



The Global Implications of Korea's Energy Policies Geopolitical Advantages of Maintaining a World Class Nuclear Industry and Increasing Gas Consumption

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By Rod Adams

During his successful campaign to become South Korea's president, Moon Jae-in promised to dramatically increase South Korea's natural gas consumption, a plan that would naturally impact the country's formidable civil nuclear industry and capabilities. Although uncertainty remains regarding how these changes will unfold, the international consequences of such moves appear more definite.

Within weeks of taking office, he took several concrete steps towards fulfilling that promise. He announced the near-term closure of 10 coal plants, he allowed the operating license to expire as scheduled for South Korea's oldest nuclear plant, he reopened discussion of a long envisioned project to build a natural gas pipeline from Russia through North Korea, and he ordered construction to be halted on Shin Kori 5 & 6, two new APR-1400 nuclear reactors.

Moon Jae-in has stated a goal of increasing South Korea's natural gas market share in electricity production from the current 19% to 27% by 2030. He has also stated that he would like to increase the market share of renewable energy from 5% to 20%, but cautioned that South Korea is not well-endowed with either wind or solar energy resources.

As noted by the Financial Times article titled [South Korea's energy shift targets increased LNG supply](#), analysts that follow the global natural gas market are bullish about the positive and durable effects of Moon's plans:

"From a country which looked like gas demand would drop because of the focus on coal and nuclear, we're now preparing for an increase in coming years," said Trevor Sikorski, gas analyst at consultancy Energy Aspects.

"We are seeing a dramatic change in strategy. There has been a big question over when the market would tighten between 2020 and 2030. The change in policy in Korea brings the date forward."

[Multiple Suppliers Available](#)

In addition to the renewed possibility of pipeline imports of natural gas from Russia's massive far eastern production sources in Siberia and Sakhalin Island, South Korea has a robust capacity to import liquefied natural gas (LNG). Unlike the situation of several years ago, there is a glut of worldwide LNG supplies with large new capacity coming on line in Australia, Qatar, Russia, and the United States.

There does not seem to be any major concern in South Korea about continuing its long tradition of being dependent on imported fuel sources.

There is a well-developed supply of trading companies with experience in arranging deliveries and South Korea's shipbuilding industry is one of the world's most productive. It has developed an impressive capability to build the specialized tankers required to move supercooled LNG around the world, so it benefits when that trade increases.

In the past couple of years, South Korea's shipbuilding industry has experienced a period of low demand because of a reduction in commodity prices and a slowdown in the LNG market. Moon's energy plan will help inject new vitality in that ailing sector of the industrial economy.

Ties That Bind

Moon Jae-in's background gives some clues about his strong interest in building up South Korea's consumption of natural gas. He has a deep desire to gradually remove the barriers--physical, political and economic--that make his ancient country the last remaining nation split by the Cold War.

He was born in a refugee camp in South Korea to parents who had fled from the North. In his mother's family, she was the only one who left. She is now 90 years old and has a living sister that she has not seen in six decades.

Moon Jae-in knows that his mother is one of tens of thousands of people that have experienced similar family separations. He is clearly motivated by the fact that there is little time remaining before that generation disappears.

During a [recent speech](#) to the Korber Foundation in Berlin, Moon Jae-in eloquently described the importance of taking steps that would reduce tensions between the North and the South.

He used the example of Germany's reunification and subsequent economic and political development as a model with many lessons to be learned and adapted.

Along with plans for increased transportation links and a shared belt of economic infrastructure projects, Moon mentioned the gas pipeline project as something that would benefit both the North and the South while binding them closer together with a shared interest, notwithstanding the considerable political obstacles to such a project.

An overland pipeline network with good connections to South Korea could also be of significant interest to Japan, its gas customers and its banks; there is not much water to traverse between the Korean Peninsula and the Japanese Archipelago.

Potential International Shock Waves of Reining in Korea's World Class Nuclear Industry

Currently, two thirds of South Korea's electricity comes from coal and nuclear plants. If the geopolitical and economic goal is to increase natural gas consumption, existing sources must be pushed out of the market to make room for increased use of gas.

There are obviously costs involved and interests that will be harmed by the change, so the

pragmatic political decision might logically include efforts to demonize coal and nuclear as a way to motivate a greater acceptance of the financial costs.

It's not difficult to convince people in developed countries that they should be reducing their use of coal; that campaign has been running for decades already.

In most countries, there are long running, successful efforts to spread dislike of nuclear energy for reasons of safety worries, actual costs, or a combination of both.

The effort to discredit nuclear energy has been a bit more difficult in South Korea because the country has enjoyed rare success with developing a cost-effective, safe, and reliable nuclear industry that can deliver projects near their promised cost and schedules.

Once wholly dependent on foreign vendors for nuclear energy technology, Korea has emerged as one of the world's chief suppliers of nuclear power reactors--it signed a [\\$20 billion deal](#) to build the UAE's first commercial units, and is currently in discussions with the United Kingdom to [construct APR-1400 units at Moorside](#). Through consistent new build projects, Korea has become the exception to the norm in significantly reducing nuclear construction costs over time--[by 50%, or an annual rate of 2% for its entire construction history](#).

All has not been rosy in recent years; there have been several parts and component related scandals that have caused significant periods of forced outages in order to inspect plants and, in some cases, replace counterfeit materials or components. There has also been a widely publicized incident of [computer hacking](#) involving a company that is part of the South Korean nuclear power enterprise.

Although it appears that [actions have been taken to address most of these issues](#), there has been a sustained and apparently successful effort (allegedly with the help of gas-interested media outlets like RT and Al Jazeera, owned by Russia and Qatar respectively) to convince a plurality of South Koreans that the events at Fukushima prove that nuclear energy is too dangerous to rely on for South Korea's future energy demands.

What needs to be better understood and appreciated, by both international observers and Korean stakeholders, is the global context within which Korea's decisions on nuclear power are taking place. The commencement of a nuclear phase out plan in Korea would arguably be inopportune considering Areva's continuing financial problems and Westinghouse's declaration of bankruptcy. These events have further raised the prospect of Russian and Chinese domination of the global market; such a state of affairs has elicited concerns from numerous circles about the potential negative impact upon international nuclear safety and security standards.

Ironically, the deliberate campaigns within South Korea to depict nuclear power as unsafe may ultimately compromise Korea's hard-won position to positively affect global nuclear governance, as well as strengthen and enhance the safety of nuclear power worldwide.

Conclusion

It remains to be seen whether or not South Korea's nuclear industry will successfully overcome the negative propaganda and convince Moon Jae-in and his governing coalition that it must remain an important part of the power supply for the Korean Peninsula, a source of Korean economic strength, and a source of continued growth in the country's international stature.

The next three months are an important period; Moon Jae-in has set up a process for determining how the public really feels about his plan to cancel the [partially completed Shin](#)

[Kori 5 & 6](#) nuclear plants.

Presumably, the affected suppliers and contractors will work to help the public better understand the value of retaining and reinforcing the nuclear industry while recognizing the geopolitical value of increased gas consumption.

Rod Adams is Publisher and Writer of [Atomic Insights](#), a blog that discusses atomic energy, the competitors to atomic energy, radiation, the risks and benefits of using nuclear technology, the hazards of avoiding the use of nuclear technology, and a variety of other topics associated with atomic technologies. Mr. Adams is an atomic energy expert with small nuclear plant operating and design experience, as well as experience as a financial, strategic, and political analyst. He is a former submarine Engineer Officer, and Founder of Adams Atomic Engines, Inc. Any views or opinions expressed above are his own.

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