The Significance and Future of the Light-Water Reactor Project

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The light-water reactor project in North Korea has important implications for international cooperation, and has a direct impact on peace and stability in the Asia-Pacific region. Not only does this project serve as a path to peace and security on the Korean Peninsula, but it may also help resolve the serious crisis brought about by the North Korean nuclear program that has threatened the world's non-proliferation system.

However, support for the project has not been universal. Some have attributed the delays in the inspection of North Korea's nuclear program to this project. Others still harbor misgivings about the project's raison d'etre, seeing it as a costly "compensation" for Pyongyang when no such compensation is due. Additionally, mistrust and dissatisfaction have been voiced among certain domestic circles claiming that the United States reached a compromise with North Korea without duly considering South Korea's security concerns.

Despite such criticisms, the Korean government has pressed forward with the construction of the light-water reactors, mindful of the benefits that may result: the easing of tensions on the Korean

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Peninsula, the suspension of the North Korean nuclear program, and the prospect of improved inter-Korean relations.

Ground-Breaking for the Site Preparation

The ground-breaking ceremony for the site preparation was held on August 19, 1997 in the Kumho area of Hamkyoung-namdo Province. This was the first occasion since the establishment of KEDO that executive board members from the original member countries (Korea, the United States and Japan) had an opportunity to exchange greetings and participate in the ceremony with North Korean government officials.

At the ceremony, I personally requested that the South and North Korean technicians and laborers, working by the sweat of their brow, do so together for our people's mutual development and prosperity. By doing so, they can build a sense of great pride by working on this common project together. Although the representatives of South and North Korea came together under the auspices of KEDO, it was our exchange of words that was perhaps the most meaningful, which was broadcast live throughout the world.

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The ground-breaking ceremony was held two years and ten months after the United States and North Korea reached an agreement in Geneva on settling the nuclear issue, and one year and nine months after KEDO and North Korea entered into the light-water reactor supply agreement. The ceremony took place after a delay of about a year and a half to two years, an illustration of just how difficult it was to overcome obstacles such as negotiations with North Korea and the complicated internal process of coordinating KEDO.

The ground-breaking ceremony commemorated the beginning of the "Preliminary Work", which takes place prior to the execution of the actual construction work. However, this was an occasion to bring in our equipment and materials to the exact site in the Kumho Area. The first shovel of soil that was lifted for the

construction of the light-water reactor was a milestone in the history of the two Koreas, and in the resolution of the North Korean nuclear issue.

Present Status of Construction

The contracted amount for this phase of construction is forty-five million dollars. The work to be completed includes leveling the site, establishing facilities for the supply of electricity and water, and constructing living quarters. Since about twenty-seven thousand tons of equipment, two hundred South Korean technicians, and one hundred-fifty North Korean workers are expected to be brought in for the construction, expectations are high that their simple contact will have a profound and wide-reaching impact.

Recent events at the site show that we have much to learn from them as well. For example, work was suspended due to a discarded Workers' Party newspaper containing a picture of North Korean leader Kim Jong-Il. That protests would occur over such a minor incident attests to the vast differences in our political and social realities.

We were given a glimpse of this possibility early on when the first South Korean-made heavy equipment, trucks and other materials were brought to the site. At the time, the workers from North Korea expressed many doubts. They were skeptical that such heavy equipment was made in South Korea. They believed that South Korea disguised foreign-made products to appear as if they were originally manufactured in South Korea as an attempt to create an impression of technological sophistication. Just a few months later however, they no longer expressed such disbelief.

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future.

Beginning the Construction of the Light-Water Reactor and Its Impact

The beginning of the construction work in Kumho has already started to have important effects in other areas as well.

Canning of the North Korean spent fuel rods has proceeded successfully without incident, thus greatly diminishing the long-standing threat that such spent fuel might be reprocessed. The completion of the canning process will remove one more threat to the environment posed by radioactive waste. It would also help lead the way to freezing North Korea's nuclear program and could be used as leverage in obtaining North Korean cooperation for IAEA inspections.

Secondly, from a negotiating standpoint, the project has established a basic platform for future negotiations between South Korea, North Korea, and the United States. This may prove effective in discouraging North Korea from engaging in reckless behavior and unreasonably accusing the United States for failing to fulfill its obligations.

What strikes the North Koreans first is the scene that almost all the South Korean engineers carry strange machines, called notebook computers, which they have never seen before. To the North Koreans, a computer must be a cabinet-sized machine or at least something that must be placed on the top of a desk. One North Korean worker was quoted as saying, "As far as I know, computers are something big, used only at central government organizations."

Thirdly, an impact is being made, albeit on a small scale, on the consciousness of those within North Korea's closed society of just how the outside world is developing, and to what extent development in North Korea is being stifled. The English-language daily, The Korea Times, recently illustrated this in an article on the construction work:

> "To North Koreans familiar with the socialist work ethic and the use of only "primitive" machines, the appearance of South Korean engineers armed with notebook computers and heavy machines plus capitalist workmanship, might as well be extraterrestrials.
> One month has passed since a horde of "ETs" organized a

ground-breaking ceremony to colonize a small town deep inside the northern half of the Korean Peninsula, with a mission of constructing two advanced light-water reactors.
The "invasion" has apparently brought culture shock to the 40 or so North Korean workers hired by the Korean Peninsula Energy Development Organization (KEDO).
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Although North Korea has frozen its nuclear facilities and the IAEA is keeping watch, the international community must remain vigilant and continue to insist that North Korea maintain its freeze and comply with comprehensive inspections. KEDO's role in this effort is critical — and difficult— as it will face the task of linking the delivery schedule for the light-water reactors with securing a guarantee of North Korean cooperation in IAEA inspections.

The project has also done much to gradually build confidence between the two Koreas. Since the ground-breaking ceremony, several North Koreans admitted to having had doubts about whether KEDO would actually build the promised reactors, but the ground-breaking helped dispel much of their suspicion. This bodes well for the rest of the construction work.

Future Endeavors

Ensuring North Korea's Performance of Its Obligations with Respect to Its Nuclear Program

As I explained earlier, the light-water reactor project is viewed as a means of helping resolve the North Korean nuclear issue by encouraging the North to return to the NPT fold and open its facilities to full-scale IAEA inspections. Dismantling its current facilities and safely disposing of its spent fuel will also contribute towards that end.

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Improvement of Working Conditions

Prior to the commencement of construction, KEDO had entered into negotiations with North Korea to guarantee certain necessary minimum conditions at the site.

At present, KEDO has been able to obtain assurances for the personal safety, privileges and immunities of KEDO personnel. Agreement has also been reached on the use of air and sea routes, communications between the Kumho site and Seoul, the exclusive jurisdiction of KEDO at the site, movement in and around the vicinity of the site, the principal terms of transactions and construction work between KEDO and North Korea, and the substantive aspects of the employment agreement.

Although these agreements provide much in the way of safety mechanisms and principal terms that are required for the project, our government and KEDO will continue to improve the other conditions that are necessary for successful construction in the future.

The unpredictable situations that may arise in North Korea are the greatest concern. It is important to have the capability of dealing with situations that are not directly related to the construction of the light-water reactor, but brought about by the internal instability of North Korea and South-North Korean relations. Additionally, a working environment free of accidents or confrontations between South and North Korean workers must be created and sustained as a routine, so that further construction

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work can be promoted smoothly in the future.

Execution of the Prime Contract and Securing Financing

A Prime Contract for the main phase of construction will be needed before the site preparation is completed. Since this preparation has been undertaken on the basis of the Preliminary Work Contract, another contract for the main phase of construction will soon be needed to ensure that the work continues uninterrupted.

It is inevitable that South Korea will bear a large share of the costs, given its central role in the delivery of Korean-type light-water reactors. It is my belief, however, that the financing issue would be best resolved in an international context. We thus look to other member countries to play a meaningful role through their financial and political contributions.

However, uncertainties exist in part because KEPCO has not yet entered into certain necessary agreements with North Korea, in addition to other factors. This makes it difficult to determine the Rough Order of Magnitude and Cost Estimation for the next phase. What is still also needed to proceed with the Prime Contract, entrusting KEPCO with the work, is the securing of necessary financing, or more certain prospects of obtaining such financing.

At present, it is difficult to estimate the total construction costs, but they will certainly be higher than those for Ulchin nuclear power plants 3 and 4. As this is not a domestic project, the transportation of personnel and materials to the site, as well as insurance and other related expenses, figure heavily in outweighing the cost reductions associated with using inexpensive North Korean labor.

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Conclusion

KEDO's construction of light-water reactors is being undertaken in preparation for the future of the Korean Peninsula, and is an international venture designed to help bring peace and

stability to the Asia-Pacific region.

Many challenges stand in the way of the project's successful implementation, both at home and abroad. One important variable is the situation in the North. North Korea's food shortage and severe economic troubles are being widely reported domestically and internationally. The North Korean economy appears to have consecutively registered negative growth for the past several years, and its energy shortage is especially serious. Thus, it is hoped that the Pyongyang regime will create a more favorable environment by engaging in structural improvements for its economy and pursue further inter-Korean cooperation in the future.

If the light-water reactor project can be given the proper support and is allowed to realize its mission, it may open a new chapter of reconciliation and cooperation in the Korean Peninsula. With the assistance of the international community, South and North Koreans have been brought together for the first time after being separated for fifty years, working together toward a common goal. With proper and timely support from all parties concerned, the returns on our investment in KEDO will undoubtedly be overwhelming. EKR

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