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RSIS COMMENTARIES

UAE Nuclear Agreement: A Model for Southeast Asia?

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The United Arab Emirates has concluded a US$20 billion deal with a Korean company for the construction of four 1400 MW nuclear reactors to be operational by 2017. The deal is seen as an industrial benchmark for others to follow with mechanisms that promotes non-proliferation.

THE RECENT nuclear deal between the United Arab Emirates (UAE) and Korea Electric Power Corporation (KEPCO) signified several new dimensions in the nuclear energy industry. Firstly, its intention to forgo indigenous enrichment and reprocessing processes is an innovative policy. It underlines the steps towards limiting the spread of fissile materials, and will be welcomed by the global community as a pursuit of nuclear technology for civilian purposes. Secondly, the UAE has engaged in a partnership with KEPCO to not only build, but also operate the plants upon completion. This move can save considerable time, and ultimately cost, in delivering nuclear power to the nation. Such innovation in policies help to overcome the worrisome process of acquiring civilian nuclear energy, often peppered by political and social hindrances,.

In addition to establishing the first nuclear power plant in the Gulf region, the record-breaking deal is also a significant milestone for the Korean nuclear industry, as nations in the Middle East, such as Jordan, could now consider South Korea's favourable bid for its nuclear project. In fact, we may be seeing a new era of nuclear power emerging, not in the form of nuclear weapons, but in the competition for a slice of the civilian nuclear market.

A Balance of Nuclear Power

The Korean-led consortium had outbid its rivals by almost 40% in cost. In considering the worth of the deal, that is a hefty savings for the oil-rich nation which has been plagued by the financial crisis. The Koreans have got it right by lowering the upfront construction cost, which constitutes the main bulk of a nuclear project. Yet again, as nuclear energy entails strategic foresight, UAE's decision to award the deal to the Koreans is not purely the lure of economic savings. It opens up an avenue for new entrants to challenge the incumbents such as France, United States and Japan who had dominated the market

all this while. In the perspective of international relations, it can be seen as a balancing act that aims to bring more competitors to the market to bring down the cost of nuclear energy.

Innovative Change

Previously, nations had developed indigenous expertise to prepare for the operation of nuclear power reactors. Coupled with roadblocks in the licensing processes that attributed to construction delays, the cost of bringing in nuclear power resulted in excessive inflation in the past. The UAE arrangement is a joint-venture partnership that engages the Koreans to operate the facility, thereby giving the vendor a stake to bring down the construction cost and have the facility to be operational in the shortest time possible with the supply of experienced staff. It therefore opens up a whole new standard for the industry to adopt in future nuclear arrangements.

Striving towards Non-Proliferation

The UAE decides to outsource the construction and operation services of its nuclear programme. By staying away from both the front and back ends of the nuclear process, it underlines the transparent pursuit of nuclear power as an option for energy diversification. This serves as a model towards the handling and control of enriched radioactive materials. For the industry, this is a novel approach whereby the contractor not only supplies the fuels upfront, but also prepares to arrange the take-back of spent fuel at the later stages. Disposal of nuclear spent fuel has clouded the adoption of civilian nuclear energy for possible new entrants, and the UAE's forthcoming action is a step towards the progress of emerging fuel arrangements in the future.

Meeting increasing demand

UAE is the third largest supplier of oil in the world, with Abu Dhabi accounting for 95% of UAE's production. Yet, it is in a haste to step up its nuclear power programme to meet its rising energy demand, primarily for desalination purposes. Taking on the nuclear programme is a strategy to ease its domestic consumption on gas, whereby the latter has proven to be a lucrative source of revenue when exported. With an expected annual 10% increase in demand, UAE hopes to have its electricity running at a quarter of the cost in 2020, after factoring in the rising cost of gas. Nuclear energy emerges as the most viable option for a base-load generation of electricity that is environmentally clean.

A model for Southeast Asia

The UAE's swift and decisive approach to its nuclear programme will see it having the advantage over other countries in the Gulf region. Its nuclear deal not only draws in foreign direct investment and boosts its political stature in the region, it also provides the nation with a head-start in the management of advanced fuel options. In the long run, its strategic decision will begin to pay off when the UAE is able to export electricity to member states of the Gulf Cooperation Council (GCC) via the common power grid.

The UAE's rise to economic prominence in the Gulf region has been phenomenal, modeling some of its infrastructure development after modern ASEAN nations such as Singapore. Its nuclear initiative which began just three years ago could have been accelerated by counter-balancing the nuclear threats posed by Iran and Israel in the nearby region. As we have witnessed to this date, UAE sees a more discerning justification in addressing non-traditional threats of energy security and global warming issues by adopting a programme that deters nuclear proliferation.

On the other hand, Southeast Asia had deliberated on their nuclear ambitions that were fermented decades ago, but has yet to concretise the development of civilian nuclear power in the region. While it can be argued that the economic, social and political climates differ between the ASEAN region and

the GCC, it is certain that the astute judgment in pursuing the nuclear option could not have been possible without a paradigm shift to overcome the mental block that has dogmatised the industry. This is perhaps something that we can learn from the UAE experience.

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