



CANADIAN CONSULTING ENGINEERING AWARDS 2021

ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA CLIMATE CHANGE ACTION PLAN

CLIENT: ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA
CONSULTANT: ASSOCIATED ENGINEERING

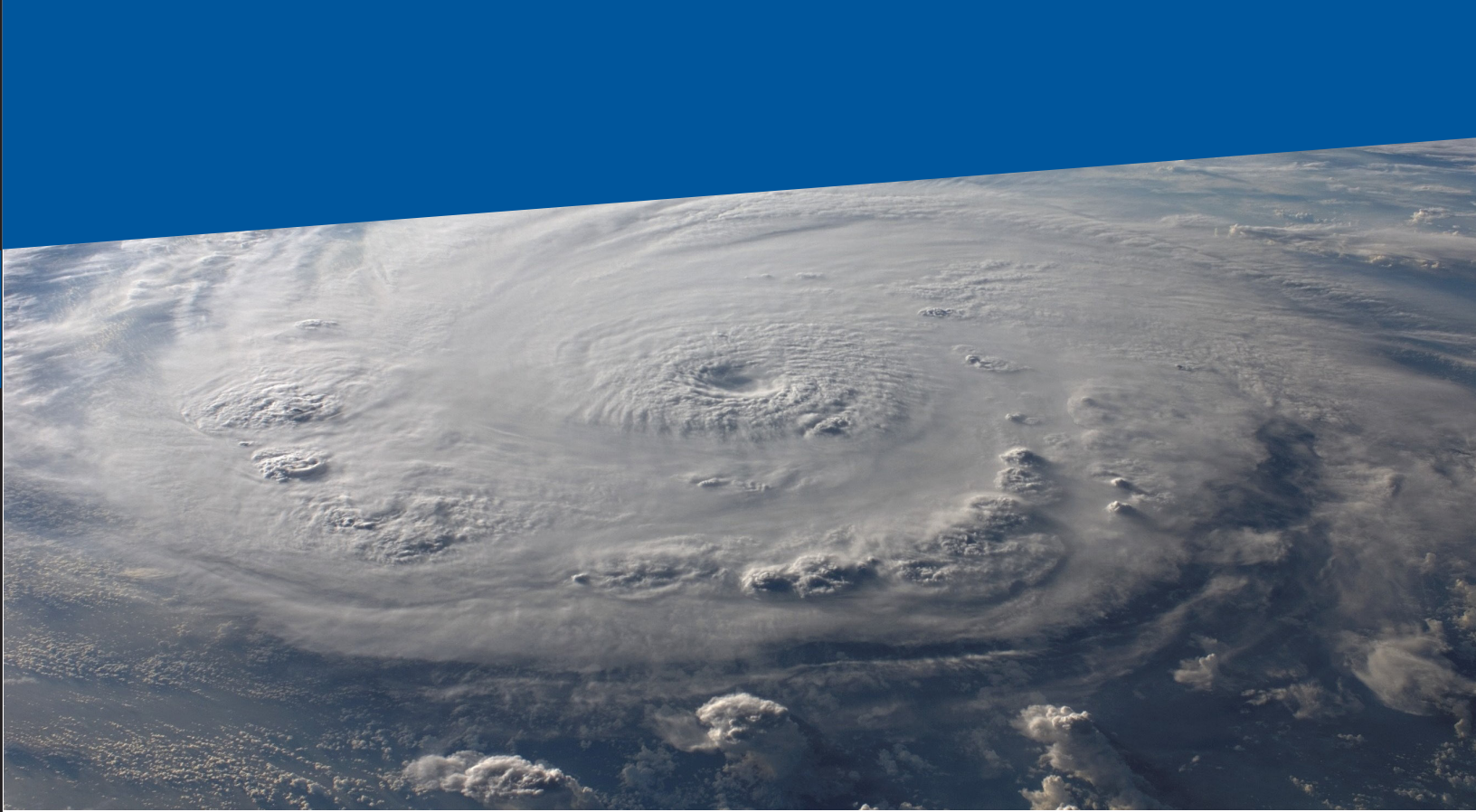


Associated
Engineering

ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA
CLIMATE CHANGE ACTION PLAN



ENGINEERS AND GEOSCIENTISTS BC, SUPPORTED BY ASSOCIATED ENGINEERING, HAS DEVELOPED A CLIMATE CHANGE ACTION PLAN - A FIRST FOR A CANADIAN PROFESSIONAL PRACTICE REGULATOR. THE PLAN ESTABLISHES EGBC'S STRATEGIC ROLE AS A REGULATOR OF PROFESSIONALS WHO PLAY A SIGNIFICANT ROLE IN DESIGNING, BUILDING, AND MAINTAINING PHYSICAL SYSTEMS AND MANAGING NATURAL RESOURCES. THE PLAN SUPPORTS EGBC'S 39,000 REGISTRANTS IN CONSIDERING THE RAPIDLY CHANGING CLIMATE IN THEIR WORK, IN DOING SO, PROTECTING THE PUBLIC AND THE ENVIRONMENT.



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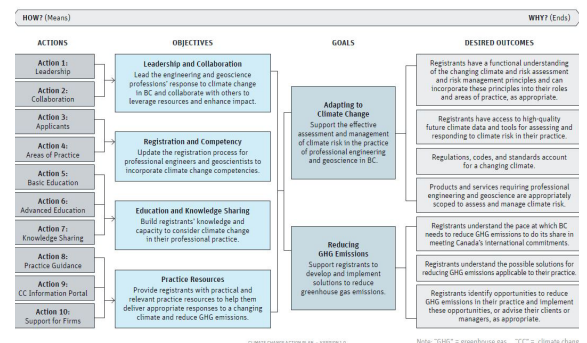
EXECUTIVE SUMMARY

As a regulator of the engineering and geoscience professions under BC's Professional Governance Act, for more than 100 years, Engineers and Geoscientists British Columbia (EGBC) has played a critical role in professional regulation and governance to protect the public interest.

In 2018, EGBC embarked on developing a Climate Change Action Plan - the first of its kind in Canada for an engineering and geoscience regulator. EGBC's registrants play an essential role in the design, maintenance, and protection of physical and natural assets. EGBC's goal was to develop a Plan that guides registrants in considering climate-related risks in their work.

EGBC established an Action Plan Steering Group comprising experts from within and outside of the association to lead and develop the Plan. Employing a broad and inclusive engagement process, EGBC sought input from their registrants, stakeholders, and other professionals on how climate change issues related to the practice of engineering and geoscience should be managed.

The resulting Plan documents two main goals: adapting to climate change and reducing greenhouse gas emissions, and outlines a set of objectives, desired outcomes, and actions. The Plan not only provides the strategic direction, but also the important tools EGBC and registrants need to deliver the desired outcomes. This Plan supports climate change learning and provides guidance to registrants on considering climate risks and incorporating climate change considerations in their work. Moreover, the Plan identifies a clear path for EGBC to deliver the goals. EGBC's Climate Change Action Plan will help reduce the economic and environmental impacts of the rapidly changing climate.





INNOVATION

Engineers and Geoscientists British Columbia (EGBC) has launched its Climate Change Action Plan to guide its response to the changing climate. The Plan is a first in Canada for an engineering and geoscience regulator and is consistent with EGBC's guiding principles to act, first and foremost, in the public interest and proactively plan for the future.

Associated Engineering and Compass Resource Management designed and delivered a wide-ranging engagement process to garner insights and opinions from EGBC's registrants, as well as stakeholders. The Plan articulates how EGBC will meet registrants' need to incorporate climate considerations into their professional practice.

Associated provided advisory services on process design, development, delivery, as well as strategic planning tailored to climate change and its relation to the engineering and geoscience professions.

Significant challenges existed in determining which actions were appropriate, effective, and within EGBC's regulatory mandate under BC's new Professional Governance Act. A desktop review of similar regulators found no public-facing, strategic climate plans. There was a dearth of guidance and support from professional regulators on how their registrants could integrate climate change into their daily work.

Without similar plans from peer regulatory bodies, a tailored engagement and development process was established to meet EGBC's unique organizational and regulatory needs, while being specifically designed to be delivered remotely during public health restrictions and across EGBC's expansive geographic territory.



A publicly released Discussion Paper presented the climate-related challenges that registrants experience in their professional practice. The Paper articulated climate actions EGBC was already undertaking alongside proposed actions, with feedback from 39 organizations.

Engagement began at EGBC's Annual Conference, with subsequent input sought at a townhall-style webinar attended by 220 participants, through six focus groups including 32 stakeholders in key disciplines and business sectors, and nine interviews with subject-matter-experts in public policy, risk, and professional practice.

Draft content was workshopped with EGBC's leadership team, as well as with volunteers on EGBC's relevant Advisory Groups and the specifically formed Climate Change Action Plan Steering Group.

The process led to a Plan with goals to address climate change adaptation and mitigation, to be met through ten specific actions in four objectives: Leadership & Collaboration; Registration & Competency; Education & Knowledge Sharing; and Practice Resources.

The Plan identifies a clear path for EGBC to deliver the goals and provides registrants with the tools to integrate climate risk management in their work, thus reducing climate impacts and lowering greenhouse gas emissions.





COMPLEXITY

Associated Engineering designed and interpreted the results from a survey of EGBC registrants, which generated 1,072 responses - amongst the highest in EGBC's history - on climate change and professional practice. This informed an extensive engagement that garnered a wide range of perspectives and opinions, which needed to be reflected in the Plan.

Some respondents and stakeholders felt that the role of engineers should focus on adaptation and others felt emissions mitigation was outside EGBC's mandate, since such efforts should be the purview of government. Other participants, however, wished EGBC to encourage more aggressive emissions reduction efforts. As such, the need to manage a divergent, myriad of potential actions was complex.

A highly structured process was used to screen and refine the consultation input. The consultation process had identified a comprehensive list of more than 70 candidate actions, which were evaluated to see if they were within, or close to, EGBC's regulatory mandate. Those too-far-removed were screened out.

Using a change structure and results-oriented (how and why) techniques ensured that selected actions would support the Plan's goals and objectives. The remaining candidate actions were scored for effectiveness against EGBC's climate goals, and for their anticipated level of effort. The combined score gave an overall rating for each action which, although not determinative, was used to structure the development and refinement of the actions in the wireframe.

A "What We Heard" report included the key points from the consultation and was distributed widely to provide transparency to registrants.



SOCIAL AND ECONOMIC BENEFITS

Ground-breaking for a professional practice regulator, the Plan articulates actions that will have wide societal impacts, equipping EGBC's registrants to better understand climate change impacts, develop adaptation measures, and reduce greenhouse gas emissions.

The Plan commits to raising awareness of climate change action and ties to professional responsibilities. It commits to strengthening collaboration with other regulatory bodies, standards agencies, and industry; and to improving access to climate change data for projects.

Included in professional registration, new applicants will have competency assessments on climate change considerations; and must take training covering climate change content. EGBC is investigating establishing new practices to recognize climate change competencies.

The Plan addresses enhancing professionals' ability to meaningfully integrate climate risk into their work. The Plan enhances knowledge sharing and demarcates basic education for those where climate impacts to their work are tangential, from those who need advanced training to reflect climate change in their practice.

The Plan commits EGBC to expand its Climate Change Information Portal, while continuing to develop climate-relevant practice guidelines in areas most exposed to climate risk. Recognizing climate risk's systemic nature, EGBC will support firms to better integrate climate change into their business, not simply relying on subject matter experts.

Insurance Bureau of Canada data shows insured catastrophic losses are being exacerbated by climate change, and have increased annually on average from \$0.4 billion (1983 – 2007) to \$1.9 billion (2008 and 2018). This Plan provides the tools to respond to and lessen the impact of climate-related events, reducing long-term economic losses.





ENVIRONMENTAL BENEFITS

Through the development of the Climate Change Action Plan, it was clear that tackling climate change presented challenges and opportunities for the engineering and geoscience professions. While engineers and geoscientists are a relatively small group, they can and must, leverage their collective voices to effectively respond to the impacts and reduce the drivers of climate change.

No single profession or organization alone can mitigate the risks posed by a rapidly changing climate. Interdisciplinary collaboration between all orders of government, academia, industry, and beyond can help engineers and geoscientists identify and manage risks, thereby contributing to avoiding the worst effects of climate change.

The Plan allows EGBC to identify new actions and build on existing practices to support registrants in fulfilling their professional responsibilities and meet the requirements of stakeholders to consider climate change.

The Plan's robust engagement and thorough development process helped EGBC determine how to carry out its mandate to serve and protect the public interest as a regulatory body responding to climate change, and will effectively reduce environmental impact and minimize greenhouse gas emissions through innumerable projects, not only in BC, but also internationally, where EGBC registrants practice.

This Plan is the first of many steps needed to effectively consider climate change in almost every aspect of engineering and geoscience, and even in areas outside their traditional roles, such as finance, economics, public policy and planning.

The first-of-its-kind, the expectation is that the Plan will act as a blueprint for other engineering and geoscience regulators.



MEETING CLIENT'S NEEDS

EGBC's main project goals were to:

- Raise awareness about the potential impacts of climate change as they relate to the professional practice of engineering and geoscience;
- Increase registrants' awareness of the regulatory body's existing resources on climate change;
- Identify the issues, challenges, and opportunities experienced by registrants with respect to addressing climate change in professional practice; and
- Identify areas of practice that can contribute to climate change adaptation and mitigation.

Undertaking a consultative process with registrants and employing a transparent decision-making process, Associated Engineering and Compass Resource Management developed a Climate Change Action Plan - a first amongst professional regulators.

The Climate Change Action Plan meets all of EGBC's expressed goals through an easy-to-understand, practical and actionable Plan that includes four key objectives, ten clear actions, and well-articulated goals and outcomes. The Plan identifies a clear path for EGBC to undertake and deliver the goals in the next three years (and beyond). EGBC's registrants will be better supported than ever before in integrating climate risk management and maximizing opportunity to reduce environmental impacts on their projects.

Associated Engineering continued beyond the Plan's development to support EGBC in its efforts to better understand how to gauge success, assess progress towards the Plan's goals, and continue to engage regularly with registrants so that they have access to adequate support in discharging their responsibilities in a fashion commensurate with a rapidly changing climate. EGBC will evaluate progress on an annual basis, and review and update the Plan in three years.

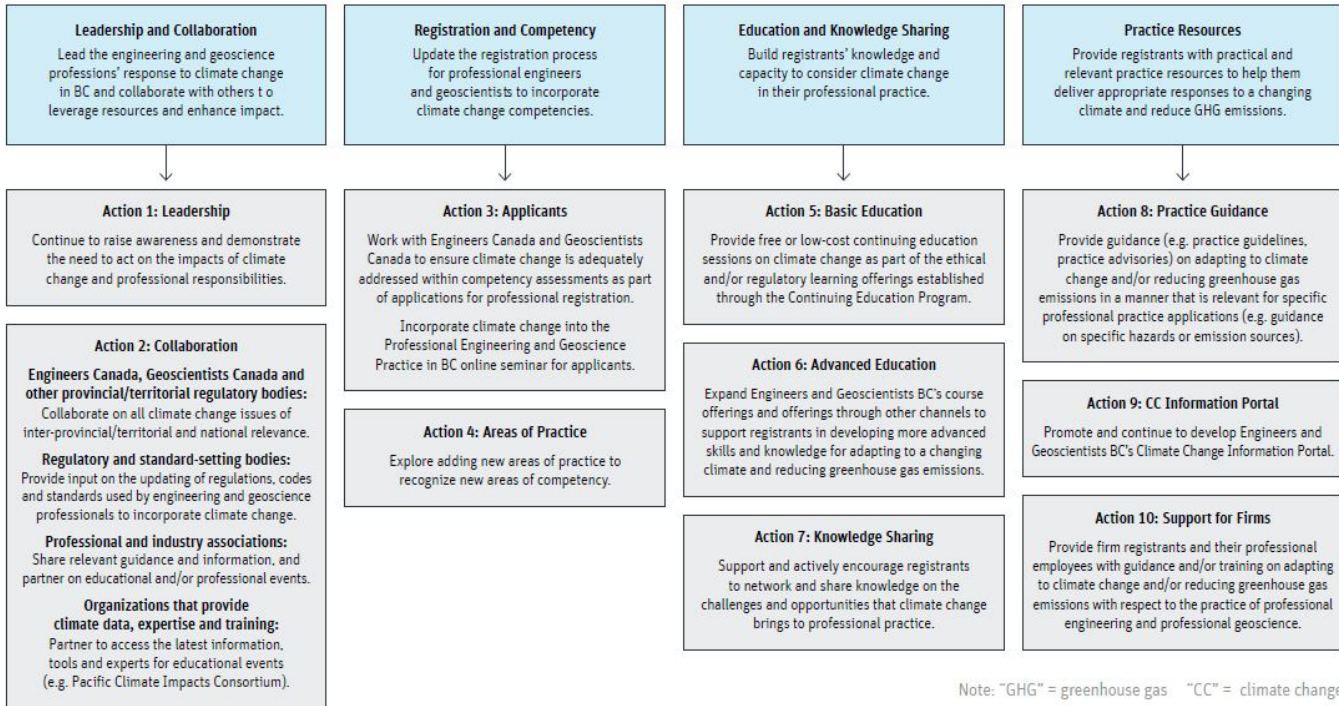


SUMMARY OF THE CLIMATE CHANGE ACTION PLAN

GOALS



OBJECTIVES AND ACTIONS



Note: "GHG" = greenhouse gas "CC" = climate change

CLIMATE CHANGE ACTION PLAN - VERSION 1.0

CONCLUSION

Engineers and Geoscientists British Columbia Climate Change Action Plan demonstrates a firm commitment to their registrants and society on its role to protect the public from the impacts of the rapidly changing climate. The Plan clearly articulates goals to adapt to the changing climate and reduce greenhouse gas emissions.

In addition, the plan identifies objectives, actions, and desired outcomes, and provides direction on priorities. The Plan gives EGBC's 39,000 registrants guidance and tools to consider and manage climate-related risks on their projects and implement measures to reduce impacts, and protect the public and our environment.

