



Canadian
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Association

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canadienne
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The Imperative of a Clean Energy Future

An Address

by

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Preparing for and Responding to the Mandate for Clean Energy

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Introduction

Good morning, and thank you for that warm welcome.

I'd also like to extend my thanks to CI Energy Group for the opportunity to address you here today.

In doing so, I'm happy to note the presence of a solid number of our CEA members on the agenda, friends from *Capital Power*, *ENMAX Energy Corporation*, *AltaLink*, *TransAlta Corporation*, and *TransCanada* are in attendance. I hope I have not missed anyone inadvertently.

And of course, the event co-chair Devin, is CEA's VP of Public Affairs.

I am pleased to delve into the topic of, *The Mandate for Clean Energy*, as in the years ahead, it will define our industry, our economy, and our way of life. Clearly, it is the way of the future.

I'd like to briefly set the stage for our panel of experts by touching on what I believe are **four** key points.

1. First, electricity plays a central role in our clean energy future.

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

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.

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**.

And it gives us a leg up on all but a few countries in the world.

But like any asset, it must be thoughtfully nurtured.

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 if you consider some of the major goals we are trying to achieve as a country...whether it's...

- Increasing innovation,
- Developing green sources of energy,
- Reducing GHG emissions,
- Sustainably developing our natural resources, or
- Building a more prosperous life for all Canadians, including our Indigenous Peoples.

...electricity, is central to each and every one of these objectives.

2. Second, electricity is a force for balancing our green energy ambitions with our economic necessities.

The climate change agreement reached in Paris has the *potential* to be a watershed moment.

I say ‘potential,’ because what we *end up* doing, matters more than what we said.

Our federal and provincial governments are clearly seized with this imperative. And they must now move from the “poetry” of the Paris Agreement, to the “prose” of policy.

In doing so, they must build a national consensus for a long-term plan; one built on consultation with industry and stakeholders; and one that will get the blessing of Canadians.

This will not be an easy feat. Some have referred to it as the challenge of our generation.

However one defines the undertaking, it is a pressing and complex global imperative that will severely test our resolve and ingenuity as an international community.

As we move forward, it is important to remember that this is not solely an environmental matter.

It is equally an economic and financial issue.

One that must be prudently seen from all sides, weighing both the benefits and their

costs, and then charting a sure path to clean economic growth.

In this regard, Canada's electricity sector is already among the cleanest in the world.

We have reduced emissions by nearly 30% since 2005. That's more than any other industrial sector.

And we will likely do the same again by 2030.

Today, some 83% of our electricity comes from non-GHG emitting sources.

By comparison, Germany generates just 41% of its electricity emissions-free. The United States? - 31%. Japan? - 15%.

In terms of coal generation nationally, Canada sits at 15%.

By contrast, the U.S. figure is 40%. Ontario, for example, now generates 99.7% of its electricity GHG-free.

And in Saskatchewan, SaskPower's Carbon Capture and Storage facility is looking to produce electricity that is 10 times cleaner than traditional coal plants.

Here in Alberta, Genesee 3, later followed by Keephills 3, jointly owned by Capital Power and TransAlta, are the first Canadian facilities to use supercritical combustion technology.

The point is, that while the costs to 'green' our electricity system are real, they will be lower than those in many other nations.

That being said, cost is as much about perception, as it is about actual numbers.

This is particularly true in Alberta, where electricity prices have decreased drastically - from \$49 per megawatt hour in 2014 to around \$16 so far this year.

Yet, consumer *perception* is that energy costs have never been higher.

Bridging the "perception gap" will be crucial to building a renewed energy system.

We must also find the *balance* between environmental goals and economic necessities.

Canada's electricity sector happens to operate at the nexus of these two imperatives, and it is uniquely positioned to power our future low-carbon economy.

Moreover, when people think of the next big invention, they picture youngsters experimenting with different gadgets in garages across Silicon Valley. Which is true.

But the reality is that companies, who have been around a long time, like most of CEA's members, are also at the forefront of innovation.

Indeed, it has been this very drive for, and investment in, new technologies among our members, that has allowed Canada to surpass the goal set by President Obama in his Clean Power Plan, a full 15 years before he announced it!

3. Thirdly, how do we transform this challenge into an opportunity for Canadians?

We currently run a \$3B electricity trade surplus with our friends south of the border.

And this is expected to rise considerably, given the opportunities created by their Clean Power Plan, and the recent announcement at the North American Leaders' Summit in Ottawa, to increase clean power generation from 37% to 50% by 2025.

This clearly puts electricity at the heart of our shared, strategic future.

As already mentioned, Canada's GHG-free generating mix already far exceeds those of the United States and Mexico.

We therefore stand ready to enable North America's clean energy aspirations by exporting more clean power; by providing hydro and wind project capital and expertise; and by developing new clean electricity resources here at home.

In 2015, Canada's export of electricity to the US was valued at \$3.1 billion.

When it comes to clean electricity, Canada is a country truly blessed. There is one exception, though. Many of our remote, northern and Indigenous communities lack access to clean and reliable power.

They still rely on expensive, dirty diesel-fuel for meeting their basic energy needs.

The cost of which, in many regions, is estimated to be over 10 times higher per kilowatt-hour, than the Canadian average.

I see this as a case of "*energy inequality*". An inequality that undercuts economic prosperity and social progress for those fellow citizens. An inequality that limits their quality of life.

Governments and industry must work together and make this an urgent, national priority.

In the march of history, we first electrified our cities. Then, we turned our attention to the rural communities. Now, the time has arrived to complete the national undertaking and electrify our North.

Why urgent? --- Because it's 2016.

And because Canadians living in those communities, are no less deserving of modern, clean energy than the rest of us!

4) Finally, many of Canada's electricity assets are reaching the end of their lifecycle.

There is no getting around this reality.

As a result, our members are stepping up to the plate and investing aggressively.

In 2014 alone, they ploughed more than \$13 billion into infrastructure renewal and modernization.

But more will be required.

The Conference Board of Canada estimates that from 2010 until 2030 we'll need to invest some \$350 billion in our electricity system.

And that is what is needed to just maintain the status quo.

But we must also take this opportunity to invest in a smarter, more responsive electricity system.

One that is capable of integrating new technologies and addressing external challenges.

New processes and technologies will become increasingly important for:

- lowering emissions,
- promoting economic growth, and
- propelling Canada to the forefront of a green, knowledge-based economy.

They will also help Canada's electricity system expand to accommodate new electricity uses.

To increase responsiveness and storage capabilities.

To build a two-way grid that Canadians can contribute to.

And enable new forms of energy generation, such as wind, solar and tidal.

As changes in our sector are often measured in decades, we cannot afford to wait.

By the way, Canada's not alone in having to invest in its electricity system.

The infrastructure life cycle has also caught up in Europe, Japan and the United States.

All of which have much higher price tags than our own.

Yes, building the electricity system of the future will come with a cost.

And no one likes paying more for their electricity.

Homeowners don't like it, and neither do businesses.

And when you have unhappy consumers, you have a perfect storm for political inaction, or immediate, short-term thinking.

I was a former politician, I get that. But I'm also a realist.

If we do not make these investments, the consequences would be quite significant:

- There will be less than-reliable electricity.
- A corresponding loss in quality of life.
- Squandered economic opportunities.
- And a less competitive economy.

All because of the potential for more disruptions caused by increased brownouts and/or blackouts.

Of course, we need to keep costs as low as we can. But we cannot be tempted to simply build the *cheapest* system available.

For the sake of future generations, we really must invest in and build the *smartest*, *strongest* and *most responsive* system possible.

While we talk a lot about the need for *smart* grids, we also will require *smart* regulations and legislation. In other words, governments --- both provincial and federal --- must develop creative means and programs by which industry will be induced and facilitated to build the very system Canadians want and deserve.

In this regard, I am pleased to report that our industry has been having very constructive discussions with several federal departments responsible for developing programs that will implement the government's ambitious energy and environmental agenda. A tall task no doubt, but I am hopeful that there will be fruitful outcomes in the months ahead.

CONCLUSION

In closing, these four points, actually four words – **asset, balance, opportunity, and investment** – capture the imperative that is *the Mandate for Clean Energy* in our industry.

A future-shaping imperative.

Tomorrow's economy will be built on a foundation of clean, sustainable growth.

A growth that will drive new technologies, and increase productivity.

But that future must be seized today.

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 reached out to 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.

Thank you.