

Coal investment cools off

Financial institutions scale back involvement in fossil fuel power plants and promote clean energy projects

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As Asia continues to build coal-fired power stations to meet the growing demand for energy, many financial institutions plan to stop investing in fossil fuel projects.

Increasingly over the last year, financial institutions have announced their intention to cease involvement in coal power projects, said Shirley Zhang, principal analyst for the Asia-Pacific coal market with natural resources consultancy Wood Mackenzie.

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Those scaling back investments include export credit agencies, or ECAs, in member countries of the Organisation for Economic Co-operation and Development (OECD), and European banks.

"Although coal-fired power is facing strong headwinds globally, it will still dominate emerging markets in Asia in the next two decades as power demand in Southeast Asia is expected to grow at about 4.6 percent per annum," Zhang said.

Coal-fired power offers baseload supply at the lowest cost. This is particularly important as safeguarding energy security and providing affordable electricity remain priorities for governments in the region.

"Also, the power grid infrastructure in emerging Asia is far from adequate, flexible or smart enough," Zhang said.

"Transmission and distribution grids in many of these markets are inefficient, weak and susceptible to blackouts. Improving grid accessibility, robustness and interconnectivity will take years or decades of effort and require a huge amount of investment.

"With these considerations in mind, we project Asia's coal power investment opportunity to top \$250 billion over the next decade."

But the question remains: Who will finance Asia's coal power projects?

The region's export and import banks as well as private sector banks have continued to back coal power projects in Southeast Asia on both the financial and technology front.

According to Zhang, banks in Asia are still interested in financing coal-fired power projects that meet efficiency standards.

The effects of the tightening financing terms from ECAs also tend to be milder for emerging markets in Asia.

The new ECA rules do not apply to projects that had already finished detailed feasibility studies, environmental assessment or requests for proposal before the rules came into force on Jan 1, 2017.



A maintenance employee works at a coal-fired thermal power plant in Gujarat, western India, on Oct 4, 2016. Coal-fired power is expected to remain the main power source in emerging markets in Asia in the next two decades. AFP

The new ECA rules also make exceptions for markets including Indonesia, Cambodia, Laos, Myanmar, the Philippines, and South Asian and Central Asian nations because these are classified as countries with low national electrification rates per the International Energy Agency criteria, or are recognized as International Development Association-eligible countries.

"A more imminent risk is perhaps the way a power system will be operated and maintained when renewables' share grows in the future. The focus of grid operation will increasingly shift away from centrality to flexibility and distributed generation," said Zhang.

"When that happens, coal power could be reduced to a marginal fuel when commercial energy storage takes over its role as a more economic peak-shaving service provider. But this could take decades to happen depending on the technology improvement, supply availability and cost of battery raw materials."

The Washington-based World Bank stopped financing coal plants five years ago, while the Manila-based Asian Development Bank says it only supports coal projects that use high-efficiency and low-emission technologies.

Since it began operations in 2016, the Beijing-based Asian Infrastructure Investment Bank (AIIB) has adopted strict limits for investing in coal power. The bank puts an emphasis on renewable energy and raising energy efficiency.

This has disappointed regional coal producers hoping the AIIB would adopt a looser policy toward

coal power investment than the World Bank.

The AIIB's energy strategy comes as China increasingly takes the lead in the fight against global warming since US President Donald Trump took office.

Although China is still building coal-fired plants, these are based on "clean" technology as the country ramps up investments in renewables.

Clean energy, including nuclear power and renewable energy, is expected to exceed coal in China's electricity generating capacity in about 10 years, according to Liu Baohua, deputy head of the National Energy Administration (NEA).

China's installed capacity of clean energy has reached 660 gigawatts, while installed thermal power capacity stood at 900 GW, Liu recently told Xinhua News Agency.

"In the near future, clean energy will take a leading role in our electricity consumption," Liu said. "China will cap its coal-fired power capacity at 1,000 GW in 2020, and non-fossil fuel will account for half of the country's total power generation by 2030."

China has been promoting green resources, such as wind and solar power, in recent years to cope with pollution and boost the quality of its growth.

In the first nine months of 2017, China added 63 million kilowatts of installed capacity of renewable energy, accounting for about 67 percent of the country's total newly installed power capacity over the period, according to the NEA.

Han Phoumin, an energy econ-

omist for the Economic Research Institute for ASEAN and East Asia, said the East Asian region still depends heavily on coal, given its abundance, as a reliable energy source.

"Coal use patterns around the region reflect the rising demand for electricity needed to power and steer economic growth," he said in a recent commentary.

"Building low-efficiency coal-fired power plants (CPPs) is an obvious choice for power-hungry emerging Asia, particularly ASEAN (the Association of Southeast Asian Nations), due to lower capital costs. However, such plants cause more environmental harm and health issues due to air pollution, carbon dioxide and other greenhouse gas emissions."

The Economic Research Institute for ASEAN and East Asia conducted a study of emission regulations for CPPs in the region for fiscal year 2016-17, with a comparative analysis of emission standards and regulations for CPPs in some OECD countries.

The results showed that ASEAN countries allow relatively higher emissions of sulfur oxides, nitrogen oxides and particulate matter. This means ASEAN as a bloc has lower emission standards compared to advanced countries, such as Germany, South Korea and Japan, where clean coal technology is mandatory.

The study also noted that India has high emission standards for newly constructed CPPs, but enforcement of these requirements needs to be monitored.

"China significantly improved its emission standards for CPPs due to

the government's policy on reducing air pollution and encouraging clean energy," Phoumin said.

The study acknowledged that world leaders have taken action to mitigate climate change as committed to during the 21st Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change. In Paris in late 2015, each country pledged to implement Intended Nationally Determined Contributions to track the progress of climate change abatement.

But the study also suggested minimizing the emission of air pollutants in ASEAN countries as a precondition for future use of CPPs and moving gradually to meet the current emission standards for CPPs of OECD countries.

"This would result in clean coal technology for ASEAN and bring many benefits for its people and environment," Phoumin said.

"These higher standards, coupled with effective enforcement, may push investors to select more advanced technologies, especially the ultra-supercritical technology for CPPs. Such plants are considered clean power because they use coal more efficiently and cleanly, compared to traditional sub-critical CPPs.

"The findings suggested that stringent government regulation of standards and enforcement in CPP emissions can benefit society and the environment. In addition, it could further influence the future ASEAN power exchange and promote ASEAN in the clean-power investment market," he said.