

Searching for the Right Side of History in Northeast Asia: Potential Role of Energy Cooperation with North Korea

Bradley O. Babson, Senior Advisor to World Bank on DPRK

The vision for the future that is embodied in this workshop on Energy Security and Sustainable Development in Northeast Asia is one that embraces shared interests, cooperation, and commitment to peace and prosperity for all the peoples of the region. It is a hopeful vision and one that deserves broad support. I have been very impressed with the results of the two previous workshops organized by ERINA, and believe that this process is making an important contribution to building consensus on the future course of policy for energy cooperation in the region.

In the struggle to shape the future history of Northeast Asia after a century marked by conflict and division, there are promising signs of growing political and economic cooperation among the countries of the region. The prospects are brighter than ever for moving ahead with deepening regional integration through cooperation in not only energy, but also in many other areas. The ASEAN plus Three meetings are leading to deepening trade and investment cooperation between China, Japan, and South Korea, and China's accession to the World Trade Organization will accelerate this process. The recent signing of the Friendship Accord between China and Russia is giving new life to increased collaboration across a wide range of shared interests, while Japanese and Russian economic cooperation is also moving ahead on a number of fronts. Against these positive developments, the continuing tensions on the Korean peninsula are a reminder of the drag that unresolved issues in relations with North Korea are placing on the ability to advance the vision of deepening cooperation within Northeast Asia more widely.

The risk that problems with North Korea could undermine the process of deepening regional cooperation has now become accentuated. President George Bush sent shock waves throughout Northeast Asia when he branded North Korea as part of an "axis of evil" and turned America's war on terrorism towards the threat of North Korea's programs of mass destruction. While this new lens will determine American policy towards the region, during his visit last February, President Bush also proclaimed support for South Korea's policy of pursuing reconciliation and engagement of North Korea and pledged to seek a negotiated solution to American concerns. For better or worse, the time seems to have come to face up to the harsh realities of the Korean peninsula and to seek creative new approaches to resolving the underlying problems. This cannot be done unilaterally, and a renewed commitment to multilateral cooperation is essential. The question we must face is how to find a solution that will be both politically and economically viable and sustainable.

What I would like to do this evening is to explore the potential for rethinking energy cooperation with North Korea as one way to transform the dynamics of engagement with North Korea and finding solutions to the

root problems blocking achievement of an enduring peace accord and integration of North Korea in the regional and global community.

Economic Dimensions of Security

Four main issues that need to be addressed to find a sustainable solution to the North Korean security situation are: regime legitimacy, inter-Korean reconciliation, weapons of mass destruction, and human security. Political achievements in each of these areas cannot be divorced from economic considerations.

The North Korean leadership must have both international and domestic recognition to maintain legitimacy. One component of this is a viable economy that can deliver improvements in social welfare to the North Korean people and interact with other economies in the regional and global economic system in ways that are compatible with international norms and good business practice. For North Korea, willingness to undertake reforms of the economic system and expand the role of market mechanisms will be necessary to maintain both domestic and international legitimacy in the medium term. Because both China and Russia have embraced market economics, there is no other path. In addition to this, North Korea will need to gain access to international finance to establish economic viability, given the severe economic contraction that has taken place in the past 10 years and depletion of capital stock. Economic cooperation with other countries in Northeast Asia and the international community will be required to maintain regime legitimacy and thus it is in the interest of the leadership to create conditions that would make progress in this area.

Inter-Korean reconciliation was given a boost by the 1990 Summit, but has suffered as a result of the complications of the U.S.-North Korean relationship. A major achievement of President Kim Dae Jung's "sunshine" policy was the separation of economic and political relations, and this has proven resilient even with the recent slowdown in the overall reconciliation process. At the heart of future reconciliation will be increased economic interdependence between the two Koreas. Gradual integration of the two economies and harmonization of their economic systems is a long-term process that has already started in a small way. A good indicator of real progress in inter-Korean reconciliation will be tangible progress in inter-Korean economic relations that is both economically and commercially viable and therefore sustainable.

From the perspective of the war on terrorism, North Korea's nuclear program and missile sales are the target of American and international concerns. While the Agreed Framework and the Korea Peninsula Energy Development Organization (KEDO) have established a framework to

engage North Korea's nuclear program, and while negotiations on North Korea's missile programs made notable progress in the latter part of the Clinton Administration, both are presently precarious and could potentially trigger a new crisis in the region. From an economic perspective, the KEDO Light Water Reactor project presents many difficulties and ultimately the important achievements of the Agreed Framework and KEDO may be jeopardized by the lack of economic viability of this solution. Similarly, a major stumbling block in missile negotiations with North Korea has been how to compensate for the loss of foreign exchange that North Korea earns through missile sales to other countries, given the weakness of its economy and low level of commercial exports. To achieve success in negotiations with North Korea in weapons of mass destruction will require seeking win-win solutions that respond to North Korea's need for a secure economic future as well as the desire of the U.S. and international community to reduce or eliminate potential for proliferation of these weapons.

Improving human security in North Korea requires not only increased attention to protection of human rights, but also an economic solution to the famine and social distress caused by failure of the economic system and policies that have favored the military and political elite over the North Korean people as a whole. Humanitarian support for the people of North Korea is not sustainable in the medium term and will need to be supplemented by economic reforms on the part of the North Korean government and development assistance on the part of the international community. Creating a viable economy and adopting policies that permit widespread participation in welfare gains from economic rehabilitation and development are essential for sustainable human security in North Korea.

The Heart of the Problem is Energy

Energy lies at the heart of North Korea's economic and security dilemma, and no solution to the security issues facing the country can avoid coming to grips with the realities of North Korea's energy problems.

Because of Soviet subsidized oil trade and socialist economic policies, energy in the North Korean economy historically was priced far below its economic opportunity cost, and as a result, North Korea built an energy dependent economic structure. The North Korean economy relied on energy-intensive industry, electrified rail for transport, and heavy fertilizer use and pumped irrigation water for agricultural production.

The collapse of the Former Soviet Union in the early 1990's led to a loss of subsidized oil shipments to North Korea. The trade shock amplified ongoing deterioration of capital stock, resulting in a sharp economic contraction of about 50% during the mid- 1990's with some stabilization taking place after 1998.¹ This was also mirrored in North Korea's energy supply, which dropped from nearly 24 million tons of oil equivalent in 1990 to a low of about 14 million tons in 1998, and recovering to about 15.7 million tons in 2000. Crude oil imports dropped from 18.5 million barrels a year to 2.8 during this same period, or about 15% the level of 1990.² Coal production, which accounts for about 70% of North Korea's energy supply also fell sharply from about 16.6 million tons of oil equivalent in 1990 to 9.3 million tons in 1998 and recovered to 11.2 million tons in 2000, reflecting efforts to re-energize coal mining operations. Hydropower, which accounts for about 15% of total energy supply, dropped from about 3.7 million tons of oil equivalent in 1990 to 2.5 million tons in 2000, reflecting low rainfall and snow in recent years and damage to facilities from flooding earlier. Hydropower is important for power generation, accounting for 60% of installed capacity and 53% of generation in 2000.³

The economic difficulties stemming from the sharp decline in energy supply in North Korea are compounded by continuing deterioration of the power distribution system, hydro and thermal generation facilities, and irrigation pumping stations, and inefficient industrial and household consumption. Without resources to finance energy imports and rehabilitation of energy infrastructure, North Korea is destined to remain in economic turmoil. The 500,000 metric tons of heavy fuel oil being provided annually by KEDO under the Agreed Framework, and China's bilateral oil contribution of about 400,000 metric tons, are together now providing life support for North Korea's energy economy, but this does not provide a solution to the underlying problems.⁴

North Korean authorities appear to be seeking short term quick-fix solutions to their energy dilemma. Micro-hydro projects in the rural areas and schemes to obtain diesel generators to re-open mining operations are illustrative of the approaches being taken. At the political level, North Korea has sought power directly from South Korea, but this has not been pursued, in part because of apprehensions about military use of such power.

To put North Korea on a track of economic rehabilitation and development will require building a foundation for future economic security. A critical part of

¹ One indicator of the scale of contraction is the North Korean national budget, which fell from 41.6 billion won in 1994 to 19.8 billion in 1998, according to figures from the South Korean Ministry of Unification. The Bank of Korea also estimates that North Korea's Gross National Income fell from U.S.\$21.3 billion in 1990 to U.S.\$ 12.6 billion in 1998. Figures for 1999 and 2000 suggest stabilization and slight improvement in these indicators.

² Figures from South Korea's National Statistics Office as presented in Keun-Wook Paik, "Revitalizing North Korea's Energy: Based on a Pipeline Gas Option", June 2000 and updated to include data for 1999 and 2000.

³ According to data presented by Paik, coal production declined from 37.5 million tons in 1985 to 20.6 million tons in 1997. Also hydropower generation declined from 15.6 Gwh in 1990 to 10.2 Gwh in 1998, even though installed capacity increased from 4.29 GW to 4.44 GW during this period.

⁴ It is noteworthy that China's oil exports to North Korea dropped from a level of about one million tons per year in the early 1990's to less than half that amount by the end of the decade (estimates from KOTRA and Chinese Maritime Customs Service).

that foundation will be rationalizing the role of energy in the economy and creating an economically efficient energy sector. Essential elements of this will be macroeconomic policies that promote economic growth and expanded role for market forces, microeconomic policies that price energy properly so that resource allocation decisions are rationalized, a plan for rehabilitation of hydropower and coal production, a plan for rehabilitation of the power distribution system network, an ability to expand commercial exports to generate foreign exchange for needed imports, including oil and other energy-intensive imports, and plans to increase efficiency in consumption of energy. To do this right, an economic development strategy and an energy sector development strategy need to be defined. This is a big challenge and to be successful, North Korea will most likely need to receive policy advice and financial assistance from the international community. But it is unlikely that such support will be forthcoming until there is agreement on the political-military issues that will satisfy both Koreas and other countries concerned about security in the region and globally.

The Looming KEDO Crisis

The Korea Peninsula Energy Development Organization is a misnomer. KEDO in fact does not have the mandate nor the resources to address the full range of North Korea's energy problems. And despite its name, it has no mandate to work on South Korea's energy sector development. KEDO was created not with the intent to solve these problems, but to manage cooperation with North Korea with regard to its nuclear program, and must be viewed in this light.

In my view, the Light-Water Nuclear Reactor (LWR) project that is being undertaken by KEDO in cooperation with North Korea is very likely headed for a crisis. This crisis could arise for any of a number of reasons. It could be triggered by a decision of North Korea to cease cooperation with KEDO because of escalation of tension in the U.S.-North Korea relationship. It could be triggered by North Korea not coming into compliance with the requirements for inspection and certification by the International Atomic Energy Agency (IAEA) that are required before the new reactors are installed on the site now under construction. It could be triggered when the financing plan for completion of the project is judged not attainable, because of cost over-runs or lack of political will among KEDO members to provide the financing for the reactors when it is needed. And it could be triggered when the reactors have been built and there is no complementary investment in upgrading the North Korean power distribution grid or solution to technical problems that must be resolved before the reactors could be commissioned.⁵ Even if the reactors are built and commissioned, there are questions about the funding for operations and

maintenance, and repayment of the loan that North Korea has agreed to take from KEDO for construction of the reactors.

The LWR project was never conceived as part of a rational plan for rehabilitation of North Korea's energy economy. If a proper energy sector development plan were to be prepared for North Korea, it is unlikely that nuclear power would even be part of the equation, when economic, technical, financial and environmental considerations were given proper weight. Rehabilitation of existing thermal and hydropower generation facilities and upgrading the distribution network would be given highest priority, not construction of the LWRs. An economic and environmental evaluation of alternative strategies for future additions to the generation system taking into account demand projections derived from a realistic economic development strategy, would most likely point towards priority being given to other fuel options located in different places.

Many seem to take the LWR project as a given fact and have been seeking second best solutions to dealing with the actual needs for energy sector development in North Korea. The debate about potential for cross-border power trade is a good example. In order to make the LWRs viable if they are in fact constructed, it is argued that some excess power would need to be traded to South Korea, China or Russia and that a good strategy to pursue would be development of a regional grid. This type of cooperation strikes me as unrealistic if it is not driven by a compelling economic logic and market demand for power trade. These types of schemes are long-term solutions for regional energy cooperation and unlikely to stem the coming crisis for KEDO.

What is needed is a solution that has both economic and political viability. One without the other will surely result in frustrations and unsustainable accomplishments.

The Gas Option as a Foundation for the Future

The idea of building a gas pipeline to cross North Korea and serve the South Korean market has emerged recently as a new avenue to explore in energy cooperation with North Korea. I believe this idea has merit and is worth serious consideration, not just from the point of view of meeting South Korea's future gas requirements through regional energy cooperation, but as a potential foundation for a lasting framework of peace and economic interdependence that could transform not only inter-Korean relations but also advance the larger goal of regional security.

The essential attraction of a gas option is that it offers a potential way to meet both the economic and political sustainability test that is presently elusive for the KEDO LWR project. To my mind, the gas option should be conceived as an alternative, not an addition to, the present KEDO LWR project. It should only be considered seriously if political developments bring KEDO and North Korea to

⁵ The LWRs would add 2GW of base power to the North Korean system. Estimates are that the present grid has a capacity of 10-12 GW and is fragmented, has high losses and is unstable. Also, there is no present planning or financing for the transmission line to connect the LWRs to the existing grid.

the point where a renegotiation of the project is desired by both parties in the interest of achieving a win-win outcome that would provide the KEDO member countries with a better solution to their concerns about North Korea's nuclear and missile programs, and at the same time give North Korea a better solution to its economic security and energy sector development needs.

In exchange for agreements on non-proliferation of DPRK's nuclear and missile programs,⁶ suspension of the LWR project, and agreement for the construction of a gas pipeline over its territory from Russia and China to South Korea as part of a larger regional pipeline project, North Korea could receive an energy package with the following components:

- Fees for transmission of gas to South Korea over North Korean territory, based international standards.
- Right to take gas off the pipeline for North Korean use, primarily for power generation and fertilizer production, priced on the same principles that apply to other consumers of gas in the regional project.
- Investment in gas-fired thermal power plants using modern efficient technology to supplement hydro and coal fired plants, and rehabilitation of old plants.
- Investment in a new gas fired fertilizer production plant.
- Financing for rehabilitation of the national power grid.
- Financing of an energy efficiency program for industry and urban households.

In addition to the energy package, an enticement could be support for relations with the International Financial Institutions in helping conduct the studies that would underpin the package in cooperation with KEDO. This would help ensure that not only technical issues but also economic policy and financial issues would be addressed objectively.

To be successful, the gas pipeline option must have

the full political backing of Russia and China as well as South Korea, North Korea and KEDO member countries. Integrating Russia and China as guarantors of the solution to North Korea's energy crisis would strengthen the overall sustainability of this solution and be more consistent with regional energy cooperation than the present KEDO framework in which neither China nor Russia participate.

To be successful, the gas pipeline must also be economic and be commercially viable. If the gas is going to be provided from the Kovykta project, then efforts must be made to develop the market structure for gas consumption and to set prices for gas that will cover costs of production and transportation, give investors a fair rate of return, and be competitive with prices for LNG and other competing fuels in the downstream markets. Adding North Korea to the market demand for Kovykta gas would help both commercial and political viability of the project designed mainly to support Chinese and South Korean markets. The initial feasibility study that is presently underway could be broadened to examine the issues involved in including North Korea in the project.

Shifting to a gas option from the LWR project would require a major shift of focus within KEDO, requiring close cooperation with RUSIA, CNPC and KOGAS, and private sector partners in the project's development. If China and Russia do not become formal members of KEDO, then cooperation agreements would also be needed.

Politically, such cooperation would be consistent with the objective of re-invigorating talks seeking a permanent peace on the Korean Peninsula, and congruent with the Six Party framework that has been advocated for this rather than the Four Party framework that excludes Japan and Russia.

To my mind, energy security and sustainable development in Northeast Asia could be significantly advanced by exploring the gas option in the search for a solution to the issues involving North Korea's energy economy, and trying to get on the right side of history for this important region of the World by taking the path of regional cooperation.

⁶ This would have to include items specified in the Agreed Framework for completion of IAEA inspections and requirements for safeguard certification, removal of spent fuel rods for reprocessing outside of DPRK, and dismantling of old graphite moderated reactors and related facilities, as well as satisfactory progress on missile talks including verification mechanisms.