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## Energy Through a North American Lens – What's Different, What's the Same?

Dialogue we hear about today's energy issues is almost always Canada-centric. And justifiably so, given energy's important contribution to Canada's economy, balance of trade, jobs, and support for health care and social programs from taxes and royalties.

But what can we learn by broadening the geographic scope - from Canada-centric to the three countries occupying the North American continent? Are there more similarities or differences amongst Canada, the United States, and Mexico? Are there opportunities to exploit the continent's rich and diverse energy resources for mutual benefit? Are there things that could be done to enhance the value that energy brings to the three countries?

Such questions were the motivation behind the trilateral *North America Region Energy Forum* held in Santa Fe, Mexico, on September 12 organized by the World Energy Council's three national committees: Mexico's *World Energy Council Secretariat*, the *United States Energy Association*, and the *Energy Council of Canada*.

Let me start by sharing some thoughts on why trilateral energy is a continental positive.

First, North America has abundant, rich and highly diverse energy resources – fossil fuels, hydropower, uranium, and renewables. In fact, this resource base is the envy of the world. Geological basins and watersheds span our international borders making energy cooperation a necessity.

Second, the development and use of these diverse resources make major contributions to the economies of our three countries, providing good jobs, driving innovation, and providing a flow of revenues to our governments to support health care and social programs. The three economies are advantageously "resource based", with energy contributing a major share.

Third, resources have been a key driver of regional development in each of our countries. Indeed, their histories include many stories based on energy developments in remote and offshore regions.

And fourth, another characteristic is that aspects of energy and environmental management are a shared responsibility between governments at the national and provincial/state level – a constitutionally-defined, customized arrangement in each country. This results in a combination of national actions applicable to the country as a whole, and actions over which state and provincial governments have control. This customized approach responds to national interests as well as regional resource characteristics, and local public interests, concerns, and policy preferences.

### Highlights of Energy Discussions in a Trilateral Context

The Forum's North American perspective yielded interesting insights.

Starting from the status quo, energy is already a key North American benefit: providing 470 million consumers with energy commodities and energy services, and \$141 billion in energy trade. The United States and Canada are connected by some 35 major electricity transmission lines and 70 oil and gas pipelines, many of which enable two-way flows.

Four aspects of energy in North America were discussed under the conference theme ***Regional Collaboration on Climate, Clean Energies and Environmental Issues***.

The scenarios presented in the session on *Medium and Long-Term Energy Scenarios for North America*, which principally focused on reducing GHG emissions, showed strong similarities: continued reliance on fossil fuels for the foreseeable future, albeit with a declining share; replacing coal-fired generation with wind and solar; and, widespread electrification of energy end-uses primarily focused on transportation, but also in industry and buildings.

Most sobering was that none of the presented scenarios achieved the level of reductions needed to meet the declared 2°C target. What would be needed to do so beyond the scenarios' already-aggressive features? Major improvements in energy efficiency, reducing emissions in the freight sector by shifting off diesel to natural gas and biodiesel, even more wind and solar combined with widespread storage, and more extensive green public transport, were listed by the head of the World Energy Council's scenarios project.

There was much commonality heard about the most promising *Technologies for GHG Reduction*. A fully integrated, actively monitored and controlled electricity grid, linking transmission, distribution, electricity storage, and energy consumers topped the list. Efficient electrification, tapping into a combination of decentralized and centralized generation based on renewables, natural gas, and nuclear, and digitally connected and interactive management systems were other features. Carbon capture and storage technology was seen as promising, provided it can be made economic by offsetting technology costs with revenues from the sale of carbon. System instability was identified as one risk arising from too quickly adding intermittent distributed generation.

Greater diversity characterizes *Climate Change Policies*. Mexico set strong sustainability goals as part of broad and aggressive reforms of its energy sector; for example, Mexico's target for annual energy efficiency improvements is 3.7%, twice the pace of improvements observed since 1990.

Canada's provinces have a strong track record of experience from implementing a spectrum of climate policies: carbon pricing; emissions regulations; policy-driven greening of the generation mix; participation in an international cap and trade regime; and, widespread energy conservation programs. Canada's national policy has been announced in the *Pan-Canadian Framework for Clean Growth and Climate Change*. Three key themes were mentioned which characterize Canada's climate policy directions: a stepped-up ambition to achieve targets, collaborative efforts between industry and government, and, working closely with our North American partners, for example, by further integrating energy systems.

In the United States, a change in policy direction has been marked by the announced intention to withdraw from the 2015 Paris Accord. Industry is taking extensive measures to reduce carbon emissions. Many climate programs, emissions trading programs, and clean energy investments by state governments are continuing, working independently or in regional clusters.

There was uniform agreement on the many benefits and opportunities arising from *Energy Trade in North America*, channeled through private sector investments in infrastructure, close trilateral collaboration by the three governments, and many state-to-province initiatives. The mutual benefits are clear: good, middle class jobs, a stimulus for economic growth, helping to reduce energy costs for businesses and consumers, and collectively, advancing North American energy independence. Plus, trilateral energy trade is seen as a pathway to achieving environmental goals. Pillars that support trilateral energy trade are: reliability, affordability, building investor confidence, and digitalization. Greater coordination among the three countries would improve energy system efficiency, data exchange, regulatory harmony, and it would make the system more resilient to any disruptions of the North American energy market.

Two promising trilateral initiatives were mentioned. Government leaders will be meeting in the fall to discuss a North American Energy Strategy. And second, talks are underway to have Mexico join the United States and Canada as a member of the North American Electric Reliability Corporation.

### **What About NAFTA and Energy?**

There is uniform agreement on the mutually beneficial, closely integrated nature of the current energy trade arrangements. As one co-host commented: *“North American energy trade is something we take very seriously. That’s why we welcome the opportunity to modernize NAFTA. To ensure that it reflects new realities, and a, free and fair and progressive approach to trade and investment”*.

In closing, as we contemplate Canada’s energy future, such continental perspectives and their implications warrant careful monitoring and attention.

The next North America Region Energy Forum will be hosted by Canada in the Fall of 2018.

As always, we welcome feedback and comment on this article *From the President’s Desk*.

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