



Written Submission for the Pre-Budget Consultations in Advance of the 2021 Budget

By: Engineers Canada

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Recommendations to the federal government

Recommendation 1: That the government kickstart the economy through the acceleration of projects promised in the *Investing in Canada Plan* program and support green infrastructure investments.

Recommendation 2: That the government continue to support efforts to build Canada's high-speed broadband connectivity through sustainable digital infrastructure.

Recommendation 3: That the government continue to support diversity and inclusion initiatives across Canada, as well as support the recruitment, retention, and professional development of women in the engineering profession

Detailed recommendations to the federal government

Overview:

Engineers Canada is the national organization that represents the 12 provincial and territorial engineering regulators that license the more than 300,000 members of the engineering profession in Canada. As the national voice for the engineering profession, our organization has a long-standing history of working and collaborating with the federal government in order to help inform and develop legislation, regulations, and policies.

Recommendation 1: That the government kickstart the economy through the acceleration of projects promised in the *Investing in Canada Plan* program, support green infrastructure and natural resources investments

Economic recovery in the long term requires the federal government to accelerate planned infrastructure projects through the [*Investing in Canada Plan*](#) program and other legacy programs into the next two or three years as stimulus. By accelerating approvals, jobs will be created, and the economy will continue to be supported.

It is imperative that engineers be consulted for projects promised in the [*Investing in Canada Plan*](#) program. Individuals performing assessments for these projects must do so with high levels of technical skills, ethics, and accountability. Public confidence and safety are at risk when engineers are not involved in the development and implementation of a wide range of regulations that require the application of engineering expertise.

Additionally, the federal government must continue to invest in green infrastructure as a recovery strategy to help benefit both the economy post-COVID-19, as well as to deliver on Canada's climate commitments. In 2018, green building activity contributed approximately \$48 billion towards Canada's GDP—an increase of 50 per cent in four years. Investing in green infrastructure investments has proven to offer both high economic returns and a positive climate impact.

Finally, supporting natural resources remains critical to Canada's economy. The engineering profession plays a critical role in safely and sustainably extracting, processing, and delivering natural resources, such as water, wood, soil, oil and gas. Increasing support for such projects will reduce the need and cost of importation, support the labour force, and increase Canada's self-sufficiency.

Recommendation 2: That the government continue to support efforts to build Canada's high-speed broadband connectivity through sustainable digital infrastructure

The spread of COVID-19 has demonstrated an increased need for reliable high-speed broadband connectivity in rural and remote communities across Canada. Amid the COVID-19 pandemic, many industries are requiring their employees to work virtually, making reliable internet access imperative for economic recovery. Additionally, internet and broadband connectivity is critical in the delivery of essential services across Canada. Access to telemedicine, online government services, and banking to name a few, have been essential for Canadians during the pandemic. Despite the strong progress in

providing broadband access to these communities, such as the government's investment of up to \$500 million over five years in 2016 to extend broadband internet in these communities, as well as the development of the Universal Broadband Fund, gaps continue to exist.¹

At the end of 2019, 63 per cent of rural and remote households in Canada did not have access to speeds that are considered standard.² This large digital divide prevents individuals in these communities from participating in the digital economy; making it difficult for a strong economic recovery to occur post-COVID-19.³ In April 2020, rural download speeds were nearly 12 times slower than in urban households. Since the COVID-19 pandemic, internet speeds have fallen for rural and remote communities, and increased for urban users, ultimately widening the digital divide further.⁴

Those without reliable internet access at home during COVID-19 risk falling behind in the economy. The health and safety of these individuals may also be threatened if they are required to go into their workplace to access reliable internet; a potential concern as public health officials ask individuals to stay home to support social distancing measures. As we look to a future that might support increased virtual working, it's even more urgent to address significant access gaps.

Broadband connectivity needs to be reliable and sustainable, and that means a long-term innovative labour workforce needs to be available. In the absence of sustained innovation to drive projects, ideas, and assessments forward, the competitiveness of Canada's economy, coupled with individual productivity, becomes strained.

Engineers are essential in the design, implementation, and maintenance of physical broadband infrastructure, making the engineering profession essential in connecting rural and remote communities to broadband internet in Canada. Engineers provide innovative ideas to solve complex problems and can support the economic recovery of Canada post-COVID-19 by providing professional and unbiased expertise in connecting rural and remote communities to the digital economy. The federal government must ensure that engineers are consulted in the development of physical broadband infrastructure.

Engineers Canada also recommends that the federal government consider ways to encourage the integration of broadband deployment within all infrastructure renewal programs as well as incentivize and encourage investments and partnerships for broadband deployment in rural and remote communities. Encouraging these investments in these communities allows for individuals, specifically engineers, to remain in the workforce, which in turn, supports the national economy.

¹ Government of Canada (2018). 'Broadband Connectivity in Rural Canada: Overcoming the Digital Divide.' Retrieved June 17, 2020 from: <https://www.ourcommons.ca/Content/Committee/421/INDU/Reports/RP9711342/indurp11/indurp11-e.pdf>

² Policy Option (2019). "All Canadians deserve reliable high-speed internet." Retrieved June 22, 2020 from: <https://policyoptions.irpp.org/magazines/october-2019/all-canadians-deserve-reliable-high-speed-internet/>

³ Ibid.

⁴ CIRA (2020). "New internet performance data shows the staggering scale of Canada's urban-rural digital divide." Retrieved June 23, 2020 from: <https://www.cira.ca/newsroom/new-internet-performance-data-shows-staggering-scale-canadas-urban-rural-digital-divide>.

Recommendation 3: That the government continue to support diversity and inclusion initiatives across Canada, as well as support the recruitment, retention, and professional development of women in the engineering profession

In May 2020, Statistics Canada reported that 1.5 million more women than men lost their jobs over a two-month period due to the COVID-19 pandemic.⁵ The federal government must continue to support diversity and inclusion initiatives across all federal departments.

Women in Canada remain severely underrepresented in both post-secondary engineering education and the engineering profession. Women make up over 50 per cent of the Canadian population yet comprise less than 13 per cent⁶ of practising professional engineers, and only 22 per cent⁷ of undergraduate engineering students.

Engineers Canada is actively working to support the recruitment, retention, and professional development of women in the engineering profession, primarily through its [30 by 30 initiative](#). This initiative has a goal of raising the percentage of newly licensed engineers who are women to 30 per cent by the year 2030. Nationally, this figure has remained at approximately 18 per cent for the past three years. Reaching 30 by 30 will help drive cultural change in the engineering profession, supporting the even greater involvement of women in the profession.

The federal government should work collaboratively with the engineering profession in supporting the recruitment, retention, and professional development of women in the engineering profession. The federal government must take the initiative to fund outreach programs, bursaries, workplace mentorships, and work-integrated learning opportunities that encourage women to pursue engineering education and engineering careers.

Engineers Canada recommends that the federal government provide funding towards the creation of diversity and inclusion training modules, focused on engineering for small and medium enterprises. Recruiting more women enables us to have more diverse and inclusive workplaces that leverage the best talent from all parts of society adds value to employers, increases innovative thinking to transition Canada to a low carbon economy, and provides a deeper understanding of clients' needs. Diverse and inclusive workplaces are more creative, cognitively flexible, collaborative, and productive. The engineering profession requires diverse problem-solvers to address those challenges in the public interest and to promote Canada's innovative capacity.

⁵ Statistics Canada (2020). "Measuring labour market impacts as COVID-19 restrictions gradually ease." Retrieved June 15, 2020 from: <https://www150.statcan.gc.ca/n1/daily-quotidien/200605/dq200605a-eng.htm>.

⁶ Engineers Canada (2018). "2018 National Membership Information" Retrieved July 6, 2020 from: <https://engineerscanada.ca/reports/national-membership-report/2018-report>

⁷ Engineers Canada (2017). "Canadian Engineers for Tomorrow". Retrieved July 6, 2020 from: <https://engineerscanada.ca/publications/canadian-engineers-for-tomorrow-2017#female-undergraduate-enrolment>