Country brief

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Cutting Europe's lifelines to coal

Tracking subsidies in 10 countries

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Hungary

Key findings

Transparency – subsidy reporting

Rating: poor

- The Hungarian government does not publish an overview of country's coal subsidies.

Coal mining – subsidy phase out

Rating: good

- State aid has historically been provided to support domestic coal production at the unprofitable Márkushegy lignite mine, which closed in 2014. Subsidies are now focused on transition support, including financing for coal mine decommissioning for state-owned mines and social provision to mine workers.

Coal fired power – subsidy phase out

Rating: very poor

- State aid is used to subsidise the purchase of coal-fired power by electricity companies. Subsidy support is also provided for household energy consumption and a reduced tax rate is applied to district heating, with both supporting domestic coal consumption

1. Trends in the production and use of coal in Hungary

Although coal production and use in Hungary is decreasing, this form of fuel continues to play a central role in Hungary's power and mining sectors, with slow progress on efforts to phase out coal mining and reduce coal-fired power generation.

Hungary has historically mined brown, black and lignite coal to supply coal-fired plants, but domestic coal reserves are now in decline and the country currently only produces lignite and hard coal (International Energy Agency (IEA), 2016). In 2015, domestic coal production met about 55% of Hungary's coal consumption, with the remaining 45% met by imports from the United States, Czech Republic, Poland, Germany, United Kingdom, Canada, Australia and Russia (IEA, 2016). According to Euracoal (2015), the main active coal mining company in Hungary, Matrai Eromu ZRt, is exploring development of further lignite deposits. Eurocoal estimates that there is a total of 10.5 billion tonnes of domestic hard coal and lignite reserves remaining in the country (Euracoal, 2015).

Despite the aforementioned reduction in production, coal continues to provide the second biggest source of electricity in Hungary after nuclear power, accounting for 21% in 2014, down from 30% in 1990, but up from 17% in 2010 (WDI, 2017). As the biggest source of electricity generation in Hungary, nuclear power accounted for 53% of domestic electricity generation in 2014. Meanwhile, natural gas was behind a steady 14% of electricity generation and renewables, primarily biomass based, accounting for 10% of power production (WDI, 2017). A large share (45% in 2014) of electricity supply stems from imports, mostly from the Slovak Republic (IEA, 2014). The country's electricity sector is dominated by the state-owned MVM, which controls about 57% of electricity production (Organisation for Economic Co-operation and Development (OECD), 2015).

Despite commitments to combatting climate change, alongside renewable energy technologies becoming increasingly economically competitive, there has been a very small decline (less than 4% in the past decade) in the use of coal in electricity production in Hungary (WDI, 2017). From 1999, Hungary's Energy Plan had signalled a move away from coal-fired power capacity to relatively cleaner, but still fossil-fuel-based, technologies such as gas turbines (Global Energy Network Institute (GENI), 2016). More recently, however, the government's National Energy Strategy 2030 has set out of an energy vision for Hungary that includes a significant role for coal. This stipulates the use of domestic coal and lignite resources in an 'eco-friendly' manner for power generation (Hungary Ministry of National Development, 2012). The government's justification is that coal can act as a reserve in energy crisis situations (e.g. natural gas price spikes and nuclear breakdown) and have also stated an intention to prevent the loss of a valuable trade culture (Hungary Ministry of National Development, 2012). Despite this, approximately €12 billion of free European Union (EU) Emissions Trading Scheme (ETS) permits have been allocated to the modernisation and diversification of the energy sector during 2013 to 2019 (Crisp, 2016). This includes increasing the supply of low carbon gas and promoting a more efficient network system, including a smart grid pilot project (European Commission, 2012; Carbon Market Watch, 2016).

Although more than 3GW of planned coal-fired capacity in Hungary was cancelled between 2010 and 2016, new coal plant capacity is still under development in the country (Global Plant Tracker, 2016). For example, the Matra power station, a lignite-fired power plant in north Hungary, is in the process of obtaining construction permits for the development of a 500MW supercritical coal unit (GENI, 2016; Global Plant Tracker, 2016; Rocha et al., 2017).

The continued reliance on coal for power generation in Hungary has significant social and environmental costs. In 2014, it accounted for 13% of Hungary's total greenhouse gas emissions, equivalent to 7 metric tonnes of carbon dioxide emissions equivalent (MtCO2e) (Sandbag, 2016). Coal-related health costs have been estimated to range between €290 and €560 million, and to have caused over 200 premature deaths in 2013 (Schaible et al. 2016).

2. Status of subsidies to coal and coal-fired power in Hungary

As a Member State of the EU and therefore part of the G20 group, Hungary has repeated its commitment to phase out fossil fuel subsidies every year since 2009. In 2016, as part of the EU and thus part of the G7, Hungary also called on all countries to end fossil fuel subsidies by 2025. The European Commission has furthermore repeatedly called on EU Member States to end environmentally harmful subsidies, including those to fossil fuels, by 2020. harmful subsidies, including those to fossil fuels, by 2020.

Despite these commitments, Hungary continues to provide significant subsidies to coal. While some of this support is allocated to coal mine decommissioning and former coal mine workers, to alleviate the social costs of the decline in coal production (see list of subsidy measures below), these provisions are offset by other support measures that incentivise the production and use of coal. These include household heating subsidies and a reduced tax rate for district heating purposes (International Institute for Sustainable Development (IISD), 2012). Since the 1990s, the 'coal cent' levy on electricity consumers has helped support coal mining activities at the uncompetitive Márkushegy Mine and used to sustain coal-fired power at the Vértes power plant (OECD, 2015). The government also backs open surface mining through a course listed in the National Training Catalogue. This is an official form of training that provides a certificate (Vaszkó, 2017).

To facilitate the transition away from coal mining activity, the government is planning to support the rehabilitation of land used for mining, and aims to finance this through a levy on electricity prices paid for by consumers (GENI, 2016). In 2013, the European Commission approved €130 million in Hungarian Government aid for the closure of the uncompetitive Márkushegy Mine, to reduce the social and environmental impacts of its closure in 2014 (EurActiv, 2010; European Commission, 2013; Euracoal, 2016). However both the Márkushegy mine and the Oroszlány power plant continue to partly rely on coal production stockpiles (Euracoal, 2016). The government is also allocating a budget to retraining programmes for coal miners (Rosenthal, 2010).

3. Hungary's coal subsidy measures explained

Average annual coal subsidies (see table): €74 million equivalent to 20,029 million Forint

The breakdown below provides a chronological overview of Hungary's historic, continuing and new subsidies. The historic subsidies are not included in the annual average estimate of coal subsidies, as these have been phased out.

- **Coal cent (also known as coal penny) (continuing: 1990 to 2018):** Non-residential final electricity consumers pay levies that are used to subsidise the purchase of coal power by electricity companies. The subsidy is expected to continue until the Vértes power plant stops operating (OECD, 2015). Originally, the measure was used to support coal production at the unprofitable Márkushegy lignite mine, used by the Vértes power plant. However, the mine was closed in 2014 (OECD, 2015; Euracoal, 2016). The subsidy is subject to EU rules, which require that coal-related aid (for the production of electricity) is phased out by the end of 2018 (OECD, 2015). The total amount allocated during 2005-2014 is estimated at €318 million (OECD, 2015). Historically – from 2004 to 2010 – €229 million in state aid was provided to the Vértes power plant, Márkushegy mine and Oroszlány power plant. This was given to support coal mining and coal power production activities in Hungary (IEA, 2011).
- **Household energy bill subsidy (maintenance cost subsidy) (continuing: 2003 onward):** Initially known as the 'household maintenance-cost subsidy', this measure subsidised the consumption of natural gas by low-income households and was later expanded to include residential heating more generally (alongside coal resources and others). As of 2010, the subsidy has been restricted to heat only. The payments are made to heat suppliers, which are then required to pass them on to electricity consumers. It is estimated that the total amount allocated during the 2010-2014 period amounted to €13 million (OECD, 2015). It is of note that the Ministry of Internal Affairs continues to provide subsidised brown coal and lignite to local governments, to be passed on to the poorest households in their constituencies. Following a tender process in 2015, 182 local governments received coal resources to a total value of €10,000 (Vaszkó, 2017).
- **Reduced rate of VAT for district heating (continuing: data from 2009 onward):** Reduced rate of VAT for district heating (continuing: data from 2009 onward)
- **Support for mine decommissioning (continuing: data from 2011 onward):** This measure is provided by the Government of Hungary to support the decommissioning of state-owned coal mines in the country. The payments are calculated at €3.4 per annum (estimates are only available from 2011). The total amount allocated between 2011 and 2014 is €14 million (OECD, 2015).
- **Early-retirement payments for coal miners (continuing: data from 2011 onward):** Social transfers are provided to underground coal mine workers in Hungary to alleviate the social costs of mine closures. The types of support include wage subsidies, early-retirement payments and 'coal emolument supplements' (OECD, 2015). The total amount earmarked for the 2011-2014 period is estimated at €115 million (OECD, 2015).

4. Opportunities to phase out coal subsidies in Hungary

By order of magnitude, most government subsidies to coal in Hungary are meant to support the closure of coal mines, as well as former coal mine workers, in a transition away from coal. However, other support measures, such as the reduced rate of VAT for district heating and the household energy bill subsidy, continue to incentivise coal consumption and therefore run counter to Hungary's fossil fuel subsidy phase-out commitments. In addition, the National Energy Strategy 2030 includes a key role for coal-fired power in ensuring security of supply, including through domestic coal reserves. Instead of turning to uneconomic and environmentally harmful coal production and use, the Hungarian government should expand renewable energy resources.

Table 1. Existing and new measures that support coal:

Measure	Subsidy type	Stage	Fuel	Annual average (€ millions)	Year (s) for which estimate calculated	Source
Coal Cent	Budgetary support	Coal-fired power (other)	Lignite	32.7	2005-2014	OECD (2015)
Household energy bill subsidy	Budgetary support	Households	Brown coal, other bituminous coal and brown coal	1.9	2008-2014	OECD (2015)
Reduced rate of VAT for district heating	Tax expenditure	Households	Brown coal and other bituminous coal	6.8	2009-2014	OECD (2015)
Support for mine decommissioning	Budgetary support	Decommissioning and rehabilitation	Lignite	3.4	2011-2014	OECD (2015)
Early retirement payments for coal miners	Budgetary support	Transition support	Lignite	28.7	2011-2014	OECD (2015)

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This country study is a background paper for the policy briefing *Cutting Europe's lifelines to coal: tracking subsidies in 10 countries.*

For the purpose of this country study, subsidies to coal include: direct spending, tax expenditure and other support mechanisms (e.g. capacity mechanisms). Where information is available, estimates for all of these categories are included in the national subsidy total for each country and in the Country Studies. The policy brief provides a more detailed discussion of the methodology used for the country studies. The authors welcome feedback on both this country study and the policy brief to improve the accuracy and transparency of information on coal subsidies.

A data spreadsheet summarising coal subsidies data for the 10 European countries reviewed is available here: odi.org/coal-subsidies-Europe.

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