



Thank you for the opportunity to share the priorities of Ontario's engineering community in advance of the next provincial budget. My name is Sandro Perruzza, and I am the CEO of the Ontario Society of Professional Engineers. That's quite a mouthful, so we simply go by OSPE. We are the voice of the entire engineering community, which represents over 300,000 professional engineers, university engineering graduates, and engineering students, who work in virtually every single strategic sector of Ontario's Economy.

My message here today is simple and clear: **Engineers Create Wealth.** Engineers do so through the development and commercialization of new technologies, that are exported to global markets and attract foreign direct investment, which benefits all Ontarians.

Ontario is experiencing a fundamental technological and economic shift. This creates demand for a highly skilled, specialized workforce that engineers can fulfill. Engineers will lead these industries into the future. Engineers understand innovation, and the reality of Ontario's financial and fiscal future. Engineers believe leading through investment to develop sectors will provide high returns on investment and contribute broadly to the well-being of Ontarians.

Engineers are inventive thinkers who develop comprehensive solutions that consider costs, benefits, sustainability and public safety—the complete lifecycle and integration of projects. Our recommendations are in line with this thinking; that we can drive the economy while protecting the environment and the public interest.

Ontario's engineering community wants in. Although the government relies heavily on us to design and build Ontario's infrastructure, we have so much more to offer. Ontario's Engineers are redefining their role as visionary leaders, capable of innovating to find holistic top-to-bottom solutions that consider all aspects of a project.

As technology becomes increasingly complex, we must consider the interactions between the transportation, energy, environmental, healthcare, and wealth management sectors. However, we are becoming frustrated with not being consulted up front when it comes to public policy discussions, and by the lack of engineers being appointed on advisory panels, such as the Ministry of Environment, Conservation and Parks' *Advisory Panel on Climate Change*, where you have engineers on the front lines of protecting our air, water, land and climate.

So, we are grateful for the opportunity to share our collective knowledge on Ontario's budget priorities this morning.

We have 17 recommendations, all with supporting sub-recommendations. In the time allotted, I can't review them all, but what I will show is how they are all connected and coalesce along four main themes:

1. Engineers Make Life More Affordable
2. Engineers Preserve and Protect the Environment

3. Engineers Connect People to Places
4. Engineers Make Ontario More Competitive

Let me tell you the story of Ivan and Mae, who met in engineering school this year. Little do they know that in about 10 years from now, they will have both graduated, got married and are working as engineers in two different industries. Mae is a senior engineer working for a major infrastructure company, managing various transportation projects, while Ivan works for an energy producer, developing new, carbon free, sustainable energy initiatives.

They recently purchased their second autonomous electric vehicle. A smart choice! Not only is it a low emissions vehicle, but by plugging it in at night in their in-home EV fast charging station, they are taking advantage of the new rates being introduced through electricity price reforms, and are helping the province—and environment—use surplus energy. Right now, this surplus costs the government almost half a billion dollars due to the cost of curtailing all the excess energy we have and cannot put to use, and because we sell this energy at a loss to neighbouring jurisdictions. In essence, we are subsidizing our competitors to the east and the south with low cost, made in Ontario energy.

By purchasing this vehicle from her local dealer, Mae is also supporting Ontario's growing advanced manufacturing sector, which was able to retool and reskill to meet the growing demands of Ontario's autonomous, connected and electric vehicle strategy.

New jobs were created in the new mobility sector, and international companies like Volvo, Honda and Tesla have built new plants and facilities, right here in Ontario.

Mae will use the vehicle to go to work, where she is putting the finishing touches on the new GO Line and their new hydrogen powered trains. Thank goodness the government finally trusted the skills, knowledge and expertise of the engineers at Metrolinx, who were able to effectively complete an environmental assessment, design, procure and build the line within 10 years with no outside political interference.

As part of this project, Mae focused on ensuring that new the infrastructure build has met the new requirements in place to mitigate flooding, ensure watershed management and maximize excess soil reuse.

Due to the government addressing the under-representation of women and other equity seeking groups within engineering, she feels comfortable and positioned to succeed in what was once a male dominated workplace and is contributing to the furious growth in Ontario's economy. Ivan now takes one of those new trains to his office. He is working on developing energy control systems, which monitor, prioritize and distribute energy to where it's needed most based-on consumer demands.

Fortunately, the Data Governance rules in place ensure that Ivan's company only collects the high-level information he needs to secure efficient and reliable energy systems. He's also excited to be working on the new Small Modular Reactor that is being installed in Martens Falls First Nation. This new energy source will be used to power the new mining development site, as

well as ensure the new waste and storm water plant will provide continuous, safe drinking water to the residents and workers in that growing community.

The best part is that Ivan is working with the Indigenous STEM (Science, Technology, Engineering, and Math) professionals from the local community, who are able to ensure they have the new technical skills required to protect their environment, and create great paying jobs for generations to come.

Is this story fiction? Well... yes, it is, but we believe that in our budget submission, we've provided a blueprint on how to make this a reality... but only if this government (and future ones) use the knowledge, skills and experience of Ontario's Engineering Community. Engineers are here, ready to engage and provide solutions... The rest is up to you. Thank you!