

Japan treats transition finance as a way to support industrial companies that are locked into thermal power technologies, argues Kurt Metzger

This year presents a host of massive opportunities for Asian countries to be in the driving seat for international cooperation on decarbonisation.

With Japan holding the G7 presidency, India holding the G20 presidency and the much-awaited investment plans from Indonesia and Vietnam under the Just Energy Transition Partnerships, the spotlight is firmly on the financing for sustainable energy solutions that make sense in Asian countries' unique contexts.

The inevitable questions that emerge are: what role should private finance play in the electric power sector to ensure a smooth transition to a sustainable economy? Is the most effective strategy to provide financing for unproven technologies to promote the continued burning of fossil fuels and questionable decarbonization pathways, or should companies that aren't pivoting to renewable technologies and adapting their business models be deprived of finance?

Kurt MetzgerThe 6th Strategic Energy Plan of Japan shows the country has been taking a clear stance on the topic: electric power providers need to be provided with "transition finance", to allow them to transition to a lower carbon profile while remaining competitive in today's market.

But the unique perspective of Japan on transition finance needs to be carefully scrutinised.

While the premise might sound enticing, the reality is that Japan treats transition finance as a way to support Japanese industrial companies

that are locked into thermal power technologies and can only survive by selling technologies that prolong the life of thermal power plants, rather than as a way to make the technologies that can provide the biggest emission reductions cost-competitive.

In other words, the goal of Japan's strategy isn't to make renewable energy cheaper and cost competitive in South-East Asian markets, but an industrial policy to keep the Japanese companies involved in thermal power going for as long as possible, with minor tweaks that will lower the carbon profile only marginally, while driving an even bigger divide between the region and the rest of the world's decarbonisation pathways.

The ministry in charge of driving this agenda is METI, which recently released a publication called *Towards Zero-Emission Thermal Power Plants*. The objective is very clear: Japan and the rest of Asia will continue to rely on thermal power generation to ensure a secure, stable, and high quality power supply, and GHG emission-free thermal power technology is essential.

In Japan, the public and private sectors are working together to develop key technologies for zero-emission thermal power plants, and these are currently in the demonstration. The ability of the technologies to deliver decarbonization and put Japan on the right trajectory to avoid breaching the 1.5°C goal has been questioned by a number of reliable sources.

Japan's transition finance strategy has so far focused on two technologies: ammonia co-firing for coal power plants and hydrogen co-firing for gas power plans. The government aims to achieve an ammonia co-firing ratio target of 20% in the energy mix by 2030, to be possibly expanded to 50% by 2030 under a more ambitious scenario.

The projections for hydrogen co-firing for gas power plants are similarly ambitious.

Yet, research continues to show that both these technologies provide dubious emission reduction benefits. For instance, the emissions from a 20% ammonia co-firing rate is equivalent to [double that](#) of gas-fired combined cycle plants.

The cheapest and most viable option is currently 'grey ammonia', produced with gas as a feedstock. Due to its production methods, which require intensive energy use, using grey ammonia for coal co-firing would [bring no net emissions reduction](#): a recent lifecycle analysis stated that grey ammonia produced using unabated fossil fuel is equivalent to double the emissions associated with the direct combustion of coal.

From a financial perspective, Japan's strategy would require massively investing in this technology to ensure it is cost-competitive. The cheapest source of ammonia is around four times the price of thermal coal. If co-firing was achieved with green ammonia, the one powered by renewable energy, the cost would widen to [15 times](#) the price of coal.

An analysis by [Transition Zero](#) shows that Japan's 'advanced coal technologies' are likely to achieve a more reasonable cost only in 2040, with a levelized cost of energy of around \$280/MWh.

Considering that the rest of the world continues to invest in renewable technologies, this strategy would force Japan and South-East Asian countries into a narrow technological pathway, preventing them from benefitting from ongoing global price reductions for renewable energy.

To ensure this strategy is successful, Japan has been actively promoting this strategy across ASEAN countries, signing agreements with coal-heavy countries such as the [Philippines](#), [Indonesia](#), [Vietnam](#),

and [Malaysia](#), hampering the chances for these countries to pursue cheaper and more affordable clean energy in the long term.

These agreements were signed as part of Japan's newly-created Asia Zero Emissions Community, whose aim is to promote "cooperative decarbonization", by focusing on the development of standards for controversial emission reduction solutions, such as biomass, hydrogen, ammonia co-firing, and carbon capture, utilisation and storage.

It's of paramount importance that policymakers, energy experts and the finance community intervene to avoid this disastrous path for a region that has the opportunity to influence the international policy-making space this year.

Kurt Metzger is director of the Energy Transition Platform at Asia Research and Engagement.