

Canadian Stakeholder Information Session on
Executive Order 13920 – Securing the United States Bulk-Power System with
Assistant Secretary Bruce Walker and Deputy Assistant Secretary Chuck Kosak

Organized by the Embassy of Canada to the United States
Monday, July 13, 2020 – 2:00 pm. Via Webex and teleconference

I – Welcome

At 2:00 pm, Andrew Dawe of the Embassy of Canada to the United States called the webinar to order.

Participants:

FIRST NAME	LAST NAME	ORGANIZATION
Mark	Ciufo	HydroOne
Maria	Ahmed	IESO
Alex	Phillips	HydroOne
Alfred	Kiesling	BC Utilities Commission
Andee	Fischer	NRCAN
Syed	Athar	HydroOne
Avista	Homayun	NRCAN
Brian	Dalby	SaskPower
Bejtit	Manal	Hydro Quebec
Ben	Blakely	HydroOne
Ben	Poirier	NRCAN
Bill	Mertikas	NRCAN
Brigitte	Bordeleau	Hydro Quebec
Bradley	Little	NRCAN
Mewhort	Brandon	BC Hydro
Brian	Strandlund	City of Medicine Hat
Carolina	Gallo	ABB Canada
Catherine	Loubier	Quebec Delegation New York
Cole	Goertz	SaskPower
Guzman	Chad	EPCOR
Chloé	Jacob	Government of Quebec
Christopher	Piercey	NRCAN
Sylvain	Clermont	Hydro Quebec
Chris	Loeppky	Manitoba Hydro
Carol	McGlogan	Electro Federation Canada
Connor	Woodrich	Trans Canada Energy
Chris	Plesiuk	Manitoba Hydro
Craig	Oldham	Public Safety Canada
Craig	Weichel	Embassy of Canada
Justin	Crewson	Canadian Electricity Association
Cristina	Papuc	Alberta MSA
Daloris	Grohman	Alectra Utilities

Daniel	Levitan	HydroOne
David	Morton	BC Utilities Commission
Derek	Cherneski	SaskPower
Deanne	Fisher	Nalcor Energy
Dennis	Frehlich	AESO
Dennis	Yeung	BC Hydro
Dianne	Hayes	IESO
Dawn	Nedohin-Macek	Manitoba Hydro
Patrick	Doyle	Hydro Quebec
Denis	Tremblay	AIEQ
Dustin	Owens	Heartland Generation
Eóin	Cooke	AltaLink
Eric	Marquis	Government of Quebec
Evan	Noble	IESO
Francois	Beaulieu	NB Energy Utilities Board
Gabriel	Lafontaine-Chicha	NRCan
Gary	Schoenhaar	Fortis BC
Gurvinder	Chopra	Electro Federation Canada
George	CHRISTIDIS	Ontario Power Generation
Gitane	De Silva	Trans Alta
Greg	Jones	Nalcor Energy
Hannah	Labuschagne	Brookfield Renewables
Henry	Wells	Canadian Consulate General
Jerry	Bellikka	Capital Power
Jeff	Bertram	EPCOR
Jean-Pierre	Dion	Government of Quebec
Jason	Muller	Capital Power
John	Barnwell	Embassy of Canada
John	McClellan	Alectra Utilities
Pollock	Jonathan	NB Power
Jonathan	Sohn	Capital Power
Justin	Currie	Canadian Consulate General
Kristel	Arnold	Manitoba Hydro
katrina	marsh	NRCan
Kevin	Berry	Manitoba Hydro
Kelly	Molnar	Fortis BC
Alex	Kent	Canadian Electricity Association
Kevin	Caron	Canadian Energy Regulator
Kristine	Bienert	BC Utilities Commission
Kenneth	Ross	SaskPower
Joelle	Lancaster	Canadian Electricity Association
Laura	Pyles	Government of Manitoba
Laurentia	Dumitrescu	Quebec Energy Regulator
Nicolas	Leblanc	Hydro Quebec

Lindsay	Zylstra	HydroOne
Lisa	Carrier	Canadian Consulate General
Leigh	Mulholland	Capital Power
Marc	Belliveau	NB Power
Gill	Manpreet	BC Utilities Commission
Mark	Urwin	Government of BC
Marko	Cirovic	IESO
Meaghan	Sunderland	Canadian Consulate General
Rita	Metta	Hydro Quebec
Michael	Frisina	Alectra Utilities
Leah	Michalopoulos	Canadian Electricity Association
Nelson	Brandao	Manitoba Hydro
Nicole	Manalili	BC Utilities Commission
Noël	Nathalie	Hydro Quebec
Patrick	McSweeney	Government of Quebec
Patrick	Bateman	Water Power Canada
Peter	Gregg	IESO
Peter	Rose	Government of Quebec
Michael	Powell	Canadian Electricity Association
Raj	Hundal	Power Ex
Ryan	Alpers	Manitoba Hydro
François	Ramsay	Hydro Quebec
Remi	Moreau	Evolugen
Rob	McIntyre	Electro Federation Canada
Robert	Berardi	HydroOne
Roberta	Clarke	Government of Nova Scotia
Russell	Andrews	Government of Alberta
Sarah	Lye	BC Utilities Commission
Shannon	Ferdinand	Capital Power
Sonja	MacQueen	Nova Scotia Power
Sophie	Girard-Cartier	Government of Quebec
Susan	Evans	Canadian Consulate General
Gary	Sutherland	Hydro Quebec
Sy	Abdoulaye Djiby	Hydro Quebec
Scott	Yost	Capital Power
Tab	Gangopadhyay	Canadian Energy Regulator
Todd	Blackman	ENMAX
Timothy	Boston	ENMAX
Tim	Gautier	NRCan
Seto	Truman	ENMAX
Tyrone	Tait	AltaLink
Vincent	Royer	Government of Quebec
Wayne	Guttormson	SaskPower
Scott	W Robert	NB Power

Robin
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Yingzi Jan

Canadian Electricity Association
BC Hydro

II - Introduction

Opening remarks were made by Craig Weichel, Counsellor of the Energy and Environment division at the Embassy of Canada in Washington, D.C. Mr. Weichel underlined the importance of bilateral collaboration between the United States and Canada in ensuring the security and reliability of our deeply integrated grid and energy systems and, more specifically, in addressing shared concerns on critical infrastructure, cyber, and supply chain security. Examples of sectoral engagement include:

- Info-sharing related to grid intelligence: Canada's Project Lighthouse and America's E-ISAC;
- Cybersecurity in the bilateral agenda: Public Safety Canada and DHS collaboration on cyber incident management (e.g. private sector engagement, public awareness efforts);
- International partnerships like the Five Eyes intelligence alliance.

III – Presentation on the Executive Order on the Bulk Power System

Chuck Kosak, whose Transmission Permitting and Technical Assistance division is responsible for the Executive Order, provided perspective on its development, as well as the reasoning behind the President's decision to declare a national emergency on BPS. Mr. Kosak cited defense and security assessments that analyzed cyber and physical security threats to the BPS. The findings pointed to the ability of "near peer" adversaries like Russia and China to launch asymmetric attacks on the U.S. power grid, as well the gravitation of these threats from information technology to operational technology. These assessments called for urgent action across all sectors. Mr. Kosak specifically mentioned the 2019 Worldwide Threat Assessment, the 2018 National Defense Strategy, and the 2020-2022 Counterintelligence Strategy. He stated that BPS security is now a top priority of the Secretary of Energy.

Later in the webinar, the Assistant Secretary provided an overview of the four pillars of the Executive Order:

1. Prohibiting BPS electric equipment with a nexus with any foreign adversary and poses an undue risk to national security, the economy, or the American people;
2. Authorizing the Secretary of Energy to establish criteria for recognizing particular equipment and vendors as "pre-qualified";
3. Identifying any now-prohibited BPS equipment already in use, allowing the government to develop strategies, and to work with asset owners to identify, isolate, monitor, and replace this equipment as appropriate;
4. Establishing a Task Force on Federal Energy Infrastructure Procurement Policies Related to National Security, which will focus on the coordination of Federal Government procurement of energy infrastructure and the sharing of risk information and risk management practices.

In developing the four pillars, there were a few elements that were critical to include:

1. A North American approach, in recognition of U.S.-Canada partnership on BPS;
2. Comprehensive Identification of BPS interdependencies, inclusive of all power generation types;
3. The ability to do contingency analysis ("N minus K"), recognizing interdependency and the potential for unintended consequences to other BPS equipment.
4. Development of a "worst case scenario" tool that, through the "N minus K" analysis, can identify the next worst piece of BPS equipment that could have deleterious effects to the overall stability of the system.

Mr. Walker talked about the interagency nature of the work being done -- that DOE's BPS "umbrella" is limited to the physical power grid. The roles of FERC and NERC in the BPS extend to other components of the national security aspect. The E-ISAC is also playing a crucial role, particularly on risk-based components of the supply chain. As an example of recent interagency work, on July 8, DOE [issued](#) an

RFI on the EO. On the same day, NERC issued [an alert](#) that identified pieces of equipment from certain countries requiring additional information. Given the interagency collaboration required, being able to communicate any findings is of great importance.

IV – Presentation on the North American Energy Resilience Model (NAERM)

Assistant Secretary Walker provided background on the North American Energy Resilience Model (NAERM). He spoke about its broader North American approach for highly integrated portions of the electric grid, and indicated that he anticipates NAERM will spur a similar cooperative North American agreement as NORAD.

Mr. Walker explained that the defense critical infrastructure analysis in the [NAERM report](#), published July 2019, included an inspection of specific pieces of equipment on the BPS and the associated risks to cybersecurity and the physical security of transmission lines. Through this, it was determined that the federal government's existing procurement policies did not, on a systematic basis, include national security as a component or criteria for awarding procurement contracts. The report led to [Executive Order 13920](#), which notably prohibits BPS electric equipment that has a nexus with a foreign government, and facilitates the establishment of suspense facilities and associated critical defence electrical infrastructure as required by [Presidential Policy Directive 21](#).

To enable interpolation and relation modeling, the architecture of the modeling tool was constructed to provide the ability to add several layers. This work is ongoing, involving eight national labs. In collaboration with Assistant Secretary of State for Energy Resources Francis Fannon, Mr. Walker and his team will, over the next six months, focus on establishing the foundational basis upon which additional capabilities and can built and Canadian assets can be included in the model.

DOE has begun integrating static components in the Western Interconnect. Next steps include compiling static models, using relational databases to identify the energy usage, and then transitioning to a near real-time BPS modeling tool that enhances situational awareness.

V - Questions and Answers on the Executive Order

Responses by Assistant Secretary Walker:

What do you see as potential impacts on the Canadian electricity industry's implementation of this executive order? What are your plans for engagement and coordination with other nations as you move forward with implementation of the executive order?

Hopefully, the interdependency and connectivity of the BPS between the U.S. and Canada will draw operational parity and provide an opportunity to move forward in a unified way. This includes working at both the federal and provincial level. DOE has not reached out to other nations for engagement, despite receiving requests from the E.U. and others.

How would you like Canadian institutes and organizations to manage this with you? What kind of process do you perceive around the timing? Is responding to the RFI an avenue for Canada's effort or would you envisage something distinct for Canadians?

The RFI is not likely the correct avenue unless the input is specific and relevant to the five types of assets, sold within the last decade. The NERC Alert is more pertinent to industry stakeholders in Canada. DOE will pursue the EO implementation using the RFI. DOE is relying on the vendor community along the supply chain to help identify risks.

Can you speak to some of the timelines for the executive order and different pieces coming forth? Can you speak to when you can expect to see more movement and more information about the pre-approved suppliers list - and a possible extension of the RFI in terms of the list of countries included? Are we expecting companies on that list or just countries?

We are going through that analysis for pillar one which would require us to walk through some level of

specificity. It was written very broadly to enable the Secretary to have a significant amount of authority. The reason we did this is we know that this is a problem that is very significant. This allows us to adapt as we learn more. We are analyzing whether there is an opportunity and if the risk level is high enough for us to execute Pillar 1. If it is, then we will pull that trigger and put out a list of prohibited items. I don't anticipate that we're going to be issuing a "white list" per say, where you can buy X but not Y. DOE is working with other agencies to lean on existing processes, such as the GSA list or buy certain pieces of equipment in the federal government.

We are not trying to reinvent the wheel. We are trying to get DOE and the BPS into the cog system that already exists to leverage those capabilities. But we are also dealing with industry and with the vendors, which is why we issued an RFI.

With the different rules and regulations that you expect to issue in September, are those expected to be final or are subject to subsequent rounds of consultation or feedback?

This is something that falls under the Administrative Procedures Act. We will file a notice proposed rulemaking in the federal register, with a comment period built into it to enable anybody to provide comments. We will then take those comments and make modifications to the rule making process before anything is set in stone.

In terms of the implementation of the executive order are you looking at measures to mitigate the financial impacts of implementing the executive order?

We recognize that if we end up finding a piece of equipment that we just can not mitigate the risk. In this worst case scenario, when a piece of equipment to be replaced it will depend on what type of utility that holds that asset. If it is independently owned, they go through normal depreciation schedules for those assets. If it were a 30-year asset that has only been installed for 10 years, there would be 20 years of stranded asset value. We have been talking with FERC and NERC about the possibility of considering stranded asset recovery as something that is built into the wholesale market.

How deep into a piece of equipment's chain of sub components are you looking to go?

We are going to work systematically and leverage our capabilities to go as deep as we can. We will start at tier one and work further using a supply chain risk portfolio and analysis. We believe we'll be able to go down to tier 2 or 3 component level.

How would you like to see the engagement or later discussions with Canadian actors proceed? Do you want us coming to you or should we organize and wait? What kind of timeline process would you like to see for further engagement with Canadian industry and governments?

It is possible through NRCAN or ESCC, or maybe both. There is one system and there are a few of us looking at this from different angles but what we are all coordinating to make sure we have all angles covered. We are open to suggestions. I think one of the things we are trying to do is have points of contact as we reach into broader areas. The first point to coordinate would be with Chuck Kosak. This is for both the EO and NAERM.

VI - Adjournment

There being no further discussion, the information session was adjourned at 3:15 p.m.