

Renewable Energy Finance Forum

**“Lessons Learned from the first round of
applications for the FIT program”**

A presentation by

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Sutton Place Hotel

Toronto, Ontario

March 30, 2010

Thank you for this invitation. You've heard a lot this morning about various provincial plans. I'm here to drill down into some specifics of how it's going in practice. I'll try not to duplicate too much of what Sue said. I am certainly aware that lunch comes after me.

It's timely to be here. Financing is a big part of our program and the success of it.

And I come from a finance background so I'm always interested in where things are going.

I came to this job at the Ontario Power Authority a year-and-a-half ago from being Deputy Minister of Finance with the Ontario government.

That job certainly gave me an appreciation for the importance of energy, and electricity in particular, to the provincial economy. It's nice to be in a sector where we're creating jobs.

I'm not the first to say: Nations that lead the clean energy economy will be nations that lead the global economy.

So, clearly, there's a lot at stake. And there's lots of interest.

This morning, I'd like to tell you Ontario's story. Because Ontario has a very good story to tell.

I'd like to tell you about new opportunities for you. How Ontario is providing attractive incentives to developers looking to supply green energy to our grid.

And opportunities not just for developers but also manufacturers, constructors, engineers, lawyers and, of course, financiers.

As Sue discussed the Ontario government passed a groundbreaking piece of legislation in May.

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

The Act is expected to encourage billions of dollars of investment in Ontario's electricity sector. It is also expected to create 50,000 jobs in communities across the province in its first three years.

The cornerstone of the Green Energy Act is our Feed-in Tariff program—the first and most comprehensive of its kind in North America.

It's certainly getting a lot of attention.

In fact, Al Gore recently called Ontario's plan—and I quote—"the single best green energy program on the North American continent."

So, clearly I'm not exaggerating when I say that the world is watching us very closely.

Two weeks ago I was asked to tell Ontario's story at CERA which is North America's largest oil, gas and electricity conference. After I was finished, my fellow panelist, the chair of the California IESO said: "Well now, we should all move to Ontario." Not bad when you can get someone from California interested in moving to Ontario in the month of March.

It's true: we do have ambitious goals. We want to build Ontario into a powerhouse of clean energy and green technology.

We're aiming to be world leaders in green energy--whether it's on or offshore wind. Solar PV. Biogas. Water or landfill gas.

But we also want to be a destination. The place where green manufacturers from around the world come to set up shop.

In other words, we are open for business. Green and clean business.

I'm happy to say manufacturers are already taking note.

For example, Samsung and a group of Korean companies recently announced plans to invest \$7-billion to build green energy projects in Ontario—including four manufacturing plants. It's expected to create 16,000 jobs in the province alone.

And earlier this month, Bosch Solar Energy—an arm of the German engineering giant—announced it will partner with a Canadian firm to build thin-film solar panels in Ontario. There have been a number of smaller projects announced, too.

Last night, at the EDA/Enercom conference the minister said there are now at least seven manufacturers that have announced plans to open solar and wind turbine manufacturing facilities in this province

It's a very strong beginning. But we see it as just that: a beginning. We're anticipating many more announcements in the coming months.

Consider these facts.

First, the Ontario Power Authority's credit rating is ranked investor grade by both Moody's and Dominion Bond Rating Service. Moody's rated Ontario as Aa1 in 2009 while DBRS gave the province an A(high) rating.

The province is also uniquely positioned. Ontario is Canada's richest market with a population of 13 million and the country's highest personal incomes. We're also the

economic heartland of Canada—generating about 40 per cent of the GDP.

Our business community is export focused with easy access to NAFTA and other world markets. In fact, there are more than 135 million consumers within a day's drive of southern Ontario.

In other words, getting a toe-hold in Ontario gives investors ready access to a lucrative North American market. A market that is being touted as the next hot growth area for green energy.

So, if you haven't already set up shop in Ontario, perhaps it's time to do so—whether you're a project developer, a manufacturer or a financier.

I'd like to explain the incentives that are available under the Green Energy Act.

But before I get into the details of the renewable aspects of the legislation and what it means for you, I'd like to tell you a bit about our conservation efforts because it's all part of an integrated plan.

Conservation will always be first on our list and we've got ambitious goals.

We're already well on our way to meeting our target of reducing peak demand by 6,300 megawatts by 2025. That's the equivalent of taking one in five households off the grid. In fact, we're already one quarter of the way there.

We're also installing a smart grid which will not only help us bring renewable energy onto the grid but help us achieve our conservation efforts. So far, we've installed 3 million smart meters across the province and 1 million consumers will be on time-of-use rates very soon.

We're also the first jurisdiction in the world that is getting out of coal-fired generation completely. And at one time it represented 20 per cent of our supply mix. It's the single largest climate change initiative in North America and it will be gone from our supply mix by 2014. Our plan means that we are reducing the carbon footprint of the electricity system in Ontario by 75%.

Like Quebec, transportation is the next sector to focus on. We'll see a further greening of our economy with the electrification of our transit system and electric vehicles

Clearly, we had to find something to replace coal with. And that's where our Feed-in Tariff program comes in. FIT is the primary vehicle for building our supply of green energy in Ontario—and what is allowing us to eliminate coal from our supply mix.

We currently have more than 35,000 megawatts of installed capacity. Our supply mix breaks down this way: about half comes from nuclear with 25 percent from hydroelectric plants and the rest primarily from natural gas and coal. It's a good starting point—even an enviable one.

A growing portion of our power is coming from green sources. The percentages are still relatively small – wind power reached 1.6 percent last year but growing. I know the question came up earlier about incorporating intermittent resources into existing systems. With geographic diversity, centralized forecasting and the diversified supply mix, it's very manageable.

The question of storage also came up. We are always interested in *cost effective* options. Whether it's large scale storage, or storage paired onsite with renewables as a way of helping remote communities get off diesel, we're interested. However, the economics have to overcome the efficiency losses inherent in the technologies so it's not part of a long-term plan yet.

Over the next few years, we're expecting to add about three to four thousand megawatts of renewable energy to our supply. Some of this is already in the pipeline and some of that we are contracting under our Feed-in Tariff program.

To put this in context, we expect generation contracts under OPA management—including gas and renewables—will double to 26,000 megawatts and triple in dollar value to over \$44-billion in the next three years.

On a 35,000 megawatt system—give or take—that's a lot of investment and a lot of growth.

As I've said, a lot of growth will come with renewable energy.

We looked at the European approaches and consulted extensively before coming up with a made in Ontario design. We put together a program that was designed with the elements that investors wanted to see. That was borne out by the response we got.

We launched our FIT program in the fall and the response has been spectacular. Since October 1st, we have received nearly 7,500 applications representing about 9,500 MW of renewable energy.

This includes about 6,000 for the microFIT program—projects of 10 kilowatts or less. And 2,000 of those applications have already been given conditional offers.

Earlier this month, we announced 510 FIT contracts for projects that are between 10 and 500 kilowatts. And we will be making contract announcements shortly for the larger projects. And it's going to be huge—2,500 MW. And then we'll see another 1500 MW once the Bruce to Milton transmission line comes along.

FIT essentially opens the door to those wanting to invest in renewable energy projects in Ontario in a way that is

simpler and more certain than before. And attractive to developers.

It offers developers and entrepreneurs guaranteed prices to invest in projects. Our prices are designed to cover capital, operating, maintenance and connection costs and a reasonable rate of return—roughly an 11-per-cent return on investment and an 11-year payback depending upon the type of project. These are after tax numbers based on 70/30 debt/equity split. Projects are guaranteed for at least 20 years—40 if they are water projects.

We go to contract early so that developers can take that to financiers. We have milestones down the road. This design is intended to keep both sides serious, to keep projects moving forward and is a lesson learned from past processes.

And finally, there are different prices applied to different technologies and different project sizes.

All in all, it's very bankable and financeable. Although, we are seeing—in some cases—that some developers are having challenges getting through the construction phase. We're not alone in this—the same thing is happening south of the border. But that's where the folks in this room come in. A few more program details you may be interested in.

Sue outlined domestic content . Our intent is to attract manufacturers, to provide an order book for them at the outset. The OPA's role is to administer contracts—which includes looking downstream at domestic content fulfillment. We have been hearing developers say they would like upstream certainty such as prequalifying. While doing both enforcement and compliance would be a conflict for us, we are willing to take an early look at domestic content plans and potentially providing comfort letters (the most we can do) based on the strength of those plans.

Our domestic content requirements under FIT rules also guarantee market opportunities for those who manufacture

in Ontario. For example, 50 per cent of goods and services used in large solar projects must originate in Ontario. That figure rises to 60 per cent at the end of the year. Similarly, the domestic content of wind projects is currently 25 per cent but will rise to 50 per cent next year.

We do take ownership of the Environmental Attributes. The premise is that the Ontario ratepayer is paying premium prices for the renewable energy and therefore should get the benefit. We will adapt to whatever regime comes into existence—whether it’s federal/provincial/or regional. Ontario is part of the Western Climate Initiative. We’ll have to see what role an inventory of attributes will play in a voluntary market or a compliance market.

FIT also offers ownership and revenue-generating opportunities for other groups outside the private sector.

Recognizing the enabling role they can play and the differing capacities they have, special funding is available to encourage municipalities, Aboriginal and community groups to become involved in renewable energy. For Aboriginal and community groups, there is also a top-up to the tariffs we provide.

FIT is an open-ended program. This means that projects have the “right to connect”—if a project is economic to connect, it will be connected.

We’ve also designed the program to ensure it is easier for developers to build their projects. Ontario has streamlined the upstream approvals process—including environmental approvals. We’ve also put in place mechanisms to make sure projects keep moving forward.

But there’s little point in even talking about bringing new supply onto the grid without an acknowledgment that we simultaneously need to rejuvenate our transmission system.

Last fall, 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. That's why we are working closely with Hydro One to prioritize transmission system expansion projects.

And we know there will be additional transmission investments to come.

Looking ahead, we believe there are still many untapped opportunities for you.

According to World Wildlife Fund International, by 2020, the cleantech industry will be worth \$2.45 trillion—ranking it as the third-largest global industry behind the car and electronics industries. Canada is currently lagging according the study. It ranked 21st in cleantech investment, well behind the top three countries—Denmark, Brazil and Germany, while the US ranked 19th.

We're working very hard to improve that ranking.

It's true that we've seen a lot of foreign interest in our Feed-in Tariff program. The Deutsche Bank, for example, has had great things to say. I am hopeful Canadian banks, lenders and pension funds will see opportunities for themselves as well as they get more familiar with the program and projects under development. I believe they'll get on board once they see some real life successes as the economy improves.

So, this is a nudge to you in this room.

To recap.

- We've got credit worth projects**
- 20-year contracts**
- A solid offer**
- Guaranteed prices**

- **Good rate of return**
- **Opportunities for both large and small projects**

And, as I've already said, we've already got a couple of early jewels in our crown—Samsung and Bosch Solar Energy have big plans for their companies in the province.

But there's still room for you.

Our doors are now wide open. I'll say it again: If you haven't already thought about grabbing an opportunity here in Ontario, now is the right time to do so.