

Japan's Continued Support for Ultra-Supercritical Coal Power is Outdated

Japan has made a costly bet on coal power technology and continues to justify its investments in this area under the guise of only financing “best available technology”. This brief lays out why the country’s coal financing policy is outdated, in terms of climate change, public health, and Japan’s own economic interests.

According to the [Global Coal Public Finance Tracker](#), since 2013 public financial institutions in Japan have reached financial closure on over 21 gigawatts (GW) of coal power abroad totaling over US\$17.5 billion dollars. Another 3.7 GW of coal power have been identified as under negotiation at a financing cost of nearly US\$4.4 billion dollars. The combined 24.8 GW of coal power capacity supported by Japanese financing is larger than the entire coal fleet of Australia (24.4 GW).

Table 1. Coal power capacity abroad supported by Japanese public finance, 2013–2019.

Financial Close		Under negotiation		Total	
Capacity (MW)	Amount (US million)	Capacity (MW)	Amount (US million)	Capacity (MW)	Amount (US million)
21,085	\$17,535	3,720	\$4,375	24,805	\$21,910

Source: Global Coal Finance Tracker, January 2020

The Japanese government has justified its continued public financing for coal power by saying it only supports “best available technologies” such as ultra-supercritical coal plants, which are more efficient than subcritical or supercritical coal plants. If Japan pulled its support for coal power, the argument goes, then the gap would be filled with inferior coal plant technologies.

However, the Japanese policy is outdated on several fronts. According to the IPCC’s [Special Report on 1.5°C](#), meeting the Paris climate agreement of keeping warming “well below” 2°C

requires a [two-thirds](#) to [four-fifths](#) reduction in unabated coal power use in just 10 years, by 2030. That category includes any coal power plant without carbon capture and storage technology, whether it be subcritical, supercritical, or ultra-supercritical coal plants. In short, even the most efficient coal plants are still too highly polluting for the steep and fast emission reductions needed to limit dangerous anthropogenic climate change.

Secondly, the claim that if Japan did not fund ultra-supercritical plants then the void would be filled by less efficient technology is simply false. According to the Global Coal Public Finance Tracker, China, Japan, and South Korea lead the world in public funding for overseas coal plants. The table below shows their support for coal power capacity abroad by plant type for all new coal plants that have reached financial close since 2013.

Table 2. Percentage of coal plant capacity supported abroad by financing country that have reached financial close, 2013–2019.

	CFB	Subcritical	Supercritical	Ultra-Super
China	1,274 MW (5%)	6,166 MW (22%)	12,300 MW (44%)	8,090 MW (29%)
Japan	200 MW (1%)	1,132 MW (5%)	12,328 MW (58%)	7,425 MW (35%)
South Korea		732 MW (6%)	6,240 MW (54%)	4,524 MW (39%)

Source: Global Coal Public Finance Tracker, January 2020

For plants that have reached financial close, Japan’s share of ultra-supercritical capacity (35%) is larger than China’s share (29%), but below South Korea’s share (39%). However, looking at coal power capacity that is currently under negotiation, the picture changes:

Table 3. Percentage of coal plant capacity supported abroad by financing country that is currently under negotiation, 2013–2019.

	CFB	Subcritical	Supercritical	Ultra-super
China	2,460 MW (9%)	3,310 MW (13%)	7,730 MW (30%)	12,520 MW (48%)
Japan			2,520 MW (68%)	1,200 MW (32%)
South Korea			1,200 MW (55%)	1,000 MW (45%)

Source: Global Coal Public Finance Tracker, January 2020

Of the coal power capacity that Japan is currently considering funding, just 32% is ultra-supercritical technology, which is far below the shares of both South Korea (45%) and China (48%). Thus Japan dropping its support for overseas coal power would arguably have little to no effect on the plant technology being funded abroad, and instead could be used to support increasingly cheap, low-carbon technologies.

Additionally, the ruling Democratic Party of Korea has put forward a [plan](#) for the complete elimination of both domestic and overseas coal power financing. This would leave Japan alone with China in being the lenders of last resort for coal power around the world, even as the United Nations has called for a [global moratorium](#) on new coal plant builds by the end of this year.

It is also important to note that plant efficiency has no effect on air pollution emissions, which requires additional, costly pollution controls. Here, Japan is not employing best available technologies: A 2019 Greenpeace [analysis](#) found most overseas coal power projects supported by Japan employ emission control techniques far inferior to those required in Japan, emitting up to 13 times more nitrogen oxides (NOx), 33 times more sulfur dioxide (SO₂), and 40 times more dust than plants built in Japan.

Finally, coal power is not a safe investment. China is now facing defaults in [Pakistan](#) and [Zimbabwe](#) as the countries struggle to pay for costly coal plant projects under growing debt and balance of payment problems. Meanwhile, a 2020 [analysis](#) by Carbon Tracker found that it is already cheaper to build new solar and wind power than to build new coal power in all major markets around the world. That means coal plants planned today are likely to become underutilized assets, performing well below their design rates and thus operating at a loss.

Financial institutions and companies around the world are increasingly recognizing that coal is a poor investment and have [limited or ended](#) their support for coal, including many located in Japan. It is time for Japan public financing and policy to do the same.