I. Introduction

The participants at the six-party talks should consider the full scope of activities needed to implement the South Korean scheme; that they should explore an alternative approach that would link the Russian and South Korean grids, thereby achieving the same outcome at lower cost and lesser political risk; and that the six parties should consider adopting a short-term, alternative package rather than resuming HFO deliveries to the DPRK because this approach would provide more energy services, faster, and at lower risk and cost to give immediate substance to statements of longer term intention to supply assistance to the DPRK. We further suggest that these issues be explored with the North Koreans at the six-party talks at a subsequent technical working group before major commitments are made to proceeding with the South Korean proposal.

South Korea has made a decisive power play to reactivate the six-party talks that aim to denuclearize North Korea (hereafter also referred to as the Democratic Peoples, Republic of Korea or DPRK). By offering to supply two gigawatts of electric power to the DPRK if and when it dismantles its nuclear weapons program, the ROK attempted to shift the United States out of its own gridlock and into a more positive approach to negotiating a cooperative outcome with the DPRK. It also aimed to change Kim Jong Il,s calculus by posing a concrete opportunity cost incurred by not abandoning the bomb. And the offer also kept the initiative in the hands of the Roh Blue House in domestic debates in South Korea as to what to do in relation to security dilemmas posed by the DPRK,s nuclear proliferation threat. The power play symbolizes South Korea taking a leading role at the six-party talks that not even great powers could ignore.

The last time that such dialogue with the North occurred was in 1994, after roller coaster confrontations with the DPRK over the defuelling of its research reactor and removal of IAEA inspection of its nuclear facilities at Yongbyon. In return for a nuclear freeze and continuity of IAEA inspections, the North Koreans demanded during negotiations with the United States that it be provided with refined oil product and light water reactors from the United States. The United States wanted to send coal and no reactors. They settled on heavy fuel oil (HFO, or „liquid coal‰) simply because the DPRK had one power plant designed to use it; and on 2 gigawatts of light water reactors to be built in the DPRK. Both choices proved counter-productive for both parties although the Agreed Framework held for eight years.

HFO proved hard for the North Koreans to absorb, as only one large power plant in the country was designed to use HFO as a full-time
fuel. The HFO sent to the DPRK also contained significant amounts of sulfur and other impurities that have reportedly accelerated the corrosion of heat exchangers in DPRK power plants designed to use coal, thereby reducing their generating efficiency (and capacity). Much HFO ended up in trenches because the DPRK had no way to store it or use it.

As for the reactors to be built at Kumho in North Korea, their long-delayed construction has been suspended, leaving them incomplete without generating a single kilowatt hour of electricity. Moreover, even if the reactors had been completed, the North Korean grid could not then nor could it ever have supported these two reactors, as the grid was far too small and simple to run such large and potentially hazardous units. During the negotiations of the 1994 Agreed Framework, North Korean grid experts told their leadership to not accept any reactors larger than (at most) 400 megawatts. American negotiators also knew about the grid constraint, but chose to ignore it because there were no (western) commercial reactor units available smaller than about a gigawatt (1000 megawatts), and because they believed that the North Korean grid problem was not theirs to solve.

Thus, the two parties were driven by irresistible political logic to proceed with a bad project that could never have worked on North Korea’s grid. A decade of squabbling and slow motion construction then ensued, all over a project that could not satisfy North Korea’s energy aspirations, even if it had been completed. As the six-party talks resume in Beijing in July 2005, it is critical that the participants not repeat these errors.

Thus, it was with a sense of déjà vu and growing alarm that we learned of South Korean Unification Minister Chung Dong-young’s announcement on July 12th that he had offered to supply 2 gigawatts of power to North Korea if it dismantles its nuclear weapons program. Chung explained that he had proposed the scheme on June 17, 2005 at his meeting with Kim Jong-il in Pyongyang. Chung reportedly said: "Of the two main items sought by North Korea, this plan will help them solve their energy-economic issue. The other item, about security guarantees and the relationship with the United States, will have to be discussed and explored with the other countries in the six-party talks.

While claiming that its hard line was behind the North Korean decision to return to the six-party talks, the US Government welcomed the scheme as lending substance to the US June 2004 proposal to offer energy aid as part of a comprehensive settlement package with the DPRK. One un-named American official even characterized the ROK offer as 'helpful'. We do not know if the ROK briefed the United States on the ROK initiative before Chung’s June trip to the DPRK, although we doubt it. But Chung states that he briefed US Vice President Dick Cheney and Secretary of State Condoleezza Rice on the idea when he visited Washington in early July 2005. However, few details about the scheme were passed to the American side at that time, and American policy-makers are preparing to fly to Beijing with their own laundry list of energy projects. However, neither they nor the other participants have compiled detailed picture of what type of energy assistance will work best for itself, its partners in the negotiations, its adversary North Korea, or interested third parties such as the EU, Canada, or Australia.

Rather, American policymakers appear to be assuming that they are heading back to Beijing to resume the six-party talks with real carrots on the table for the first time since late 2002, when HFO delivery was suspended and the KEDO light water reactors were shelved due to the DPRK’s alleged uranium enrichment activities. This relaxed attitude is underscored by the widespread assumption that no pile of carrots can induce the DPRK to abandon its
nuclear weapons program, and that the ROK's power play will prove insufficient to the task of inducing the DPRK to comply with its nuclear non-proliferation commitments.

If, as has been suggested, this energy scheme is the lead offer at the six-party talks, it appears to already have wobbly foundations. Thus, it is urgent to delineate the scheme's potential, the obstacles to its success, and the implications for the negotiations that arise from the energy issue in the DPRK. Indeed, within days of Chung’s announcement of South Korea’s power play, skeptical voices were raised in Seoul. On July 15, 2005, a former head of the Korea Electric Power Company was quoted in the media as warning that technical problems may impede the supply of 2 gigawatts of electricity to the DPRK. Criticism of the scheme, possibly motivated politically and possibly by the prospect of consumers upset by prospective tax increases to pay for the estimated $2.3 billion to provide the power to the North, erupted in the opposition party.

In this paper, we summarize what is known about or can be plausibly inferred to constitute the South Korean scheme. We review the status of the DPRK power system and the implications of this status for the ROK offer. We outline the technical problems and challenges associated with the South Korean scheme. We also note non-technical issues such as cost, institutional and coordination requirements, and political obstacles.

In conclusion, we argue that the participants at the six-party talks should consider the full scope of activities needed to implement the South Korean scheme; that they should explore an alternative approach that would link the Russian and South Korean grids, thereby achieving the same outcome at lower cost and lesser political risk; and that the six parties should consider adopting a short-term, alternative package rather than resuming HFO deliveries to the DPRK because this approach would provide more energy services, faster, and at lower risk and cost to give immediate substance to statements of longer term intention to supply assistance to the DPRK. We further suggest that these issues be explored with the North Koreans at the six-party talks at a subsequent technical working group before major commitments are made to proceeding with the South Korean proposal.

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