

Monitoring Europe's fossil fuel subsidies: Hungary

Leah Worrall and Florian Zerzawy

Leading on phasing out fossil fuel subsidies by...

- The government of Hungary is supporting the decommissioning and rehabilitation of coal mines, as well as providing social transition support for coal miners worth HUF9.1 billion (€30 million) in 2014.
- No evidence of public finance for domestic or international fossil fuel infrastructure was found during our analysis.

Lagging on phasing out fossil fuel subsidies by...

- Hungary's transparency and reporting on fossil fuel subsidies remains relatively poor compared with other European countries including France, Germany, Italy and Sweden. The fossil fuel estimates in this study are therefore likely to be underestimates.
- In Hungary the largest support for the consumption of fuels is in the transport sector. A subsidy applied through tax deductions on the purchase and use of cars (classified as business expenditure) led to foregone revenue equivalent to 5% of gross domestic product in 2011. More recent estimates are not available.
- The state-owned energy incumbent, Magyar Villamos Művek (MVM) Ltd, invested an annual average of HUF42,930 million (€105 million) per year in Hungary's electricity sector, for which fossil fuels constitute over 37% of generation capacity.

Status of the energy transition in Hungary

In Hungary, coal and petroleum prices are set freely in the market whilst electricity and gas sectors are regulated by the Hungarian Energy and Public Utility Regulatory Authority (International Energy Agency (IEA), 2017). The natural-gas sector is dominated by the state-owned energy incumbent, Magyar Villamos Művek (MVM) Ltd, which also controls 57% of electricity production in Hungary (Organisation for Economic Cooperation and Development (OECD), 2016). The Hungarian government has been transforming the energy sector, however, with the primary aim of cutting energy prices; to this end, in 2016 it created a state-owned not-for-profit national energy utility, NKM Nemzeti Közművek (previously ENKSZ) (Euractiv, 2016; *Budapest Business Journal*, 2017).

It is estimated that there is a total of 10.5 billion tonnes of remaining domestic hard coal and lignite in Hungary (Euracoal, 2015). Despite the European Union-level (EU) commitment to phase out coal mining in 2018, the major coal mining company in Hungary, Mátrai Erőmű ZRt, is exploring the development of further lignite sites (Euracoal, 2015; WWF Hungary, 2017). In a more positive step, however, coal production at the MVM-owned Márkushegy Mine ended, with reclamation of the mine from January 2015, following the approval of closure state aid under a 2011 European Commission decision (MVM, 2015).

Hungary's domestic production of oil and natural gas is low and falling (OECD, 2016; IEA, 2017). Given low domestic production, trade imports are important to Hungary's fossil fuel production and consumption. In 2015, imports totalled 6.5 million tonnes of oil, 6.8 billion cubic metres of natural gas and 1.6 million tonnes of coal (IEA, 2017).

Fossil fuels remain important within Hungary's electricity mix. Coal-fired power accounts for 20% of electricity production, gas 17% and oil 0.2% (World Development Indicators (WDI), 2017). The largest source of electricity is nuclear at 52%, with the remaining 11% coming from renewables and hydroelectric reserves (WDI, 2017).

Hungary's National Energy Strategy 2030 includes a target of achieving between 15% and 20% of renewables in primary energy supply, the latter of which is in line with EU decarbonisation objectives (Ministry of National Development, 2012; European Commission, 2017a; Roadmap 2050,

2017). For more information on EU’s decarbonisation objectives, see the summary report *Phase-out 2020: monitoring Europe’s fossil fuel subsidies*. The country has plans to connect its gas network with Bulgaria, Romania and Slovakia through the ‘Eastring’ project, which is being financed by capital expenditure and European funding (Eastring, 2017).

Status of fossil fuel subsidy phase-out in Hungary

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 part to the Paris Agreement, Hungary 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 G20, Hungary has repeated its commitment to phase out fossil fuel subsidies every year since 2009 (G20, 2017). As a member of the EU bloc that is party to the G7, Hungary has committed to phasing out its ‘inefficient’ fossil fuel subsidies, and called on all countries to do so as well, by 2025 (G7, 2016).

The government of Hungary does not publish an inventory of its fossil fuel subsidies or environmentally harmful subsidies. This contrasts with Germany and Italy, which demonstrate 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 Hungary is on track to meet its subsidy phase out commitments.

Overview of fossil fuel subsidies by Hungary

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Due to limited transparency, our research found no data for 70% of the fiscal support instruments and 17% of the state-owned enterprise (SOE) investments, identified for this report.

Despite Hungary’s commitments to phase out fossil fuel subsidies, the government continues to provide support domestically to all sectors reviewed in this brief through national subsidies, public financing and SOE investment.

This support includes consumption subsidies granted in the electricity, heating and transport sectors. Production subsidies are also granted for coal mining and fossil fuel generation through fiscal support and through MVM.

Whilst fuels and energy services are subject to the regular value-added tax (VAT) of 27%, gas, electricity and heat prices charged to end-users are regulated, helping to lower prices (OECD, 2016). The household consumption sector also receives price support for energy services and products (see ‘Household’ section).

Table 1. Subsidies to fossil fuel production and consumption in Hungary, by activity (Hungarian Forints, average 2014-2016)

<i>Production</i>	<i>Consumption</i>
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Activity/ instrument	Coal mining	Oil and gas	Electricity	Multiple or unclear	Transport	Industry and business	Households	Agriculture	Multiple or unclear	TOTAL
Fiscal support (Budget expenditure + tax exemptions + price and income support)	9,100	n/a	n/a	29,002	5,000.0	2,041.9	n/a	26,700	n/a	71,844
Public finance	0	0	0	0	0	0	0	0	0	0
<i>Domestic and EU</i>	0	0	0	0	0	0	0	0	0	0
<i>International (outside the EU)</i>	0	0	0	0	0	0	0	0	0	0
State-owned enterprise investment	1,208.0	2,496.7	32,454	6,771	0	0	0	0	0	42,930

This table is in the local currency, but numbers are compiled in Euros for the overall analysis presented in the summary report.

For more information on the sources of data, see country data sheet available at: odi.org/Europe-fossil-fuel-subsidies

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 country data sheet.

Coal mining

Domestic, and EU countries

The government of Hungary provides low royalty rates on the extraction of lignite, when compared with royalties paid by oil and gas companies (WWF Hungary, 2017). Estimates for this support were not identified in our analysis however. The government also provides financial support for open surface mining training (WWF Hungary, 2017).

Early retirement payments are provided to coal miners to alleviate the social costs of mining closures (OECD, 2015).[1] This support was estimated at almost HUF9.1 billion (€30 million) in 2014 (OECD, 2015). With EU legislation to end support to hard coal mining by the end of 2018, it is likely that the scale of social and environmental rehabilitation support to coal mining regions will need to increase.

MVM has also invested in the closure of mines and associated environmental protection obligations, including at the Márkushegy Mine and VERT sites. Total support provided in 2014 was HUF1.2 billion (€3.9 million) (MVM, 2014; 2015).

Oil and gas production

Domestic, and EU countries

The government supports investments in research, development and demonstration (RD&D) for gas production (IEA, 2017). Recent estimates for this measure were not found, but the latest identified amount of support, in 2012, was HUF173 million (€0.6 million) expenditure for that year (IEA, 2017). Subsidies for gas production have also been provided through MVM. In 2014, MVM acquired 50% shareholdings in the gas company Panrusgáz Zrt at a cost of HUF940 million (€3 million) (MVM, 2014). This is the Hungarian natural-gas operation of E.ON (MVM, 2014). In 2015, the company also invested in the decommissioning of six gas wheels at a natural-gas storage site in Hungary (Hajdúszoboszló) (MVM, 2015). Estimates for the cost of this project were not identified.

In 2014, the state-owned MFB Hungarian Development Bank purchased a 49% stake in the national gas distributor Főgáz (our analysis found no estimates) (Horslen, 2014). The same year it acquired a 51% stake in the gas storage company MMBF (our analysis found no estimates) (MOL Group, 2014).

In 2017, the state-owned energy utility NKM Nemzeti Közművek (previously ENKSZ) purchased the national-gas distributor Főgáz, as well as the regional electricity distributor Démász, from France's EDF, having previously having acquired assets from Germany's E.ON and RWE (Euractiv, 2016; *Budapest Business Journal*, 2017). The purchase of Démász was worth HUF121 billion (€392 million), but was not included in Table 1 given this is outside the study period (2014-2016).

International (outside the EU)

MVM provided guarantees to 16 foreign gas and electricity companies, arising out of their obligations related to gas and electricity delivery (MVM, 2014). In 2014, the value of these guarantees totalled HUF19.2 billion (€62 million) (MVM, 2014).

Electricity production

Domestic, and EU countries

The EC requested the termination of long-term power purchase agreements between the state-owned network operator and certain power generators in 2008 (European Commission, 2017b). These agreements, which were originally intended to end between 2010 and 2024, covered 80% of the Hungarian electricity generation market and were deemed to be unlawful state aid (European Commission, 2017b). Despite this, two power purchase agreements still exist, for Matra lignite power plant and Paks nuclear power plant (WWF Hungary, 2017). Matra receives a higher-than-market price from MVM for electricity producers, hence increasing the power plant's profits (WWF Hungary, 2017). Other subsidies are awarded to Matra for co-production using biomass and coal (WWF Hungary, 2017). Estimates of the value of these subsidies were not found during our analysis.

In the electricity sector, the Hungarian capacity mechanism [2] provides support to electricity producers for the ability to respond to periods of peak demand. We found no estimates of subsidies provided as a result of this measure. However, in 2014, MVM's income from the capacity auction was HUF19.2 billion (€63 million), of which 30% HUF5.8 billion (or €19 million) could be attributed to fossil fuels (MVM, 2014; MVM, 2015). This is based on the assumption that the income was allocated proportionally across total electricity capacity, which is dominated by nuclear power (MVM, 2014).

In 2014, MVM received tax benefits of HUF22.8 billion (€69 million) from the state, including from local tax benefits (MVM, 2014). Using a proportional approach as before, support to fossil fuel assets was estimated at HUF6.8 billion (€21 million) (MVM, 2014). Further MVM expenditures supported the purchase of electricity into the Hungarian grid, worth €5.3 million (based on the assumption that this purchased electricity had the same contributions of fossil fuels as MVM's own portfolio) (MVM, 2014). Other MVM electricity-related expenditures included the development of the transmission networks, and the shutdown of power plants and re-cultivation of mines (MVM, 2014, 2015). In 2014,

MVM also provided guarantees for Hungarian electricity companies including Paksi Atomerőmű Zrt and Magyar Földgázkereskedő Zrt worth a total of HUF5.9 billion (€19 million) that year (MVM, 2014). Government subsidies are provided for heat production. District heat plays an important role in the Hungarian energy sector, and a preferential VAT rate is applied to district heating infrastructure (OECD, 2015). Over 94% of district heating is derived from conventional sources (including fossil fuels), with the remainder from renewables (Hungarian District Heating Sector, 2015). In 2014, HUF29 billion (€94 million) was provided under this measure (OECD, 2015).

International

Guarantees were provided to foreign electricity and gas companies for their obligations (MVM, 2014). Estimates for these guarantees are in the 'Oil and gas production' section.

Transport

According to the Clean Air Action Group (2011), the most significant subsidy in the transport sector is the accounting of car purchases and private car use within company expenditure, creating estimated revenue foregone of 5% of GDP. Private cars used for business purposes are eligible for tax-free fuel as well as allowances on fuel costs^[3] (Clean Air Action Group, 2011). This creates a strong incentive for the business and private use of cars.

As with many other countries in Europe, Hungary's taxation of diesel is lower than that of petrol^[4] (European Environment Agency (EEA), 2016). However, the total value of subsidies resulting from this support measure has not yet been disclosed at country level.

International transport by aviation, maritime and rail and railway transport within Hungary receive financial support from the government of Hungary. Tax exemptions apply to international passenger transport, provided the place of departure or the destination is outside Hungary (European Commission, 2014). There is no estimate available to quantify this support. Fuel tax refunds apply to railways operating in Hungary, by the National Tax and Customs Administration (OECD, 2015). This support was estimated at HUF5 billion (€16 million) in 2014 (OECD, 2015).

Agriculture

One of the largest subsidies provided to fossil fuels in Hungary is the fuel tax refund for the off-road use of diesel in agriculture and farming activities (OECD, 2015). The refunds are up to 70% on the normal excise tax rate, with an estimated revenue foregone of HUF26.7 billion (€87 million) in 2014 alone (OECD, 2015).

Households

To lower the impact of high energy prices on household income, the Hungarian Energy and Public Utility Regulatory Authority reduced utility prices by over 25% between 2013 and 2014 (IEA, 2017).

Prime Minister Viktor Orbán announced in 2016 that the government is exploring further energy price cuts (Euractiv, 2016). Support is provided by municipalities to Hungarian households under 'individual cases', for limited periods of time. In these 'cases', municipalities pay the electricity bill directly to the energy supply company (Ecofys et al., 2016). Estimates for these measures are missing however.

Financial support is also provided for gas supply in low-income households and large families (Hungarian Energy Office, 2012). Families with three children are entitled to take 1,800m³ gas at discount rates, instead of 1,200m³; families with four or more children can draw an additional 300m³ discounted gas volume per child (Hungarian Energy Office, 2012).

The Ministry of Internal Affairs provides subsidised brown coal and lignite to local governments under a competitive tender to supply to the poorest households (WWF Hungary, 2017). Only villages of less than 5,000 inhabitants are eligible, and the total value of the coal awarded is up to HUF3.1 billion (€10,000) per village (WWF Hungary, 2017). In 2015, 182 local governments were successful in their application for this subsidy (WWF Hungary, 2017).

Legislation introduced by the government provides preferential tariffs for electricity sector employees, according to their level of electricity usage^[5] (Ecofys et al., 2016). Electricity bills receive between 37% and 63% in reductions depending on annual consumption usage, which is paid to the universal service provider on behalf of employees (Wolters Kluwer, 2017).^[6]

Industry and business

Only two fossil fuel subsidy measures were identified for industry and businesses. However, given a lack of transparency it is likely that there is missing information. Natural-gas use for industrial purposes and households was exempted from excise duty between 2008 and 2015 (Ecofys et al., 2016). Estimates for the total amount of subsidies resulting from this measure could not be identified. Under the 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.

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 €53 million between 2008 and 2015, or HUF 2 billion (€6.6 million) per year between 2008 and 2015 (Bruyn et al., 2016).

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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*.

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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[1] This measure is known domestically as 'átmeneti bányászjárdék'.

[2] 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).

[3] Allowances are HUF9 (€0.03) per kilometre, converted from HUF to EUR using the Canadian Forex 2017 rate of 0.003242.

[4] The rate applied for petrol is HUF146 million (€472.97) per 1,000 litres, compared with HUF124.2 billion (€402.97) per 1,000 litres for diesel. More recent calculations suggest that rates applied to petrol and diesel might be lower, at HUF124 million (€403) and HUF308 million (€388) per 1,000 litres respectively (WWF Hungary, 2017; based on Vezess, 2017).

[5] Known as 'C tarifa', this measure provided support ranging between €0.42 per megawatt-hour (mWh) and €0.64 per mWh between 2008 and 2014.

[6] Annual consumption of 1 kWh-6,000 kWh: 37% of the total price; 6,000 kWh-9,000 kWh: 40%; 9,000 kWh-12,000 kWh: 50%; 12,000 kWh-15,000 kWh: 60%.