ASIAN ENERGY SECURITY NETWORK DAILY REPORT, February 24, 2004

Recommended Citation

LATEST REPORT
Tuesday, February 24, 2004

Content

1. The Environmental Impacts of High-Voltage Transmission Lines

The Nautilus Institute (Jim Williams, "INTERNATIONAL BEST PRACTICES FOR ASSESSING AND REDUCING THE ENVIRONMENTAL IMPACTS OF HIGH-VOLTAGE TRANSMISSION LINES," 10/1/03) released a presentation presented to the Nautilus Institute's 3rd Workshop on Grid Interconnection in Vladivostok, Russia on September 31, 2003. This presentation discusses internationally-recognized best practices for assessing, avoiding, reducing, and mitigating the environmental impacts associated with the siting, construction, and operation of high-voltage electric power transmission lines and associated facilities such as substations and converter stations. It also discusses the environmental assessment and mitigation requirements of international financial institutions (IFIs), such as the World Bank and the Asian Development Bank (ADB), that are relevant to obtaining IFI financial and/or technical assistance (TA) for transmission projects.

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2. Carbon Dioxide Emissions Reduction Potential in Japan's Power Sector

The World Wildlife Fund, Japan (Masami Nakata, Junichiro Oda, and David Von Hippel, "CARBON DIOXIDE EMISSIONS REDUCTION POTENTIAL IN JAPAN'S POWER SECTOR - ESTIMATING CARBON EMISSIONS AVOIDED BY A FUEL-SWITCH SCENARIO," October 2003) reported that Carbon Dioxide Emissions Reduction Potential in Japan's Power Sector - Estimating Carbon Emissions Avoided by a Fuel-Switch Scenario, commissioned by WWF-Japan as a part of WWF's global "Power Switch" campaign, provides an evaluation of the costs and benefits to Japan of an energy path that emphasizes energy efficiency improvements and the use of renewable energy sources. This report was prepared for WWF-Japan by Masami Nakata, Junichiro Oda, and David Von Hippel. The LEAP Japan database prepared by Junichiro Oda and Prof. Tatsujiro Suzuki as a part of the Nautilus East Asia Energy Futures/Asia Energy Security project [insert web link] was used as a basis for the Power Switch Study. English and Japanese versions of the Power Switch study are provided here, as well as a "work papers" volume providing background materials and data used in the study. All three of these documents can also be accessed on the WWF-Japan web site at

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3. The Mongolian Energy Sector

The Nautilus Institute (Shagdar Batryenchin, "Energy Sector in Mongolia," 11/8/03) released this paper and presentation examining the current status of the energy market in Mongolia written for the Forth East Asian Energy Futures Project (EAEF) workshop convened by Nautilus Institute in November 2004 in Vancouver, Canada. This presentation features details on the current status of the Mongolian energy sector, noting that "Mongolia's energy sector should be developed within a regional energy context, while at the same time taking advantage of new technologies and sources of energy that might further promote economic efficiency and environmental sustainability."

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4. Regional Electricity Markets In The ECT Area

Energy Charter Secretariat ("REGIONAL ELECTRICITY MARKETS IN THE ECT AREA," October 2003) released this study examining the current structure of the electricity industry in the Eurasian Energy Charter Treaty (ECT) area, focusing on existing and potential trade in electricity. The underlying premise is that there are several benefits of a more liberal trade regime. In general, these include improved security of supply thanks to a more diversified supply portfolio (both geographically and by fuel type) and improved economic efficiency due to the economies of scale. The technical benefits for the electricity sector are lower reserve margin requirements and reduced peak loads in integrated systems, as well as better financial opportunities for environmentally

friendly development. The study notes that current liberalization of electricity markets has not yet resulted in significant inter-regional trade.

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5. Transmission Line Project Linking the Russian Far East with the DPRK

The Vostokenergo Far Eastern Representative Office Of The RAO (Victor N. Minakov, "Transmission Line Project Linking the Russian Far East with the DPRK (Chongjin)," February 2004) reported that the power supply shortages from which the DPRK began to suffer in the mid-1990s have become the principal obstacle to national development, exacerbating the economic and humanitarian crisis within the country and contributing somewhat to maintaining the international tension in Northeast Asia. We are of the opinion that solving this problem will not only be in the interests of the DPRK, but will also promote economic development and stability in Northeast Asia as a whole. Until now, neither the DPRK's own efforts nor the few international attempts that have been made to solve the problem of power shortages by constructing new generating facilities have yielded successful outcomes. In our opinion, such initiatives are unable to provide fast and fruitful solutions:

- TPS: the finance and fossil fuels available are insufficient to allow the construction of new thermal power stations.
- APS: the KEDO program has been suspended for at least a year with only a very dim prospect of resumption, particularly given that the available APS is too small.
- HPS: the DPRK's existing hydraulic power stations require reconstruction or the replacement of equipment. The construction of new and bigger HPSs requires large-scale investment and a longer completion period.

A speedy alternative solution might be the construction of a 500kV transmission line linking the Russian Far East (Vladivostok) with the northern part of the DPRK (Chongjin). The construction of new generating facilities would inevitably take more time than the construction of a power transmission line. This factor is no less significant than the financial aspect.

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Read the presentation.

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6. TumenNET Strategic Action Program

Compilers Note: The Tumen River has become a focus of prospective international economic cooperation in the Northeast Asia region, in particular the cross-border grid project referenced in item #5. The overarching goal of the TumenNET Strategic Action Program (SAP) is to elucidate a suite of regional policy priorities and national action commitments to address the international dimensions of biodiversity loss and water issues in a manner that is sustainable, transparent, and democratic. This SAP should be considered a living document that builds upon the significant cooperative work already completed by the participating countries to protect their shared natural

heritage as responsible stewards allegiant to present and future generations. Based largely upon a series of bi-lateral and multi-lateral agreements and a Transboundary Diagnostic Analysis (TDA) conducted under the project, this SAP prioritizes the threats to transboundary biodiversity and international waters, lists regionally negotiated policies designed to remedy the priority threats, and elaborates concrete national actions to follow-up on the regional policies. It is anticipated that this SAP will help channel resources and green investment to assist the TumenNET countries' cooperative initiatives to protect the region's shared environmental endowment.

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7. Pipeline Security: An Overview of Federal Activities and Current Policy Issues

The Congressional Research Service (Paul W. Parfomak, "PIPELINE SECURITY: AN OVERVIEW OF FEDERAL ACTIVITIES AND CURRENT POLICY ISSUES," February 5th, 2004) Reported that nearly half a million miles of oil and gas transmission pipeline crisscross the United States. The nation's pipeline industry has made substantial investments to protect these systems and respond to the possibility of terror attacks. However, U.S. pipelines are inherently vulnerable because of their number and dispersion. Due to the essential role pipelines play in our economy, Congress is examining the adequacy of federal pipeline security efforts. The Transportation Security Administration (TSA), within the Department of Homeland Security (DHS), is the lead federal agency for security in all modes of transportation - including pipelines. The agency oversees industry's identification and protection of critical pipeline assets through security reviews, risk assessment and inspections. The Office of Pipeline Safety (OPS), within the Department of Transportation (DOT), is the lead federal regulator of pipeline safety. While TSA and the OPS have distinct missions, pipeline security and safety are intertwined. There are questions about the appropriate division of responsibility between the agencies and about the resources they will have for mandated security activities. As the lead agency for pipeline security, TSA expects pipeline operators to maintain security plans based on security guidance initially circulated in 2002. TSA also plans to issue pipeline security regulations, although it is unclear if and when it will do so. This agency also intends to issue new analytic models to help operators identify critical facilities and assess vulnerability to terrorist attack. In 2003, TSA inspected 24 of the largest 25-30 pipeline operators to review their security practices and collect critical asset data. TSA found that nearly all of these operators had met or exceeded minimum security guidelines. All but two of the 24 operators also provided TSA with their security plans and critical infrastructure information. The OPS joined TSA on approximately one-third of these inspections and expects a continued security role.

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Produced by the Nautilus Institute.

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