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**Ontario Energy Network Luncheon**  
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(Check Against Delivery)

**Introduction**

Good afternoon. I am glad to be with you today for my fourth consecutive December OEN speech.

Thank you to the OEN for inviting me once again to be your “Festive Season” speaker. Perhaps next year I should challenge you all to an ugly Christmas sweater contest to add a little holiday cheer to the event.

We all strive to learn from the past and plan for the future, but we live in the present and at this moment, we are managing a labour situation at OPG.

Since I have the stage at this same moment, I wanted to reassure you that our employees -- the PWU, Society and management -- are professionals, respected around the world for our safety standards.

We have robust contingency plans that involve not only our employees but other critical organizations such as the IESO.

During this next 21 day period we will take the steps needed to ensure the safety of all of our facilities -- our nuclear plants as well as our hydroelectric stations that control flows on 24 river systems across the province.

OPG is committed to providing safe working conditions and fair compensation for our employees, while balancing the interests of customers who deserve value for their money.

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Now, turning back to the matter at hand, my first OEN speech was in December 2015.

I was hired around the same time the Leafs hired Mike Babcock and some of you might remember a story I recounted in my first OEN speech about being mistaken for him in my early days in Toronto.

I ended the story by sharing that if I had my choice of jobs, I'd rather refurbish a nuclear plant than try to turn the Leafs into a championship team.

I'm not sure many would have predicted back then that both Coach Babcock and I would be feeling pretty good about our odds three years later.

OPG is now well past the half-way mark on refurbishment of Darlington's Unit 2. We've completed all the Unit 2 calandria disassembly and inspection work (calandria - that's Canadian for "reactor") and we are well into rebuilding it with new components.

It's a massive undertaking, requiring dozens of trades, hundreds of separate projects, thousands of skilled workers, hundreds of thousands of discrete tasks, and millions of hours of field work.

Four hundred and eighty new calandria tubes have been installed – the first step to making the reactor whole again. We are now installing the fuel channel components, including end fittings, spacers and pressure tubes. And we expect to load fuel into the calandria in May.

Among thousand of other tasks, the project team has also refurbished the steam turbines. For the first time in Darlington's history, the huge turbine spindles were removed and the blades inspected before carefully being hoisted back into place.

Our four pillars for the project are cost, schedule, quality, and safety.

Today, I'm pleased to report that the Darlington Refurbishment – our Stanley Cup -- remains on time and on budget. The quality has been and continues to be near flawless.

Most importantly, we reached the two-year milestone on Unit 2 execution with a safety performance 10 times better than Ontario's industry average.

That's more than 11 million hours worked without a lost time injury.

Unit 2 is scheduled to be returned to service in the first quarter of 2020, but our team has set their sights on returning it to service late this year, conclusively demonstrating that complex nuclear megaprojects can be reliably and cost-effectively executed – at least here in Ontario.

But as Coach Babcock once said: "If you want to be a benchmark team, you have to do it again."

So we, alongside our industry partners, have started planning our execution of Unit 3, incorporating the lessons learned from Unit 2.

We expect this robust lessons-learned engine to yield shorter schedules and lower cost on each of the next three units.

All four units should be refurbished by 2026, perhaps sooner if we're successful in our plans.

Learning from your successes, shortfalls and from the feedback of others is vital to project success. In that first OEN speech I listed robust oversight as one of 8 keys to mega project success.

Sometimes it is hard to remember that critical feedback is a gift. But properly levered it can be your most valuable source of improvement opportunities.

In her value-for-money audit of the Refurbishment, released as part of the 2018 Annual Report, Ontario's Auditor General highlights OPG under her "good news" section and indicates the Refurbishment has:

- incorporated lessons learned from some of the early challenges on the prerequisite projects;
- used a fair and transparent procurement process; and
- implemented a clear accountability structure and management processes to successfully deliver the project.

More importantly, the Auditor General also identified risks – risks we need to pay attention to, risks like access to skilled trades -- that could impact future performance.

We are fully aligned with the Auditor General's findings and will continue our diligent monitoring and efforts to address the risks identified.

I'm extremely proud of the Refurbishment team for getting us this far but I am not satisfied because I know we can do even better, and I'm confident they will ensure the project remains on track.

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Now while I view Darlington as the center of the energy universe, I need to concede that in this sector we face a dizzying array of change, and the risks and opportunities change brings.

We face a climate change imperative that will demand more low carbon electricity to help decarbonise other sectors such as transportation.

And as efficient electrification gains momentum, customer expectations regarding price, power availability, quality, and reliability will become more and not less challenging.

Over the next 3 decades, together we will build the integrated energy network needed for this future.

Our industry must align and develop the innovation, planning and integration process needed to succeed, and look to governments and regulators for the support needed to execute the plan.

I'll leave the rest of this topic for another day and another speech but I did want to plant a seed before I turn to the main focus for today's speech.

It occurred to me that we spend a lot of time at these luncheons and other industry events talking about projects, plans, technologies, strategies, and policies.

But at the end of the day, plans and strategies will only get you so far -- **success depends on our people.**

So today, I want to talk about people.

Darlington is a good jumping off point because 13,000 people from across Ontario have worked on this project.

I believe our greatest business challenge as an industry, is to ensure we have the necessary people to operate, maintain, build, and ultimately transform our businesses and services now and in the future as we move to an integrated energy system.

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As of 2020, OPG and Bruce Power will have parallel refurbishments underway.

By 2021, when OPG is half-way through the Darlington Refurbishment project, concurrent demand for skilled tradespeople will reach its peak.

Other industries and massive infrastructure projects like the \$40 billion liquefied natural gas development in northern British Columbia and the \$5.7 billion Gordie Howe International Bridge in Windsor will be drawing workers from across Canada.

With various disciplines of trades soon to be in short supply, and the nuclear industry projecting further shortages, we're facing a significant people challenge.

That's why OPG has been working hand-in-glove with Bruce Power and other industry stakeholders to mitigate the risk, which was flagged by the Auditor General.

**First**, Bruce power and OPG are optimizing our schedules to minimize having the same trades in demand at both sites at the same time.

**Second**, efforts are underway to build capacity within the current skilled trades' workforce.

Together with EPSCA, the Electrical Power Systems Construction Association, we've identified a list of trades -- including boilermakers, millwrights, pipefitters, electricians and carpenters — whose demand within the sector is likely to exceed supply within the next five to 10 years.

Based on most available data from the various unions, it looks like the boilermakers' trade has the highest risk of shortages.

OPG and Bruce Power have been working with the Boilermakers, EPSCA and CanAtom to increase the labour supply by creating new classifications, like Radiation Protection Assistant Technicians, and by collaborating with local colleges.

We're also working with the pipefitters, carpenters and millwrights' unions.

So if you have a teenage or twenty-something son or daughter who's still looking for direction in life, and you want to free up their bedroom for a den, encourage them to consider these highly sought-after trades.

The **Third** focus area involves a joint push with industry stakeholders to encourage women, members of Indigenous communities and people who are new to Canada, to join the nuclear workforce.

And this brings me to another people issue that remains a challenge for the entire energy sector.

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When I look around this room, I see many familiar faces.

But what I also see at this, and similar industry functions, are people whose background, education, age, and gender are similar to my own.

What I don't see is significant diverse representation.

And I don't say this to make anyone uncomfortable, or to be politically correct.

I say this because, more than ever, if we want to talk about success, we need to talk about diversity and inclusion.

Diversity and inclusion are business-critical issues.

They lead to better discussions, better decisions and better outcomes.

Most importantly, diversity leads to innovation.

Research shows diverse groups of people are better at creative problem solving.

And a group that thinks dynamically and brings new perspectives to the status quo increases the chance of *thinking the unthinkable*.

That's where innovation comes from.

Studies also show we still have a long way to go.

In advanced industrial nations, women make up approximately 20-25 percent of the energy sector workforce. Less than six percent of the roles women hold are technical positions and less than one percent are top management roles. Currently, just 5 per cent of board members at the top 100 utilities companies are women.

We can and must do better, and that includes OPG.

OPG's efforts to increase diverse representation include an array of initiatives, some of which have been in place for over a decade.

In thinking about diversity, equity and inclusion, we've considered the whole lifecycle of our employment relationship with applicants and future employees, as well as our current workforce.

Because the future depends on what we do right now, we're taking steps that will foster diversity for years to come.

As many of you know, there's been a historic and on-going lack of diverse representation in STEM fields.

This imbalance starts early and is reflected in STEM program graduates.

Even if we want to hire more women, visible minorities and people of different abilities and ethnic backgrounds, we're often limited by the pool of new grads and potential employees.

To get to the root of this challenge, we've negotiated funding agreements with our educational institution partners requiring them to proactively seek out diverse representation in STEM program applicant pools.

We're also thinking about outreach and the message we're sending to potential employees.

From recruiting materials to our career fair staffing decisions, we're considering diverse representation and telling prospective energy professionals to "**Be the Generation**" that brings about change.

We also know that potential employees may face systemic barriers as they try to get a foot in the door. This is why our hiring manager training program now addresses bias and the impacts bias can have in interviews and on hiring decisions.

It's also why we're making sure our hiring panels reflect the diversity we're looking to attract.

And while getting diverse candidates in the door is certainly a step in the right direction, it's not enough.

We have to make sure our workplaces are welcoming and inclusive.

Diverse employees who can be themselves at work, can reach their full potential.

To this end, we've just finished delivering diversity fundamentals and unconscious bias training to all OPG employees.

In addition to this baseline training, our People Leaders are completing a two-hour, in-person program on creating inclusive workplaces.

Our talent pipeline is another area where we know we have untapped potential for growth, particularly for our senior leadership talent.

Given the highly specialized nature of our operations, many of our senior leaders come up through the OPG ranks, so we're working to give everyone an opportunity to excel.

Our authorized nuclear operator role is a perfect example of this.

To become a licensed operator, employees have to complete a training program that can take 7 plus years of intensive in-class and on-shift learning.

In addition to the rigorous learning and performance expectations, the program imposes strict restrictions on how much time employees can take off from the program before they are disqualified.

This kind of demanding work and rigid schedule can be hard to balance for anyone.

But it's uniquely challenging for those with family obligations, women who want to have a baby, single parents, and anyone else who's a primary caregiver.

In the past, we've lost out on top tier candidates because of these requirements.

Today, we're working with our nuclear regulator to build greater flexibility into training requirements and thinking about new scheduling approaches to account for pregnancy and parental leaves.

While all of these steps are relatively small, they represent an essential shift in our corporate consciousness.

OPG has entered a significant and exciting period of change.

In a few short years, our business will be transformed.

Having people with diverse backgrounds, experiences and perspectives will be at the core of our ability to grow, adapt and ultimately excel in a changing landscape.

And a workforce that is representative of the communities and customers we serve makes us all better.

I believe our future, and in many ways the future of this province, depends on it.

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In my final minutes, I want to share some stories about OPG's people.

They are individuals who I personally find inspiring.

They exemplify the immeasurable value of diversity and they wholeheartedly embrace their responsibility as role models for others.

**The first story is about Katelin Dzjacky.**

Katelin graduated as one of the top students in her engineering class at Lakehead before going on to pursue graduate studies at McGill University.

After her studies, Katelin moved back to northern Ontario, where she grew up hunting and fishing with her older brother and dad.

She worked at the Ministry of Natural Resources and Forestry and later at a mining company before joining OPG in 2010 as a Senior Plant Engineer in Timmins where she participated in redeveloping several hydroelectric stations on the Upper Mattagami River.

Working in the male-dominated engineering field, Katelin has had to face her fair share of challenges, just as she did in school.

But she was undeterred.

A move to the Project Management department at OPG's Northeast Operations has allowed Katelin to flex her leadership skills by providing technical support on several projects, while working with management, production staff and engineers.

Touched by her experiences, Katelin has now made it her goal to speak out about gender challenges in the workplace and encourage young girls and women to consider a career in engineering.

*Say hello to Katelin.*

### **Next, I want to tell you about Sant Marwaha.**

Sant believes it's his duty to help break down stereotypes and misconceptions.

As a Cost & Scheduling Front Line Manager at Pickering Nuclear Generating Station, Sant has had an extensive career in nuclear.

He's worked at OPG for 27 years, and previously at Atomic Energy Canada and Tata Consulting Engineers in India and Africa.

His international experience has allowed him to gain the skills needed to help new professionals join the ranks of Canadian employment.

Sant believes people fear new faces or are hesitant to interact with those unfamiliar to them because of a lack of knowledge -- this can be especially difficult for newcomers to Canada.

Through the Toronto Region Immigrant Employment Council or TRIEC) Mentorship Partnership, Sant has mentored 31 internationally-trained engineers seeking to pursue their career in Canada.

He helps them build a professional network through coaching and exchanging knowledge.

It is Sant's personal philosophy to promote diversity and breakdown stereotypes through knowledge of self, and a willingness to help others succeed.

He wanted me to tell you that TRIEC is always open to new mentors.

You can visit their website at [triec.ca](http://triec.ca) to learn more or to get involved.

*Please say hello to Sant Marwaha.*

### **My next story is about Ben Shaughnessy.**

One of OPG's capacity-building initiatives includes the new Indigenous Opportunities in Nuclear program, also called ION.

Together with Kagita Mikam (Kah-gee-ta Meek-um), an Aboriginal employment and training agency, the ION program is recruiting and placing skilled and qualified members from Indigenous communities across Ontario in jobs within the nuclear industry, including at OPG, union halls and vendor partner organizations.

Ben heard about the need for skilled tradespeople in the nuclear industry and knew he couldn't pass up the opportunity.

The millwright apprentice from Curve Lake First Nation is now working on the Darlington Refurbishment project, after being contracted by OPG through ION.

Deciding to work in nuclear was a big step for Ben, who applied after his dad told him about the program and encouraged him to give it a try.

Ben admits working in nuclear was a little intimidating at first. But after learning about how seriously safety is taken on site, his trepidation faded.

Ben counts his father, an electrician and member of Curve Lake First Nation, as the biggest influence in his decision to work in trades.

*Ben, please thank your father for us.*

*And folks, please say hello to Ben.*

### **And my last story is about Sara Dolatshahi.**

Sara is an Authorization Training Manager at the Darlington Nuclear Generation Station.

With a Masters in Nuclear Engineering from McMaster University, Sara was hired as a junior engineer in 1999.

In 2007, she joined Operations as a Shift Assistant Technical Support.

Sara was still a new mom with an 18-month old child at home when she decided to take on one of the most trying nuclear training and licensing programs in the industry – Control Room Shift Supervisor.

The Shift Supervisor role is an authorized position requiring a license from the Federal government and the process for getting accepted into the program and licensed is very tough.

A commitment of 8 hours of training per day and additional study time in the evenings and the weekends is necessary.

As a result, the failure rate of this program is high.

Through perseverance, sheer will, and the support of a loving family, Sara became the first female Control Room Shift Supervisor in the history of Pickering Nuclear Units 5 – 8.

Today, Sara is a diversity champion, a mentor to other women, and the Chair of the “Bridging the Gap” committee, which aims to recruit other women to consider being Control Room Shift Supervisors.

*Let's hear it for Sara.*

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My dear OEN friends, as much as I enjoy seeing you all -- year after year -- I really hope we continue to see more Saras, more Katelins, more Sants, and more Bens.

They are the future, but we need them today.

So let's commit to share our diversity efforts -- the successes and challenges -- and to find more platforms where we can bring the stories of our people to life.

Thank you for allowing me to share my thoughts.