

Electricity: A Strategic Asset for a More Prosperous Future

Keynote by

The Honourable Sergio Marchi

President and CEO of the Canadian Electricity Association

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Introduction

Good morning, and thank you for that warm introduction. I'd also like to extend my thanks to the organizers for the opportunity to address you here today.

To those of you who have traveled to be here this week, welcome to the consultation capital of the world!

As you may be aware, Canada's federal government has been on a consultation kick since being elected almost one year ago.

By most counts, there are over 150 consultations currently underway across government.

The consultations are driven by many factors and priorities, but two stand above the rest: economic growth and environmental sustainability, which includes climate change.

In other words: clean growth.

At this conference and our industry think about the smart grid of the future, clean growth is a timely and relevant agenda for us. Because Canada's electricity sector has much to offer.

Now, as the Head of the Canadian Electricity Association, you might think I'm a little biased. As the old saying goes, "he who works with a hammer, sees every problem or opportunity as a nail." But this is not hyperbole.

Electricity has been called the "great enabler" of modern society for good reason.

From the alarm that woke you up this morning, to the traffic lights that guided your commute to work, electricity is central to our lives. In fact, I'd be hard-pressed to think of any other public asset that provides more good, to more people, every single day of the week.

Electricity has become indispensable to the quality of our lives, and to the competitiveness of our economy. Both our social and economic prosperity depend on it.

Simply put, it is a national **Strategic Asset**. Like any asset, it must be thoughtfully nurtured.

You all know that the electricity sector is undergoing an unprecedented transformation:

- **Infrastructure is aging** and needs to be replaced and modernized;
- Traditional **business models** are evolving;
- Distribution grids are becoming **smarter**;
- **New technologies** are challenging conventional forms;
- **Customers** are more empowered today than ever before, as they transition from passive consumers to active partners;

- **De-carbonization** remains a “top of mind” issue.

How we respond to these challenges and opportunities will define whether electricity will be a catalyst for Canada’s clean growth ambitions, or our sector will be disrupted by it.

With that context in mind, let me briefly touch on three points that I believe sit at the heart of our sector, and at the heart of this conference: the need to invest, the need to deliver, and the need to innovate.

First, the need to invest.

Canada’s electricity sector must invest \$350 billion over the next twenty years to renew our aging infrastructure. There’s no getting around this, like in the US, EU, and Japan, our systems are approaching an end-of-life-cycle.

Clearly, the scale of investment will have implications for consumers, because no one --- neither home owners nor business owners --- likes paying more.

However, it’s not merely a matter of infrastructure the old way, replacing like-for-like.

We have an opportunity, in fact an obligation, to build an electricity grid that will power a very different and rapidly-changing future, for a very long time.

And in the process, to ensure that we pass on to our children and our grand-children a system that *at the very minimum*, is as good and reliable as the one we were fortunate to inherit from our forefathers and mothers.

The good news is that the process of grid modernization is well underway. Our members have been investing some \$13-14B annually for the last number of years.

The tricky news is how political electricity rates have become in provinces and communities across the country.

Ontario is a classic example.

Indeed, at Queen’s Park, electricity rates, rightly or wrongly, have become one of the chief political weapons for the Official Opposition.

In this room, we know that delivering power is a feat of engineering, not of political maneuvers.

As a former politician, I know how hard it can be to resist the mantra that everything is political.

We must always remember that electricity is a critical input for businesses, households, and individuals.

Our indispensability can leave us feeling exposed, but it is also our greatest strength.

In addition to the significant financial investment, I also believe we must make another kind of investment.

Namely, we must strive to find better ways of discussing this indispensability with consumers and Canadians at large.

A dialogue that would dispassionately address the issues that really matter the most.

About the value that electricity plays in our lives and in the life of our nation.

About how we factor in this value when it comes to the very important matter of pricing and costs.

About how competitive our rates are relative to other commodities, and to electricity prices in the U.S., EU, or Japan.

About our systems reliability record.

And about how important it is to build the best and strongest system for our kids and grandchildren, and not just the cheapest, if we wish to maintain this reliability.

It is critical that we have this conversation. And to conduct it in a frank, accurate, and respectful manner.

Second, we all need to deliver on the promise of electricity.

Governments – the feds in this town and the 13 in provincial and territorial capitals – are pursuing major, transformational policy objectives.

If you consider some of the major goals they are trying to achieve as a country, whether it's:

- Increasing innovation;
- Developing green sources of energy;
- Reducing GHG emissions across the economy;
- Sustainably developing our natural resources; or
- Growing the middle class, and building a more prosperous life for all Canadians, including our Indigenous Peoples.

All of these are major files, and all are heavy political lifts.

And in all of these, electricity plays a central role.

In fact, I believe we are in an enviable position.

Electricity stands as Canada's clean energy solution. Our national electricity system is currently at some 83% GHG free. That's amongst the highest percentages of any country in the world!

We have reduced our greenhouse gas emissions by 30% since 2005, and will likely do so again by 2030 as much of Canada's fleet of coal-fired generation comes offline. No other industrial sector can boast that emissions trajectory.

And yet, today electricity powers only 20% of our industrial, commercial, residential and transportation activities.

As a society, we must to grow that number.

Look: if Canada is to achieve a 30% decrease in greenhouse gas emissions by 2030, an 80% decrease by 2050, and carbon neutrality by about 2070 – targets that are very much at the top of the agenda in Ottawa – then we must develop and drive an electrification strategy for Canada.

Transportation, buildings, industrial activities...opportunities abound to reduce emissions while improving the quality of life for Canadians.

In terms of transportation, for example, which contributes about 25% of Canada's carbon footprint, going electric cuts fuel costs while drastically reducing emissions.

I'm not saying full electrification of Canada's economy is going to happen overnight. And nor should it.

After all, we must pursue reasonable economic evolution and not an ideological revolution.

An incremental shift will allow electricity companies to better understand the impacts on the system and make the appropriate adjustments. It will also allow more time to find innovative solutions to the complex technical issues that will undoubtedly arise.

But we must build the case for electrification now.

Barring a technological breakthrough that nobody has yet envisioned, the next 40 to 50 years of Canada's energy landscape is being formed today. Here in Ottawa, in Provincial capitals and – coming soon to a theatre near you – in Marrakesh, Morocco during COP22.

CEA and its members are engaged in this conversation, but to effectively communicate the promise of electricity to policy-makers, regulators, and customers, it will take an ongoing, sector-wide effort.

It will take a village.

Finally, to meet these needs while maintaining a safe, reliable and affordable electricity system, we must continuously innovate.

Fortunately, there is recent success on which to build.

Often, when people think of the next big invention, they visualize those brilliant young minds experimenting in their garages in Silicon Valley and elsewhere. And think, that's where the next Google will come from.

And that's valid. But that is only part of the story.

Because our members, many of whom have been around a long time, are also driving innovation.

Out on the West coast, **BC Hydro** is leading a smart infrastructure initiative, working with partners to deliver a public network of EV charging stations.

SaskPower's Carbon Capture and Storage Project is the world's *very first* commercial-scale installation in a coal-fired plant. Now operating near peak capacity, it captures more than 90 per cent of carbon dioxide and 100 per cent of Sulphur dioxide.

Ontario Power Generation has converted coal to biomass. Its Atikokan Generating Station is the largest 100 per cent biomass-fueled plant in North America.

Nalcor Energy's Ramea Wind-Hydrogen-Diesel Project reduce diesel generation and associated emissions, which can have great commercialization potential for our remote communities in Canada. This is so important because Canadians living in those communities, together with indigenous people, are no less deserving of the benefits of a low-carbon lifestyle and prosperous economy than the rest of us.

Here in the nation's capital, **Brookfield and Hydro Ottawa** are part of this list too.

The question is not whether we are innovating. It's whether we can keep up and even deepen our resolve.

As I'm sure many of you can appreciate, provincial regulators tend to focus on immediate costs and needs in order to keep electricity rates as low as possible. I get that.

But this leads to capped infrastructure investment and an overall reluctance to support innovative pilot projects, or integration of renewable and/or green technologies, or the extension of service to areas without sufficient ratepayer critical mass, such as to Northern Canada.

These market failures represent important “gaps” that must be filled by electricity-sector ingenuity and – in some cases – public funds.

In this regard, for the last several months, we have been making the case to Canada’s Federal Government to invest in different ways, and by different departments, in the electricity sector, in an effort to bridge this gap.

Put good money after good, we told the government.

An investment in Canada’s electricity system is an investment in the future we want.

They appear to be listening.

There were a number of positive “nuggets” in Budget 2016.

Also, in August, Natural Resources Canada announced \$25 million for an Energy Innovation Program focused on Clean Energy Innovation.

While the available funds are modest in the context of the government’s 10-year \$125 billion infrastructure investment program, I am pleased that the government recognizes the value and necessity of public support for electricity-sector innovation.

The Clean Energy Innovation program covers up to 50% of demonstration project costs and 75% of research and development costs for a specific technology or application. Funding is capped at \$5 million; the minimum is \$300,000.

The deadline for applications is October 31st, and it is worth noting that the application form is quite light for the amount of funding available (for example, the maximum length for project descriptions is 1,000 characters).

But here’s the catch:

We need you to put forward applications. We need you to make use of this new funding mechanism.

Active engagement shows that we are interested in the technology areas identified, that we welcome federal government support, and that we are keen to take advantage of funding opportunities as they arise. These are important signals to send as the government maps out how it will allocate resources in the years ahead.

Proposals are being requested in the following areas germane to the electricity sector:

- Renewable, smart grid and storage systems;
- Reducing diesel use by industrial operators in northern and remote communities;
- Reducing greenhouse gas emissions in the building sector;

- Carbon capture, use and storage;
- Improving industrial efficiency.

Again, I encourage you to submit your proposals by the end of the month!

Conclusion

In closing, these three points, actually three words – **invest, deliver, and innovate** – capture the imperative that frames our electricity system.

A future-shaping imperative. An imperative built on a foundation of clean, sustainable growth, driven by new technologies and increase productivity.

Throughout our history, we have undertaken major projects.

Think of the great railroads of the 19th century, or the highway, seaway, and national broadcast systems of the 20th.

Or, the Canadian-made arm that extended mankind's reach into space.

We undertook these initiatives because we understood the importance of looking ahead. And each time we did, it was transformative.

Uniting our country, facilitating the movement of people, goods and services, and laying the foundation for economic prosperity for generations to come.

Today, we are again at one of those transformative moments. A time to build something important. Something enduring.

And if we do it right – and if we do it together – we can build a brighter, greener and better tomorrow for all Canadians.

Thank you.