



Written Submission for the Pre-Budget Consultations in Advance of the 2020 Budget

By: CSA Group

Recommendations

The Canadian Standards Association (CSA Group) proposes:

Recommendation 1: That the federal government stipulate that at least 1-2% of any funding it provides for any new climate related innovation (e.g. clean technology) and/or emissions reduction-focused program, be directed towards the research and development of related standards.

Recommendation 2: That the federal government attach the consideration and/or development of standards as a qualifying funding criterion for provincial, territorial and municipal projects, including large infrastructure projects related to transit, wastewater, renewable energy, hydrogen and alternative fuels infrastructure.

Overview

The Canadian Standards Association (CSA Group) was established over 100 years ago and is Canada's largest accredited standards development organization. We are a member-based association serving business, government, and consumers, with over 3,000 published standards and codes in more than 54 subject areas, including the environment, energy, infrastructure, health, and emerging technologies.

CSA Group's mission is to enhance the lives of Canadians through the advancement of standards in the public and private sectors. The technical and management standards developed with our 10,000 members help improve safety, health, the environment, and economic efficiency in Canada and beyond. We have a long history of partnership with federal, provincial, and territorial governments to continually improve standards that positively impact the lives of Canadians every single day.

We work with our members and stakeholders to support the development of national, bi-national, regional as well as accredited international standards, to meet the evolving needs of the global marketplace, and to continually respond to changing regulatory requirements. CSA Standards is accredited by both the Standards Council of Canada and the American National Standards Institute.

CSA Group's steadfast commitment to safety and sustainability through the use of standards is deeply embedded in our culture. Our recommendations in advance of the 2020 federal budget simply reinforce this commitment to help Canada transition to a low carbon economy, and at the same time, help develop standards that will continue to keep Canadians safe.

By promoting industry-wide best practices and operational efficiencies, standards support the efficient use of public funds for large projects that support emission reductions, such as green infrastructure, wastewater treatment facilities, renewable energy initiatives, and others. For government and regulatory stakeholders, the standards process can increase acceptance by industry and the public through involvement and collaboration, serve as building blocks to form new or augment existing regulations, provide a forum for open discussion and continuous improvement, and support transparency through the availability of publicly accessible standards.

To that end, CSA Group recommends that the federal government:

1. Stipulate that at least 1-2% of any funding it provides for any new climate related innovation (e.g. clean technology) and/or emissions reduction-focused program, be directed towards the research and development of related standards.
2. Attach the consideration and/or development of standards as a qualifying funding criterion for provincial, territorial and municipal projects, including large infrastructure projects related to transit, wastewater, renewable energy, hydrogen and alternative fuels infrastructure.

The Value of Standards in Addressing our Changing Climate

For over 100 years, CSA Standards have helped ensure the quality and safety of various services, products, and systems that people encounter at home, at work, and at play. Standards provide peace of mind to consumers, drive business innovation, and help manage risks. Standards also help increase compatibility, interoperability, and ultimately enhance trade and economic activity. Standards also help reduce their impact on the environment.

CSA Group's Research team conducts and supports research in new and emerging areas of interest that have the potential to impact important facets of our work, our lives, and indeed our world. Our research programs are designed to support the development and adoption of new technologies and our ongoing commitment to social good. Some research reports of relevance include the following:

- *Canada's North: Discovering How Standards Can Contribute to Safety, Sustainability & Economic Growth*

- *The Role of Standardization in Emerging Technologies*
- *Canada's North: Exploring the Environmental, Societal and Economic Challenges Facing Canada's Northern Communities*
- *Upstream Oil and gas Flaring, Incineration and Enclosed Combustion*
- *Structural Design of Wastewater Treatment Plants*

As an active leader on international standards development committees, such as those at the International Organization for Standardization (ISO), CSA Group has adopted and published international standards with many more under development. Many of these efforts are pioneering issues for under-served, yet critical topics such as the health of Canada's northern communities, climate change adaptation, carbon capture and storage, and utilizing forestry bi-products to increase sustainability.

CSA Group has partnered with Natural Resources Canada, Environment and Climate Change Canada, Innovation, Science, Economic Development, Transport Canada, and others, to develop new standards and update current standards to meet current and future challenges. Our work covers a wide variety of standards ranging from the more traditional areas of climate change adaptation, such as those standards that increase energy efficiency in homes and business by reducing fuel and energy use, to standards that govern the safe and efficient use of cutting-edge technology such as hydrogen and fuel cell vehicles.

On energy and fuels, our wide ranging work includes renewable natural gas, studying the use and impact of hydrogen in our pipeline systems, the management of GHG registries for Alberta, and our work in the study and use of fuels in the marine, on-road transportation, and appliances sectors. Our standards are used by the wind and solar energy industries, and in the nuclear energy sector.

CSA Group's current work on climate change adaptation/resilience includes updating the National Bridge Highway Code and the Canadian Electrical Code, and studying the durability of buildings, and ways to prevent and reduce the impact of flooding on built environments such as basements.

Climate change is an increasing challenge for Canadians and will be an on-going threat to future generations if left unmitigated (e.g. extreme weather events, loss of property). While climate change mitigation is a vital part of Canada's climate strategy, so is climate change adaptation.

Federal government programs need to incorporate the development of standards at early stages of program development – especially if it is a program that will have a long-term impact on Canadians – such as clean technology investments in infrastructure, innovation, green energy, and other emission reductions programs. Standards support innovation, accountability, enhance trade, create economic opportunity, and benefit Canadians by helping reduce our collective environmental footprint. We need to ensure that infrastructure built today is able to withstand the pressures of an evolving climate system, and that codes that protect Canadians today are updated to meet the challenges of the future.

Incorporating Climate Change Adaptation Strategies for Safe, Sustainable Infrastructure and Technology Development

We know that climate change is an urgent priority for governments, businesses and all Canadians. CSA Group inspires innovative solutions that preserve our planet. For more than 60 years, CSA Group has produced trusted environmental standards contributing to sustainable practices in the areas of water management, forestry, mining, and air quality. Today, we are innovating the development of standards for emerging technologies, such as bio-retention systems, smart cities, carbon sequestration, and autonomous mining systems and machines. We have also pioneered registries to publicly demonstrate the successful impact of implementing standards across a variety of areas, from GHG management to accessibility in community infrastructure.

While much of this work is being done in partnership and alignment with federal, provincial, and territorial governments and priorities, more needs to be done to ensure that standards are being continuously developed to meet new and emerging challenges. In light of the climate emergency Canadians are facing,

we collectively need to do much more to ensure that we are mitigating climate change by reducing our environmental footprint today, while building infrastructure that is adapted to meet future climate challenges.

Climate change and its associated impacts will play a central role in Canada's policy future. Making smart investments now can improve the system and help to avoid more severe climate related costs in the future. The critical infrastructure we rely in our daily lives must remain resilient to more damaging and frequent extreme weather events.

Rather than incorporating the research and development of standards at the end of a program cycle, CSA Group recommends that federal government programs incorporate standards into their budgets at their infancy, and continue to ensure the development and adoption of standards, by attaching the consideration or development of standards as a funding criteria for projects at the federal, provincial, territorial or municipal levels. Incorporating climate change considerations into standards will help guide how infrastructure is designed and built to withstand more frequent and severe weather events.

Conclusion and Recommendations

Standards continue to have positive impacts on the lives of Canadians and people around the world. Enhanced trade through compatibility and interoperability, increased economic activity, reduced environmental impacts, improved safety and security, are all a direct result of implementing standards in wide ranging areas of our lives.

Ultimately, standards contribute to the overall development of social good, and benefit not just Canadians but people around the world. In addition, standards specifically related to climate change have helped to retain Canada's position as the leading voice for climate change globally.

Furthermore, the economic benefits of standards to Canada cannot be understated. A 2015 study by the Conference Board of Canada – supported by the Standards Council of Canada – said that the economic benefit of standards in 2014 represented \$3 billion of the \$39 billion increase in real GDP. Since 1981¹, the use of standards has injected more than \$91 billion into Canada's economy.

With sound and on-going policy support, the development of standards will continue to enhance lives around the world, and help Canada meet its environmental commitments, and cement its position as a leader in helping meet climate change challenges by embracing innovation and implementing cutting-edge technology.

CSA Group recommends that the federal government:

1. Stipulate that at least 1-2% of any funding it provides for any new climate related innovation (e.g. clean technology) and/or emissions reduction-focused program, be directed towards the research and development of related standards.
2. Attach the consideration and/or development of standards as a qualifying funding criterion for provincial, territorial and municipal projects, including large infrastructure projects related to transit, wastewater, renewable energy, hydrogen and alternative fuels infrastructure.

Our recommendations, if implemented, will only strengthen our partnership with the federal government, and support our service to Canadians and our planet

¹ [Standards Council of Canada: How Adopting Standards Affects Canadas Productivity and Growth revised 2016-08-03.pdf](#)