tourism and Digital Agenda, 2014; 2017). This mechanism is used to support vulnerable people against energy poverty, including pensioners, large families and the unemployed, with specific thresholds applied to each category (Ecofys, 2014; Ministry of Energy, Tourism and Digital Agenda, 2017). In addition, there

are excise tax exemptions for the use of LPG and natural gas for heating purposes (EC, 2014). Estimates for these support measures were not identified during our research.

Other social aid helps to compensate coal-mining workers by granting them a fixed quantity of coal, or the equivalent in euros, for life (OECD, 2015).

Of all the support measures identified for households, 66% are targeted at a particular segment of the population.

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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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