Brief

Czech Republic
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Germany
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Hungary
Italy
Netherlands
Poland
Spain
Sweden
United Kingdom
European Union

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

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Netherlands

Key findings

Leading on phasing out fossil fuel subsidies:

- In 2013, the Netherlands ended subsidies through tax breaks for diesel and heating oil as they were deemed environmentally harmful and expensive.
- In 2015, the Dutch bilateral aid agency, Financierings-Maatschappij voor Ontwikkelingslanden (FMO), committed to end its direct overseas financing both for coal-based power generation and coal mining.

Lagging on phasing out fossil fuel subsidies:

- The highest level of budget support to fossil fuels is provided to consumption in the transport sector, mainly in the form of tax breaks, and amounts to €3.5 billion per year.
- The next highest level of fiscal support is for fossil-fuel based electricity production, at €513 million per year.
- Despite commitments to address overseas finance for coal, the Dutch government, via its export credit agency, Atradius DSB, provides €1.8 billion per year in insurances and guarantees to fossil fuel-related projects; such projects account for two-thirds of their portfolio.
- In 2016, the Netherlands reintroduced a tax exemption for the use of coal in electricity production, after it was abolished in 2012 for environmental reasons.

Status of the energy transition in the Netherlands

The Netherlands is Europe's second largest producer and exporter of natural gas, after Norway. It is also a major transport hub for fossil fuels because of its geographical location and large ports. Rotterdam and Amsterdam are Europe's biggest and second biggest coal ports respectively, placing the Netherlands among the main importers and exporters of coal in the world (International Energy Agency (IEA), 2016). However, the country itself has not produced coal since 1974 and is not a significant producer of oil, with domestic oil production only meeting half the country's demand. Gas fields in the Netherlands are approaching exhaustion, and caps have been imposed on production to reduce earthquakes caused by gas extraction in the North; as a result the Netherlands is expected to transition from a net exporter to a net importer of fossil fuels by 2021 or 2022 (TNO, 2017).

Despite a reduction in the domestic production of fossil fuels, they continue to dominate the Dutch energy system, with 81% of electricity production fossil fuel-based and with renewables accounting for just over 12% (Central Bureau of Statistics (CBS), 2016a). The Netherlands has set domestic objectives to increase the share of renewables in total energy consumption to 14% by 2020 and to 16% by 2023 (CBS, 2016a). In 2016, renewables accounted for a mere 5.9% of total energy consumption (CBS, 2017a). In the European Union (EU), only Luxemburg and Malta have smaller shares of renewable energy in total energy consumption (Eurostat, 2017). The Netherlands aims to achieve a 16% reduction in greenhouse gas (GHG) emissions by 2020, which is lower than the EU-level target of 20%; by 2015, it had only achieved a reduction of 12.4% (CBS, 2016b).

In 2015, the non-governmental organisation (NGO) Urgenda Foundation won a historic lawsuit against the Dutch state when the court ordered the government to increase its emission reduction objective to 25% by 2020. Although the government appealed the judgment, it still plans to meet the more ambitious target. In October 2016, a coalition of Dutch companies called on the government to adopt a climate change act to set emission reduction objectives in line with the Paris agreement. Prior to the 2017 elections, a parliamentary majority supported the adoption of such an act, but it remains to be seen whether this will be taken forward when the new government is formed (Verlaan, 2017).

To support the country's GHG emission reduction objectives, the Netherlands plans to take all residential buildings off natural gas by 2050, starting in 2018 (van den Ende, 2017). However, there has long been a gap in policy alignment, which means that two-thirds of new-build homes still get gas grid connections, a result of a legal obligation to connect new-build homes to the grid if requested by the project developer (Ekker, 2017). In June 2017, the government adopted a decision to abolish this obligation by January 2018 (Rijksoverheid, 2017).

A decision on the phase-out of the remaining coal-fired power plants, which would also help meet the more ambitious emission reduction targets, has been postponed until the new government takes office. In the meantime, other initiatives are targeting the closure of the remaining coal-fired power plants. In March 2017, Vandebron, a Dutch green energy company, offered the utility company Nuon €1 million to shut down its Hemweg coal plant in Amsterdam.

Action to reduce the reliance on fossil fuels is also taking place at sector level. The Amsterdam harbour has adopted a strategic plan that includes the objective to make the port coal-free by 2030 and 'to become Amsterdam's battery' (Fluxenergie, 2017a).

Status of fossil fuel subsidy phase-out in the Netherlands

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 a party to the Paris Agreement, the Netherlands 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, the Netherlands 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 thus as part of the G20, the Netherlands has repeated its commitment to phase out fossil fuel subsidies every year since 2009 (G20, 2017). In addition, with nearly 40 other countries and hundreds of companies, the Netherlands signed a communiqué in 2015 calling on countries to eliminate inefficient fossil fuel subsidies in 2015 (Friends of Fossil Fuel Subsidy Reform (FFFSR), 2015).

The Dutch government does not publish an inventory of its fossil fuel subsidies, nor of its environmentally harmful subsidies. This contrasts with Germany and Italy, which demonstrate greater transparency by 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 the Netherlands is on track to meet its subsidy phase-out commitments. According to the former Dutch Minister of Economic Affairs Henk Kamp, the Netherlands does not provide any subsidies to fossil fuels. In May 2017 Kamp argued that only some uses of fossil fuels, for example the use of fuels in international air traffic and inland shipping, are exempted

from excise duties, as agreed in international treaties (Hayer, 2017; Ministerie van Economische Zaken, 2017). Kamp also highlights that the Netherlands' renewable energy subsidies, estimated at €748 million in 2017, are increasing (Ministerie van Economische Zaken, 2017). Our analysis shows that subsidies to fossil fuel production and consumption in the Netherlands dwarf the support provided to renewable energy technologies.

Overview of fossil fuel subsidies by the Netherlands

The government of the Netherlands 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 the Netherlands is on track to meet its subsidy phase out commitments.

Due to limited transparency, our research found no data for 50% of the fiscal support instruments, and 40% of the state-owned enterprise (SOE) investments identified in this report.

Despite the Netherland's commitments to phase-out fossil fuel subsidies, the government continues to provide support domestically (and internationally) to all sectors reviewed in this brief through national subsidies, public financing and SOE investment.

Fossil fuel subsidies in the Netherlands comprise fiscal support (including budget spending, tax breaks and price and income support) of €4.4 billion, with the highest amount of budgetary support going to the consumption of fossil fuels in the transport sector, at €3.5 billion per year between 2014 and 2016. Fiscal support to oil and gas production are estimated at €144 million per year during the same period. Investment by state-owned enterprises (SOEs) in oil and gas was nearly €946 million per year between 2014 and 2016. The Netherlands provided international public finance for fossil fuel production and electricity infrastructure worth €2.2 billion per year during the same period.

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

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 Netherlands data sheet.

> 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 fuels and fossil fuel-powered electricity in the Netherlands (Euro millions, average 2014-2016)

Activity / instrument	Production				Consumption					TOTAL
	Coal production	Oil and gas production	Electricity production	Multiple acitivites or unclear	Transport	Industry and business	Households	Agriculture	Multiple acitivites or unclear	
National subsidies (Budget expenditure + tax exemptions + price relief)	0	144	513	12	3,526	127	0	100	n/a	**4,422**
Public finance	0	0	0	2,218	0	0	0	0	0	**2,218**
Domestic and EU	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
International (outside EU)	*0*	*0*	*0*	*2,218*	*0*	*0*	*0*	*0*	*0*	*2,218*
State-owned enterprise investments	0	946	0	0	0	0	0	0	0	**946**

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

Coal mining

Domestic

The Netherlands has not produced coal since 1974, nor provided coal mining subsidies since 1990 when subsidies to support the closure of the Dutch coal mines ended.

International (outside the EU)

In 2015, the Dutch development bank, Financierings-Maatschappij voor Ontwikkelingslanden (FMO), committed to ending the provision of direct public finance for new coal-fired power and coal mining projects (Bast et al., 2015). This commitment does not extend to financing that already allocated to existing coal projects, nor to indirect financing provided by FMO through its intermediaries, which makes up a large share of FMO's portfolio. Furthermore, it does not apply to metallurgical coal used to produce steel.

The 70% state-owned ABN Amro bank has a policy not to invest in new coal mines and coal-fired power plants, but it can still invest in existing ones.

Oil and gas production

Domestic, and the EU

As the Netherlands is one of the largest gas producers in Europe and has a long history of gas production, strong ties exist between the gas industry and the Dutch government (Oxenaar, 2017). The state participates in exploration and production, gas infrastructure, and trading and supply, including through public-private partnerships. The production, distribution and sale of natural gas is governed through the 'gas building' (gasgebouw), a collaboration between public and private entities. In addition to non-financial support for the industry, the government provides significant subsidies to gas production, including in the form of guaranteed purchase of gas from small fields, investment allowances for gas production, subsidies for the 'gas roundabout' and liquefied natural gas (LNG), and through the 100% state-owned gas company Energie Beheer Nederland (EBN).

The government introduced the 'small fields' policy in 1974 to encourage the production of natural gas from small fields to complement production from the Groningen gas field. The policy obliges the main trading and supply company, Gas Terra, which is half state-owned, to act as a guaranteed buyer of gas from small fields, and the GasUnie Transport Services (GTS) to transport the gas, reducing uncertainties with regards to demand (Organisation for Economic Cooperation and Development (OECD), 2015). Estimates for the support provided to gas extraction under policy are not available. Production from small gas fields peaked in 2000, and is expected to continue to decline (GasTerra, n.d.).

In 2010, in order to incentivise off-shore production from small fields still further, the Dutch government introduced a 'marginal fields and prospects' incentive, which allows operators of marginal fields that meet certain criteria to deduct 25% of their investment costs from their taxable profit. According to EBN this implies that the government largely carries the risks of exploration. EBN's calculations show that only 32% of the costs of a dry hole are borne by private investors. When EBN participates in the exploration activities, private investors only bear 19% (net) of the costs of a dry hole (EBN, 2015). Although no estimates are available for the support provided through the investment allowance, around half all offshore field developments in the Netherlands benefited from this measure between 2010 and 2013 (EBN, 2014).

EBN is a state-owned natural-gas company that takes part in exploration, production, transportation, pipelines and storage, as well as sales activities. It participates in all fossil fuel projects in the Netherlands, typically taking a 40% stake. Investments in fossil fuel production and infrastructure by EBN decreased from €765 million in 2014 to €281 million in 2016 (EBN, 2016a). Natural-gas infrastructure and transportation in the Netherlands is state-owned through GasUnie, a 100% state-owned company. It owns the Dutch transmission network as well as a part of the transmission network in Germany.

As EBN also takes part in decommissioning activities, of which the estimated costs of have risen steadily over time (EBN, 2016b). The Dutch state is expected to contribute €5 billion to decommissioning, or 75% of the total estimated decommissioning costs (EBN, 2016c).

Since 2012 earthquakes in Groningen caused by gas extraction have become increasingly damaging. The government accounts for the biggest share (64%) of the costs of researching the damage, safety inspections, reparation of damaged buildings and compensation payments. It estimates that it will provide support worth €144 million per year between 2014 and 2018 (Rijksoverheid, 2014). The final costs might be even higher as Nederlandse Aardolie Maatschappij (NAM) and the province had already spent more than 90% of their budgets for this before the end of 2016 (Netherlands Centre for Geodesy and Geo-Informatics (NCG), 2016).

In 2005, the government launched its 'gas roundabout' ('gasrotonde') policy to transform the Netherlands into a hub to which gas is transported and then stored for distribution. This is meant to ensure security of gas supply, promote economic growth and guarantee a prominent position for the Netherlands in the gas market when domestic production declines. GasUnie and EBN invested €8.2 billion of the planned total of €9.6 billion between 2005 and 2014 in infrastructure related to the 'gas roundabout' (or €820 million per year). This is not included in the total estimate for SOE investment in fossil fuel production to avoid double counting. A 2012 report by the Dutch court of auditors concluded that the Dutch

state approved the investments in the 'gas roundabout' without having checked whether it would be in the public interest, and no evidence existed of how it would contribute to the set objectives of security of supply and economic growth (Algemene Rekenkamer, 2012).

With the adoption of the Green Deal Rijn en Wadden in 2012 the Dutch government committed itself to stimulating Liquefied Natural Gas (LNG) as a cleaner transport fuel. It established an LNG platform to connect companies and government agencies in order to promote the introduction of LNG. The government's Topsector Knowledge and Innovation (TKI) fund provides an average of €1.6 million per year in subsidies to LNG (Topconsortium voor Kennis en Innovatie gas (TKI gas), 2016). However, this was not included in the datasheet to prevent double-counting with estimates for research and innovation support.

Subsidies for gas projects are also available at the province level, including for small-scale LNG. For gas projects in general (including power to gas, hydrogen, LNG and carbon capture and use projects) there are 75 funds available at the province-level, in total worth €1.6 billion. However, these gas subsidies were not included in the datasheet to prevent double-counting with estimates for research and innovation support.

Between 2014 and 2015, the government spent on average €10 million per year on fossil fuel-related research and development (Netherlands Enterprise Agency (RVO), 2014; 2015).

Other forms of government subsidies include exemptions from excise tax for oil used for the production of oil products destined for export, and for the use of fuel in the refining process. The costs of these tax exemptions amount to an annual average of €48 million (Oxenaar, 2017).

The ports of Rotterdam and Amsterdam are important fossil fuel trading hubs, and receive significant support from the government. In Rotterdam, fossil fuels account for almost 54% of the goods coming into the port. The port in Amsterdam, owned by the municipality of Amsterdam, is the world's largest petrol port and Europe's second largest coal port. Dutch ports paid no corporation tax until January 2017, which also benefited fossil fuel-related activities in the ports. In addition, the ports receive various subsidies, from municipalities and from EU public financing institutions. It was not possible to identify the investments made in fossil fuel-related infrastructure by the ports of Rotterdam and Amsterdam.

Some infrastructure investments by the Dutch government also support the fossil fuel industry, including pipeline infrastructure and oil and gas storage, however it was not possible to quantify these subsidies. The majority of gas pipelines are operated by GasUnie, which invested €406 million on average per year in transmission network maintenance between 2014 and 2016 (Gasunie, 2016). The Dutch government also participates in oil and gas storage. Such projects include the gas storage facility in Bergermeer and the strategic oil reserves in the Eemshaven. It was not possible to quantify the support provided to gas and oil reserves. The Dutch state also participates in gas trading and supply, through its 50% ownership of GasTerra.

Finally, the government supports the promotion and education activities of fossil fuel companies. In 2016, the municipality of the Hague awarded a subsidy of €100.000 to the oil company Royal Dutch Shell for the organisation of its Generation Discover festival. The festival is supposed to introduce children, aged between 8 and 12, to the future of energy, innovation, science and technology (Gemeente Den Haag, 2016).

International (outside the EU)

Although Dutch public finance institutions have made multiple commitments to end direct financing for international coal mining and coal power projects, similar commitments have not been made regarding international public finance support for oil and gas projects.

The FMO states that it only supports fossil fuel projects where alternatives are not viable, as well as the refurbishment and efficiency improvements of fossil fuel-fired plants. As of 2016, 20% of the total committed portfolio for international finance for energy provided by FMO, totaling around €456 million, benefits fossil fuel projects (FMO, 2017). Between 2014 and 2016, FMO provided an estimated average of €67 million per year in international development finance to fossil fuel projects (FMO, 2017; AEF, 2016).

The Dutch export credit agency, Atradius Dutch State Business (ADSB), also provides significant support for the fossil fuel sector. Between 2012 and 2015 ADSB provided €7.3 billion (or €1.8 billion per year) of insurance to fossil fuel-related projects, almost entirely for oil and gas, accounting for two-thirds of the total amount it insured in that period. The support to fossil fuel-related projects accounts for 99% of all insurances supporting energy projects (Hazekamp and Wiertsema, 2017).

The 70% state-owned ABN Amro Bank also continues to finance coal, oil and gas projects. In 2014, it provided loans and investments in fossil fuel companies to fossil fuel projects worth around €320 million (Warmerdam et al., 2015). ABN Amro states that although investments in fossil fuels will need to decline, they continue to be necessary, and cannot be stopped immediately because of economic growth, jobs and energy security (ABN Amro, 2016). We found no data on ABN Amro's fossil fuel investments from 2014 onwards.

While the state-owned SNS Bank does not provide any loans for fossil fuel projects, it does have shares in fossil fuel companies, although these have been reduced in recent years. Investments attributable to fossil fuels have declined from around €207 million in 2007 to €30 million in 2014 (Warmerdam et al., 2015).

Electricity production

The use of fossil fuels in electricity generation is exempted from the energy tax (OECD, 2015). A tax exemption for the use of coal in electricity production was reintroduced in 2016, after it had been eliminated in 2012. This amounts to €189 million in government revenue foregone per year (Rijksoverheid, 2015). The co-firing of biomass in coal-fired power plants is also subsidised by €450 million per year (Fluxenergie, 2016a). It was not possible to quantify foregone tax revenue linked to the energy tax exemption that applies to the use of natural gas in electricity generation.

The electricity company Eneco is owned by 53 Dutch municipalities. Of its total generating capacity 46% is based on fossil fuels. The electricity company Delta is 50% owned by the Province of Zeeland and fossil fuel-based capacity accounts for 55% of its total electricity production capacity (Oxenaar, forthcoming). It was not possible to determine the scale of investments in fossil fuel-fired capacity by Eneco or Delta between 2014 and 2016.

Transport

Energy tax exemptions for fuels used in aviation and waterway navigation are the largest subsidies provided to fossil fuel consumption through budget support (mainly in the form of tax breaks), with annual average support estimated at €2.1 billion and €1.4 billion respectively (Rijksoverheid, 2014; 2016; 2017). In addition, International passenger transport services by air and sea are taxed at zero rates.

Up until 2013, diesel used for heating, agriculture, railways and industrial or commercial use benefited from a lowered tax rate relative to the tax on diesel used in transport. This differentiated tax rate was eliminated because it was considered environmentally harmful, costly to monitor and there had been instances of fraud (OECD, 2015). However, gas oil (red diesel) is still taxed at a substantially lower tax rate than gasoline, benefiting diesel cars and thus distorting the vehicle market.

While VAT, excise taxes and a special compulsory fee (COVA) are levied on the sale of petroleum products, some companies receive VAT reductions or exemptions. It was not possible to quantify the support provided through these exemptions.

The government has imposed a rebate for excise tax that benefits users of LNG. According to the Ministry of Finance, the Dutch government will forego €15 million in tax income over five years (between 2014 and 2018), or €3 million annually, because of the rebate (Tweede Kamer der Staten-Generaal, 2013; van Beek and Mast, 2017).

Industry and business

The Dutch energy tax (Energiebelasting) has a regressive rate structure for both electricity and natural gas (i.e. that benefits energy intensive users), as rates decline with the level of consumption and energy products. Commercial electricity users also receive a refund from the energy tax they pay in the highest tax category. This means that big electricity users pay significantly lower tax rates than households. While industry is responsible for 80% of GHG emissions, it accounts for less than a fifth of energy taxes paid. Households account for more than half all energy taxes paid in the Netherlands (CBS, 2016b).

Under the EU Emissions Trading Scheme (EU 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. The over-allocation of emission allowances generated subsidies for energy-intensive industries in the Netherlands worth €229.5 million between 2008 and 2015, or €32.8 million per year (Bruyn et al., 2016). However, this value was not included in the total amount of support identified in the country data sheet, as it is not a direct subsidy.

The Dutch government has also introduced compensation for energy-intensive industries to prevent any negative impacts on competitiveness as a result of ETS. The subsidy was put in place in January 2014 and compensates not only those companies that participate in the permit system, but also those that do not. To receive the subsidy, companies have to participate in long-term agreements on the improvement of energy efficiency, for which they can also receive fiscal stimuli through the Energy Investment Deduction (Tweede Kamer Staten Generaal, 2017). Between 2014 and 2016, the Dutch government spent an annual average of €50 million on this support (Oxenaar, 2017).

The Energy Investment Deduction (Energie Investerings Aftrek or EIA) was introduced in 1997 and allows companies to deduct up to 58% of investments in energy technologies from their profits. Many of the projects that benefit from EIA are focused on energy efficiency or renewable energy, but gas-based projects can also benefit. The publicly available data is not sufficiently disaggregated, so it is not possible to calculate the amount of support that EIA provides to gas (Agentschap NL, 2009; 2012; Oxenaar, 2017).

Public religious service buildings and not-for-profit organisations benefit from a 50% energy-tax rebate for natural gas and electricity for heating. This support amounted to €6.5 million and €20.5 million respectively per year between 2014 and 2016.

Households

We did not identify any subsidies for consumption of fossil fuels by households.

Agriculture

An energy tax discount applies to fuels used in the horticulture industry, amounting to annual support estimated at an average of €99.7 million between 2014 and 2016 (OECD, 2015).

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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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