

Green Power in Ontario:
The Spanish Connection

“Ontario’s Green Power Feed-in Tariff Program”

A presentation by

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Thanks Brian and Jose for having me here and welcome to everybody.

To begin with, when I was thinking about preparing for here and I was thinking while I haven't had a chance to go to Spain and visit the energy system yet, I have had a chance to visit Spain a few times on various holidays.

Until lately, I was probably most impressed by three things in particular in Spain.

The architecture of Gaudi—I was very impressed at an early age.

The Barcelona waterfront. I happened to have a chance to visit that when Toronto's waterfront paled by comparison. I also happened to be in Madrid at a time when the city was seriously expanding its subway system and making much more progress than we have here. And what's an interesting coincidence is that I ended up being the trustee for the subway system extension in Toronto which will eventually run through this campus.

When I look back at those trips, there was a lot of inspiration. Some of it aesthetic. Some of it on the urbanization, planning front.

But I didn't realize that I'd be coming back with much more inspiration for the job that I'm in now.

As many of you here today already know, Ontario has looked to Spain for lessons in how to build our supply of renewable energy. Spain was very influential in inspiring our former Minister, George Smitherman, who saw firsthand what could be done—in Europe and Spain in particular.

What we also learned from your experience, is that with a strong vision, it's possible to pursue a number of goals at the same time. Clean our air. Stimulate the economy. Create green jobs while building the foundation of Ontario's future prosperity.

I'd like to talk today about is how we aspire to follow in Spain's footsteps. And also what we've learned from Spain's Feed-in Tariff Program. I'd also like to tell you how we've modified your blueprint. Reworked it. And made it so it fits our needs here in Ontario.

In fact, we just launched North America's first FIT program less than two months ago. We've already seen an overwhelming interest in the program—including nearly 500 applications and 55,000 unique website visits—all weeks ahead of when we'll begin awarding contracts.

But before I get into the FIT details, I'd like to take a step back and provide a little context. I'd like to tell you Ontario's story because Ontario has a very good story to tell.

I should probably tell you about the Ontario Power Authority's role in all of this.

We were created to make sure Ontario has a reliable and sustainable electricity supply.

At the OPA, we plan resources for the long-term and coordinate conservation initiatives. We also contract new energy resources. We look out for the ratepayer but increasingly we also being asked to consider objectives other than just keeping the lights and prices low. Those objectives also now include social, economic and environmental goals.

We don't own generation stations or transmit electricity. We're also not involved in local distribution—that's up to about 80 local distribution companies across the province.

We're about five years old. At the time we were created, Ontario was having trouble attracting investment into the energy sector.

We were so stretched, we went through a couple of summers with our fingers crossed. Hoping we'd be able to keep the air conditioners on—that our supply wouldn't run out. I'm very happy to say that isn't the case right now and we're secure for another few years. We even have periods of surplus baseload generation—a new problem.

That being said, we have challenges. Our nuclear fleet, comprising about 50 per cent of our supply, is aging and will soon be in need of refurbishment.

The provincial government had also made a decision to phase out coal—another 20 per cent of supply—for environmental reasons. Getting rid of coal is the single largest climate change initiative in Canada and it will be gone by 2014. As far as we know, we're the

only jurisdiction in the world that is phasing out coal altogether as a source of generation.

Clearly, we have to replace it with something.

Building on Minister Smitherman's trip a year ago, as well as consultations with the public and stakeholder groups, the government developed a groundbreaking piece of legislation that was passed into law in May.

The Green Energy and Green Economy Act positions Ontario as a North American leader in renewable energy. It is significant to note that the title of the legislation is the Green Energy and Green Economy Act.

The Green Energy Act has various tracks. Renewable energy, the Smart Grid and Conservation. The OPA has a part in all of them.

Conservation will always be first on the list. We're already well on our way to meeting our target of reducing peak demand by 6,300 megawatts by 2025. And we're looking at ways to accelerate that target.

The Act will not only give a fresh push to conservation, it will usher in a new era of clean energy. It is also expected to encourage billions of dollars of investment in Ontario's electricity sector. And create 50,000 green-collar jobs in its first three years.

We have high aspirations and we're already seeing signs of the future.

In fact, we've gone from just seven wind turbines in 2003 to 670 this year and by the end of 2012, we're expecting that number will grow to 2,400. That represents \$6.5-billion investments this year compared with \$10.8-billion in 2012.

We're looking at 100,000 solar rooftops, and we believe that's just a window into what's possible.

To put those numbers in some context, we now have 33,000 MW of electricity serving 13 million people. Our highest-ever peak demand was 27,000 MW. It's now about 24,000 MW. Off-peak demand is 11,000 MW.

Contrary to what people think, it doesn't all come from Niagara Falls. In fact, 50 percent of our supply is generated by nuclear; 25 percent is hydro and coal is 20 percent and dropping.

Over the next few years, we're expecting to add about three to four thousand megawatts of green energy to our supply. Some of this is already in the pipeline, and some of that we expect to contract under FIT.

Clearly, our FIT Program is the cornerstone of the province's renewable energy plan.

FIT essentially opens the door to those wanting to invest in renewable energy projects in Ontario in ways that simply weren't possible before. Whether it's wind, water, solar or bio-energy projects.

Just as Spain saw a rapid uptick in wind energy projects as your FIT program rolled out, we also expect wind to comprise a large portion of our renewable supply in the early going. We have huge offshore capacity. And offshore projects aren't that far off.

We know there is also strong interest in solar energy, and we will eventually see our bio-energy sector grow as a portion of supply. We're already talking about converting one of our large coal plants to biomass and we're looking at others.

In fact, Ontario is a potential powerhouse in biomass. We're a land full of wood, pulp and agricultural waste—the kind of stuff that makes us the envy of bio-energy gurus around the world.

Our FIT program also offers developers and entrepreneurs attractive incentives to invest in projects. The prices are designed to cover capital, operating, maintenance and connection costs and a reasonable rate of return—an 11 year payback and an 11 percent Return on Investment. More generous than Spain in fact.

It's an open-ended program—there are no targets. We take all comers with a "right to connect," provided an economic test is passed. And the developer has take or pay features and socialization of some part of connection costs.

FIT also includes special funding to encourage municipalities, Aboriginal and community groups to become involved in renewable energy.

The result is more engaged consumers—some call them ProSumers—involved in both generation and conservation.

As I've already said, less than eight weeks in and we're seeing huge interest in our FIT program.

That doesn't mean that there haven't been a few bumps along the way. A few aspects that we haven't touched on today that may be specific to Ontario.

Just before we launched, the government was still putting the finishing touches on the program. Final decisions were still being made over domestic content and agricultural land issues. And when we did launch, some people who had gotten in early were taken by surprise by some of the rules. It took some negotiating, but we did work things out. We made allowances for those who were there first.

The good news is that we've got plenty of room for everybody. During the early days, the focus is going to be on the projects that are the most shovel-ready.

One thing I should note is that in charting the future, Ontario has not just taken a bold tack, but also a holistic and systemic approach to rebuilding our electricity system.

Looking to the future, we will see the electrification of our transit system as well as cars. We will also be looking at bringing more renewable energy onto the grid and further conservation measures. We will also be studying generation in all of its forms and looking to further diversify our supply mix.

Of course, there would be no point in bringing new green energy onto the grid without an acknowledgment that we desperately need to rejuvenate our transmission system.

In early October, the government announced the provincial transmission network will see a \$2.3-billion injection over the next three years. This is primarily to unlock significant potential for greener, cleaner electricity all over the province. Where there is critical mass, we will be building out the transmission system in every new phase of our renewables program.

The OPA is working closely with Hydro One, the Independent Electricity System Operator and local distribution companies on

priorities. This is a paradigm shift—never have we all worked in tandem on transmission and generation before.

We have also looked closely at how Spain has expanded its transmission capacity to bring clean energy on to the grid. And we've taken note of the careful planning, forecasting and publishing of your environmental targets and renewable supply plans—and their importance to investor confidence.

Clearly, it's been a very busy period. We've come a long way in a year. And we're excited about all that's been accomplished as well as what's to come as we begin the implementation of North America's first—and clearly—most comprehensive Feed-in Tariff Program.

It's our first go at this. We have been learning by doing as Jose said and will continue to do so—adding additional features and other fuel types, for example.

I do hope one day an executive or official in the energy sector in another part of the world will look at wind turbines and other large-scale projects and think of Ontario.

Spain has a good head start on Canada. But we're playing catch up as hard as we can. And hopefully together we can influence and inspire the world in green energy.

Thank you.