



# Engineers Canada Federal Budget 2018 Highlights and Analysis

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## Overview

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On February 27, 2018, the Honourable Bill Morneau, Canada's finance minister, tabled Budget 2018, *Equality and Growth: A Strong Middle Class*, in the House of Commons. Budget 2018 highlights that approximately \$21.5 billion in new spending would be provided over a six-year period and that there will be an \$18.1 billion deficit for 2018-2019, which will fall to \$12.3 billion by 2022-2023. Additional information regarding Budget 2018 can be located at <http://www.budget.gc.ca>.

Immediately following Minister Morneau's announcement and the tabling of Budget 2018 in the House of Commons, Engineers Canada issued a press release with the organization's initial reaction to the budget and details regarding its contents. Engineers Canada's press release is located on our [website](#).

The government's third budget places a significant emphasis and commitment towards achieving gender parity across Canada's labour market, supporting science, technology, engineering, and mathematics (STEM) research, enhancing reconciliation with Indigenous Peoples, strengthening Canada's cyber-security, and preparing Canadians for the jobs of tomorrow. Engineers Canada is pleased to see that the federal government had made commitments towards achieving gender equality in STEM fields, increasing research grants, and improving national climate data collection as it pertains directly to weather and water services in Canada.

Engineers Canada looks forward to continuing its working relationship with the federal government on key priorities outlined in Budget 2018, specifically regarding:

- science, technology, engineering, and mathematics (STEM) research
- diversity and gender equality in STEM
- national climate data collection
- support for Indigenous communities

## Science, technology, engineering and mathematics (STEM) research

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### Promises

Federal support of science, technology, engineering, and mathematics (STEM) education is key to ensuring that Canada remains a leader in the provision of intellectual capital to the global marketplace. Research that is dedicated towards improving STEM education is critical in preparing the youth of today for the jobs of tomorrow. Budget 2018 makes strong commitments to support research; specifically, by allocating an additional \$3.2 billion over the next five fiscal years. Budget 2018 proposes new federal funding to three granting councils that provide federal funding "for the work of researchers at post-secondary institutions and research hospitals."<sup>1</sup>

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<sup>1</sup> The Government of Canada (2018). "Equality and Growth: A Strong Middle Class: Budget 2018." Retrieved February 27<sup>th</sup>, 2018 from: <https://www.budget.gc.ca/2018/docs/plan/toc-tdm-en.html>.

The government proposes an investment of \$925 million over five years, starting in 2018-2019, and \$235 million per year ongoing, to the following three granting councils:

- \$354.7 million over five years (\$90.1 million per year ongoing) to the Natural Sciences and Engineering Research Council (NSERC)
- \$354.7 million over five years (\$90.1 million per year ongoing) to the Canadian Institutes of Health Research (CIHR)
- \$215.5 million over five years (\$54.8 million per year ongoing) to the Social Sciences and Humanities Research Council (SSHRC)

Budget 2018 also proposes to provide an investment of \$15 million over five years to support equality and diversity initiatives in Canadian academia at post-secondary institutions, as well as \$4 billion towards Canada's research system to support researchers and to provide access to facilities and the necessary resources required to conduct such research.

These proposed investments will work to support diversity in academia and will “increase support and training opportunities for about 21,000 researchers, students, and high-quality personnel across Canada every year by 2021-2022.”<sup>2</sup>

## Analysis and opportunities

The increasing automation across industries, as well as rapid changes and developments in technology, are factors that will influence educational curriculums as well as the way in which Canadians will work. Proactive and long-term education strategies must therefore include investments in building fundamental STEM skills. Engineers Canada is encouraged by the federal government's commitment to invest in STEM research, facilities, and state-of-the-art tools that researchers require and believes this investment will continue to create the leaders of tomorrow.

## Diversity and gender equality in STEM

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### Promises

Budget 2018 highlights the Government of Canada's commitment towards eliminating barriers to gender parity in both employment and education; particularly to support women and girls' equal participation in Canada's growing economy. Budget 2018 has a significant focus on gender parity, including a new proactive pay-equity system for federal workers in both the public and private sectors across Canada.

The government proposes to introduce a new Employment Insurance Parental Sharing Benefit that would provide an additional five weeks of Employment Insurance Parental Benefits when parents agree to share the parental leave. It is a “use-it-or-lose-it” incentive that encourages equal participation of both parents in the work of raising their children. This incentive works to promote additional flexibility for women to return to the workforce sooner; a great incentive to support the equal participation of women in the engineering profession in Canada.

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<sup>2</sup> The Government of Canada (2018). “Equality and Growth: A Strong Middle Class: Budget 2018.” Retrieved February 27<sup>th</sup>, 2018 from: <https://www.budget.gc.ca/2018/docs/plan/toc-tdm-en.html>.

Additional commitments include additional support for female entrepreneurs to access further capital and greater female participation in Canada's labour market; specifically, in male-dominated industries.

The federal government recognizes that women are more likely to enter STEM programs in post-secondary institutions, however are less likely to graduate. To bridge this gap, Budget 2018 includes the following proposals to undertake research and data collection in support of the government's Gender Results Framework, specifically in STEM-related industries:

- \$5 million per year to Status of Women Canada to support an analysis of the unique challenges visible minority and newcomer women face in finding employment in STEM occupations

Additional gender-based measures to support the equal participation of women and Indigenous Peoples in Canada's labour market and national economy include:

- \$3 million over five years to implement pay transparency. This will highlight employers who are leading the way for equitable pay practices, while simultaneously holding employers accountable for addressing the pay gap that disproportionately impacts women and Indigenous Peoples in Canada.
- \$1.5 million over 2018-2019 and 2019-2020 for a symposium addressing women and the workplace. This symposium will work to encourage employers across Canada to address systemic issues faced by women and Indigenous Peoples in the workforce.

## Analysis and opportunities

Increased diversity and gender parity across Canada's labour market, specifically within Canada's engineering workforce, provides significant benefits to Canadians, particularly by delivering a solution to overcoming skills shortages, increasing innovation capacity, and providing a greater return on federal resource investments. The federal government's investment in research will fill important gaps in knowledge as to how to achieve greater diversity and inclusion, specifically relating to engineering in Canada.

## National climate data collection

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### Promises

Budget 2018 acknowledges that Canada's climate is drastically changing, causing extreme weather events such as ice storms, floods, and wildfires that leave devastating and long-lasting impacts on Canadian communities and the national economy. Budget 2018 highlights that our current Canada-wide networks that collect data and monitor changes in climate, ice, air, and weather are key to both addressing and planning for extreme weather events; up-to-date national climate data collection networks are imperative in developing "environmental predictions that help keep people safe."<sup>3</sup>

The government, through Budget 2018, has promised to invest \$120 million over the next five years to adapt Canada's weather and water services to climate change. Budget 2018 proposes to support national

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<sup>3</sup> The Government of Canada (2018). "Equality and Growth: A Strong Middle Class: Budget 2018." Retrieved February 27<sup>th</sup>, 2018 from: <https://www.budget.gc.ca/2018/docs/plan/toc-tdm-en.html>.

climate data collection as it pertains to adapting Canada’s weather and water services to climate change by investing:

- \$40.6 million over five years, starting in 2018-2019, with \$0.2 million in remaining amortization, to complete the modernization of Canada’s severe weather warning systems and weather forecast system, as well as to maintain direct support to emergency management organizations.
- \$69.5 million over five years, starting in 2018-2019, with \$7.3 million in remaining amortization, to revitalize Canada’s water stations, test and implement new technologies, and expand engineering capacities.
- \$9.8 million over five years, starting in 2018-2019, with remaining amortization of \$3.1 million, to support water station operations that are cost-shared with both provinces and territories.

Budget 2018 reaffirms \$180 billion towards commitments to infrastructure investments across Canada. However, due to the continued negotiation of bilateral agreements with the provinces and territories, and the funding process in place that requires municipalities to submit receipts for specific costs incurred, this funding has been distributed at a slower rate than forecasted, causing a modest infrastructure investment over the next five years. This will be offset by an increase in infrastructure investments in the second-half of the government’s 12-year fiscal commitment.

The Government of Canada is working to improve financial reporting, as well as transparency and accountability under its infrastructure programs, specifically to ensure “that it is clear when projects get underway, when costs are incurred, and when federal funds flow to other levels of government.”<sup>4</sup> To this end, provinces and territories will need to provide a three-year plan to form the basis for the delivery of funding in each jurisdiction. This will be updated on an annual basis and will work to help the federal government make informed decisions regarding funding every year over the life of the plan.

## Analysis and opportunities

Engineers Canada welcomes the federal government’s proposed investment of \$120 million over the next five years to adapt Canada’s weather and water services to climate change. By doing so, we must ensure that the collection of national climate data remains up-to-date, consistent, and accurate to increase public confidence in federal environmental assessments and regulatory processes, while simultaneously supporting evidence-based information to guide project planning activities. Consistent national climate data will ensure that accurate climate projections are made, enabling effective planning for both present and future projects.

While this investment is an important first step, Engineers Canada encourages the federal government to continue to support climate resilience and adaptation initiatives. Canadian communities, as well as Canada’s growing economy, will be better protected with the combined federal investment of reliable, up-to-date climate data and climate resilient and adaptation initiatives. Professional engineers in Canada are leaders in adaptation and are ready to work collaboratively with the federal government on environmental assessments and regulatory processes to provide unbiased and transparent advice regarding climate change and its impact on new and aging infrastructure. The consideration of climate change vulnerability assessments, such as Engineers Canada’s [Public Infrastructure Engineering Vulnerability Committee \(PIEVC\) protocol](#), with national climate data considerations would be an excellent

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<sup>4</sup> The Government of Canada (2018). “Equality and Growth: A Strong Middle Class: Budget 2018.” Retrieved February 27<sup>th</sup>, 2018 from: <https://www.budget.gc.ca/2018/docs/plan/toc-tdm-en.html>.

step forward in helping to better protect the environment, the economy, and Canadians from the risks associated with climate change.

## Support for Indigenous communities

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### Promises

The Government of Canada provides significant commitments in Budget 2018 towards enhancing reconciliation with Indigenous Peoples across Canada.

First, Budget 2018 acknowledges that all long-term drinking water advisories on public water systems specifically on reserves and in northern and remote communities must be lifted by March 2021. To achieve this objective, Budget 2018 builds upon previous fiscal investments towards strengthening and safeguarding water and wastewater infrastructure. Budget 2018 reaffirms the government's commitment to improving water and wastewater systems by providing an additional \$172.6 million over three years, beginning in 2018-2019, "to improve access to clean and safe drinking water on reserves."<sup>5</sup>

This \$172.6 million federal investment will go towards supporting repairs to high-risk water and wastewater systems, construction, and renovation of jeopardized water systems, and recruiting and retaining trained water operators, resulting in 25 additional projects being completed by 2020 rather than 2021. The federal government acknowledges that this investment will also go towards supporting innovative First Nations-led service delivery methods.<sup>6</sup>

Budget 2018 also allocates \$5 billion over five years to ensure that Indigenous children and families have an equal chance to succeed, to build the capacity of Indigenous governments, and to support self-determination and self government agreements with Indigenous Peoples. Additionally, the budget allots approximately \$1.5 billion towards tackling the housing shortage in Indigenous communities across Canada. This is distinct from the National Housing Strategy announced in December 2017.

### Analysis and opportunities

Engineers Canada strongly supports the need for safe drinking water and proper wastewater management systems to be in place across Canadian communities; specifically, to uphold and protect public health and safety. Investments to clean drinking water and wastewater systems must be made to prevent future long-term drinking water advisories from occurring. With Canada's changing climate in mind, it becomes vastly important for new or renovated water distribution and treatment facilities to be constructed and maintained with climate resilience in mind. Engineers Canada's Public Infrastructure Engineering Vulnerability Committee (PIEVC) protocol has been applied several times to drinking water and wastewater management facilities across Canada (examples of which can be located at [www.pievc.ca](http://www.pievc.ca)). Engineers Canada strongly encourages the federal government to consult with professional engineers

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<sup>5</sup> The Government of Canada (2018). "Equality and Growth: A Strong Middle Class: Budget 2018." Retrieved February 27<sup>th</sup>, 2018 from: <https://www.budget.gc.ca/2018/docs/plan/toc-tdm-en.html>.

<sup>6</sup> The Government of Canada (2018). "Equality and Growth: A Strong Middle Class: Budget 2018." Retrieved February 27<sup>th</sup>, 2018 from: <https://www.budget.gc.ca/2018/docs/plan/toc-tdm-en.html>.

when working to deliver safer and more resilient water resources to vulnerable communities across Canada.

## About Engineers Canada

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Engineers Canada is the national organization of the 12 engineering regulators that license the country's 290,000 members of the profession. Together, we work to advance the profession in the public interest.

To learn more about Engineers Canada and its advocacy work, please visit [engineerscanada.ca](http://engineerscanada.ca)