

**Niagara District School Board**

**“Ontario’s Changing Electricity Landscape”**

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I want to thank you for this invitation.

In many ways, I feel right at home here. I've always had a soft spot for teachers because I come from a long line of educators. My grandparents on my mother's side were teachers. So was my great aunt. They taught in one-room schoolhouses on the prairies. And they inspired my mother to pursue a degree in education, too. And if it wasn't for that, I wouldn't be here because she met my dad at university. So I have a lot to thank a publicly funded education for.

In speaking to a crowd of educators, I can't help but also think back to my own school days and how I came to be standing at the podium here today.

In fact, it's easy to trace the line between those days and who I am now.

I had an excellent education—both in and outside the classroom.

Along the way, I had a number of inspirational teachers. The lessons they taught me are ones I call on every day.

I was a relatively shy, frequently tongue-tied kid, but I was lucky enough to have teachers who convinced me to get outside my comfort zone.

As a result, I ended up as class valedictorian, speaking to a crowd of a couple thousand people—definitely beyond my comfort zone at the time but a situation I would find myself in more and more as life went on.

In high school, I also learned something else that has stayed with me. I wasn't one of those kids who knew all along what he wanted to do. In fact, it took me into my second year of university before I kind of landed in economics as a major.

But I had teachers who said not to sweat the uncertainty, to pursue what interested me and the rest would follow.

Wise words because along the way, I also learned you can do interesting work AND do important work at the same time.

And it was that realization—youthful aspirations of wanting to make the world a better place—that led me first into the Ontario public service and now to the Ontario Power Authority.

That's one of the core values of education—it rounds you out as a person and prepares you for whatever comes along.

So, I think it's important to note that we do recognize how important you are—as teachers—to our young people's futures. To our province's future. And to making our world a better place, as hokey as that might sound.

And that's what I'd like to talk to you about today.

What happens in your classroom lingers long after your students they have moved on. You give them the foundation they need. They carry those lessons back into their families and on into their adult lives. As engineers and nurses. Mothers and fathers. As citizens.

We recognize that you can't do it alone. You need the right supports to help you inform, engage and empower our future workers and leaders. And that's where we can come in.

As many of you already know, this has been a transformational year for the electricity sector in Ontario.

I'm not exaggerating when I say that the world is watching us very closely. And that I truly believe that the work we are doing is making Ontario a better place.

I should probably explain a little about our role at the OPA. We mainly do three things: planning, conservation and

contracting new electricity resources. We don't own, build or operate electricity stations. Our mandate is to ensure a sustainable and reliable electricity system for the future.

The passage of the Green Energy and Green Economy Act positions the province as a global leader in both conservation and renewable energy.

Conservation will always be our first priority—after all the cheapest electricity is the one you don't have to generate in the first place. We have the most ambitious conservation targets in North America—6,300 megawatts or the equivalent of taking one in five households off the grid altogether by 2025.

The Green Energy Act also puts much more of a focus on harnessing the power of the wind and the sun and bio-energy through our Feed-in Tariff program. It's the first and most comprehensive program of its kind in North America and the vehicle for building our supply of green energy here in Ontario.

It is also enabling us to eliminate coal from our supply mix by the end of 2014—North America's single largest climate-change initiative. In fact, we're the only jurisdiction in the world to be getting out of coal altogether.

Put those together—ambitious conservation, a push for renewables, and getting out of coal—and Ontario has a very good story to tell.

Next, I'd like to turn my attention this morning to what the new legislation will mean to the economy—and more specifically—how that will impact you and your students.

The Green Energy Act is 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. It will also be a catalyst for the greening of other parts our economy like transit and vehicles.

Usually when we hear about job creation—it's good news. And, of course, it *is* good news with one big caveat: We're facing a serious shortage of skilled workers in the electricity sector. Many of these jobs didn't even exist when I was in high school. And I expect that on the horizon there will be jobs we've yet to even imagine. Jobs that will fully exploit this generation's extraordinary technological skills.

I know Catherine Cottingham, from the Electricity Sector Council, is going to address this looming shortage, too. And tomorrow, Hydro One's Laura Formosa will also be talking about what the skills shortfall means for her organization.

But I'd like to talk about this briefly, too, before I turn my attention to some of the really innovative things the Power Authority is doing, working closely with a number of Ontario schools.

Then, I'd also like to tell you how you can participate as institutions in our conservation programs.

Let me start by touching on the skills shortage.

A recent national study showed that nearly 30 per cent of those currently working in the electricity sector are set to retire by 2012—not unlike many other sectors. And this projected skills shortage will grow with advances in technology—especially in developing sectors like conservation and renewable energy.

Increasingly, we're going to see the job boards filled with ads for workers with an expertise in wind and solar energy. For conservation officers, energy auditors and nuclear safety managers. We're also seeing growing demand for everything from engineers, operations, maintenance, construction and steelworkers to sales people, architects, lawyers, software developers and those in financial services. The list goes on.

A recent study commissioned by the Power Authority found that the conservation services industry in Ontario will require

3,000 conservation-industry specialists and 3,200 program administrators to meet this year's target for reducing demand for electricity.

We're already struggling to fill openings in the industry.

The need to train our young people for careers in the energy sector is recognized as a priority worldwide. We know that if we don't address this shortage now, we'll be jeopardizing our ability to keep the lights on in our hospitals, our schools and libraries. In fact, the impact will be felt across the entire economy.

So, that's why it's so great to be standing here today. Here—with you—those who are actively working to educate our future engineers, designers and transmission line workers.

We do know from our own studies at the Power Authority that global warming is of great concern to high school students—well ahead of issues like crime, education and poverty. But we also know that these same teens don't often make the connection between climate change and electricity use.

That's one reason we need programs like the Ambassadors for Conservation Energy—the ACE program—now underway at the Niagara District School Board. I hasten to add that we were very proud that the board acknowledged our support for this program and that the plaque you gave us last summer is on display in our office in Toronto.

It's very exciting for the OPA to be working with you. It's our Conservation Fund that is funding the specialist high skills major program that is being developed here in Niagara. It's one of the most innovative pilot projects in the country. A program that not only addresses needs in the classroom, but combines that knowledge with experiential learning and co-op opportunities.

We believe this program is a model for other schools across the province. And I understand that five other similar

programs are underway and six more are in the works. That's great.

We are confident that programs like ACE will help prepare the next generation of leaders for rewarding and well paying jobs, but also give them the necessary skills to steer the green economy of the future.

However, it's not our only educational initiative. I think it's important to note that we're really thinking about the big picture: facilitating and supporting educational initiatives from grade school to the university level.

I'd like to give you a few more of the highlights.

For example, the Dearness Environmental Society program for high school students is a cross-curricular program. It combines study from geography, science and world issues courses. The strength of this program is that it recognizes that changing how youth views energy should be done as part of the core curriculum and not as an add-on activity.

We also have what we call our Kids' Corner conservation booklet. Its goal is to connect with kids so they develop conservation-minded behaviours at an early age. We know it is very popular with teachers and students alike and it has already reached many thousands of young people through their science groups, science centers and at schools.

And of course, there's our popular, province-wide Seasonal Card contest for youth between 8 and 14 which is themed around energy efficiency. It's not just bragging rights, trophies and cash prizes that are up for grabs, but also the chance to have your student's artwork featured on the OPA's seasonal card. I encourage you to participate next year.

We're also currently developing a program with CGC Educational Communications that will give students in grades four to six field trips to wind farms and solar farms, waterworks and bio-energy projects. The idea is that these

tours will help educate children about the need for renewable energy in creating a greener Ontario. These trips have been extremely successful and we're exploring them for a province-wide rollout.

Last September, we also met with First Nations and Métis youth in Sudbury to engage them on conservation initiatives and awareness.

And at the other end of the spectrum, we've partnered with the Ontario Centres for Excellence to work with undergraduate students from colleges and universities in their final year. More than 200 students are paired with industry to work on 60 energy efficiency projects across the province.

The students work with industry as consultants, seeking creative solutions to real-life problems. The good news is that these students not only gain exposure to green industries, they often get hired once their program is complete.

If you'd like to find out more about any of these programs please visit our website at [www.powerauthority.on.ca](http://www.powerauthority.on.ca).

But before I move on, I want to emphasize that many of our educational initiatives are very much in the pilot stage. Working closely with the Ministry of Energy and Infrastructure as well as other ministries, we're taking our learnings from these projects. They are being assessed so that we can refresh and redesign programs as we look to the future.

I think it's important to note that our schools are hubs of innovation in other ways, too. Both in terms of conservation and generation.

In fact, the Green Energy Act provides new incentives for you to participate in renewable energy—not just as consumers but as electricity generators too.

Under our microFIT program, designed for projects of 10 kilowatts or less, you can also install solar panels on your rooftop and earn revenues doing so. You will be paid a guaranteed price for all of the electricity your project produces for at least 20 years.

The Ottawa-Carleton District School Board, for example, has just been awarded a contract under our microFIT program. It plans to mount solar panels on its school roof-tops—a 10 kW system that will cost \$120,000.

And you're not limited to your workplace. You can participate in the microFIT program—installing solar panels or even a small wind turbine at home too.

And, of course, I'd be remiss not to mention the David Suzuki School which will open next September in Windsor. It's a model of what can be achieved when buildings are constructed with an eye to minimizing their environmental impact.

It will feature cutting-edge technologies—solar walls, earth tubes and sun pipes. It's expected to be 70 per cent more energy-efficient than a typical school.

The builders of the David Suzuki School, for example, took advantage of our High Performance New Construction Program. Part of that process is to find energy efficiencies by bringing designers and construction professionals together.

We also have our Electricity Retrofit Incentive Program or ERIP. It's a great opportunity to conserve energy by investing in more energy efficient technologies—whether it's lighting, heating or more efficient motor systems.

I'd encourage you to look into all of these initiatives. They will not only help your school conserve energy, but save on its electricity bills. And they provide an ongoing living science experiment for your students that not only reduces greenhouse gas emissions but creates jobs.

There are also upcoming opportunities to conserve energy with Earth Hour. The OPA is a co-sponsor of the program so I encourage you to participate. And don't forget to follow through with conservation the "day after" and the day after that.

And you may like to hear about our Power Pledge campaign—which is kicking off in April—a conservation program that is targeted, in a big way, at youth. It runs throughout the remainder of the school year, and into the summer. So mark, that into your calendars. You can find out more about this at a break-out session this morning presented by my colleague, Tim Taylor.

In case you didn't know, last fall, the Ontario government earmarked \$50-million for school boards to purchase green technologies. It is also expected that the government will create a centralized procurement process to assist Ontario's 72 school boards in researching technologies and selecting vendors. Those funds should be available to the boards this spring.

And one final bit of business. I would just like to alert you to a microFIT open house that is happening tonight at the Quality Hotel in St. Catharines. The OPA will be making a presentation but you'll also have lots of opportunities to ask questions of your local distribution companies and suppliers—whether you go because you are interested for your school, for your community or your home, there will be lots of information.

As I said, it's been great to have this opportunity to speak to you. I'm sure that my grandparents, the teachers, would be proud.

I hope my teachers would understand how influential they've been in helping me carve out a career path that I believe is important to the future of Ontario's prosperity.

I hope you can see how relevant the electricity sector is to your students. There are lots of opportunities. There certainly are going to be jobs. We're going to need knowledgeable, engaged youth because we've got a lot going on.

That's where you come in.

I hope one day, your students will be standing here, similarly inspired to pursue a career in energy as a way to make the world a better place.