

# Preparing for the Electricity System of Tomorrow

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### **CHECK AGAINST DELIVERY**

### Introduction

Good morning, everyone. Thank you for having me.

Before I begin, I would like to acknowledge the passing of Her Majesty, Queen Elizabeth the Second, and express condolences to the Royal Family for our nations' collective loss.

When I spoke with you last it was the first major speech in my tenure as President and CEO of the IESO.

Those remarks were made virtually, and I must say, it is refreshing to be here in person, with a little more formality, and a lot more collaboration.

That collaboration is already evident, because we're here for the first-ever OEA – APPRO combined conference.

Thank you to both organizations for hosting these proceedings, and facilitating very important discussions for our industry.

In September 2021 I shared with you what I had seen so far at the IESO, and how that informed my view of what's needed to prepare Ontario's electricity system for the future.

The challenge, as I saw it then, was keeping up with the pace and scope of change in a highly complex and interconnected service that is central to our daily lives.

I focused on three themes: resource adequacy, enabling resources, and decarbonization.

Today, I am going to share with you some of the progress we've made, along with key corporate priorities, observations, and developments that have since emerged.

## Corporate Strategy

As I mentioned, one of my first observations was about the need to keep up with, and get in front of, the pace and scope of change.

A year later, I'm proud to say we're now in a position to do that, something that's very much reflected in our refreshed corporate strategy released this summer.

For the IESO to deliver on its mandate, we purposefully developed a corporate strategy informed by broad societal trends and anchored by robust performance measures.

In doing so, we concentrated on three core strategies.

One: drive and guide the sector's future.

Two: ensure system reliability while supporting cost-effectiveness.

And three: drive business transformation within the IESO so we can fully deliver on our mandate

This strategy is our North Star. It sets out how we will meet Ontario's electricity needs.

By working together - industry and communities, producers and consumers, innovators and academics - we are positioned to deliver.

## Drive and Guide the Sector's Future

Let me start with the first pillar of our strategy: drive and guide our sector's future.

Make no mistake: Ontario's electricity system is at a pivotal point. After more than a decade of strong supply, we have entered a period of emerging electricity system needs, starting in the mid-2020s.

Unprecedented growth will continually pressure the system.

Energy and capacity needs will persist through 2040, with demand expected to increase by nearly two per cent annually during this period.

There is a lot of interest and expectations from all corners to get it done right and on the first try.

Because in our sector there are no dress rehearsals.

Growth in the industrial, mining and agricultural sectors, as well as major electrification projects, are driving higher electricity demand than we've seen in a very long time – if ever.

Clearly, these are challenges that we face as a group.

So what is the IESO doing to respond? First, we've taken a holistic view, identified needs, and considered all players in the system.

Every stakeholder we engage has a unique role in the system, with precise needs, and priorities.

Specifically, we are strengthening our relationships with stakeholders and Indigenous communities through purposeful and transparent outreach.

At the same time, the IESO works tirelessly to understand the forces driving transformation, and to make informed decisions that underpin orderly transitions.

Because in planning, driving, and guiding the future, we must weigh diverse interests to plot a course that considers the interplay among everyone. Especially those here in this room.

I am pleased to say that we are deriving value from this approach.

For example, we received considerable response in the first step of our long-term request for proposals, which wrapped up a few weeks ago.

The IESO qualified 55 applicants who collectively reflect broad local and global interest to participate in Ontario's energy sector.

And in a real sea change for our industry, we saw a significant number of potential energy storage projects put forward, a resource that will be critical to our long-term decarbonization goals.

This, to me, reinforces the value of open and competitive procurements to meet the province's reliability needs, and underscores the importance of our work engaging with the sector, by understanding your challenges and what opportunities we can tap into.

Our stakeholder and community engagements about the Resource Adequacy Framework, and our procurements, have helped us adjust and respond to widespread changes in the sector.

And that, in turn, is delivering positive results. But we have to be realistic, understand our options, and concurrently prepare for a future that maintains reliable and cost effective electricity, using existing infrastructure and resources already online.

In short, we realize that as we continue the journey of transformation – there is a lot more for us to discuss.

Rest assured, however, we are committed to further refining our approaches to stakeholder and community engagement, so that we can continue to share perspectives, while also being mindful of the time and effort you put in to these processes.

## Ensure System Reliability

That leads me to our second pillar: ensuring cost-effective reliability.

After years of stable supply, the IESO is moving forward with a series of procurements to secure more than 5,000 megawatts of capacity.

As I have described, these activities — under the umbrella of the Resource Adequacy Framework — are working.

Last month, through our medium-term request for proposal, we offered new five-year commitments to secure critical existing resources at a lower cost than previous contracts.

We also extended contracts with biomass facilities, and have a program for existing small hydro facilities.

To support system reliability in the near term, we are holding a third capacity auction in December, seeking a minimum of 1,200 megawatts next summer, and 750 megawatts for the subsequent winter period.

These procurements are critical for acquiring a diverse range of supply, including large consumers providing demand response, energy storage, and generation.

And with a robust electricity market — more than 20 billion dollars in transactions are settled annually — we are making sure the market is as efficient as possible.

That's why we've undertaken a Market Renewal Program to enhance our ability to deliver on core priorities to drive future transformation, and ensure the cost-effective reliability of the electricity system.

This program introduces fundamental reforms to electricity markets to improve how we supply, schedule, and price electricity to meet future needs at the lowest cost.

And many of you are aware, we have just received board approval for a revised in-service date of May 2025.

Market Renewal remains a critical investment to optimize the resource mix of today, prepare for the resource mix of tomorrow, and drive significant savings for ratepayers and the sector as a whole.

We have an incredible range of options to incorporate into the system. It reflects the diversity that is so critical to the functioning of our system.

With this level of interest, and with the complexity of our system with so many moving parts, we are confident we are moving things along the right path.

## Decarbonization

That path also includes decarbonization.

There is much discussion about how we should minimize, and eventually eliminate, the use of natural gas to produce electricity. For us, the critical question is when can we do this without compromising reliability or decarbonization efforts taking place in other sectors of the economy.

The Government of Ontario has asked us to study pathways to decarbonization for the electricity sector with a comprehensive report back due in November. There will also be an interim report to inform the eligibility of emitting resources in our upcoming procurements. This report is due in October.

To be sure, most of us here know intimately the complexities of supply and demand, and the role that natural gas generation plays in our supply mix. It is a vital resource that enabled the shut down of coal.

So the question we ask ourselves is: What role should natural gas play in the midst of this transition to decarbonization? And how much value do we place on capacity?

I'd like to reiterate that the strength of any electricity system lies in the diversity of supply to ensure reliability and affordability.

As we are seeing in the challenges faced elsewhere — notably California and Europe — there is always the potential for a confluence of unprecedented and unpredictable events that suddenly impact energy systems.

At the IESO, as long-term system planner and real-time operator we constantly evaluate how we can best maintain grid resilience to withstand geopolitical events and extreme weather, and to support customer preferences.

Being mindful of pressures faced globally, let me provide a quick run-down of various forms of supply that will help Ontario address near-term needs that are emerging out of the pandemic, and electrification.

We are proposing an expansion of conservation and demand management programs, with incentives for residential and business consumers, and targets for provincial and regional system needs mid-decade.

As you know, we have embarked on a series of new procurements, including the capacity auction, the medium-term RFP and the long-term procurements that will bring new supply into service.

We'll tap into our capacity sharing agreement with Quebec.

We're working with the asset owners of nuclear facilities to manage the timing of outages.

I'll be in a position to offer more detail in a few weeks – but I want everyone to know that all options are on the table.

I also want to stress that we are hard at work optimizing the system to eke out any remaining capacity that could be offered to the market.

As we work toward decarbonization, any final decision on the future role of natural gas generation will be made knowing that our approach will rely on different solutions, which together, will ensure we satisfy reliability standards.

But I want to make clear that our decisions will be made in the best interests of Ontario.

Our job is to balance reliability, affordability, and sustainability to ensure that we have a system that can be relied upon, day in, day out.

So if we cast our eyes farther down the road – our route toward decarbonization is taking shape.

We are addressing our shared goal for a decarbonized system.

Let me tell you how we are getting there. Looking at the positive response to the current Long-Term RFP we see opportunities for non-emitting supply in future iterations.

Hybrid facilities have the potential to play an important role in meeting future electricity needs.

We are also preparing a report on potential hydrogen programs, and how Ontario's clean energy mix can be leveraged to create a new form of dispatchable supply.

I was recently at the Association of Municipalities of Ontario Conference in Ottawa, where we heard that communities and businesses want to install solar panels, undertake energy efficiency projects, develop microgrids, and decarbonize transportation systems.

These distributed energy resources can help meet local needs and preferences, and help us manage the grid more efficiently.

In fact, across Ontario, we estimate there are 10,000 megawatts of DERs, which represents about 25 per cent of the province's electricity supply and growing.

And our colleagues at Ontario Power Generation are helping to lead the way in advancing small modular reactor technology, which may help meet Ontario's changing energy needs.

With all of these interests aligning and coinciding, our goal is to ensure that the system is positioned to support the massive scale of decarbonization that is sweeping through the broader economy.

## Drive Business Transformation

Getting to the final pillar of our Corporate Strategy – we need to drive business transformation.

As I've signaled throughout my remarks, Ontario's electricity system is becoming increasingly complex, with more participants and resources, potential new technologies, all with their unique challenges that require high degrees of co-ordination to maintain reliability.

For the IESO to stay ahead of change, and manage both the day-to-day and long-term complexities of the grid, we are evolving our own internal processes, technologies, and tools.

That means identifying and building next generation skills and competencies, while defining and enhancing the IESO culture and employee experience.

For the sector at large, the IESO plays a central role: we juggle many pins and wear many hats.

It's imperative we have the right people in place to drive the collaboration that is crucial to our role as the system operator, and to the sector at large.

Transforming our business - whether it's developing the skills and competencies through a robust learning and development program - or promoting cultural change through our equity, diversity, and inclusion strategy, will determine our success.

## Conclusion

To wrap up, and I say this with clarity and confidence, the IESO is focusing all its efforts on being one step ahead of transformation.

We are committed to decarbonization, and to working with all levels of government to support net-zero opportunities in an orderly fashion.

And most of all, we're paying attention and we're listening.

By evolving our engagement processes, ensuring system reliability, planning for the future and addressing current needs, and driving business transformation within the IESO, we are demonstrating our deep commitment to guiding and driving positive change.

As the system operator of Ontario's electricity system — relied on by every single person and business in the province — all eyes are watching.

And while there's a lot of scrutiny... I welcome the challenge.

This is an incredibly interesting and exciting time for our sector.

I wouldn't want to be anywhere else, and I am grateful to be working with all of you as we prepare for the electricity system of tomorrow.

Thank you.