

# China

## G20 coal subsidies



China remains the **single biggest provider** of international public finance for coal

### Coal and China's economy

**US\$16,169**



GDP per capita, PPP  
(2016–2017 average)

**136,058**



2016 imports  
(kilotonne oil equivalent)

**12,144**



2016 exports  
(kilotonne oil equivalent)

**68%**



Share in power mix  
(by generation)

### Key findings

- China's state policy banks provide ¥65 billion (\$9.3 billion) support per year for overseas coal plants (2016–2017 average).
- The domestic power market favours coal as power contracts are set in advance, rather than on a market basis, allowing coal plants to run even if they are not the cheapest option.
- Support for domestic coal plants is largely through state-owned enterprises, and amounts to ¥53 billion (\$7.6 billion) per year (2016–2017 average).

### Prominence of fossil fuels and subsidy phase-out commitments

- China is the world's largest coal-fired power plant operator, with coal accounting for 68% of electricity production, and all fossil fuels combined accounting for 71% (IEA, 2019).
- China's 13th Five-Year Plan (FYP) for 2016–2020 pledged in 2014 to reduce coal consumption to 58% of total energy consumption or below by 2020, a 6% reduction from 2015 (Lin, 2017; National Bureau of Statistics of China, 2019). Some regions are required to cap coal consumption, or to decrease coal use to control air pollution (G20 Peer Review Team, 2016; G20 Voluntary Peer Review, 2016).
- As part of the G20, China has committed to phasing out inefficient fossil fuel subsidies over the medium term (G20, 2009). China has also signed the Convention on Biological Diversity (Aichi Target 3), committing to phase out environmentally harmful subsidies by 2020 (UN, 1992).
- China conducted a mutual peer review of fossil fuel subsidies with the United States in 2016. This review indicated that China is developing a roadmap to rationalise and phase out inefficient fossil fuel subsidies (G20 Peer Review Team, 2016; G20 Voluntary Peer Review, 2016).

### Government support to coal power production

- China subsidises coal mining indirectly, i.e. by rail freight tariffs set at below-market rates (Xue et al., 2015).

- ¥4.8 billion (\$0.7 billion) of fiscal support per year (2016–2017 data) has also been identified for coal exploration and mining.

## Government support to coal-fired power production

- Coal plant profits are protected through artificially high tariffs, though coal power generators receive a tariff premium if they introduce contamination-reduction equipment.
- Policy is inconsistent. Local revenues are tied to new coal-fired power plants, while national mandates are for decreasing coal use.
- Government support to coal amounts to tens of billions of dollars. Environmental costs add tens of billions more (Yuan et al., 2019).<sup>1</sup>
- In March 2018, China’s State Development & Investment Corporation (SDIC) announced it would stop investing in thermal power plants and had quit coal to focus on clean energy sources (Smith, 2019).

## Government support to coal and coal-fired power consumption

- Estimates are scant, but government support includes: local subsidies for coal heating, value added tax (VAT) reductions for gas and coal use in homes and coal mining by-products, and a national emergency coal reserve.
- Preferential power pricing for industrial users is being phased out (G20 Peer Review Team, 2016; G20 Voluntary Peer Review, 2016).
- Consumer subsidies include regulated tariffs for electricity (at ¥165 billion (US\$24.9 billion) in 2018) and heating, mainly from coal (IEA, 2018).

### China’s government support to coal and coal-fired power production and consumption

¥ millions, 2016–2017 annual average

Instrument	Coal production <sup>i</sup>	Coal-fired power	Coal consumption <sup>ii</sup>	Transition support <sup>iii</sup>
<b>Fiscal support</b> (budgetary transfers and tax exemptions)	4,810	none identified	476	14
<b>Public finance</b>	1,097	64,792 <sup>iv</sup>	none identified	none identified
Domestic	none identified	none identified	–	–
International	1,097	64,792 <sup>iv</sup>	–	–
<b>State-owned enterprise investment</b>	7,844	53,082 <sup>v</sup>	none identified	none identified

Note: for more detail and sources see the China data sheet available at [odi.org/g20-coal-subsidies/china](http://odi.org/g20-coal-subsidies/china).

<sup>i</sup> This category includes support for coal exploration, mining, processing and transportation.

<sup>ii</sup> 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).

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

<sup>iv</sup> Further support of ¥527 million (US\$75 million) has been quantified for multiple activities but its allocation between coal mining and coal-fired power is unclear and therefore has not been included in this total.

<sup>v</sup> Further support of ¥234 million (US\$33 million) has been quantified for multiple activities but its allocation between coal mining and coal-fired power is unclear and therefore has not been included in this total.

1 In 2016, coal power generation benefited from ¥264 billion (US\$38 billion) of de facto subsidy, of which ¥63 billion (US\$9 billion) was environmental subsidy, ¥17.5 billion (US\$2.5 billion) was ‘squeezing out’ of renewable energy, and ¥183 billion (US\$26.5 billion) from the on-grid benchmarking price, which favours coal power despite significant overcapacity. It has been estimated that the externality subsidy could amount to ¥178 billion (US\$25.8 billion), to be factored in to the true cost of coal power.

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

- The 13th FYP included the ¥100 billion (\$14.5 billion) Industrial Special Fund for employment restructuring in coal areas (Bridle et al., 2017). However, the allocation for the coal sector could not be quantified and therefore is not included in the data totals.
- Transition has focused on coal chemicals rather than abandoning coal, counter to national and international trends to move away from coal (ibid.).
- The government supported transition from coal to electric and gas heating in the northern regions of China after 2017 (Reuters, 2019).

## References

- Bridle, R., Kitson, L., Duan, H., Sanchez, L. and Merrill, T. (2017) *At the crossroads: balancing the financial and social costs of coal transition in China*. GSI Report. Winnipeg MB: International Institute for Sustainable Development ([www.iisd.org/sites/default/files/publications/crossroads-balancing-financial-social-costs-coal-transition-china.pdf](http://www.iisd.org/sites/default/files/publications/crossroads-balancing-financial-social-costs-coal-transition-china.pdf))
- G20 (2009) G20 Leaders' Statement: The Pittsburgh Summit. Pittsburgh PA: G20 ([www.g20.utoronto.ca/2009/2009communique0925.html](http://www.g20.utoronto.ca/2009/2009communique0925.html))
- G20 Peer Review Team (2016) *China's efforts to phase out and rationalise its inefficient fossil-fuel subsidies: a report on the G20 peer review of inefficient fossil-fuel subsidies that encourage wasteful consumption in China*. Paris: Organisation for Economic Co-operation and Development ([www.oecd.org/site/tadffss/publication/G20%20China%20Peer%20Review\\_G20\\_FFS\\_Review\\_final\\_of\\_20160902.pdf](http://www.oecd.org/site/tadffss/publication/G20%20China%20Peer%20Review_G20_FFS_Review_final_of_20160902.pdf))
- G20 Voluntary Peer Review (2016) *G20 voluntary peer review by China and the United States on inefficient fossil fuel subsidies that encourage wasteful consumption: China self-review report*. Paris: Organisation for Economic Co-operation and Development ([www.oecd.org/site/tadffss/publication/G20%20China%20Self%20Review%20on%20Fossil%20Fuel%20Subsidies-China%20Self-report-20160902\\_English.pdf](http://www.oecd.org/site/tadffss/publication/G20%20China%20Self%20Review%20on%20Fossil%20Fuel%20Subsidies-China%20Self-report-20160902_English.pdf))
- IEA – International Energy Agency (2018) 'World energy outlook: the gold standard of energy analysis. Fossil-fuel subsidies' (electronic dataset, International Energy Agency) ([www.iea.org/weo/energysubsidies/](http://www.iea.org/weo/energysubsidies/))
- IEA (2019) 'Statistics: global energy data at your fingertips' (electronic dataset, International Energy Agency) ([www.iea.org/statistics/](http://www.iea.org/statistics/))
- Lin, A. (2017) 'Understanding China's new mandatory 58% coal cap target'. Blog. Natural Resources Defense Council, 17 March ([www.nrdc.org/experts/alvin-lin/understanding-chinas-new-mandatory-58-coal-cap-target](http://www.nrdc.org/experts/alvin-lin/understanding-chinas-new-mandatory-58-coal-cap-target))
- National Bureau of Statistics of China (2019) 'Statistical communiqué of the People's Republic of China on the 2018 national economic and social development'. Press release, 28 February ([www.stats.gov.cn/english/PressRelease/201902/t20190228\\_1651335.html](http://www.stats.gov.cn/english/PressRelease/201902/t20190228_1651335.html))
- Reuters (2019) 'China expands switch from polluting coal heating in 2018: environment minister', 11 March ([www.reuters.com/article/us-china-parliament-environment-gas/china-expands-switch-from-polluting-coal-heating-in-2018-environment-minister-idUSKBN1QS0QB](http://www.reuters.com/article/us-china-parliament-environment-gas/china-expands-switch-from-polluting-coal-heating-in-2018-environment-minister-idUSKBN1QS0QB))

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Smith, M. (2019) 'China state investment giant drops coal'. *Financial Review*, 19 March ([www.afr.com/news/world/asia/china-state-investment-giant-drops-coal-20190318-p51597](http://www.afr.com/news/world/asia/china-state-investment-giant-drops-coal-20190318-p51597))

UN – United Nations (1992) Convention on Biological Diversity. 1760 UNTS 20619, entered into force 29 December 1993 ([www.cbd.int/convention/text/default.shtml](http://www.cbd.int/convention/text/default.shtml))

Xue, H., Wang, H., Bridle, R., Gerasimchuk, I. and Attwood, C. (2015) *Subsidies to coal production in China*. GSI Report. Winnipeg MB: International Institute for Sustainable Development ([www.iisd.org/library/subsidies-coal-production-china](http://www.iisd.org/library/subsidies-coal-production-china))

Yuan, J., Guo, X., Zhang, W., Chen, S., Ai, Y. and Zhao, C. (2019) 'Deregulation of power generation planning and elimination of coal power subsidy in China' *Utilities Policy* 57: 1–15 (<https://doi.org/10.1016/j.jup.2019.01.007>)



**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](http://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 China data sheet at [odi.org/g20-coal-subsidies/china](http://odi.org/g20-coal-subsidies/china).

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