



## 2016 Canadian Energy Person of the Year Address Elyse Allan, President & CEO, GE Canada

### *The Path to Canadian Energy Leadership*



Thank you, for that very kind introduction, and thanks as well to the Energy Council of Canada for this wonderful honour. I see it as a tribute to the thousands of employees of GE Canada, who inspire me every day, and to a company founded back in 1892 in Ontario by one of the greatest innovators of all time, Thomas Edison.

Tonight, I want to talk about the changing landscape of the Canadian energy industry, and what it will take for us to achieve and maintain global competitiveness – what it will take for us to truly be energy leaders.

Not very long ago, there was talk about Canada being an energy superpower, and that designation was based largely on the immense scale of our resource endowment. But as everyone here knows all too well, the global and domestic environment for our industry has changed dramatically in recent years.

Is energy leadership still attainable? I believe the answer is yes, but it will come less from our production capacity and more from our innovative capacity.

And that is my main theme for this evening. For Canada/ the path to energy leadership is through innovation.

Let me start by mentioning a couple of factors that are driving the need for our industry to become more innovative.

The first is carbon pricing. This is now a fact of life in Canada. It will impact the cost structure not merely of the energy sector, but of virtually every sector – from transportation to manufacturing, from construction to agriculture – you name it, the cost to consume energy will increase. We will need to keep a watchful eye on our relative competitiveness.

But as certain as that is, so too is the certainty that innovation is the most effective tool we have to lower costs – and reduce our carbon emissions at the same time. When viewed through this lens, carbon pricing moves from threat to opportunity.

Carbon pricing is the most tangible and cost-effective policy tool available to achieve what Canadians are demanding – striking the right balance of being a responsible actor in the fight against climate change, and maintaining our legitimate role as an energy supplier to the world.

Carbon pricing will have a transformative impact on the rate at which we adopt new technology because it changes the fundamental economic equation around risk and reward.

And there is another compelling reason why faster technology adoption is imperative -- not just in our sector, but in every field of enterprise.

I'm speaking of course of the technology race we all find ourselves in. Call it the IT Revolution, the Digital Revolution, the Internet of Things.... whatever we call it, we're all faced with the reality that technology today is disruptive, and these disruptions are occurring at an accelerating pace. Technology is reshaping the competitive landscape for energy companies around the world - and this is one race where I can assure you / the tortoise does not win.

There are many cutting edge companies in Canada that are creating exciting new technologies and digital solutions. No surprise there! But the real question is, what's the appetite for these innovations among large companies and – even if they are open to new technology -- how capable are they of adopting it?

This is sometimes referred to as “receptor capacity”, and it is something I often encounter. I see energy customers who are excited about new technologies and ideas, but they don't have the people or the processes to embrace or assess the risks and opportunities involved.

Let's say that a new technology does make it past the front door. Then there is the scale problem. What is the company's risk appetite for a trial run, and for the costs of bringing the technology to scale with a smaller player?

I'm on the Federal Minister of Finance's Advisory Council for Economic Growth, and I can tell you that the scale issue is a focus of discussion. That's because an important source of job growth is when a company is scaling up. Not only does this create new employment, but it also has a real impact on GDP growth because companies are really productive when they're scaling up.

And so the question for the larger corporations and utilities here this evening is, how do we figure out how to engage effectively and in a sustained way with smaller, innovative companies? How do we ramp up our “receptor capacity”?

My own company is running a lab in Calgary that is tackling this very problem. At the GE Customer Innovation Centre, we have process engineers working with seven small companies to accelerate the scaling of their innovations. The project started in March, and today all seven companies are working with either GE or our customers. Seven months from the garage to the boardroom and production site. The excitement among the seven and their peers is palpable. We continue to assess new companies for participation.

More space for technology adaptation and faster scaling are a start. But if we don't help our employees adopt and embrace this new technology, it won't work. Jim Bessen at Boston U wrote an intriguing book on innovation and the workplace...and uses learnings from the early 1900s industrial revolution ...he found one of the greatest barriers to the adoption of new technology was that workers were overwhelmed by it. It could take a generation for the new technology to be fully adopted.

Let me state the obvious – our industry doesn't have a generation to spare!

One solution, according to Bessen, is for companies to get new technology in the front door as fast as it emerges. The sooner your employees digest it, the sooner they will turn it to competitive advantage.

When we talk about enhancing a company's ability to absorb new technology and quickly bring it to scale, we're inevitably talking about retraining and reorienting the existing workforce. Too often, however, companies think that in order to bring in new technology and boost productivity, they need to shed older workers and hire tech-savvy younger ones. That's a mistake.

Let me tell you a quick story to illustrate this point. At our aviation plant in Bromont Quebec, we introduced 125 robots to the plant and engaged young software engineers to program design them. We found that they knew everything about robots and very little about manufacturing jet engine parts. We needed our older, more experienced people to work alongside the software developers and robot designers. This pairing not only got the job done but changed the mindset of our older workers, who now embrace the new technology. As it turned out, they were the bridge we needed to move into a new era of manufacturing at that facility.

Companies can also improve their receptor capacity by tapping into what GE calls "the global brain". There are some great examples of this in action:

- For more than a decade, GE has worked with jurisdictions around the world to develop electricity microgrids. These small, self-sustaining grids use distributed generation resources to deliver clean power to local communities and provide local communities with more choice in terms of supply and demand.
- Evok Innovations in Vancouver is a partnership between Cenovus Energy, Suncor Energy and the BC Cleantech CEO Alliance. This \$100 million fund "accelerates the development and commercialization of solutions to the most pressing environmental and economic challenges facing the oil and gas sector today".
- Emissions Reduction Alberta and SDTC teamed up for a competition that offers four \$10M prizes to Cdn SMEs that come up with the best GHG reducing technologies for deployment first in Alberta.

Reaching out beyond the walls of one's company to find better ways to reduce GHG or meet other societal aims has corollary benefits as well. The Canadian public wants and expects us to collaborate on developing solutions that will make the energy industry more sustainable. Collaboration speeds up the adoption of new technology and puts us further along that path to energy leadership.

So far, I've been talking about innovation in the context of new technology adoption. But there is another area where I believe we need to innovate. It is how we as Canadians, and as an energy producing nation, can play a role in addressing the global challenges of energy poverty and climate change. These challenges are intertwined, and we need to take them on simultaneously.

Today 1.2 billion people live without access to electricity, the backbone of our modern society. Consider this: when women in developing countries use kerosene to cook their families' meals, the smoke they inhale is the equivalent of smoking four packs of cigarettes a day. When we speak about raising the health and living standards of people in developing nations, ending energy poverty is a material part of the equation.

Climate change also has undeniable environmental, economic, social and health impacts for the world. Carbon pricing has long been recognized as a cost-effective tool to stimulate the necessary innovation and behaviour change to reduce emissions. At its most effective, carbon pricing would be applied globally, which is why I believe it is so critical that we are thoughtful in this conversation.

Carbon pricing creates a new kind of level playing field, one where fuels compete based on their emissions. And one that encourages new technology choices that drive down those emissions.

The International Energy Agency has shown that, alongside the rapid expansion of low-carbon energy sources, the demand for oil and gas is also growing. Canada has the resources and the know-how to supply that demand and to show climate leadership in how we do it. We need to reconceive this conversation, moving from a framework of conflict to one of cooperation.

And that brings me to my final observation this evening. We need to get better at telling the Canadian energy story to the Canadian public, to audiences in the United States - our predominant energy customer, and to potential new markets overseas.

This is a big problem for our industry, and the evidence of that problem is all around us. Here and abroad, there is a growing backlash against infrastructure projects – even those involving renewable energy – and a growing trust deficit with business in general.

We need to get better at telling our story to young Canadians. By the time they reach university, it's too late. They're either receptive to our industry, or they're out protesting the latest infrastructure project. And frankly, these days, the latter is more likely.

There is no retreating from this challenge. We need to step up and become more visible, demonstrating how much we contribute to the economy, how we are working collaboratively to reduce our carbon footprint, how we are creating good jobs in places where they are most needed.

In today's world, communications is not a cost of doing business; it is a core business in itself. Effective communications mitigates risk and enhances regulatory and public acceptance, and this reality should inform how we treat it and allocate capital and resources to it.

This is a battle for the hearts and minds of the next generation, and it is one we simply cannot afford to lose.

"The world needs more Canada" is a refrain I hear frequently these days. After Tuesday night, it just may well become our new national anthem!

The world needs more of a Canada that is both a climate leader and responsible energy provider...

...a Canada that prices carbon appropriately, and places real targets and timelines on emissions reduction...

...a Canada that leads in energy innovation, and uses that leadership not only to transform how we produce and consume, but also to solve the energy challenges of people around the world.

I don't have all the answers for you this evening. Nor do I want to put any further distance between you and the arrival of your dinner!

But I hope I've put forward a few ideas that can move us faster along the path to global competitiveness and leadership. The Canadian energy industry has a proud history and all the tools at hand to build a bright future. All we need to do is take hold of them.

Ladies and gentlemen, it's been a privilege to speak to you this evening, and a great honour to receive this award.

Thank you all very much.

*CHECK AGAINST DELIVERY*



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