

The Honourable Peter Bethlenfalvy
Minister of Finance
c/o Budget Secretariat
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RE: Ontario 2022 Pre-Budget Submission

Dear Minister Bethlenfalvy,

The Ontario Society of Professional Engineers (OSPE) is the advocacy body and voice of the engineering profession. Ontario currently has over 85,000 professional engineers, 250,000 engineering graduates, 6,600 engineering post-graduate students and 37,000 engineering undergraduate students. The engineering profession's commitment to safeguarding the public interest has always been extremely important, and in these times, there is no exception.

Engineers are at the centre of a prosperous economic recovery for our province and country. Engineers generate wealth through the development and commercialization of new technologies and by designing innovative and sustainable solutions for the benefit of all Ontarians. Engineers also ensure safety and stability by designing resilient infrastructure and reliable energy and water systems that Ontarians rely on daily. Without the important work engineers perform, short and long-term economic recovery will not be possible.

In times of crisis, you will always find engineers working tirelessly, in the background, without much accolade, diligently supporting the communities they serve. Engineers were among the first to point out that SARS-CoV-2 was an airborne disease, and hence called on the government to invest in proper ventilation in schools and Long-Term Care homes to prevent its spread.

Unfortunately, the engineering community, like others, has been severely impacted by this pandemic, as thousands of engineering jobs are directly linked to the infrastructure, manufacturing, technology and research and innovation sectors. This has not only affected the profession, but the entire Ontario economy.

Despite this setback, engineers possess technical knowledge and talent and are beyond capable of leading the economic recovery of our province. As such, the province must now support the engineering community in rebuilding the engine that drives Ontario, and the rest of the country.

Engineers' Recommendations for the 2022 Ontario Budget

Engineering Workforce Development

1. Invest in talent development, knowledge training, and supports for engineers across the province.
2. Train engineers for the skills required to succeed in new and green emerging sectors.
3. Support the growth of a diverse workforce to enable economic equity and recovery in Ontario.
4. Work with the federal government to establish a \$10 a day child-care program in Ontario.

Climate Crisis

5. Provide further relief to Ontario families and businesses by making surplus electricity available at current market rates.
6. Accelerate the electrification of the transportation system, including electric vehicle (EV) adoption.
7. Modernize Ontario's Building Code.
8. Ensure all provincial infrastructure projects:
 - a. Use a Qualifications-Based Selection (QBS) framework
 - b. Effectively report life-cycle costing
 - c. Create diverse supply chains
9. Establish an Ontario Critical Minerals Research and Market Development Council within Ontario's Critical Minerals Strategy

Research and Innovation

10. Support local manufacturing innovation and production.
11. Support the generation, protection, and commercialization of intellectual property (IP) in small to medium enterprises (SMEs).

Engineering Workforce

1. Invest in talent development, knowledge training, and supports for engineers across the province.

One of the primary barriers to innovation and growth is the access to a talent pool that possesses the skills needed to adapt to the future economy. Prior to COVID-19, some of Ontario's most strategic sectors, such as infrastructure and transportation, were already facing a talent-gap in their engineering departments. Engineering jobs were being given to international firms because Ontario did not have the right talent to get the job done. This is deeply concerning to the economic recovery of the province as the success of the economy depends on the ability to match talent with job vacancies and to ensure that this talent can adapt to market demands. This concern has become magnified by immediate demands for more technologically-equipped engineers due to changes caused by the current crisis.

The government should create incentives to support a strong culture of lifelong learning across Ontario, where employers and employees are provided with the tools and resources to upskill and retrain local talent. In 2021 OSPE launched the [Ontario Engineering Academy](#) (OEA) to up-skill/re-skill engineering graduates exclusively to meet industry needs in Ontario. Your support of this initiative by mandating companies be responsible for the upskilling of local employees is critical for engineering graduates to adequately support Ontario's economic recovery. There is an opportunity for the government to incentivize engineering companies to invest in the professional development of their employees, to ensure that they are equipped with the knowledge to design and execute based on new realities. Investing in engineering talent allows the economy to shift towards more innovative and efficient processes and systems, which in turn creates jobs for other professionals, stimulating growth.

2. Train engineers for the skills required to succeed in new and green emerging sectors.

As Ontario and Canada transition towards a low-carbon future, new emerging sectors, such as the energy efficiency and building sectors will be at the forefront of change. To accelerate this, we need to strengthen the capacity of the existing workforce and attract more people to work in these sectors, especially engineers. This is why OSPE has joined [Workforce Coalition 2030](#), which is a broad cross-sectoral coalition of employers, educators, and practitioners across the construction ecosystem working to collectively impact government policy, business practice, and education.

Engineers believe that sustainability, investing in talent development and retention, and fostering innovation must be the priority of new government funding allocations. While the climate emergency is a defining challenge, we must acknowledge it is happening while employment and skills are being reshaped by digitalisation, automation and the response to COVID-19. By aligning with Workforce 2030, OSPE looks to accelerate new approaches for rapid up-skilling, growing women's participation in Science, Technology, Engineering and Math (STEM) occupations, and emphasizing continuing professional education to build design capacity and deliver enhanced low-carbon building performance.

In 2018, the green building sector directly employed approximately 436,000 workers across 51,000 establishments in Canada within the following key industries: construction, manufacturing, wholesale trade, professional and business services and utilities, all of which employ engineers. Together, these generated \$82.6 billion in estimated energy efficiency operating revenues in 2018. In the next 10 years, targeted investment and policies in support of green buildings can lead to 626,080 direct green building jobs in Canada. Engineers are key to planning and executing the green projects that will provide these jobs. Without engineers this sector will not flourish.

However, despite this growth, [research from the Environmental Careers Organization of Canada](#) reveals that employers are generally experiencing difficulties hiring energy managers/directors/consultants, jobs which engineers can perform well.

Currently the energy efficiency workforce is also, on average, less diverse than the national workforce. Just 18% of workers were reported to be female, and 2% Indigenous, both figures below the national average. Proper government funding towards training in this sector can lead to an increase in diversity and equity-seeking groups.

Further investment in this sector would not only help fight climate change, but would also stimulate the economy by creating more jobs for Ontarians. This is extremely important now more than ever, due to high unemployment rates experienced due to the COVID-19 pandemic. Ensuring an adequate supply of skilled workers is crucial to supporting the sector's growth.

Government policies that help the energy efficiency sector thrive will lead to a more productive and sustainable workforce that will help grow the economy while protecting the environment.

Therefore, we suggest the Government of Ontario:

- a) **Ensures an in-depth skills gap and needs assessment of the energy efficiency sector is conducted**, including the building sub-sector and occupations across the full ecosystem, from design and construction to building operation and management.
- b) **Strengthen training provisions** by increasing the capacity of educators and trainers, specifically with emphasis on green literacy basics, low-carbon skills and latest technologies training content.
- c) **Support training uptake** by aiding new entrants and incumbent workers to build in-demand skills and rapidly up-skill for re-employment, especially work such as building retrofits for energy efficiency and indoor air quality improvements.
- d) **Create incentives to support a strong culture of lifelong learning across Ontario**, where employers and employees are provided with the tools and resources to up-skill and retrain local talent.

3. Support the growth of a diverse workforce to enable economic equity and recovery in Ontario.

Research suggests that groups that were historically under-represented in the workplace have been most impacted by the pandemic. A [report](#) released by the Royal Bank of Canada shows that women's participation in the labour force is the lowest it has been in three decades, with 1.5 million Canadian women losing their jobs or choosing to quit to better support households in the first two months of the pandemic alone.

This is increasingly problematic throughout sectors of the economy, where women, racialized persons, and members of other equity-seeking groups remained highly under-represented. For example, based on most recent data women accounted for only 12.8% of engineers in Ontario. OSPE's report [Calling All STEM Employers: Why Workplace Cultures Must Shift to Change the Gender Landscape](#) demonstrated that women in STEM continued to face significant barriers to success. These barriers included being undervalued and disrespected in the workplace, lack of mentorship and sponsorship, and the existence of a gender-wage gap. These barriers were a contributing factor to the trends above and likely mirror the barriers to other under-represented groups. As a result, conditions are now exacerbated for those who remain in the labour market.

OSPE has been an avid advocate of building a diverse and inclusive engineering sector across Canada. We have seen incremental progress made across industry, academia, and government that is now being threatened by the disproportionate impact of COVID-19 on labour force participation. We can quantify the impact on women as this has historically been measured, however, the impact on other under-represented groups with diversity dimensions including race, ethnicity, ability, and sexual orientation cannot be determined, as these trends have not been widely analyzed and studied. A competitive economic recovery will require the attraction and retention of top talent to key sectors of the economy such as engineering. Without diverse voices, Ontario is bound to fall behind, lagging on innovation and the ability to compete in new markets.

Intercultural competence, creativity, innovation, and productivity are only some of the reasons that Ontario must ensure it has a diverse and inclusive economy.

We urge the government to implement policies that encourage the participation of under-represented groups in the workplace by:

a. Addressing the wage gap.

OSPE's Census analysis revealed that the wage gap between men and women working in engineering was 12% or \$11,000 annually. Ontario has introduced robust legislation intended to tackle the gender wage gap through the *Pay Equity Act*, however, there is an insufficient accountability mechanism within this legislative tool. Further, the wage gap for other under-represented groups should also be assessed and mechanisms similar to those developed for gender should be introduced. The government must create accountable and enforceable tools to truly address this issue.

b. Investing in robust labour market analysis.

In a data-driven economy it is imperative that the provincial government continue to make investments in data collection, analysis, and evaluation. For the STEM sector, most data pertaining to the unique experiences of equity-seeking groups in the Canadian labour market focuses on gender. This remains consistent during the current crisis. It is therefore important to expand labour market analysis to be more inclusive and to ensure that reliable data is available to inform both private and public sector responses to the barriers impacting all underrepresented groups in engineering and other STEM professions.

c. Encouraging diverse and inclusive workplace practices.

Organizations must demonstrate a real commitment to diversity and inclusion through their workplace practices to access public funding. A revision of current funding frameworks to include specific measurable requirements from organizations seeking to access public funding should be included to ensure accountability. We encourage the government to look at workplace policies and practices, representation, commitment to inclusive design and/or diverse supply chains when determining eligibility.

4. Work with the federal government to establish a \$10 a day child-care program in Ontario.

The COVID-19 pandemic has caused huge disruptions to Ontarians' daily lives. The closure of businesses has had a tremendous social and economic impact. However, this impact has been disproportionately felt by women. 2020 Statistics Canada data shows that in March 2020, at the onset of the pandemic, women between the ages of 25 and 54 lost more than twice as many jobs as men in Ontario. Women's labour force participation rate fell to its lowest level in three decades. A reason for this disparity is that women are more likely to be employed in those sectors hardest hit by Ontario health measures and emergency orders (retail, food and accommodation, social services, among others).

Another added layer of complexity that families and single mothers have had to deal with has been the lack of affordable child-care options. With health measures in place, parents have had to take care of their own children, as well as manage homeschooling. This, once again, disproportionately affects women, limiting their participation, vis-à-vis men, in the labour market.

Enabling women to participate fully in the economy is not only a policy driven by gender equality and social justice, but also a way to fuel Ontario's economic growth and labour productivity. Providing affordable early learning and child-care options will remove one of the barriers that women have in being able to fully participate in paid work. However, it is important that these child-care options not only address accessibility, but also affordability. The availability and affordability of child-care was a problem before the pandemic. This

has only been heightened by the current situation. For example, Toronto continues to be the least affordable city for child-care in Canada, with median preschool-age fees of \$1,250 a month (\$1,866 a month for infants). Fees have also risen 15% to 21% between 2019 and 2020 in Brampton, Windsor and Mississauga.

The very best example of the economic power of an affordable, well-run early learning and child-care system is Quebec. In 1997, at the time when the *Québec Educational Childcare Act* was instituted, women's labour force participation rate in Quebec was four percentage points lower than the rest of Canada. Today it is four points higher. At the same time, Quebec women with children under three have some of the highest employment rates in the world. Furthermore, studies show that child-care alone has raised Quebec's GDP by 1.7%. TD Economics has pointed to a range of studies that have shown that for every dollar spent on early childhood education, the broader economy receives between \$1.50 and \$2.80 in return.

Ontario is missing out on this great opportunity. Currently, Ontario is the only province that has not signed a deal with the federal government that establishes a \$10 a day child-care program.

Climate Crisis

5. Provide further relief to Ontario's businesses and families by making surplus electricity available at current market rates.

Ontario must leverage its existing assets, which include its low-emission electricity system. This system produces significant amounts of emission-free electricity that is in surplus to domestic needs. Ontario currently exports most of this surplus to other Canadian provinces and the United States at low wholesale market energy prices and discards the amounts it cannot export. Unfortunately, Ontario consumers cannot access this low-cost surplus electricity, as Ontario's retail price plans do not allow surplus electricity to be made available at its low wholesale market energy price.

The government's recent announcements of suspending time-of-use rates for 45 days and deferring a portion of Global Adjustment (GA) charges for some industrial and commercial electricity consumers are only beneficial to some energy users.

The Government of Ontario should take this opportunity to **implement permanent electricity price reform** that will allow consumers to purchase surplus electricity now and in the future. This will alleviate the economic burden posed by COVID-19 by reducing energy bills for consumers and businesses, as well as decreasing greenhouse gas (GHG) emissions. This reform is required to achieve real economic relief both in the short and long term. Additionally, low-cost, carbon free electricity can support increased adoption of electric vehicles (EVs), supporting job creation in the selling of EVs and their required infrastructure in both public and private locations.

6. Accelerate the electrification of the transportation system, including EV update and adoption.

Ontario should work towards a safe, green, innovative, and integrated transportation system that is able to support a clean environment, while boosting trade, economic growth, and public safety. Policies should seek to develop and foster a transportation system that works for current and future generations.

Electric motors are about three times more energy efficient than the internal combustion engine under ideal operating conditions. They also reduce greenhouse gas emissions and take advantage of the province's largely low carbon electricity grid.

By increasing the uptake of EVs in Ontario and encouraging recharging during evenings, EVs will in effect store Ontario's surplus energy supply, which will significantly reduce the amount of surplus energy that is sold for a loss to external jurisdictions and/or curtailed, which is currently [costing Ontario energy ratepayers](#)

[approximately \\$1 billion per year.](#)

According to the Windfall Centre, if EVs were to reach a 10% share of the total vehicle population by 2025, Ontario would experience a GDP increase of over \$3.6 billion. Ontario would benefit from a growing industry that would be modern, efficient, and create new employment opportunities across the province.

As Ontario historically has been a leader in automotive manufacturing, OSPE is pleased that the government is partnering with the private sector to ensure that Ontario counts with the necessary charging stations throughout the province. However, although this is a positive step, OSPE believes that more can be done. The Ontario Government cancelled the EV incentive program, which resulted in a 53% decrease of EV purchases in the first half of 2019. Ontario is the only province in Canada not experiencing an increase in EV sales.

Some of the uptake barriers encountered with EVs, such as a shorter range, longer recharge times, and a higher upfront cost can be addressed by smart government action. Some jurisdictions like California have committed to achieving a “tipping point” of EV adoption by enacting EV sale mandates requiring automakers to sell a specified number of EVs per year, as percentage of sales. In Quebec, such action has resulted in a 131% percent increase in one year.

To ensure Ontario accelerates the electrification of its transportation system, the province should:

- a) Work with the federal and municipal governments to allocate specific resources to the electrification of the public transportation system.**
- b) Develop and implement an incentive program for electric vehicles, until mass adoption “tipping point” is achieved.**
- c) Enact an EV sales mandate like the ones established in Quebec and California, requiring automakers to sell a minimum percentage of electric vehicles.**
- d) Permit free or discounted access for EVs to all tolled highways in Ontario.**
- e) Continue establishing a robust network of electric vehicle charging stations across Ontario.**
- f) Amend the Building Code to ensure that there is a minimum percentage of electric vehicle supply equipment (EVSE) in residential and non-residential buildings, including condo and apartment buildings.**

7. Modernize Ontario’s Building Code.

The construction and renovation industries employ hundreds of thousands of Ontario workers, which have been greatly impacted by COVID-19. The National Building Code (NBC 2020) and the National Energy Code for Buildings (NECB 2020) contain new guidelines for energy efficiency in homes, small buildings, and commercial and institutional buildings. NBC 2020 section 9.36 focuses on energy efficiency and reducing GHG emissions to support a long-term goal of a net zero energy ready (NZER) model building code by 2030. Provinces have the option to adopt these provisions. **Ontario should adopt these sections of the NBC 2020 into the Ontario Building Code O.Reg. 332/12 and define clear steps and deadlines to achieve a NZER code by 2030.**

By doing so, not only would Ontario decrease its carbon footprint, but would also create jobs moving forward, especially under the lens of more energy efficient buildings and retrofits. This would also provide opportunity to lower life cycle costs to building owners and retrain workers in particularly hard-hit sectors. Ontario could learn from other jurisdictions, like British Columbia, who in 2017 became the first North American jurisdiction to create a regulated pathway for net-zero energy-ready buildings, through its *BC Energy Step Code*.

British Columbia’s success rests on:

- **Prioritizing the Building Envelope.** An envelope-first approach designs a measurable level of performance into the very fabric of the building, permanently wedding energy efficiency to the structure.
- **Prescribing outcomes, not processes** by defining a target, and working backwards with fixed interim deadlines and requirements.
- **Providing a baseline and working towards capacity building** by allowing local governments to adopt higher energy-efficiency requirements at a pace that works for them.
- **Consulting appropriately** with municipalities and local governments, professional associations, and utilities.

These measures will help stimulate the COVID-19 economy, as greener buildings have been proven to lead to lower utility bills, and higher property value. Having these provisions in the Ontario Building Code will significantly increase the number of green homes and buildings being built. This is a unique opportunity to both create jobs and increase consumer spending as well as contribute to Canada’s transition to a low-carbon future.

The recovery from COVID-19 also provides the Ontario government with the opportunity to further support companies in retrofitting existing buildings with energy-efficient and low-carbon options. The goal should be to have existing buildings consume at least 30% less energy than 2005 levels by 2030. This could be achieved through energy labelling or EnerGuide. This requires assessing the energy efficiency of existing buildings upon renovating or selling and should also be included in the Ontario Building Code. There needs to be additional financial support to make these cost-efficient, until the retrofit industry is more mature, such as reductions to HST/PST and enhancements to the current SaveONEnergy program.

These are strategic steps towards the development of sustainable communities for current and future generations. Green buildings provide some of the most effective means to achieving a range of goals, such as addressing climate change, creating sustainable and thriving communities, and driving economic growth.

8. Ensure all provincial infrastructure projects:

a) Use a Qualifications-Based Selection (QBS) framework

Given Ontario’s current economic and fiscal situation, it is essential that all public infrastructure investments be transparent and return the greatest possible value for money. By adopting Qualifications-Based Selection (QBS) as its best practice for the selection of consultants, the government can realize the greatest possible value for investment in its infrastructure projects.

QBS is a competitive, sound, and fair process that selects those that are the best qualified. Selecting a consultant is one of the most important decisions a client makes. To a great degree, the success of a project depends on securing the professional services firm with the most experience and expertise that best fits the project. Experience demonstrates that selecting a consultant through QBS ultimately provides the best value for money.

QBS was codified as part of the *Brooks Act*, passed into law by the United States Congress in 1972, to protect the interests of taxpayers. The Act stipulates that public owners negotiate engineering and architectural services contracts based on demonstrated competence and qualifications for the type of professional services required and at fair and reasonable prices. Its intent is to discourage public owners from contracting for professional services based exclusively on price. The *Brooks Act* requires a competitive process in which professional services firms submit their qualifications to the project owner. The owner selects the consultant from this pool based on their technical competence, experience on similar projects, managerial ability, personnel to be dedicated to the project, local knowledge, industry reputation and integrity.

This process provides the owner with a clearer and accurate understanding of overall project costs. This process also provides for vigorous and open competition among firms, assuring the owner they are selecting

the most capable professionals, while at the same time obtaining a price that is “fair and reasonable.”

The Benefit to Ontarians:

i. Better value to taxpayers

QBS encourages innovation which in turn drives better value on the infrastructure investment. It provides accountability by ensuring that fees will directly correspond to the level of service and the value of deliverables to be provided. QBS also results in more realistic and predictable budgets and schedules for project expenditures.

ii. Significant life-cycle savings

QBS maximizes the value of the consultant’s contribution to a project while reducing the project’s life cycle costs. A recent American Public Works Association study shows that using QBS for professional services reduces construction cost overruns from an average of 10% to less than 3% - equivalent to a savings of up to \$700K on a \$10M capital project.

iii. Benefits small firms

QBS helps small firms compete by providing them a process through which to demonstrate the advantages that they often have over larger firms, including a greater degree of niche market expertise, greater knowledge of the local market and greater involvement of senior level management in the execution of the project.

iv. Promotes communication and technical innovation

Using QBS provides owners the opportunity to fully define the scope of work of the project during the selection process. This results in a project that is thoroughly thought out and fosters innovative, creative, cost-saving, and timesaving approaches to problems. It also fosters better communication and business relationships between owners and proponents as the process makes them partners in the job.

b) Effectively report life-cycle costing

It is essential that all infrastructure projects conducted by the province properly report and consider life-cycle costing. In order to gain the maximum value for money, all costs incurred over the whole life span of infrastructure projects must be estimated. This will ensure that taxpayers’ money is used for infrastructure projects that are able to produce multigenerational benefits for most Ontarians at a proper cost.

c) Create diverse supply chains

The provincial government should implement supply chain diversity policies. This will enable the province to use procurement to advance equity, diversity, and inclusion. The benefits of a diverse supply chain are well documented in research done by the Centre for Diversity and Inclusion and the Conference Board of Canada. Small to medium enterprises owned by women and members of other equity-seeking groups provide value to large organizations, reduce the risk of streamlined supplier pipelines, and lead to economic growth. The federal government has committed to increasing the participation of under-represented groups and Indigenous businesses in federal procurement, while cities like Toronto have established social procurement programs with similar objectives. It is imperative that the provincial government establish this to ensure that engineering companies led by women and members of equity-seeking groups are provided with access to public procurement opportunities.

9. Establish an Ontario Critical Minerals Research and Market Development Council within Ontario's Critical Minerals Strategy

OSPE is pleased that the Ontario Government is moving forward with the implementation of a Critical Minerals Strategy, which should create jobs and investment and economic development, while still supporting the transition to a low-carbon economy.

Ontario has a strong mining, materials and manufacturing industry and a well-developed chain of supply and service companies. Ontario must show the global investing community that it has a serious, sustainable plan to develop these resources appropriately. This means having a framework that understands the need to consult appropriately and engage with Indigenous and local communities, as well as industry partners. This framework should also demonstrate capability to develop the required infrastructure to develop and process these critical mineral deposits.

Ontario's global competitiveness in the area would be strengthened by further investment in mining and exploration, ideally with the establishment of an **Ontario Critical Minerals Research and Market Development Council**. This council should be dedicated to matters pertaining to research, development, design, consultation, innovation, and investigation in, and commercialization of critical minerals. This would lead to value added products made in Ontario.

Doing this will send a clear signal that Ontario is truly open for business.

Research and Innovation

10. Support local manufacturing innovation and production.

The Government of Ontario has launched a procurement tool that will remove barriers and leverage Ontario manufacturing capacity in the fight against COVID-19. In these uncertain times the government must continue to support the manufacturing sector to maintain strong supply chains.

The government should keep investing in "Made-In Ontario" solutions and products. This could be achieved by working with the federal government to identify nationally strategic products and services and establish a minimum level of domestic production of these. Items such as medical supplies, personal protective equipment (PPE), food, energy, and other essentials should be included.

The uptake of technology and digitization will improve the sector's ability to be able to switch production to respond to consumer demand more quickly, not only in times of crisis but also in response to market shifts. For economic recovery it is critical that engineering expertise be deployed to ensure the safety and optimization of innovative solutions within industrial spaces.

Ontario should work with the federal government to provide additional advanced manufacturing (AM) focused programs with potential financial incentives for Ontario companies to enhance their competitiveness both domestically and internationally. Supporting businesses in improving current manufacturing processes and methods, developing and implementing digital technologies and focusing on more sustainable and energy-efficient products will help create resiliency in this sector and improve Ontario's export potential.

11. Support the generation, protection, and commercialization of intellectual property (IP) in small to medium enterprises (SMEs).

Ontario should encourage research and development (R&D) that will accelerate technology transfer and commercialization of innovative products, processes, and services based on immediate demand. As a result of COVID-19, many businesses are having to shift their operations, processes, products, and services, and the need to invest in R&D has become crucial to their ability to remain competitive. All SMEs are integral to the economic recovery and long-term prosperity of Ontario and Canada. According to a recent report by the Ontario Chamber of Commerce titled *Small Business, Big Impact*, Canada is home to 1.2 million SMEs (426,490 are in Ontario). SMEs are responsible for employing 90% of Canada's private sector workforce.

SMEs are being forced to pivot their operations to adapt to new realities and remain competitive. These enterprises play an important role in fueling innovation through the creation and commercialization of new products, services, and processes. As a result, it has become increasingly important for these companies to invest in research and innovation. These investments are not only critical to the long-term sustainability of organizations but also to the overall economic health of the province and its workforce.

A key driver of this innovation potential is the generation, protection, and commercialization of associated intellectual property (IP). As noted in the province's IP report titled [Intellectual Property in Ontario's Innovation Ecosystem](#), Ontario has fallen significantly behind other jurisdictions in its economic growth and prosperity. The report outlines the potential to recover Ontario's economic position through R&D with a specific focus on increasing IP assets.

We commend the government's recent announcement to develop a Made-in-Ontario Intellectual Property Action Plan to ensure that the social and economic benefits of research and innovation are incentivized and retained within the province. Many engineers and engineering graduates are either entrepreneurs involved in launching SMEs or otherwise associated with SMEs. As such, we recommend that the government address three key barriers currently preventing all types of SMEs from pursuing the generation, protection, and commercialization of IP:

- Limited access to IP professionals with practical expertise (patent agents or patent lawyers)
- Lack of transparency and uniformity in the process to engage research institutions in IP development and commercialization
- Cumbersome administrative requirements that impact the access for funding

The Government of Ontario should:

- a) Provide a dedicated fund for small to medium enterprises (SMEs) to access IP expertise alongside their R&D efforts.** SMEs require practical IP advice at every stage of the R&D process. This includes providing a foundational understanding of the types of IP protections available for R&D, guidance on IP strategy, and how to capture and leverage IP protections to achieve business goals. The patent filing fee and legal fees associated with this are costly and a deterrent for companies to file. Current government funding programs either do not consider IP a fillable expense or do not encourage the expense as it may be a significant portion of the grant. If the government wants to increase the number of patents filed in Ontario it must make this process more affordable by assisting with the cost of IP filing.
- b) Create a resource that effectively explains how industry can engage with universities and other research institutions to access IP assets for commercialization.** Currently, the owner of the IP is dependent on the funding program used to engage the institution. This means that working with one research institution will not be the same as working with another leading to an initial lack of transparency regarding who will own the IP until the company is engaged in the process. The negotiation can also take time and resources that SMEs do not have the capacity to provide. A resource/tool should be developed to provide distinctions between research institutions that will enable companies to make informed

decisions in the selection of their research partner and assist in navigating the negotiation process once it begins.

- c) **Work with the federal government to reduce cumbersome red tape that impedes access to public funding for R&D efforts by implementing the following:**
- i. **Public disclosure of funds available to disperse for that year and an up-to-date version available regularly.** This should avoid the filling of applications to programs where funding may no longer be available or become highly competitive as funding is closed to being fully committed. Submitting a funding application requires a time investment that organizations can spend on other activities with higher ROI if funding is no longer available.
 - ii. **Companies undertake strategic relationship building, with members from funding agencies, located within regional innovation hubs.** This relationship building process is onerous creating an added burden on SMEs. At times, these relationships may not be well established by the end of the funding cycle, and companies miss the opportunity to access funding for the year. The government must examine this process and determine how best to streamline these activities considering the potential economic burden they place on SMEs.

OSPE believes that these recommendations are essential for the economic recovery of Ontario and look forward to working with you to further. If you have any additional questions please contact Stuart Atkinson, OSPE Policy and Government Relations Lead at satkinson@ospe.on.ca or 416-223-9961 ext. 225.

Sincerely,



Mark Frayne, P.Eng.
Chair and President
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