

Security and Assurance of the North American Energy System

OCTOBER 12, 2006
1:30 P.M.–5:30 P.M.

ASSURING THE CAPACITY TO WITHSTAND DISRUPTIONS TO OUR ENERGY SYSTEM: THE OUTLOOK FOR PUBLIC-PRIVATE COORDINATION

David Biette, Director, Canada Institute, Woodrow Wilson Center
Colleen Killingsworth, President, Canadian Centre for Energy Information
Tom DiNanno, Deputy Assistant Secretary for Infrastructure Protection, United States Department of Homeland Security

Dr. James Young, Special Advisor to the Minister, Public Safety and Emergency Preparedness Canada
Michael Armstrong, Vice President, Emergency Management and Homeland Security, ICF International
Patrick Currier, Associate, Van Ness Feldman
Paul F. MacGregor, Vice-President, Operations and Engineering Services, TransCanada Energy

OCTOBER 13, 2006
8:30 A.M.–12:00 P.M.

SECURING ENERGY INFRASTRUCTURE IN NORTH AMERICA

Dr. James Young, Special Advisor to the Minister, Public Safety and Emergency Preparedness Canada
Representative John Smith, Louisiana House of Representatives and Past Chair, The Energy Council
Matt Morrison, Executive Director, Pacific Northwest Economic Region
Ed Tymofichuk, Division Manager, Transmission System Operations, Manitoba Hydro
David Nevius, Senior Vice President, North American Electric Reliability Council

Brian Gabel, Vice President, Corporate Services and Chief Financial Officer, British Columbia Transmission Corporation
Dr. David Dismukes, Louisiana State University Center for Energy Studies

KEYNOTE LUNCHEON

Paul Connors, Counsellor, Economic and Energy Policy, Embassy of Canada
Wyoming Senator Hank Coe, Chair, The Energy Council
Hon. Dave Mackenzie, Parliamentary Secretary to the Minister of Public Safety

The **Canada Institute** of the Woodrow Wilson International Center for Scholars, the **Canadian Centre for Energy Information**, and **The Energy Council** co-hosted the sixth *Cross-Border Forum on Energy Issues* in conjunction with Global Public Affairs and the Canadian Embassy on October 12 and 13, 2006 in Washington, D.C. The program, “Security and

Assurance of the North American Energy System,” looked at progress and challenges to the reliability and security of our North American energy infrastructure, how recent market and regulatory developments and initiatives have affected efforts to assure the capacity to withstand disruptions, and public-private coordination and cooperation in efforts to ensure that the shared infrastructure is



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viable, resilient, and reliable. The forum also received support from **TransCanada** and **British Columbia Transmission Company**.

The forum provided an opportunity for more than 50 high-level Canadian and U.S. government officials, industry representatives, and energy experts to continue an ongoing dialogue on cross-border energy cooperation. The two-day event was held at the Wilson Center with two panels of presentations followed by a closed-door roundtable discussion. Each panel continued with a 90-minute closed-door discussion of the issues mentioned below. Representatives of government, industry, regulatory agencies, and the academic community discussed policy issues, the roles of the public and private sectors sharing of information and in assurance of infrastructure, areas for improvement, and the many approaches to ensuring the reliability of North American energy supply. The forum also included a reception at the Canadian Embassy on the evening of October 12, a networking breakfast for participants on October 13, and a luncheon program later that day sponsored by the Canadian Embassy, where The Hon. Dave MacKenzie, Parliamentary Secretary to the Minister of Public Safety, delivered the keynote address.

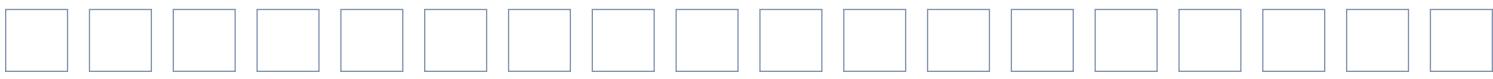
This conference was designed to explore the interface between the public and private sectors in protecting the infrastructure that transports fuel, processes energy resources, and brings electricity into our homes. The major portion of critical energy infrastructure in Canada and the United States is privately owned, so industry has a significant stake in ensuring that potential weaknesses are hardened, and recovery and repairs can be accomplished in real time.

Supply and production are strongly linked; “no fuel, no power; no power, no fuel.”

Though terrorism has played a significant role in directing attention to vulnerabilities in the United States, natural disasters and consumer demand have been the most recent threats to our energy reliability and security. Many panelists spoke of Hurricanes Katrina and Rita and the devastation those two storms caused in the Gulf Coast region of the United States, but there were also references to the Northeast Blackout and California’s electricity shortages. Panelists also discussed several key lessons on the nature of the

Tom DiNanno
James Young





energy sector that are fundamental to addressing assurance of energy infrastructure. Rep. John Smith explained that restoration and recovery in the energy sector is difficult due to the circular nature of the systems. He aptly pointed out that supply and production are strongly linked; “no fuel, no power; no power, no fuel.”

It is crucial that any planning for disruptions involve both the public and private sectors.

The energy system needs a model of rapid restoration over assurance, an approach that is unique to the sector. Industry representatives spoke of their companies’ commitment to quick repair and early detection of failure. The presentation from Ed Tymofichuk of Manitoba Hydro outlined ways that electricity infrastructure can be compromised by natural causes like severe weather, or simple human intervention such as shredded aluminum foil showered over a transformer. The difficulty in predicting or preventing system disruptions was contrasted with a wide variety of quick recoveries and system redundancies, showing how such incidents are much more easily remedied by adjusting the system, making diversions, or cooperating across the industry to make efficient repairs. Paul MacGregor of TransCanada Energy explained that redundancies, storage on both ends of the supply chain, and seamless integration of infrastructure allowed the oil and natural gas system to adjust when Hurricanes Katrina and Rita compromised portions of the natural gas supply chain. Concerns were raised, however, that redundancies that allow the system to be flexible and the capacities needed for quick repair require significant upfront capital, and future expansion of the system may bring efficiencies that save money, yet undermine rapid restoration.

Given that the energy sector has unique needs when it comes to securing infrastructure and assuring supply, it is crucial that any planning for disruptions involve both the public and private sectors. The United States has developed a framework for protecting infrastructure called the National Infrastructure Protection Plan (NIPP); Tom

DiNanno of the U.S. Department of Homeland Security provided an overview of the U.S. federal efforts to oversee infrastructure protection. DiNanno discussed the NIPP, a public-private partnership, and called for the joint creation of a Sector Specific Plan tailored uniquely to the needs of the energy system; industry has been at the table, writing the document from the start. A strong international annex was written in consultation with the Department of State to provide a place to work with countries, such as Canada, who share a stake in protecting infrastructure. The U.S. efforts have involved cataloguing of infrastructure, which led to some discomfort from industry. Issues of data security and keeping such a list current were among concerns. Approaching infrastructure protection by itemizing and prioritizing can be contrasted with an approach that allows threats to drive what information is collected.

If damage to energy infrastructure leads to an emergency situation on either side of the border, economic impacts could be enormous.

James Young was on hand to discuss Canada’s effort at creating a critical infrastructure protection plan at the federal level. Canada is quite deliberate, developing a plan that is “evergreen” and has received much attention for that effort. Past plans did not integrate well and showed the government’s tendency to create silos. There needs to be one voice, Young said, with plans integrated across the government as well as with the private sector. The Canadian approach involves less prescription and more guidelines, and has not tried to assemble a great deal of information; on the other hand, the Canadian approach has encouraged industry to keep information and be prepared to hand it over when needed, rather than relying on the government to keep a current record of key resources. There was some discussion of Alberta’s provincial efforts at creating an infrastructure protection plan, and the involvement of industry in the planning was cited as a good reason for its success. Canada considers

preparedness an evolving concept, and plans to constantly reconsider its definition.

An additional development in energy assurance is the recent designation of the North American Electric Reliability Corporation (NERC) as the electric reliability organization (ERO) for the United States. It is hoped that NERC will be approved as the ERO for Canada by the end of 2007. Rather than setting guidelines and facilitating communication as it has in the past, NERC will be a self-regulating international group with enforcement responsibility. NERC's David Nevius explained that the new incarnation of NERC will develop standards, monitor compliance, and conduct readiness audits. The NERC's first reliability assessment as an ERO was released on October 16, 2006 and at the time of the conference, Nevius revealed that many concerns raised by panelists and participants had already been noted in the report; guidelines are being developed to address them. He estimated that NERC will be a fully functional ERO by June 2007, changing the regulatory environment by moving from industry best-practices and suggested guidelines to enforceable standards.

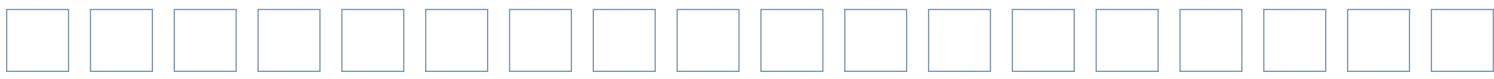
Critical infrastructure protection will only be effective if it develops as a shared responsibility in both countries between the public and private sectors.

Recent changes to the regulatory environment are of great interest to industry, which is constantly trying to assess whether it is in compliance with the whole range of guidelines, regulations, and standards. The law firm Van Ness Feldman has a practice that works with industry to answer such questions, and VNF associate Patrick Currier was able to explain the challenges that were revealed in this area of public-private interface. The absence of regulation is a difficult position for energy companies; regulatory gaps make infrastructure more vulnerable and confuse future planning. Industry must assess whether to wait for regulations to come along or otherwise be pro-

active and develop their own standards and guidelines individually or in cooperation with other companies, and then hope that future regulations will not nullify their efforts. Others industry representatives addressed the difficulty of sharing information in a transparent process, and voiced concerns that data would be secure and used only for assurance purposes.

The organizers also brought in two panelists to speak as facilitators of public-private partnerships. Matt Morrison of the Pacific Northwest Economic Region (PNWER) described the cross-border regional efforts at assuring infrastructure. The human relationships and trust that are key to helping industry, government, and regulatory agencies cooperate are more easily developed at a regional level, where the perception of shared interests and perspectives is stronger. PNWER has learned that planning and running exercises is most successful when all stakeholders truly own the process; they fund, lead, and participate in the process. As a consultant to both public and private sector stakeholders, Mike Armstrong of ICF International deconstructed the expectations of industry, regulators, and even the U.S. executive and legislative branches: both what each expected to contribute, and what others expected of them. Armstrong felt that the term "public-private partnership" is almost a cliché, and is thrown around as a panacea in emergency planning. Public-private partnerships can, in fact, be meaningful, but they require true commitment of time and resources, voluntary participation, and an added value which can be measured. There was agreement that early involvement of both sides and the building of trust and human relationships were important when public and private sectors work together on planning for disaster response.

During the luncheon portion of the forum, Parliamentary Secretary to the Minister of Public Safety The Hon. Dave Mackenzie spoke of how Canada's new government is working with its counterparts in the U.S. Departments of Energy and Homeland Security as well as with the private sector in both countries to protect the shared critical energy infrastructure. Canada exports more oil to the United States than any other country and also provides its southern neighbor with large



amounts of natural gas, uranium, and electricity. The two countries are becoming increasingly dependent on each other in the area of energy. Incidents or disruptions that earlier may have been isolated to one area can now cause a chain reaction on both sides of the border and have a significant economic impact. Mackenzie spoke about the August 2003 blackout that started out as a minor problem at a power company in Ohio but quickly spread to significant parts of the Northeast and Ontario that left more than 50 million people without power and cost billions of dollars to repair. If damage to energy infrastructure leads to an emergency situation on either side of the border, economic impacts could be enormous because of the potential disruption of the enormous flow of goods and services that cross the border each day. To help make sure that such an event never occurs, officials on both sides of the border are working together to construct joint vulnerability assessments of critical cross-border energy infrastructure. Workshops are being conducted on pipeline security and other threats to the energy industry, and a newly designed protocol has been put in place to move people and equipment across the Canada-U.S. border to respond to energy emergencies. Both governments



**Parliamentary Secretary
to the Minister of Public
Safety Dave Mackenzie**

are also working closely with the private sector, which owns 85% of the energy infrastructure. Government agencies monitor seismic activity near critical dams and nuclear facilities, and are increasing their protection of oil, gas, and electric facilities. Critical infrastructure protection will only be effective if it develops as a shared responsibility in both countries between the public and private sectors.