



ENGINEERS AND GEOSCIENTISTS BC POSITION PAPER ON CLIMATE CHANGE

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ENGINEERS AND GEOSCIENTISTS BC'S POSITION

Engineers and Geoscientists BC acknowledges that climate change is primarily human-induced and presents significant risks to the public and the environment, requiring urgent action.

Climate change is one of many considerations relevant to professional practice. In accordance with the Engineers and Geoscientists BC's Code of Ethics and *Professional Practice Guidelines - Sustainability*, registrants are required to consider the impact of their work on the climate and the impact of climate change on their work to deliver sustainable solutions.

THE ISSUE

Earth's climate is changing at an unprecedented and accelerating rate, causing a multitude of rapidly evolving challenges, risks, and opportunities. Addressing these requires collective action, including that of professional engineers and professional geoscientists, on two urgent, interconnected efforts: reducing GHG emissions, and adapting to the impacts of climate change.

The scientific consensus emphasizes that reducing GHG emissions from human activities is crucial for mitigating the worst effects of climate change. At the same time, thoughtful adaptation can lessen the negative impacts of climate change on human well-being and the environment.

While climate change presents complex and uncertain challenges, it is important that the solutions to mitigate or adapt to the associated risks also address societal issues like reconciliation with Indigenous communities and other systemic inequities.

DRIVERS FOR ACTION

In accordance with its regulatory mandate, Engineers and Geoscientists BC is proactively addressing climate change in its 2022-2027 Strategic Plan. The organization articulates its objectives and areas of action in its Climate Change Action Plan (CCAP).

Engineers and Geoscientists BC's governing legislation, the *Professional Governance Act (PGA)*, defines the regulatory body's mandate and authority "to promote and enhance the ability of its registrants to respond and adapt to changes in practice environments, advances in technology and other emerging issues." The *PGA* also defines the regulatory body's responsibility "to establish, monitor and enforce standards of professional ethics amongst registrants". These responsibilities are strong drivers for the regulatory body to support registrants in navigating through a range of professional practice and ethical issues, including those concerning climate change.

Engineers and Geoscientists BC's Code of Ethics outlines the principles that all registrants must follow in their professional dealings. Specifically, Principle 1 of the Code of Ethics requires registrants to "hold paramount the safety, health, and welfare of the public, including the protection of the environment and the promotion of health and safety in the workplace." This tenet includes consideration of the impacts of climate change on the safety, health, and welfare of the public and the environment.

There is strong evidence that equity-deserving groups and remote communities are disproportionately affected by the impacts of climate change. In particular, these impacts have compounding effects on Indigenous Peoples' way of life, health, food security and culture.

These issues relate to the protection of the public interest and thus serve as additional drivers for registrants to consider climate change in professional practice.

EXPECTATIONS FOR REGISTRANTS

As professionals providing engineering or geoscience solutions across various sectors, registrants are required to apply scientific principles and leverage their expertise to enable, design, and implement sustainable solutions.

Engineers and Geoscientists BC expects individual and firm registrants to consider climate change in their professional practice by:

- meeting the objectives and intent of the *Professional Practice Guidelines – Sustainability*, using their professional judgement on how to apply them;
- maintaining a current knowledge of climate change related data, technologies, assessment approaches and policies as it relates to their professional practice;
- collaborating with Indigenous Peoples to learn ways to integrate Indigenous knowledges and perspectives in climate action and implement best practices that foster reciprocal, respectful, and collaborative relationships;

- designing and implementing solutions through the lens of low-carbon resilience that are equitable, inclusive, and just for all;
- collaborating with peers and experts across all disciplines—including climate scientists and meteorologists—to enhance their current understanding of how climate may change in the future and to develop climate change adaptation and mitigation strategies, as relevant to their areas of practice;
- evaluating and managing the risks of climate change and extreme weather events on their professional practice;
- identifying and assessing the risks and opportunities of innovative and sustainable climate change solutions, and
- discussing with their clients and employers the potential climate change impacts, risks, and opportunities on their tasks, projects, assessments, designs, products, processes or systems, and documenting the ensuing decisions. These discussions should occur early enough and include the consequences of not incorporating climate change considerations, to enable informed decision-making.

ENGINEERS AND GEOSCIENTISTS BC'S COMMITMENTS

Over the last decade, Engineers and Geoscientists BC has led and supported several initiatives to better address climate change in engineering and geoscience practice in BC, including:

- developing professional practice guidelines on both adapting to the impacts of climate change and reducing GHG emissions;
- dedicating core staff resources to climate change initiatives;
- establishing the Climate Change Information Portal;
- improving access to climate-related continuing education for registrants, and,
- engaging with standard-setting bodies.

Engineers and Geoscientists BC is committed to continue these efforts, through the implementation of its CCAP and in accordance with its Strategic Plan. In particular, Engineers and Geoscientists BC commits to:

- build on the work done to develop and implement the CCAP to develop an Organizational Climate Change Strategy which will detail specific initiatives the regulatory body will take to integrate climate action into its regulatory activities;
- lead by example by mitigating its GHG emissions and adapting to climate change;
- support individual and firm registrants by providing tools, resources, and information they need to consider climate change in their work through a low-carbon resilience lens and by seeking to incorporate Indigenous knowledge into professional practice;
- collaborate with governments, non-profit organizations, professionals, regulatory and standard-setting bodies, as well as organizations that provide climate data, expertise, and

training, to enhance climate action and to ensure consistency and transparency within areas of engineering and geoscience practice in BC; and

- work towards building respectful and reciprocal relationships that honour the knowledge, perspectives, and invaluable contributions Indigenous Peoples make to understanding climate change challenges and opportunities, while respecting their agencies and timelines.

GLOSSARY

2SLGBTQIA+: Acronym for Two-Spirit, Lesbian, Gay, Bisexual, Transgender, Queer (or Questioning), Intersex, Asexual. The plus sign (+) represents all the different, new and growing ways that people may identify with, as well as the ways that we continually expand our understanding of gender and sexual diversity. Source: [UBC's Equity & Inclusion Glossary of Terms](#).

Anthropogenic: Anthropogenic effects, processes, objects, or materials are those that are derived from human activities, as opposed to those occurring in natural environments without human influences.

Climate change: A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere, and which is in addition to natural climate variability observed over comparable time periods. Source: [United Nations Framework Convention on Climate Change \(UNFCCC\)](#).

Climate change adaptation: Adjusting our decisions, behaviours and activities to account for existing or expected changes in climate. The goal is to reduce risks from the harmful effects of climate change (like sea-level rise, more intense and frequent extreme weather events, food insecurity, diseases and disease vectors). It also includes making the most of any potential beneficial opportunities associated with climate change (for example, longer growing seasons or increased yields in some regions). Source: [Environment and Climate Change Canada](#).

Climate change mitigation: Reducing greenhouse gases emissions from human activities. Cutting back on emissions will demand a wide range of approaches, ranging from replacing fossil fuels with renewable energy, to rethinking how we plan and build, to figuring out how to be productive with fewer resources. Sources: [Climate Atlas of Canada](#), [Environment and Climate Change Canada](#).

Climate resilience: The capacity to prepare for, respond to, and recover from the impacts of climate change while incurring minimal damage to societal well-being, the economy and the environment. This entails a range of actions across policy, infrastructure, services, planning, education and communication. As such, building climate resilience requires a holistic and multi-dimensional approach to enhance communities' social, human, natural, physical and financial capacities to cope with and recover from the impacts of climate change. Source: [London School of Economics and Political Science](#).

Equity-deserving groups: Groups that have been historically, systemically, and persistently marginalized in Canadian society, and seek to address the inequities they continue to face. These groups are often not considered the default norm for whom processes, physical spaces, and systems are designed, which they often need to adapt to or navigate. Equity-deserving groups include people who are marginalized, disadvantaged, or discriminated against based on their race, colour, religion, marital status, family status, disability, sex, sexual orientation, gender identity, or age. Source: Engineers and Geoscientists BC's Professional Practice Guidelines - Equity,

Diversity, and Inclusion. Examples of equity-seeking persons include Indigenous Peoples, people of colour, 2SLGBTQIA+ persons, newcomers, women, people with disability, low-income individuals, ethnic minorities, etc.

Extreme event attribution: The science of calculating how much human-caused climate change has influenced extreme weather events such as heat waves, floods, and wildfires. Sources: [Environment and Climate Change Canada](#), [NOAA](#).

Low carbon: This term is used in different and various contexts. It typically refers to buildings, infrastructure, materials, technologies or systems that aim at reducing GHG emissions by enhancing energy efficiency, enabling decarbonization, reducing waste, or capturing and storing carbon.

Low-carbon resilience: A step change in climate action that coordinates and mainstreams adaptation, mitigation, and co-benefits in municipal and decision-making processes. This approach brings into focus the multiple considerations and trade-offs of policies, investments, projects and decisions made today while acknowledging their legacies for tomorrow. Low-carbon resilience does not necessarily mean that all adaptation measures achieve GHG reductions, but that mitigation is considered throughout the process and that synergistic measures are emphasized. Source: [SFU - Action on Climate Team](#).

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