

Climate Change Action Plan

WHAT WE HEARD REPORT

PUBLISHED NOVEMBER 4, 2020



ENGINEERS &
GEOSCIENTISTS
BRITISH COLUMBIA

CONSULTATION SUMMARY

1.0 INTRODUCTION

In order to understand how Engineers and Geoscientists BC can better support its registrants and ensure the professions effectively and safely respond to the impacts of a changing climate, Engineers and Geoscientists BC (also referred to as the ‘regulatory body’) is developing a Climate Change Action Plan. The development of this action plan will give the regulatory body an appropriate and methodical approach to addressing climate change implications related to the practice of professional engineering and geoscience.

To ensure this action plan accommodates the complexity and breadth of areas of practice amongst registrants, Engineers and Geoscientists BC embarked on an engagement process to help understand the unique drivers and requirements of registrants.

From February to July 2020, Engineers and Geoscientists BC engaged Compass Resource Management Ltd. to seek feedback from registrants, industry professionals, and the wider professional community—through written submissions, webinars, one-on-one meetings, and focus groups—on how it should approach climate change issues related to the practice of professional engineering and geoscience.

This report summarizes the feedback received from stakeholders (individuals, organizations, Engineers and Geoscientists BC branches and divisions, industry bodies, and subject matter experts) throughout this engagement process. This input will be used to help inform potential actions that could include initiatives, programs, and policies that Engineers and Geoscientists BC can consider as part of the Climate Change Action Plan.

As such, this report is simply a summary of all feedback received without prioritization or analysis. We hope that it helps raise awareness and promotes collaboration between registrants on issues relating to climate change.

1.1 ADDRESSING CLIMATE CHANGE

Climate change presents new and evolving challenges, risks, and opportunities that will need to be considered by registrants in the fulfillment of their professional responsibilities. In 2012, a Climate Change Advisory Group was established to help advise Council on matters—such as policy development and practice guideline development—related to climate change.

At the 2018 Annual General Meeting, a motion was brought forward to the Engineers and Geoscientists BC Council “to consider undertaking and putting the necessary resources into the development of a comprehensive action plan that will provide direction on the roles and duties of registrants in addressing the issue of a changing climate”.

In April 2019, Engineers and Geoscientists BC Council directed the Climate Change Advisory Group to develop a Climate Change Action Plan. The action plan is intended to be a pragmatic plan that the regulatory body can use to guide specific initiatives, programs, and policies.

Understanding how Engineers and Geoscientists BC can support its registrants is important to ensuring the professions effectively respond to the impacts of climate change, and thereby continue to work in the public interest.

1.2 PREVIOUS ENGAGEMENT

The following section outlines the previous engagement undertaken on climate change to date.

1.2.1 2017 REGISTRANT SURVEY ON CLIMATE CHANGE

The Climate Change Advisory Group developed a survey to assess registrants' attitudes towards climate change. It was open from January 18 to March 15, 2017, and sought to understand:

- Within its remit, how can Engineers and Geoscientists BC support registrants to consider the impact of their work on the climate, and the impact of climate on their professional activities?
- How important and urgent is action on climate change to Engineers and Geoscientists BC registrants?

The survey results showed that most respondents were interested in considering climate change in their work, with a significant proportion stating there was an important and urgent need for the regulatory body to take action.

Other key findings from this survey illustrated:

- 3 out of 4 respondents felt taking action should be urgent;
- 1 out of 4 respondents felt Engineers and Geoscientists BC was doing enough to support registrant efforts; and
- Over half of respondents were unaware Engineers and Geoscientists BC had resources to help registrants or were not using them.

This survey also demonstrated that many registrants were already taking action to address climate change in professional practice. Types of actions included gathering information, considering relevance to their work, as well as discussing climate change with clients and colleagues.



1.2.2 PRE-CONSULTATION WORKSHOP

Prior to the engagement process outlined in this report, a pre-consultation workshop was held on September 25, 2019 through the Vancouver Branch to inform development of the discussion paper and to update attendees on the action plan development. The workshop attracted 66 registrants from the lower mainland area. It also sought high-level feedback on the plan, along with advice on future engagement.

1.3 DEVELOPING A CLIMATE CHANGE ACTION PLAN

To help govern the Climate Change Action Plan development, the Climate Change Advisory Group formed a Steering Committee, which included the five members of the advisory group including a Council member, and three members of the Sustainability Committee.

The Steering Committee, with input from Engineers and Geoscientists BC's leadership, is following a three-phased approach to action plan development.

1.3.1 PHASE 1 (FEBRUARY – JULY 2020)

Phase 1 encompasses the engagement process in which Engineers and Geoscientists BC solicited input into the Climate Change Action Plan—from registrants, industry professionals, and the wider professional community—through a variety of methods, including written submissions, webinars, one-on-one meetings, and focus groups. Input received will be used to further define the action plan context, scope, and objectives.

1.3.2 PHASE 2 (JULY – AUGUST 2020)

This phase incorporates the review, evaluation, and selection of potential actions to include in the Climate Change Action Plan. Engineers and Geoscientists BC will develop a preliminary structure for the action plan, along with identifying and commencing development of content.

1.3.3 PHASE 3 (SEPTEMBER – NOVEMBER 2020)

During the final phase, Engineers and Geoscientists BC will develop the draft action plan based on the input and decisions made during the first two phases. Upon completion of Phase 3, the proposed Climate Change Action Plan will be submitted to the Engineers and Geoscientists BC Council in November 2020.

2.0 ENGAGEMENT PROCESS

This section details Phase 1 of the action plan development described above. From February to July 2020, Engineers and Geoscientists BC sought feedback on what it means to consider climate change, and on how the regulatory body should approach climate change issues related to the practice of professional engineering and geoscience.

In addition to seeking input and feedback on the action plan, Engineers and Geoscientists BC used this engagement process to:

- Raise awareness about the potential impacts of climate change as they relate to professional practice;
- 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.

2.1 COVID-19 & SCOPE

2.1.1 IMPACT OF COVID-19

COVID-19 introduced sudden and significant changes to both work and life. As most workplace and social interactions moved online, many of the proposed engagement activities (face-to-face workshops and town hall meetings) were no longer possible.

Given the demands of COVID-19, Engineers and Geoscientists BC had to be respectful of our stakeholders' willingness to engage. As such, traditional face-to-face activities were shifted to online focus groups and a webinar.

2.1.2 ENGAGEMENT SCOPE

The scope of the engagement process included:

- Climate change adaptation, mitigation strategies and emissions reduction;
- Tools, resources and standards of practice required to help registrants integrate climate change into their professional practice; and
- Discussion of registrants' ability to shape and develop the Climate Change Action Plan.

Areas and/or issues that were not considered as part of the engagement scope included:

- Advocacy for amendments to local, provincial, and/or national legislative requirements; and
- Engineers and Geoscientists BC's position for or against natural resource development projects.

2.2 ENGAGEMENT ACTIVITIES

Several engagement methods were deployed, ensuring stakeholders had multiple channels to provide input into the action plan.

In total, we received 39 written submissions, 220 people participated in the online webinar, 52 people completed the pre-webinar survey, 6 focus groups were held, and 9 subject matter experts were interviewed.

We sought input from each region across British Columbia and registrants from every branch participated.

2.2.1 DISCUSSION PAPER

To help frame the engagement process, a Discussion Paper was released in February 2020 to solicit views and opinions to inform the action plan.

The Climate Change Action Plan Discussion Paper included current and proposed initiatives for the regulatory body, which were organized into four general areas:

1. **Leadership:** Engineers and Geoscientists BC will take an active role in the engineering and geoscience professions' response to a changing climate.
2. **Regulation:** Engineers and Geoscientists BC will use right-touch regulation, that is, the level of regulation is proportionate to the risk to the public, to limit and manage the impacts of climate change.
3. **Knowledge Development:** Engineers and Geoscientists BC will build registrants' knowledge and awareness to integrate climate change into professional practice.
4. **Knowledge Application:** Engineers and Geoscientists BC will support registrants in addressing a changing climate through the development of tools and resources.



2.2.2 WRITTEN SUBMISSIONS

Written submissions were open from February 10 to June 30, 2020.

Engineers and Geoscientists BC received 39 written submissions from a range of stakeholders, including individuals, organizations, and Engineers and Geoscientists BC divisions and branches.

Submissions came from a range of areas of practice and disciplines including air quality engineers, drainage engineers, civil engineers, climate scientists, exploration geologists, and water and resource engineers. As such, the feedback received was diverse and illustrated the varied impact of climate change on professional practice.

2.2.3 FOCUS GROUPS

Six focus groups were held between May and June 2020 with 32 registrants across various sectors. To ensure feedback received represented the breadth of our two professions, participants were identified and invited to participate based on their area of practice. Additional steps were taken to encourage a diversity of age, designation, gender, experience, and regional location—however, due to scheduling availability, this wasn't always possible.

Sessions were grouped according to the following areas:

1. Forestry and Built Environment (two sessions)
2. Mining, Oil and Gas
3. Utilities and Power Generation
4. Manufacturing, Industry, Software, and Biomedical engineering
5. Transportation and Critical Infrastructure

Each focus group was approximately one hour and thirty minutes, and participants were asked the following questions:

- How does climate change impact your personal practice and the sector that you work in?
- Are you currently considering climate change in the work that you do? If yes, how?
- What specific barriers and/or opportunities exist for considering climate change in your practice and/or your sector?
- What could Engineers and Geoscientists BC do to better support you and the firms that you work for?

The focus groups shed light on how climate change impacts various sectors, and how these sectors prioritize the issue. They also helped Engineers and Geoscientists BC understand challenges and opportunities professional engineers and geoscientists face with respect to meeting their professional responsibilities in addressing climate change.

2.2.4 WEBINAR

In lieu of a town-hall-style meeting, a webinar was held on June 25, 2020. The webinar raised awareness about potential impacts of climate change on professional practice and discussed the regulatory body's existing resources on climate change. Approximately 220 people were logged into the webinar at any one time. According to a pre-webinar survey (to which 52 registered attendees responded), 83% said that climate change impacts their professional practice and/or sector, while 15% were unsure and 2% saw no impacts.

Audience members were also encouraged to submit feedback via email and live polls, and a third of this webinar was dedicated to a Q&A session with the panel.

The webinar covered the following topics:

1. Climate change and policy in BC
2. Role and responsibilities of professional engineers and geoscientists vis-à-vis climate change adaptation and mitigation
3. Climate Change Action Plan Development

2.2.5 1:1 INTERVIEWS

To build upon the feedback received from February through June, Engineers and Geoscientists BC undertook one-on-one interviews with experts working in policy, academia, and professional practice. Each expert brought a perspective informed by years (sometimes decades) of exposure to climate issues affecting the professional practice of engineering and geoscience.

Nine participants were interviewed in July 2020, with expertise in a range of areas including:

- Natural hazard research
- Climate science & decision making
- Community infrastructure
- Coastal risk assessment & management
- Dam safety
- Safety regulation
- Asset management
- Public policy
- Industrial ecology

These interviews were less structured than the focus groups or written submissions. Each consisted of a one-hour conversation across a range of topics encompassing risk, liability, education, regulation, and climate opportunities and challenges arising from COVID-19.

A representative sample of the types of questions discussed is provided below:

- How is climate change impacting the professional practice of engineering and geoscience?
- How should regulation change to account for these impacts?
- How should practice change to account for these impacts?
- What action would you like to see Engineers and Geoscientists BC take to meet the challenge of climate change?
- What action do you consider outside of Engineers and Geoscientists BC's mandate?
- In the absence of codes and standards that sufficiently address climate change, what process do you use to address climate change in your practice?

3.0 WHAT WE HEARD

Throughout the engagement process, we heard several recurring themes related to climate change in the context of professional practice. We also heard a few one-off ideas worth consideration. The feedback presented below has been selected because of its relevance to the action plan. This section does not contain every item of feedback received—if readers are interested in a fuller picture of the results of the engagement process, please refer to the appendices.

This section sorts feedback into 4 categories:

- Impacts of climate change on professional practice;
- Key messages;
- Key questions; and
- Potential actions.

3.1 KEY MESSAGES

The following key messages were heard consistently throughout the engagement process; they provide a general barometer on the attitudes of engagement participants.

3.1.1 THE CASE FOR MORE ACTION

Broad support for the development of a Climate Change Action Plan—Feedback was generally supportive of the action plan and stakeholders welcomed the opportunity to provide input on the topic. Some registrants felt that Engineers and Geoscientists BC’s position on climate change must be strengthened to have a practical effect (while a few, as mentioned, felt that it goes too far).

Basic awareness is still lacking for some registrants—There are varying levels of awareness and knowledge around climate change, as well as different levels of prioritization of the issue in professional practice. Many registrants are unsure of how climate change relates to liability and to their duty to uphold the safety and protection of the public and environment.

Widespread support for Engineers and Geoscientists BC to act on knowledge development and application—Engineers and Geoscientists BC has an important role in disseminating high quality information, training, tools, and other resources on climate change. Registrants want further guidance and sector-specific information to understand how to address climate change in professional practice.

3.1.2 REGISTRANT CHALLENGES IN RESPONDING TO CLIMATE CHANGE

Historical methods often fail to account for a changing climate—Professional practice has tended to treat climate as static rather than dynamic. Given climate change, it is no longer appropriate to base engineering and geoscience practice solely on historical climate data and old methods.

Registrants often feel overwhelmed by the volume of climate information available through various channels and the analysis that may be required of them to adequately account for climate change— There is a desire for Engineers and Geoscientists BC to help bridge the gap between climate science models and data, easing the burden on registrants. Many registrants stated a desire for as specific guidance as possible (e.g. which climate model and scenario to use for a particular application). Where possible and appropriate, registrants suggested updating the climate data in guidelines, codes and standards to reflect climate change.

Registrants do not feel that they have the proper tools and resources to address climate change in their professional practice— a live poll in the webinar showed that 49% of respondents replied “not at all” or “to some extent”, when asked if they have the right tools to address climate change while just 11% replied “to a great extent”. Furthermore, small- to medium-sized firms may lack access to climate expertise or the requisite resources needed to design for climate change.

Difficulty motivating clients to spend additional money on climate-appropriate solutions in the absence of regulations, standards, and codes—Registrants have limited ability to incorporate

climate change above what's required, unless their clients already have an interest in climate change or sustainability. Many practicing professionals are interested in how to justify best practices or climate risk assessments to clients.

Codes and standards often fail to adequately account for climate risk—Codes and standards are outdated in many areas of practice with respect to climate risk (e.g. a live poll in the webinar showed that 58% of respondents felt that codes and standards account for climate risk “not at all” or “to some extent”, while only 10% replied “to a great extent”). That said, registrants also expressed awareness of the risk that rigid codes and standards could be economically onerous or stifle innovation.

Many registrants feel most comfortable employing *tried and tested* methods which can be a barrier to implementing technologies and practices with lower GHG emissions and/or higher climate change adaptation potential—In the absence of incentives or clear guidance, registrants may resist necessary changes to their professional practice. This comfort with the status quo brings potential risks to the public and environment.

3.1.3 ADVICE ON HOW TO ACT

Desire for sector-specific guidance on what it means to ‘consider climate change in professional practice’—Registrants would like Engineers and Geoscientists BC to clarify what it means to ‘consider climate change in professional practice’, and suggested that more science-based guidance and specific examples be provided.

Need for an interdisciplinary & collaborative approach to the issue of addressing climate change in professional practice—Engineers and Geoscientists BC should foster collaboration across public and private actors working in a range of disciplines. This would help inform registrants and relevant parties about climate-related developments in policy, science, technology, and practice.

Interest in updating guidelines, codes and standards as relevant to incorporate climate change projections. Many registrants (especially in the building sector) stated that they rely on guidelines, codes and standards to account for relevant climate variables. If these do not account for future climate projections, they would have difficulty doing the analysis themselves to figure out how they need to be adjusted.

Interest in a risk-based approach to addressing climate change—Registrants desire training and resources on understanding, communicating and addressing climate change risk. Where hazard- or performance-based approaches are not required by clients or legislation, risk-based approaches can help with managing liability and considering climate change in professional practice.

Interest in a cost-benefit approach to addressing climate change—In the absence of clear codes, standards and regulations, registrants suggested that responding to climate change often requires weighing the benefits of adapting to climate change and/or reducing greenhouse gas emissions with additional financial costs or other trade-offs. Practical advice on how to do this type of cost-benefit analysis in the context of professional engineering and geoscience could be helpful.

Take a scientific, evidence-based approach to addressing climate change—Regardless of their feelings around the politics of climate change, all registrants noted the importance of producing an action plan informed by the best available science.

The “soft reset” of COVID-19 provides opportunities to address climate change in a number of areas—These include recognizing the social equity component of climate risk (i.e. populations vulnerable to COVID tend to also be vulnerable to climate change), incentivizing community scale

renewables, and expanding active transportation corridors (to compensate for fewer people carpooling or taking public transit).

3.2 IMPACTS AND CHALLENGES OF CLIMATE CHANGE ON PROFESSIONAL PRACTICE OF ENGINEERING AND GEOSCIENCE

The engagement process revealed numerous ways in which climate change impacts and challenges professional engineers and geoscientists across a range of sectors. The table below summarizes what we heard on sector-specific impacts and challenges. It is not a comprehensive list of all impacts and challenges.

Sector	SECTOR-SPECIFIC IMPACTS AND CHALLENGES
All Sectors	<ul style="list-style-type: none"> • Uncertainty in climate projections affects projects/services that are based on climate data. • Better data and data sharing are needed (stream flow gauges, snow pillow data, lidar data, etc.).
Buildings	<ul style="list-style-type: none"> • Buildings are a major source of GHG emissions (both operational and embodied). The Energy Step-Code addresses energy efficiency but not GHG emissions. Regulators often don't understand new materials and equipment that can be implemented to reduce carbon footprints. • Current building code does not adequately account for risks related to overheating, flooding, storm damage, power outages and impacts to indoor air quality from forest fires. • Risks are often not made clear to subsequent owners. • Many existing buildings are in floodplains, and when flooded are fixed/replaced on a like-for-like basis. • Buildings were not designed to handle air pollution experienced from increased forest fires. • Slope stability assessments only consider immediate risks; they don't account for increased rainfall and forest fires. • Groundwater management is not sufficiently considered in designs, especially where underground construction is common and sea levels are rising.
Chemical	<ul style="list-style-type: none"> • Chemical sector could play a role in helping to reduce GHG emissions from point sources (as they did to reduce SO₂ emissions in the 1990s). • Need government policy to create demand for GHG emission reduction technologies.
Critical Infrastructure and Transportation (public sector)	<ul style="list-style-type: none"> • Stormwater management – existing sewer systems are often not adequately designed to handle projected increases in rainwater with climate change. • Water supply – snowpack and rainfall changes could impact drinking water supply. • Storms and wildfires could increase power outages. • Sea level rise impacts to municipal infrastructure such as roads, bridges and pump stations. • PIEVC Protocol helps identify risks but there is a lack of guidance (from Engineers Canada and elsewhere) on how to address them.

Sector	SECTOR-SPECIFIC IMPACTS AND CHALLENGES
	<ul style="list-style-type: none"> Climate change influences maximal flow rates in rivers & creeks which influences sizing of bridge crossings. Changes to winds, currents, river flows, sea level affects marine and aquatic infrastructure designs.
Forestry	<ul style="list-style-type: none"> Elevated risks to workers and roads (e.g. storm events more likely to cause landslides). Rainfall shutdown guidelines lack consistency, which is especially problematic on the coast. Extreme uncertainty around flooding risks—given the uncertainties and high costs of designing for floods, professionals need guidance on what’s <i>reasonable</i>. Lack of information on how climate change might affect micro-scales (due to rain, wind, erosion) and extreme events.
Hydropower	<ul style="list-style-type: none"> Dam operation is impacted (e.g. higher water flows must be considered in operation of gates and spillways). Harder to forecast power usage with climate change. Micro-hydro power plants especially impacted by changes in streamflow, both in changes in annual average volumes and timing.
Oil & Gas	<ul style="list-style-type: none"> Sector is GHG emission-intensive and is therefore already the focus of climate change policies and regulations to reduce emissions (e.g. Low Carbon Fuel Standard, regulations on venting and flaring in the natural gas sector).
Manufacturing	<ul style="list-style-type: none"> Engineered products exposed to climate variables (temperature, wind, rain, etc.) could be impacted.
Mining	<ul style="list-style-type: none"> Global climate models are not very helpful for informing specific issues at a particular mining site. Closure planning activities for mines could be impacted. Potential climate impacts on abandoned structures, tailings and waste ponds need to be considered. Hydraulic flow for mine water treatment is impacted by changes to freshet and precipitation events.

3.3 POTENTIAL ACTIONS

We received a range of opinions on what actions might be included in the Climate Change Action Plan—to provide a flavour of the feedback, we’ve presented a subset below. This subset only includes actions which are aligned with the regulatory mandate of Engineers and Geoscientists BC. For a complete summary of the feedback from the various means of engagement refer to the appendices in this report. Potential actions generally fell in the following categories:

3.3.1 ADAPTING TO A CHANGING CLIMATE:

Feedback received suggested that Engineers and Geoscientists BC could help **support the development of codes and standards** that provide a straightforward and systematic way to build climate resiliency, level the playing field and clarify liability issues. Participants suggested that Engineers and Geoscientists BC could assist in the **development of improved environmental data and models**. They identified that better data is needed with respect to stream flow, snow pillow, hydrological models, rainfall run-off, future pump storage, hydro power, LIDAR, satellite observations, and for future land-use planning. There was broad based support for the development of guidance

that identifies **risk-based approaches** to managing climate risk in professional practice. There were suggestions to **develop guidance** in the following areas: nature-based solutions & green infrastructure, water supply systems, flood management, natural asset management, groundwater management, sea level rise, climate risk management, highway design, low carbon resilience and aquifer recharge.

3.3.2 REDUCING GHG EMISSIONS:

There were multiple pieces of feedback suggesting that the plan should establish clear climate change goal(s), aligned with provincial, federal or international targets. One such action might include Engineers and Geoscientists BC providing support for registrants who may be working for governments and industry that have committed themselves to **achieving net-zero greenhouse gas emissions by 2050**. There were suggestions to recognize and showcase notable emissions reductions from various sectors and to develop industry partnerships to **publish sector-specific case studies** and summaries of successful emissions reduction projects. Feedback related to the **building sector** spoke to the need to develop guidance on embodied carbon, high efficiency buildings, energy modelling, HVAC systems, passive cooling, and building retrofits. In the **industrial sector** registrants wanted guidance on GHG quantification & verification, lifecycle analysis, carbon offsets, brownfield remediation and leak detection & mitigation. Feedback suggested that Engineers and Geoscientists BC could **develop technology white papers** (e.g. low carbon concrete, negative emission technologies) and technology road maps (to guide industry towards compliance with relevant GHG reduction goals)—thus informing government of opportunities to reduce GHG emissions. A few respondents also expressed the desire for Engineers and Geoscientists BC to **support performance evaluation studies** to track progress in achieving emissions reductions goals and targets.

3.3.3 TRAINING AND COMPETENCIES:

Suggestions for actions with respect to training and competencies included:

- inclusion of climate change content in the Professional Practice Exam, Code of Ethics training, and EIT & GIT programs,
- requiring firms and organizations to establish internal climate change committees and include climate related training for their professionals,
- providing free or low-cost continuing education programming on climate change for registrants,
- working with accreditation bodies, universities and educational institutions to incorporate climate change considerations into professional competencies and to establish new areas of practice,
- expanding the use of the Climate Change Information Portal and enabling registrants to sign up for updates,
- exploring opportunities for shared professional learning or developing professional training resources applicable to multiple professional groups, and
- hosting more online training events to cut down on costs and emissions.

A few professionals working in climate change and sustainability roles asked Engineers and Geoscientists BC to consider establishing new **professional designations** to recognize their efforts in this field. There were suggestions to consider establishing **areas of practice on climate science and climate change adaptation/mitigation**—some professionals working in these areas mentioned that they have developed specific skillsets in understanding climate science, interpreting climate data and in carrying out risk and vulnerability assessments to aid decision making, but find that Engineers

and Geoscientists BC does not have competency assessment frameworks specific to their work in relation to taking action on climate change.

3.3.4 COLLABORATION WITH OTHER STAKEHOLDERS:

Several pieces of feedback spoke to how Engineers and Geoscientists BC might collaborate with public, private, professional, institutional and academic sectors with respect to taking action on climate change. Suggestions included:

- collaboration with Engineers Canada through a special committee consisting of representatives from each jurisdiction to develop guidance and share information,
- organizing a climate change committee through the Joint Practices Board (which connects forestry, architecture, engineering, professional planners through PIBC/CIP, climatologists, biologists, health professionals and geoscience professionals),
- inviting provincial government to be represented on an appropriate sub-committee or a task force to collaborate and maintain communication on an ongoing basis,
- collaboration to expand university programs and courses with regards to climate change including the understanding of the causes of climate change and what mitigation/adaptation solutions are available, and
- engagement with other stakeholders to pursue joint knowledge sharing initiatives (e.g. workshops, conference) that break down silos across governments, industry, academia and other groups.
- engagement with other stakeholders on climate-focused advocacy actions focused at the provincial, federal or municipal levels to improve registrants' ability to reduce GHG emissions and adapt to climate change in their practice (e.g. getting better data collection, making it easier to implement new technologies).

Respondents noted the importance of collaborating with stakeholders to ensure that the Engineers and Geoscientists BC is aware of the various climate related initiatives underway, supports these initiatives in a strategic manner and considers how these might support execution of its regulatory function. A few respondents highlighted the need for collaboration to achieve **social equity and to protect human health**, as engineers and geoscientists cannot make progress on these areas in isolation.

4.0 NEXT STEPS

Based on input from the Climate Action Planning Steering Committee, feedback received is being analyzed to understand what the challenges are, what initiatives or opportunities exist, and to narrow down potential actions within the plan.

Engineers and Geoscientists BC staff, with input and review from the Climate Action Plan Steering Committee, and technical consultants, will develop the preliminary draft of the Climate Change Action Plan for Council's consideration—to be presented to Council in November 2020.

APPENDICES

APPENDIX 1 – FOCUS GROUP SUMMARY

APPENDIX 2 – WEBINAR SUMMARY

APPENDIX 3 – WRITTEN SUBMISSIONS SUMMARY

APPENDIX 4 – EXPERT INTERVIEW SUMMARY