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Malaysia-Singapore Energy Cooperation: Prospects and Challenges

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Synopsis

Singapore and Malaysia are considering sharing electricity. Will this pave the way for an ASEAN-wide electricity grid, or even cooperation in the supply of nuclear energy?

Commentary

MALAYSIA and Singapore have raised the prospect of sharing electricity. The Prime Ministers of the two countries discussed the possibility of Malaysia selling electricity to Singapore when they met in Putrajaya on 5 January 2012.

While the plan would be a private-sector initiative, PM Lee Hsien Loong said Singapore was open to importing a portion of its electricity from Malaysia if the terms were right. "We're in the process of working out a proper framework for managing these imports of electricity…Once this framework is ready, Malaysian companies will be welcomed to participate and bid to supply electricity to Singapore," he said. However, PM Lee added that the offer has to conform with proper safeguards. Singapore will also need to study the environmental impact of power-generating companies.

Promising, though there are challenges

Though promising mutual benefits, the energy-sharing deal will also entail challenges. While Malaysia is keen to export electricity to Singapore, it also needs to meet its own increasing demand for domestic consumption. Currently, gas and coal form respectively about 60% and 20% of its electricity production. In addition, its gas reserves are running low with supply estimated to last for the next 30 years. Its investment in hydropower will offset future land developments and renewable energy will hardly be sufficient to meet baseload requirements.

Hence, in the longer term, nuclear energy will likely be a strategic option for the country to ease its reliance on fossil fuels and enhance its export capacities in the oil and gas sectors. At the same time, there are multiple technical challenges in bringing conventional large scale nuclear power plants to land-scarce Singapore. Amid intensive efforts to adopt energy efficiency and conservation, the Republic still requires considerable amount of electricity to sustain its economy. Already reliant on total import of gas for its electricity generation, Singapore needs to divest its portfolio of energy mixes and deliver strategic partnerships that will enhance its security in the energy realm.

Nuclear energy option

Malaysia has been making inroads in embarking on nuclear energy, shortly after Vietnam decided to proceed with this option and sealed the deal with Russia in 2010. At the regional level, there are no proliferation concerns as ASEAN members that are considering the nuclear option have announced their commitment to adhere to strict IAEA regulatory frameworks. While Malaysia has already developed expertise and talent pool in nuclear technology, its proposal to bring in its first nuclear power plant has been met with resistance on the ground level. Hence, exporting electricity to Singapore can serve as a justifiable platform to cast nuclear power as economically viable.

At the buyer's end, Singapore's energy demands, if met by the import of electricity from Malaysia, will free up valuable land for the construction of power generators. Therefore, it will benefit both countries to forge an energy partnership to address the issue of security in terms of supply and demand, apart from boosting bilateral relations.

There are good reasons why Singapore will want to ensure that the Malaysian supply will be in accordance with proper safeguards and that the environmental impact of power generating companies will not be unfavourable. If they burn fossil fuel, particularly coal, they have to make sure that there are environmental controls put in place to regulate sulphur dioxide or ash to be released into the environment. As PM Lee noted, it will not only affect the immediate neighbours of the power station because there could be cross-border implications as well.

However, if nuclear energy is considered in this trading equation, it will eliminate the debate of carbon emissions surrounding the agreement. Power generation via fossil fuels may also attract carbon taxes. Hence, the nuclear option will likely see a transaction of stable prices of electricity to be traded between the two countries, which will also trickle down as reliable electricity prices in the non-subsidised Singapore market.

Electricity trading

Electricity trading has not been adopted on a large scale in Southeast Asia. Traditionally, electricity consumption is relatively low in the region and most countries are able to meet their domestic demands with their present power-generating capacities. As economic growth accelerates in Southeast Asia, the potential consumption of electricity by 2020 is expected to triple, especially for countries like Vietnam. Hence, the establishment of an ASEAN common grid lays down the framework for countries with energy surplus to sell electricity to their neighbours. It also sets the technical foundation for electricity to be transported in the outbreak of a crisis.

Although Singapore may still need an independent energy source as a strategic reserve, in the larger context, Singapore's participation in this energy-generating process will strengthen regional energy security.

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