

South Korea

G20 coal subsidies



Though one province has committed to ending coal power, South Korea has **no national phase-out target**

Coal and South Korea's economy

US\$37,483



GDP per capita, PPP
(2016–2017 average)

81,366



2016 imports
(kilotonne oil equivalent)

0



2016 exports
(kilotonne oil equivalent)

42%



Share in power mix
(by generation)

Key findings

- South Korea is constructing large-scale new domestic coal-fired power plants.
- South Korea provides ₩1,262 billion (US\$1.1 billion) of public finance for construction of new coal plants overseas, including in countries vulnerable to climate change and with hazardous levels of air pollution.
- South Chungcheong Province has joined the Powering Past Coal Alliance, with the pledge of phasing out coal by 2050. The national government has no target year for this.

Prominence of fossil fuels and subsidy phase-out commitments

- South Korea generates 68% of its electricity from fossil fuels, and only 4% from renewables (IEA, 2019).
- As a member of the G20, South Korea has committed to the phase-out of inefficient fossil fuel subsidies over the medium term, as agreed in 2009 (G20, 2009). As a signatory of the Convention on Biological Diversity (Aichi Target 3), it has also committed to phasing out environmentally harmful subsidies, including those to fossil fuels, by 2020 (UN, 1992).
- No peer review of fossil fuel subsidies under the auspices of the G20 has occurred, unlike several other G20 countries.

Government support to coal production

- South Korea provides budgetary transfers to support coal mining, research and development for coal, and briquette production, amounting to ₩161,345 million (US\$140 million) per year (2016–2017 average).

Government support to coal-fired power production

- South Korea is one of only two Organisation for Economic Co-operation and Development (OECD) member states constructing multiple large-scale new foreign coal-fired power plants (DeAngelis, 2018). South Korean national banks subsidise the construction of coal plants in Viet Nam and Indonesia (often with excessive pollution levels).
- Government support for coal plants distorts the domestic power market. Coal plants benefit from regulatory structures, enabling companies to pass on the cost of capital investments to consumers and underplay alternative energy sources. Coal generators also receive subsidies through artificially high electricity prices and indirect support through out-of-market payments (Gray and D'souza, 2019).
- Analysis for this report finds ₩17,758 million (US\$15 million) of support for coal-fired power generation, but independent studies estimate the subsidisation of coal power at much higher levels (KPX, 2019).
- Additional estimates include ₩2,026 billion (US\$1.84 billion) of capacity payments¹ to coal power plants in 2018, a measure that is not captured in the OECD inventory of support measures to fossil fuels (ibid.).
- Carbon Tracker's recent report on stranded assets² assessed South Korea's risk as the highest (i.e., most overcompensated) in the world (Gray and D'souza, 2019).
- The state-owned utility, KEPCO, dominates the power market. The merit order for power dispatch only reflects fuel costs, neglecting capital, pollution and carbon costs (ibid.).
- In 2018, South Chungcheong Province, home to half of the country's coal-fired power plants, joined the global Powering Past Coal Alliance and announced a phase-out of coal-fired power plants (Chen, 2018).
- In 2018, South Korea's Teachers' Pension and Government Employees Pension System became the first financial institution to ban coal investments (Shin, 2018).
- South Korea is constructing large-scale new domestic coal-fired power plants. The government has cancelled plans for two new coal plant units, but others are still pending (Gray and D'souza, 2019).

South Korea's government support to coal and coal-fired power production and consumption

₩ millions, 2016–2017 annual average

Instrument	Coal production ⁱ	Coal-fired power	Coal consumption ⁱⁱ	Transition support ⁱⁱⁱ
Fiscal support	161,345	17,758	none identified	67,217
Public finance	none identified	1,262,429	none identified	none identified
Domestic	–	none identified	–	–
International	–	1,262,429	–	–
State-owned enterprise investment	24	3,939	none identified	none identified

Note: for more detail and sources see the South Korea data sheet available at odi.org/g20-coal-subsidies/south-korea.

ⁱ This category includes support for coal exploration, mining, processing and transportation.

ⁱⁱ This category includes support for consumption of coal-fired power, and of coal other than for its use for coal-fired power generation (or for co-generation of power and heat).

ⁱⁱⁱ This category includes support for closing down mining sites, and for workers and communities in their transition away from coal and coal-fired power.

1 A capacity mechanism is 'an administrative measure to ensure the desired level of security of supply by remunerating generators for the availability of resources' (Erbach, 2017: 2).

2 Stranded assets (in the context of greenhouse gas emissions) are fuel energy and generation resources that, at some time prior to the end of their economic life, are no longer able to earn an economic return, due to changes in the market and regulatory environment associated with the transition to a low-carbon economy (CTI, 2014).

Government support to coal and coal-fired power consumption

- No support measures were identified in this research for the consumption of coal or coal-fired power.

Government support to the transition away from coal and coal-fired power

- Though solar photovoltaic (PV) systems will be cheaper to build than it is to operate existing coal plants by 2027, the government has not cancelled new coal plants, nor begun a transition to cleaner energy. The cost will be passed to ratepayers and citizens (Gray and D'souza, 2019).
- The state-owned utility plans to spend several billion dollars retrofitting coal plants, meaning they will need large subsidies (ibid.).
- Analysis for this report finds ₩67,217 million (US\$49 million) of support per year (2016–2017 average) to cover inherited social liabilities from coal mining.
- No other policies or mechanisms to transition away from coal were identified during this research.

References

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This country study is one in an 18-part series. The country findings are collated in the summary report, which you can find at odi.org/g20-coal-subsidies along with full references, acknowledgements and further information about methodology and data sources.

Unreferenced information in this summary is from the analysis conducted for this report, available in the South Korea data sheet at odi.org/g20-coal-subsidies/south-korea.

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