

## **“North American Electricity: A Policy Framework for Future Success”**

By

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To

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Thank you for that kind introduction and good afternoon. It is indeed a great pleasure for me to be able to join you today, and share with you CEA's perspectives on the evolving North American electricity business, and the policy options we are promoting in Ottawa and Washington.

The core membership of CEA is the 30 largest electric utility companies in Canada responsible for over 95% of the electricity produced and delivered in this country. Among them are the key players here in Ontario.

***Ontario electric utilities play a key role in developing Canadian Electricity Policy solutions.***

CEA acts as the national voice for the Canadian Electricity industry, and seeks to address electricity policy both in Ottawa and Washington. Our policy focus is grounded in a North American view of the electricity industry, and looks at how we can maximize the efficiency of regional North American markets for the benefit of consumers on both sides of the border.

There has been a great deal of attention paid to electricity since the August 14 blackout in Ontario and the Eastern United States. We have also witnessed a number of significant outages in Europe recently, including a serious transmission failure that plunged nearly all of Italy into darkness.

***The recent spate of power outages needs to be addressed urgently.***

A number of things have changed for the electricity business since August 14, while the core issues remain. What has changed is a growing sense of urgency among policy makers to ensure that conditions are in place to facilitate necessary capital investment to guarantee the reliability and security of the grid. What has not changed, is CEA's message which we are delivering to decision-makers concerning the need to create an investment climate more favourable to sinking large amounts of capital to modernize and expand our existing electricity infrastructure. Suddenly, we are getting traction.

The recent blackout was an historic event, something that hasn't happened on this scale for decades. While there has been much discussion of the root cause, it is also clear that we experienced a major systemic breakdown in our response. Transmission lines are knocked out of service on a fairly regular basis in North America. That is a reality of the electricity business. But what happened that resulted in a cascading blackout that affected some 50 million people?

The bi-national task force lead by Energy Secretary Abraham and Natural Resources Minister Dhaliwahl published their interim report on the events leading up to and during the blackout a few weeks ago. Drawing upon the data and expertise of the North American Electric Reliability Council, we now know with greater certainty why the lights went out. A combination of equipment failure, human error, and the failure to follow NERC procedures, starting in Ohio and spreading throughout the region, brought down a significant portion of the Eastern interconnection. As the report indicated, the integrated grid was not the cause of the outage; rather, it was the failure to adhere fully to existing protocols and standards.

Now that we have a clearer picture of what happened and why, we await the next report from the bi-national process, which will provide recommendations on how to address the issues raised in the investigation. I suspect we shall find that action will be required on many fronts, including both short term and longer term initiatives. In the short term, making sure this sort of event doesn't happen again soon is job one. Making sure it is unlikely to occur again for a long time to come – if ever – is job two and more fundamental in nature.

Let's be clear, however, that the system worked as it was designed to in protecting equipment and making possible a rapid restart of the system. This was the first major widespread failure in the Eastern Interconnection in 38 years. That's not an altogether bad record. However, there is also an emerging consensus that the transmission system needs substantial renewal, as indeed do our distribution and generation assets.

***Modernization of the electricity system will not be a cheap or easy process.***

How much it will cost is open to debate. The Electric Power Research Institute (EPRI) in Palo Alto, California estimates that it would cost \$10 billion a year for 10 years to update the U.S. portion of the transmission system alone. Another consulting firm, R.J. Rudden, predicts that the cost would be between \$30 and \$50 billion. By their analysis, that is a manageable cost that would add between \$50 to \$125 to the average residential customer's bill over five years, or less than one percent a year. Given that some estimates of the annual cost of outages in the U.S. total \$100 billion, this looks like a worthwhile investment.

More recently, the International Energy Agency produced a report on energy investment requirements over the next three decades. Globally, power generation, transmission and distribution will require investments in the order of \$10 trillion. Transmission and distribution will account of more than half of global electricity-sector investment. From a North American standpoint, the IEA estimates that over the next 30 years, required investments in electricity will reach \$1.6 trillion

***The challenge is how to make sure that those investments happen.***

CEA has been making recommendations to decision makers in Ottawa and Washington on what steps could be taken to facilitate these needed investments. But at the very core of these recommendations is what we hope will be a shared understanding of the inter-dependent nature of our economies and electricity systems, and a recognition that these inter-dependencies are a net benefit to the industry and consumers on both sides of the border. I think this message is getting through. In fact, a number of observers have been heard to remark that “when the lights went out in Ontario and New York, the light went on in Ottawa and Washington”! I will come back to this.

The economic inter-dependence between Canada and the United States is extensive, and has benefited both. From a Canadian perspective, 85 percent of the goods we export go to markets in the U.S., while 73 percent of the goods we import come from the United States.

***When it comes to the electricity relationship, Canada and the United States are the only external markets which matter to each other.***

And the benefits of this electricity relationship for both countries are enormous. But before going into the specifics, I would first like to provide you with a brief overview of the Canadian domestic electricity outlook.

What does the future of Canadian electricity hold? In short, it will be a busy future indeed, with investment in new and replacement capital stock in the order of \$150 billion over the next 20 years.

Two years ago, CEA launched a study of the future need for electricity in Canada, a project we called the “Bird’s Eye View”, which we have since updated. We took into account savings from energy efficiency programs, but also accounted for plant retirement over the next 20 years. Even accounting for a reduction in electricity exports, we were still left with the need to increase electricity supply by 205 terawatt-hours from some 30 - 40,000MW of new capacity over the next two decades. Our total installed capacity today is 110,000MW.

***Clearly, this is a daunting objective – but a necessary one.***

It is within this context that CEA has been reviewing and making recommendations with respect to our shared North American electricity relationship. The August blackout has only served to reemphasize the need for policy action and has given us new traction with government, the media and stakeholders.

The North American electricity market is increasingly characterized by regionally integrated sub-markets, and continued growth in scale and scope of regional integration is part and parcel of a strategy to move towards greater efficiency. We believe that enhancing existing cross-border cooperation will help deliver continued economic and environmental benefits to the various regional electricity markets in place today.

A remarkable bi-lateral trading system has evolved between Canada and the United States over the last half century. What began with small tie-lines and the development of boundary waters for hydroelectricity, has evolved into extensive cooperative arrangements for managing transmission system reliability, major inter-ties across the Canada-U.S. border coast-to-coast, and growing energy transactions.

The diversity of our systems -- when linked across the international border, has created opportunities for enhanced efficiencies through regional systems management, reduced environmental impact, improved reliability and better financial performance; achievements important to all involved.

***Electricity is now a key and growing part of the larger energy trade picture between the two countries, and it is increasingly two-way.***

The quantity of electricity exported from Canada has typically been 7 and 9 percent of production. Overall, Canadian exports have been relatively stable over the past ten years but are now declining. At the same time, electricity imports to Canada have increased significantly of late. Why? Well, to some extent weather and technical problems have contributed to this development. For example, the “lay up” of a significant portion of the Ontario nuclear fleet and low water levels in key hydro-rich regions, coupled with a hot summer in 2002 is part of the explanation. But another more profound reality is at work as well.

***Canada is experiencing a decline in the input resource advantage for manufacturing electricity that it has enjoyed for the last one hundred years.***

What do I mean by that? Electricity is manufactured from a rich mix of natural resources and capital. We have no inherent advantage in the latter and a declining one in the former. Our access to capital is no better than that available to investors in the U.S. and our fiscal regimes, while much improved, are still not fully competitive with those in the

U.S. But most important, our natural resource base, while still attractive, is not as advantageous as it once was.

Put simply, we have harvested the “low hanging fruit” and now we have to climb higher up the tree to get what we want. This changes the risk /reward profile of our sector. If we take hydropower as an example, our new projects are more remote, requiring longer transmission lines and costing more per unit of output to develop. Our coal resources are uneconomic in the east and face challenging environmental requirements everywhere.

These have been our mainstays for the last century. Indeed they will likely remain so for a long time to come. But over the last half decade or so natural gas emerged as the input resource of choice in North America with the advent of highly efficient, modular, and therefore flexible, combined cycle gas turbine technology. These units can be manufactured in large numbers using standard designs and most importantly can be located close to demand and fed off existing pipeline systems. And natural gas is, to all intents and purposes, a North American commodity when it comes to price. When combined with an oversupply of natural gas resulting in \$2 per thousand cubic foot (mcf) price levels, was it any wonder everyone jumped on the “bandwagon” and Canadians found themselves facing formidable competitors for traditional export markets and a rising tide of new players in domestic markets?

But then along came the California debacle and, not long after, the implosion of Enron to wreak havoc on the emerging competitive marketplace and its leading corporate exponents. At the same time the gas glut dried up, just as many had predicted, and here we are today. Natural gas prices have more than doubled and hydro and coal look both attractive and perhaps even more important, reassuringly stable. What is not stable, however, is the regulatory uncertainty and timing questions involved in getting projects approved and the ever-changing environmental requirements facing large projects.

While this may seem a confusing picture, there are some conclusions to be drawn with implications for our trade story.

***The clear cost advantage we have taken for granted with respect to electricity vis-à-vis the U.S. is no longer so certain.***

In the future, we will have to earn it the old fashioned way—by being quicker, smarter and by using all our resource options efficiently and creatively. Secondly, we need to build on the excellent base we now have for continental trade --- a system which has evolved to become a model of stability for both Canada and the United States as well as, increasingly, Mexico.

But, it is also a system facing its own challenges. Three of the most important of which are: lack of clarity around market rules, environmental challenges, and an uncertain investment climate.

CEA's North American electricity policy takes these three factors as both the context and the rationale for our principle thesis. That thesis, stated simply, is that the evolving North American market is increasingly a regionally integrated one, and that continued and growing regional integration will be beneficial.

While increased regional integration alone cannot solve all the problems that currently confront the industry, it can contribute to greater efficiency, increased reliability, more predictable regulation and policy, lower costs and greater environmental benefits overall, thereby increasing investor confidence and reducing uncertainty in the marketplace.

Let's first look at the uncertainty.

***The North American electricity industry is in a state of flux unlike anything it has experienced in its over 100 years of existence.***

With respect to lack of clarity around market rules, the model of state-owned or sanctioned integrated monopolies, while still the standard in many jurisdictions, has been undergoing a change at the hands of state/provincial and federal governments and regulators. New sub-sectors – independent generation, merchant transmission, and power marketing entities – have emerged and in some cases are disappearing again. Nevertheless, a pronounced change in the structure and make-up of the industry has required regulators to rethink how they treat the sector.

***The transition to competitive markets has been uneven with higher cost jurisdictions moving earlier and further.***

And while competition at the wholesale level has been widely embraced, many provincial and state decision-makers have expressed concern regarding the implementation of competition in retail electricity markets. In fact, a few have taken steps to either slow or stop the movement to competitive markets in their respective jurisdictions.

At the same time, electric utilities are feeling the pressure of environmental challenges unlike anything seen to date. In Canada, this is especially the case as a result of the federal government's ratification of the Kyoto Protocol. That decision leaves Canada obliged to reduce greenhouse gas emissions by six percent from 1990 levels for the period 2008-2012; the Canadian electricity industry will face an onerous task in helping meet that goal. In the United States, while the Bush Administration has chosen to pursue a voluntary approach that focuses on improving the carbon intensity of industrial

processes, rather than Kyoto, several U.S. States have enacted their own legislation to control GHG emissions. The current lack of a coordinated North American approach to addressing Climate Change is both inefficient and potentially disadvantageous to Canada. Above and beyond GHG emissions, companies on both sides of the border anticipate increased pressure to further reduce other air emissions.

Lack of clarity around market rules and environmental concerns are compounding the third cause for market uncertainty: a challenging investment climate.

***Investors have become wary of investing in an industry affected by the Enron debacle, the telecom market deflation, and the continued fallout from September 11th.***

This lack of investor confidence places an additional hurdle in the path of raising the necessary capital for the construction of needed generation and transmission projects and could affect meeting the future needs of customers.

These regulatory, environmental and investment issues are all cause for concern. They are also evident across the North American marketplace. Equally evident across the market is an emerging opportunity that, I am convinced, can make a material contribution to moving past such environmental and investment concerns: the potential for efficiency gains from well functioning large, north-south regional markets.

Cross-border electricity trade provides the opportunity to optimize the use of generating resources to the benefit of U.S. and Canadian market participants. For example, when linked across borders, the diversity of our systems, our climates, and our demand profiles allow for efficient power flows north or south. The resulting regional market efficiency gain minimizes the need for additional generating facilities and results in lower overall generation costs to consumers. Such opportunities exist in each of the regional markets across the continent -- western, central, and eastern.

Imports and exports balance system usage and provide reliability at the various transfer points along the U.S./Canada border.

***More robust transmission capacity across the border will be essential for an increase in electricity flows between markets in the United States and Canada.***

Provided that the barriers and disincentives to transmission investment are successfully addressed, and the transmission grid is operated in a manner that accommodates international exchanges, reliability in electricity supply will increase as a result of this integration of markets.

No one technology is universally applicable across a national marketplace -- fuel availability, geography, and a host of other factors help determine the generation mix.

***The objectives of reliable, affordable, environmentally preferable power require that all technologies be available.***

In fact, increased integration enables the larger, combined U.S. and Canadian regional electricity markets to take full advantage of various traditional and emerging technologies – such as hydro, coal or nuclear as well as wind, biomass and solar. And, perhaps most importantly, it allows us to coordinate our respective environmental regulations and approaches to optimize results while minimizing the risk of trade impacts

It is within this context that CEA has been delivering policy recommendations to assist the further development of these regional markets and ensure a brighter shared electricity future.

Once the worst was over following the August blackout, CEA began engaging various players concerning the long-term needs of the industry to ensure reliability, and sharpened our messages into a five-point plan. Moving forward, governments and industry need to cooperate to develop and implement a common agenda that focuses on creating a reliable and secure supply of electricity.

We began promoting our five-point plan, as an agenda for action on electricity policy. It includes the following components:

1. Establishing An Investment Climate To Ensure Future Electricity Supply

We are working in Ottawa, in particular in the run-up to the next federal budget, to seek improved tax depreciation rates through more realistic Capital Cost Allowance (CCA) rates for generation, transmission and distribution assets that better reflect the useful life of these assets in today's context. The United States is moving to update its depreciation rates and so must we!

As well, there needs to be adequate rates of return on capital investment for regulated assets. Of particular concern is the differential between the returns allowed to Canadian companies compared with those in the US. The Dominion Bond Rating Service has studied the difference between the two countries in terms of rates of return, and has calculated that Canadian utilities earn a significantly lower return on equity, in the order of 200 basis points below the US average. This places the Canadian electric utility sector at a distinct disadvantage in global capital markets.

## 2. Moving Government and Industry Towards Smart and Effective Regulation

CEA believes that moving to smart, effective and timely regulation for generation, transmission and distribution projects will help bring new projects on-line by shortening project timelines and making approval processes more transparent and predictable.

How can we hope to meet the needs of electricity customers when, in some cases, project review and approval processes can take a decade or longer? I'm not suggesting that these reviews not take place or be less than rigorous. On the contrary, these processes are a vital step in understanding the potential impacts of projects, and ensuring that appropriate decisions and remedial actions are taken. The issue is with how these reviews are conducted and the timelines involved. Greater transparency, predictability, timeliness and certainty is needed, all within and a more cooperative partnership approach.

We have made some progress in this area. For example, CEA has entered into a Memorandum of Understanding with the Department of Fisheries and Oceans, which we hope will be a model for the future. It builds on a framework of principles and objectives which are now being used to guide the development of interpretation bulletins to better inform proponents and regulators alike on how to apply the Fisheries Act and its regulations more consistently across the country.

## 3. Working to Ensure a Sustainable Future for the Next Generation

Environmental and climate change actions must be undertaken in conjunction with an overarching energy policy framework to ensure industry obligations are realistic, balanced and equitable. Long-term climate change policies must recognize the North American nature of the electricity sector and factor in current and future technological options available during the current commitment period (2008-2012) and beyond. In the near term there are few options to achieve emission reductions in the face of growing demand beyond buying offsets. This is in effect a carbon tax under another name. We are developing a range of tools from demand side management and energy efficiency initiatives to R&D and cleaner generation options. But there is no "silver bullet" available in the Kyoto timeframe so we must position ourselves for the longer game by investing today in solutions for tomorrow.

Among the successes in the area of sustainable development for which the association is, I think, justifiably proud, is our Environmental Commitment and Responsibility Program. Participation in this program is a condition of membership in the Association, and the ECR program includes a transparent reporting system, third party audits of member company reporting, and the implementation by our member companies of an Environmental Management System equivalent to ISO 1401. This last criteria was achieved by all our member companies this past year.

#### 4. Fostering Innovation and Accelerating Skills Development

The fourth element in our plan recognizes that we need to work aggressively to encourage the adoption of energy efficiency, automated distribution technologies and alternative energy generation, key climate change initiatives that provide an opportunity for Canadian technological leadership.

One specific example involves government/industry collaboration on the development of Clean Coal technologies, recognizing the vast proven strategic reserves of coal in western Canada. Given these massive reserves, it would be foolish for us to turn our back on this important potential source of future energy. We need to find ways of unlocking the energy stored in our huge western coal reserves in a more environmentally sustainable fashion.

From an HR perspective, we need to continue the industry/government collaboration on the Human Resources Sector Review for the Electricity Sector.

We are working jointly with Human Resources Development Canada to gain a deeper understanding of the future HR needs of the electricity industry . This is at a time when the specialized workforce in our industry is aging, and the skill sets are changing. We face up to a 50% turnover in our employees over the next 10 to 15 years and the source of replacements is not clear.

#### 5. Building a Strong Canadian Electricity System While Strengthening our North American Institutional Arrangements

North America has changed a great deal in the past two decades. The NAFTA agreement recognized that we share not simply geography with our neighbors to the south, but an economic space as well. In this post-NAFTA era, we have seen the benefits of this shared geographic and economic space, while at the same time remaining distinctly Canadian. The same dichotomy applies to electricity.

Canada must maintain a strong domestic electricity system while strengthening its role within North American Institutional arrangements for ensuring system reliability and critical infrastructure protection.

Canadian companies are active in emerging North American regional transmission organizations (RTO) as well in the North American Electric Reliability Council (NERC). CEA has been and continues to be unequivocal in its support of the reliability language in the Energy Bill before the US Congress. We support the creation of mandatory reliability standards by providing regulatory backstop to NERC on both sides of the border.

And in the world post 9-11, security is of primary importance to CEA and our members. We have a coordinated approach to critical infrastructure protection and we work closely with Canadian and North American critical infrastructure agencies.

We believe that enhancing existing cross-border cooperation will help deliver continued economic and environmental benefits to the various regional electricity markets in place today, benefiting investors in the industry, the environment, and ultimately consumers across the continent. Maximizing the opportunities offered by our integrated markets must be part of the strategy to help secure a healthy electricity industry for the future.

If success is to be realized and the electricity industry is to play its full and vital role in powering the North American economy in the 21st century, the following must occur:

- Policy makers must embrace the vision of large, non-discriminatory, bi-national regional markets;
- Regulators must coordinate and collaborate in setting clear and certain rules within efficient processes, respectful of and accommodating jurisdictional realities;
- Investors must see reasonable rates of return.

Regionally integrated markets are a reality in the Canada/U.S. electricity relationship. Recognizing these natural markets, and identifying opportunities to build on them, offers significant promise for future growth, for improved environmental performance, and for the continuing reliable supply of electricity to consumers across North America.

It was more than four decades ago that Marshall McLuhan coined the phrase the "Global Village". At the dawn of the 21st century, we are indeed living McLuhan's vision. We in Canada have the option to embrace this vision and rise to its challenge in North America or turn our back on it and risk missing an important opportunity.

Thank you.