APEGBC Discussion Paper

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Should organizations that practise engineering and geoscience in BC be regulated?

Advisory Task Force on Corporate Practice Discussion Paper

Professional Engineers and Geoscientists of BC

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Summary Highlights

Mt. Polley and Provincial Government interest in corporate regulation

Questions around the lack of regulation of organizations that practise engineering and geoscience arise when major incidents occur involving our professional practice. After the Mount Polley Dam incident, the BC Ministry of Energy and Mines contacted the Association of Professional Engineers and Geoscientists of BC (APEGBC) to request a summary of issues related to the potential regulation of companies that carry out professional engineering and geoscience. Government expressed strong support in APEGBC's evaluation of this issue while it considers the possibility of developing changes to regulation on its own prerogative.

APEGBC Council initiative – examination of corporate practice

Because it is the duty of APEGBC to uphold and protect the public interest respecting the practice of professional engineering and the practice of professional geoscience (*Engineers and Geoscientists Act*, Section 4.1 (1)(a)), and further motivated by this incident, APEGBC's Council initiated an examination of corporate practice and corporate regulation. **To maintain legitimacy and credibility as self-regulating professions, APEGBC's Council decided that it was in the best interest of BC's engineering and geoscience professions to be proactive on these issues and to take the lead in examining whether APEGBC should pursue regulatory authority over corporate practice.**

An Advisory Task Force of APEGBC members representing a broad range of disciplines, organizations, and industries was established to examine corporate practice and corporate regulation. **We, the task force, have been asked by APEGBC's Council to make a recommendation by March 2017 on whether APEGBC should pursue regulatory authority over corporate practice, and if so, to define the types of organizations that should be subject to regulation.**

Due to the importance of this issue to APEGBC members and stakeholders, we have begun an evaluation and consultation process. We recently concluded a preliminary round of consultation, and are undertaking a review of the potential pros and cons of various corporate regulatory models, and other alternatives, which may be preferable to enhance public protection, some of which are summarized here. **The release of this discussion paper starts the second round of consultation with members and stakeholders.**

What is Corporate Practice and Corporate Regulation?

The term **corporate** in this document and initiative is used in a broad sense to refer to *all organizations* in both the private and public sectors, including any type of legal entity formed for business purposes (e.g., corporations, partnerships, sole proprietorships) and any type of public entity (e.g., municipalities, crown corporations, ministries). The term **corporate practice** refers to the provision of engineering or geoscience services and products by organizations. The term **corporate regulation** refers to the licensing and regulation of organizations authorized under legislation.

Corporate regulation—a common regulatory tool used by other jurisdictions and professions

Regulation of corporations by legislated authorities is commonly used by governments across Canada and the US to protect the public interest in the practice of numerous professions. **Every Canadian province and territory regulates engineering and geoscience organizations except BC and Quebec. Likewise, BC corporations practising architecture, land surveying and public accounting are regulated under their respective professional Acts.** In addition, most US northwest states regulate engineering organizations. The fact that so many other jurisdictions and professions regulate corporate practice raises questions for the engineering and geoscience professions in BC:

Why is a regulatory tool that is used by many other engineering and geoscience regulatory authorities not being used in BC?

Can engineering and geoscience in BC remain credible self-regulating professions without corporate regulation?

BC's history on corporate regulation

The history of this issue in BC does not provide a clear response to these questions. Early APEGBC Council discussions on corporate regulation began with the Closkey Commission, which reviewed the Station Square Mall collapse in Burnaby in 1988. **The commission recommended, in part, that corporations that provide professional engineering services to the public should be required under the *Act* to be registered; and that such organizations should face deregulation for unethical, unprofessional or incompetent practice.** The commission stated: "Facing the prospect of decertification of a firm as a whole, the individual members within the organization will have a strong incentive to ensure that thorough internal checks and high standards of service are provided." In 1991, following an in-depth review of the Closkey Commission and its recommendations, APEGBC voiced its support for the commission's recommendations and requested amendments to the *Act*.

In 1993, the Province amended the *Act* to introduce Certificates of Authorization (CoA)—a licence allowing companies to provide professional engineering services to the public—however, this single amendment only partially accomplished the goal of the recommendations. A second amendment to prohibit practising without a CoA, was not included due to a dispute over what type of companies or other legal entities would be required to hold CoAs.

In 1996, APEGBC engaged in extensive consultations and recommended to the BC government that, at a minimum, corporations, partnerships or other legal entities should be prohibited from practice unless they held a CoA specific to the following:

- Consulting engineering or consulting geoscience;
- Designing and manufacturing custom design engineered products, structures, processes or facilities;
- Engineering and/or geoscience testing and assessment.

In 2002, after discussions with stakeholders, the BC Government stated that they would not implement APEGBC's recommendations. Since then, the issue of corporate regulation continues to be raised by members and organizations that look to APEGBC to protect the public. In September 2014, APEGBC conducted a public opinion poll to assess public awareness of APEGBC, and to find which activities are viewed as most important. **Of those surveyed, 81% indicated that an important function of APEGBC was to regulate firms to ensure they have qualified professionals and set standards for quality assurance.**

Organizational influence on the professions

Corporate regulation is used by other jurisdictions, and by other professions in BC, because the practice of a profession can be influenced not only by the actions and judgments of the individual professionals, but also by their employer organizations, through corporate policies and procedures. Organizational influence on professional practice can be either positive or negative.

As mentioned above, APEGBC regulates individual professional engineers and professional geoscientists, but currently has no regulatory authority over organizations that practise engineering and geoscience. **These organization's policies can promote adherence to the association's Code of Ethics and Bylaws, or could do the opposite and prioritize other objectives.** An organization that is prioritizing other objectives at the cost of professional practice can put professionals in a difficult position and public protection may be compromised. Moreover, individual professionals have little recourse in this situation.

The key purpose of corporate regulation is to have oversight over the organizational level of influence on the profession, rather than relying solely on oversight of individual professionals. **Corporate regulation does not alter the responsibility of individual professionals, but layers more responsibility for organizations to ensure that organizational policies and procedures are in line with the *Act*, Code of Ethics and Bylaws.** This could align the responsibilities of organizations and individual professionals. **Furthermore, corporate regulation means that organizations are subject to investigation in the event of an incident or complaint.**

Potential benefits of corporate regulation

Just as APEGBC regulates individual professionals and sets the minimum bar that professionals must meet, corporate regulation would set a minimum bar for organizations. **Benefits that may be gained from corporate regulation depend on the minimum regulatory requirements set, which organizations are regulated, and what type of compliance activities are taken to ensure requirements are being met.** Possible benefits include:

1. **Enhanced public protection**:
   - Requiring or encouraging the owners and/or senior executives of an organization to maintain an organization in which the practice of the professions can be conducted in accordance with the *Act*, Code of Ethics, and Bylaws; and,
   - Ensuring organizations practising engineering and/or geoscience have at least one qualified professional engineer, geoscientist or licensee on staff.

2. **Increased public and government confidence in the professions and APEGBC's self-regulatory system through**:
   - Implementing a regulatory tool that is used in most other jurisdictions for the engineering and geoscience professions;
   - Increased consistency and quality of professional services across all organizations employing APEGBC professionals; and,
   - Providing APEGBC the power to investigate engineering and geoscience organizations in the event of a complaint or incident where misconduct is suspected.

3. **Added-value for individual professionals through:**
   - Increasing support for the responsibilities of professionals from employers;
   - Establishing a mechanism to hold organizations accountable if they are pressuring professionals to act in contravention of the *Act*, Code of Ethics, and Bylaws; and,
   - Raising public confidence and commensurately, the value society places on the practice of engineering and geoscience.

In a survey of APEGBC members that we conducted in July and August 2016:

Out of a total of 312 respondents, ***70%*** *of respondents indicated that they see* ***benefits*** *from corporate regulation for either the public and/or the professions, while* ***30%*** *of respondents indicated that they see no benefits from corporate regulation.*

76% *of respondents also indicated that they have* ***concerns*** *with the potential effects of corporate regulation and how it would be implemented.*

Key concern: dilution of individual professional responsibility

A key concern raised by members and stakeholders is that by extending regulation to organizations for the practice of engineering and geoscience, an individual professional's responsibility may be diluted, negatively affecting protection of the public. We inquired with several other jurisdictions that have implemented corporate regulation, and their responses indicate that corporate regulation does not dilute the responsibility of individual professionals, and in fact supports individual professionals to fulfill their responsibilities.

However, while corporate regulation may not change individual professional responsibilities in legal terms, we do recognize that there is a risk that corporate regulation could result in a *perception* that individual professional responsibility is reduced. As we investigate, we are taking note of what factors in the various corporate regulatory models may contribute to the perception of reduced individual professional responsibility and will report our findings.

Key concern: implementation costs

Another key concern for members and stakeholders is the cost of implementing corporate regulation and particularly whether it would provide value-added benefits to the public and the professions to justify the cost and effort. Professionals working in small organizations have especially voiced concern about being disproportionately affected by any additional fees and regulatory requirements. Note that the existing annual fees levied on regulated organizations by engineering and geoscience regulatory authorities in Canada range from only $150 to $1,186, with an average annual fee of about $500. Several regulatory authorities also have fee structures that are scaled to the size of organizations (e.g., number of professionals on staff). While it is too early to estimate what the fee structure would look like in British Columbia, the average fee provides a point of comparison alongside the potential benefits of corporate regulation for the public, professions and individual professionals.

Key activity of Task Force: Cost-benefit analysis

Whether the benefits outweigh the drawbacks for corporate regulation is an active discussion within the Advisory Task Force. Consultation with members and stakeholders along with a jurisdictional scan of regulatory models and an assessment of these regulatory models is informing this discussion. **We are exploring whether an approach for corporate regulation exists that can derive benefits for public protection and the professions, including the individual professional, *and* address the issues and concerns in regard to how corporate regulation may be implemented. Our consultation and evaluation focuses on our two mandated questions:**

1. Should APEGBC seek regulatory authority over corporate practice?
2. What types of organizations, if any, could be subject to regulatory oversight?

We look forward to actively reviewing members' and stakeholders' feedback. More discussion and analysis of these issues can be found in the body of this discussion paper. **We are also asking for feedback through an online survey that is open from Oct. 4, 2016 to Nov. 30, 2016, as well as other consultation opportunities listed on the APEGBC website at apeg.bc.ca/corporatepractice.**

Should organizations that practise engineering and geoscience in BC be regulated?

Advisory Task Force on Corporate Practice - Discussion Paper

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Advisory Task Force on Corporate Practice - Discussion Paper

1. Introduction

The Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) is the regulatory body that oversees the practice of professional engineering and geoscience. It is the duty of APEGBC to uphold and protect the public interest respecting the practice of professional engineering and the practice of professional geoscience (*Engineers and Geoscientists Act*, Section 4.1 (1)(a)). In the fall of 2015, APEGBC's Council established an Advisory Task Force of APEGBC members to lead an examination of corporate practice and corporate regulation. The task Force is representative of a broad range of disciplines, organizations and industries. We, the task force, have been asked by APEGBC's Council to make a recommendation by March 2017 on whether APEGBC should pursue regulatory authority over corporate practice and if so, to define the types of organizations that should be subject to regulation.

We understand the importance of this issue to APEGBC members and stakeholders and we are engaging in a thorough evaluation and consultation process to inform our recommendations to APEGBC's Council. This discussion paper provides an update to APEGBC members and stakeholders on five key activities that we are undertaking to inform our recommendation:

- Consultation with members and stakeholders (Section 2);
- Documentation of the drivers for examining corporate practice and corporate regulation (Section 3);
- Identification of the key considerations, concerns, and benefits associated with regulating corporate practice (Section 4);
- Jurisdictional scan of existing corporate regulatory models (Section 5 and Appendix 1); and,
- Assessment of options for corporate practice (Section 6).

We invite feedback from all APEGBC members and stakeholders on the issues discussed in this document. We encourage you to provide feedback between October 4, 2016 and November 30, 2016 through the online survey, accessible through apeg.bc.ca/corporatepractice, or by sending an email to corporatepractice@apeg.bc.ca.

What is Corporate Practice and Corporate Regulation?

The term **corporate** in this document and initiative is used in a broad sense to refer to *all organizations* in both the private and public sectors, including any type of legal entity formed for business purposes (e.g., corporations, partnerships, sole proprietorships) and any type of public entity (e.g., municipalities, crown corporations, ministries). The term **corporate practice** refers to the provision of engineering or geoscience services and products by organizations. The term **corporate regulation** refers to the licensing and regulation of organizations authorized under legislation.

Corporate regulation would likely involve the prohibition of organizations practising engineering and geoscience unless they have a licence from a regulating authority (e.g., APEGBC), or are a type of organization that is not required to have a licence. For most jurisdictions in Canada, such licences mean that regulated organizations need to comply with the engineering or geoscience legislation of the jurisdiction and the Code of Ethics and bylaws issued by the regulating authority. Across jurisdictions, there are also a variety of other requirements and responsibilities of licence holders (for more information, see Appendix 1 - Jurisdictional Scan of Corporate Regulation Across Canada).

2. Consultation

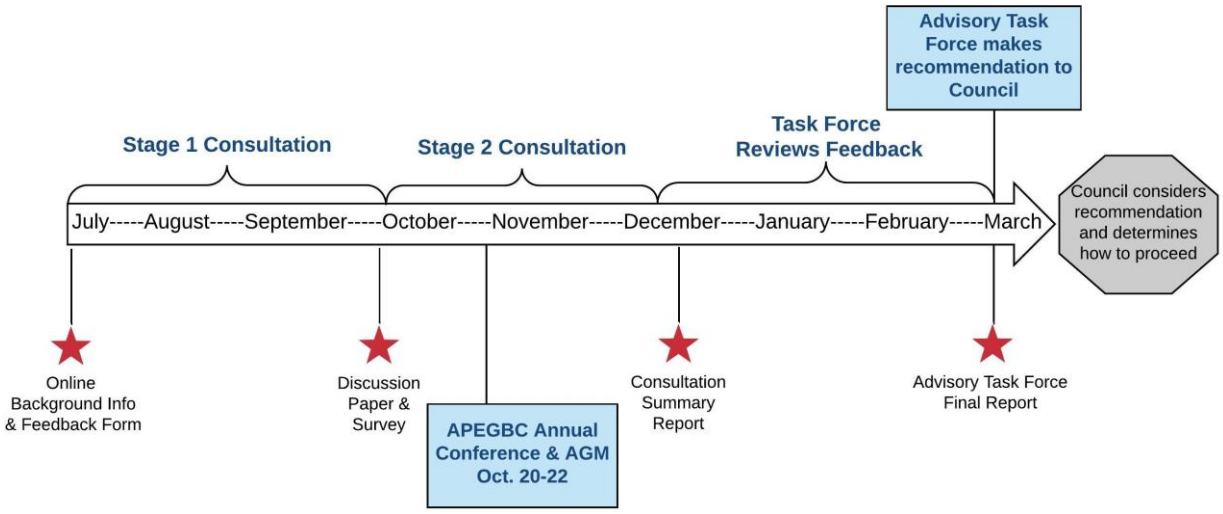
Input from members and stakeholders is key to informing our recommendations. Consultation is being conducted in two stages (Figure 1). **Stage 1** (June to August 2016) focused on early input from members and stakeholders to understand the issues and help guide the development and assessment of different regulatory models to explore during the review. **Stage 2** (Oct. 1, 2016 to November 30, 2016) will focus on more detailed input from members and stakeholders on their preferences for non-regulatory and regulatory options for corporate oversight.

Stage 2 includes:

- An online survey for members and stakeholders to provide feedback on the issues identified in this discussion paper;
- A webinar and in-person presentations to member and stakeholder groups around the province;
- In-person presentation at the Annual Conference on Oct. 21, 2016 in Victoria, BC;
- Outreach to stakeholder groups;
- Articles in APEGBC's magazine and Enews; and
- Feedback opportunities via email and phone.

A consultation summary report will be released in January 2017 that summarizes the key themes and issues heard through stage 1 and stage 2 consultation activities. The consultation summary report will be made publicly available through the Corporate Practice webpage. We will review feedback, undertake additional information gathering and analysis as necessary, and will make recommendations to APEGBC's Council in March 2017. At this time, the Chair of the Advisory Task Force will release a final report summarizing the reasons for our recommendations and supporting information.

Figure 1: Consultation Timeline – Advisory Task Force on Corporate Practice



3. Why corporate regulation?

Regulation of corporate practice is a common tool used by governments across Canada and the US to protect the public interest with respect to the practice of the profession. Every province and territory in Canada regulates engineering and geoscience organizations under a mandatory legislated authority except BC and Quebec. Every state in the Northwest United States except Oregon regulates engineering organizations. BC corporations practising architecture, land surveying and public accounting are regulated under their respective professional Acts.

Corporate regulation is used by other jurisdictions and by other professions in BC because the practice of a profession is believed to be influenced at two fundamental levels:

1. At an individual level, through the actions and judgments of individual professionals; and
2. At the organizational level, through policies and procedures implemented by organizations that employ professionals.

APEGBC has regulatory authority over individuals practising engineering and geoscience; it maintains standards of entry and practice for individual professionals, and has a series of proactive programs directed at individual professionals to support their practice. The association has no similar regulatory authority over engineering and geoscience organizations, even though policies and procedures implemented by these organizations have an influence on professional practice. Similarly, APEGBC has regulatory authority to audit and investigate individuals, but has no authority to audit or investigate organizations when concerns are raised.

3.1 Organizational influence

An ongoing discussion within the Advisory Task Force is on the substance and strength of the organizational influence on professional practice. Organizational influence can have either a positive or negative effect on professional practice. For example, an organization's policies and procedures can encourage and promote adherence to the association's Code of Ethics and Quality Management Bylaws, or they could do the opposite and prioritize other objectives above professional practice standards. Where corporate practices or objectives conflict with APEGBC's Code of Ethics and Bylaws, individual professionals may be put in a difficult position. Moreover, individual professionals have little support or recourse because organizations are not regulated by APEGBC.

While organizational influence *can* have a negative impact on professional practice, we are interested in hearing from members and stakeholders on the extent to which this is actually happening. In a survey undertaken in July and August 2016, we asked whether respondents were aware of issues occurring because of a lack of regulatory oversight of organizations that practise engineering and geoscience.

*Out of a total of 312 survey respondents, **56%** of respondents indicated that they were aware of issues that indicated an organizational influence was having a negative impact on professional practice.*

This includes issues such as:

- Lack of support from an employer for doing what is necessary for proper professional practice;
- Cutting corners with respect to professional practice for the benefit of organizational interests;

- Difficulty balancing responsibilities as a professional engineer/geoscientist/licensee and responsibilities as an employee of a business/organization;
- Hiring engineers or geoscientists that are not qualified for the work;
- Insufficient supervision and training of inexperienced workers;
- Lack of awareness of senior staff of quality assurance procedures.

***44%** of survey respondents indicated that they have never experienced or seen organizational influence that diminishes the quality of individual professional practice.*

3.2 Public and government opinion

In August 2014, APEGBC conducted a public opinion poll through Insights West which asked which APEGBC activities are most important to the public. Eighty-one percent of those surveyed indicated that they believed an important function of APEGBC was to "regulate firms to ensure they have qualified professionals and standards for quality assurance."

Recent discussions between APEGBC and the Provincial Government also indicate that government sees the lack of corporate regulation as a potential regulatory gap. APEGBC briefed the Advisory Task Force that in June 2015, the BC Ministry of Energy and Mines contacted APEGBC to request a summary of issues related to the potential regulation of organizations that carry out professional engineering and geoscience activities. Government had been exploring this option as a possible outcome of the Mount Polley Mine tailings dam incident and has expressed significant interest in APEGBC's evaluation of this issue.[1]

The engineering and geoscience professions are permitted to self-regulate at the discretion of the BC government, who are accountable to the general public. As self-regulation is a privilege, not a right, APEGBC needs to seriously consider public and government expectations regarding potential regulatory gaps.

4. Key considerations

In discussions with stakeholders and members, we have heard many questions regarding the potential benefits and drawbacks of corporate regulation and have heard several issues and concerns around how corporate regulation may be implemented. The questions, issues and concerns consistently raised by members and stakeholders are discussed below.

4.1 What are the benefits of corporate regulation?

Just as APEGBC regulates individual professionals and sets a minimum bar that these professionals must meet to practise in BC, corporate regulation would set a minimum bar that organizations practising engineering and geoscience would have to meet. The benefits that could be gained from corporate regulation depend on the regulatory requirements, which organizations are regulated, and what type of compliance activities are taken to ensure requirements are being met.

[1] Note: if regulation of corporate practice was in place in BC at the time of Mount Polley tailings dam incident, APEGBC would have had the regulatory authority to investigate the companies involved in the incident in addition to the individual APEGBC members involved. As well, these companies would have been required to follow the Code of Ethics and Quality Management Bylaws.

The three major areas for potential benefits include:

1. **Enhanced public protection through regulatory requirements such as:**
   - Requiring or encouraging the owners and/or senior executives of an organization to maintain an organization in which the practice of the professions can be conducted in accordance with the *Act*, Code of Ethics, and Bylaws; and,
   - Ensuring organizations practising engineering and/or geoscience have at least one professional engineer, geoscientist or licensee on staff.

2. **Increased public and government confidence in the professions and the APEGBC self-regulatory system through:**
   - Implementing a regulatory tool that is used in most other jurisdictions for the engineering and geoscience professions;
   - Increased consistency and quality of professional services across all organizations employing APEGBC professionals; and,
   - Providing APEGBC the power to investigate engineering and geoscience organizations in the event of a complaint or incident where misconduct is suspected.

3. **Added-value to individual professionals through:**
   - Increasing awareness and support for the responsibilities of professionals from employers;
   - Establishing a mechanism to hold organizations to account if they are pressuring professionals to act in contravention of the *Act*, Code of Ethics, and Bylaws; and
   - Raising public confidence and commensurately, the value society places on the practice of engineering and geoscience.

*In the survey conducted by the Advisory Task Force in July and August 2016, **70%** of respondents indicated that they see benefits to corporate regulation for either the public and/or the profession, while **30%** of respondents indicated that they see no benefits to corporate regulation.*

We will continue to consult with members and stakeholders on the potential benefits of corporate regulation. The varying benefits of different corporate regulatory models are also being examined through a jurisdictional review of corporate regulatory models and an options assessment (see section 6 – Corporate Practice Options).

4.2 Which organizations would be regulated?

APEGBC's Council has asked the Advisory Task Force to make recommendations on which types of organizations, if any, should be subject to APEGBC regulatory oversight. We have received some feedback on this issue from consultation to date and hope to receive additional feedback in upcoming consultation activities.

Organizations practising engineering and geoscience in BC differ widely in size and type. In BC, there are many sole practitioners and small engineering and geoscience companies as well as large organizations employing hundreds of professionals. In the private sector, there are companies that practise only in BC and there are multi-national companies where BC represents only a small portion of where they work. There are consulting companies that provide engineering and geoscience services to external clients and there are companies that practise engineering and geoscience for internal purposes only (e.g., engineered product companies, utilities, resource companies). In the public sector, engineering and geoscience is practised by municipalities, crown corporations and provincial agencies.

There are a number of factors to consider with respect to size of organization. The area of sole practitioners is a particular challenge. If a system of corporate oversight included sole practitioners, there could be concern about "double regulation." The individual is already licensed by APEGBC and any new oversight may be deemed a second level of regulation. It may also be noted that there is no organizational influence on a sole practitioner.

Small organizations may be concerned that there would be an unfair burden placed on their company compared to a large organization.

The type of organization is also an important consideration. It may not be fair to single out some types of organizations for a new regulatory system. For example, would the system best be limited to a small number of organizational types such as consultants, or should the system apply to the full spectrum of organizations practising engineering and geoscience including companies that practise for internal purposes only and public sector organizations?

4.3 Impact on individual professional responsibility

We have heard concerns that by giving organizations additional responsibility for the practice of engineering and geoscience, the professional's individual responsibility could be diluted, which would negatively affect the protection of the public. We have inquired about this issue with several other jurisdictions that have implemented corporate regulation. Their perspective is that corporate regulation does not dilute the responsibility of individual professionals and in fact supports individual professionals in fulfilling their responsibilities (e.g., by requiring their organization's structure, policies and procedures to be conducive to meeting the requirements of the Code of Ethics and Bylaws).

However, while corporate regulation may not change individual professional responsibilities in legal terms, we do recognize that there is a risk that corporate regulation could result in a *perception* that individual professional responsibility is reduced. As we investigate, we are taking note of what factors in the various corporate regulatory models may contribute to the perception of reduced individual professional responsibility and will report our findings.

4.4 Do the benefits outweigh the costs?

We have received questions around the effectiveness of corporate regulation and whether it would provide enough value-added benefits to the public and the professions to justify the cost and effort. Corporate regulation would involve some additional effort by regulated organizations to meet the requirements and fulfill the responsibilities for the regulation. Implementing corporate regulation would also put additional costs on APEGBC to administer the regulatory program. These costs would need to be offset or recovered through some means, such as licensing fees for regulated organizations.

Whether the benefits outweigh the drawbacks for corporate regulation is an active discussion within the Advisory Task Force. Consultation with members and stakeholders along with a jurisdictional scan of regulatory models and an assessment of these regulatory models is informing this discussion. A key question is whether an approach for corporate regulation exists that can derive benefits for public protection *and* address the issues and concerns in regard to how corporate regulation may be implemented. For more information on the potential benefits, costs and effort associated with corporate regulatory models, see Section 6 – Corporate practice options.

Discussion Questions

Do you think a minimum bar is needed for organizations that practise engineering and geoscience in BC? Why or Why Not?

What do you think needs to be considered by the Advisory Task Force in regard to corporate regulation?

5. Corporate regulation in BC and across Canada

The Advisory Task Force is undertaking a review of corporate regulatory models for the engineering and geoscience professions in other jurisdictions and for other professions in BC. The purpose of this review is to learn about the different approaches for designing and implementing corporate regulation and to learn about the advantages and disadvantages.

In BC, other professions that regulate organizations include architecture, land surveying, public accounting, as well as a number of the medical professions. The Law Society of BC has also recently been granted the authority by the Provincial Government to regulate law firms and is currently undergoing consultation on a proposed approach for corporate regulation.

Every province and territory in Canada regulates engineering and geoscience organizations under a mandatory legislated authority except BC and Quebec. We have reviewed 11 of these corporate regulatory models to identify similarities and differences in approaches across Canada with respect to regulatory coverage, regulatory requirements and responsibilities, compliance mechanisms and fee structures (see Appendix 1 for summary).

5.1 Past attempts to implement corporate regulation in BC

Subsequent to the roof collapse on April 23, 1988, at the Save-On-Foods store in Burnaby, BC, the Provincial Government appointed a commissioner (the Closkey Commission) to inquire into the incident. The Closkey Commission Report included 17 recommendations with recommendations 5 and 6 related to the registration of engineering firms. The commission stated "Facing the prospect of decertification of a firm as a whole, the individual members within the organization will have a strong incentive to ensure that thorough internal checks and high standards of service are provided." As a result, APEGBC established a Special Review Committee which developed a response to the recommendations in the Closkey Commission Report. The report of the Special Review Committee, published in the BC Professional Engineer in June 1991 (APEGBC's professional journal), recommended that:

> *Companies, partnerships, firms and other organizations that provide professional engineering services must be registered under the* Engineers and Geoscientists Act *and that the* Engineers and Geoscientists Act *be amended accordingly and that they must face deregistration for incompetence, negligence or unprofessional conduct.*

A letter ballot was issued to members in 1991 and 28% of the membership participated. The results of the letter ballot were:

- 92.8% voted in favour of the following recommendation: "organizations that provide professional engineering services must be registered"; and,

- 93.2% supported the recommendation that "organizations that provide professional engineering services must face deregistration for incompetence, negligence, or unprofessional conduct."

In 1993, Section 10.1 (now Section 14) entitled "Issue of Certificates of Authorization" (CoA) was introduced into the *Engineers and Geoscientists Act*.

At the time the CoA was proposed, the association also proposed an addition to Section 18, Prohibition on Practice. This provision would have made it illegal for companies to practise professional engineering or geoscience unless they held a CoA. The amendment to this section was not included when Section 10.1 was added to the *Act* in 1993. The recommended provisions regarding the prohibition on practice for engineering/geoscience companies was not included because of a dispute over what type of companies or other legal entities would be required to hold CoAs.

In 1996, APEGBC engaged in extensive consultations and recommended to the BC government that, at a minimum, corporations, partnerships or other legal entities should be prohibited from practice unless they held a CoA specific to the following fields:

- Consulting engineering or consulting geoscience;
- Designing and manufacturing custom design engineered products, structures, processes or facilities;
- Engineering and/or geoscience testing and assessment.

In 2002, after discussions with stakeholders, the BC Government stated that they would not be implementing APEGBC's recommendations.

5.2 Implementation of voluntary program to certify engineering and geoscience organizations

In the absence of corporate regulation, APEGBC established a voluntary certification program for engineering and geoscience organizations called the Organizational Quality Management (OQM) Program. Specifically, this program was developed in response to recommendations contained in the Professional Renewal Task Force Report published by APEGBC in 2009. The relevant recommendations in this report identified the significant level of influence organizations employing APEGBC professionals have on the quality management of the practice of the professions.

OQM is a voluntary APEGBC program for organizations that employ professional engineers and professional geoscientists in BC and provide products or services requiring the application of professional engineering or professional geoscience. The purpose of the program is to help organizations improve their quality management practices, reduce risk and support their professional employees. APEGBC is the only regulatory association in Canada offering a *voluntary* quality management program for organizations.

Through the OQM program, organizations agree to implement processes and procedures in seven areas: (1) APEGBC practice guidelines, (2) retaining project documentation, (3) checking engineering and geoscience work, (4) independent review of structural designs, (5) use of APEGBC seal, (6) direct supervision, and (7) field reviews.

Organizations are then audited on how well they are implementing the quality management processes and procedures. Similar to individual practice reviews, the audits function as a proactive mechanism to identify and address any quality management issues before any harm results. As of July 2016, there have been 44 audits and a total of 40 non-conformances with quality management processes and procedures since the OQM program began certifying organizations in 2014. These non-conformances were in the following areas:

- Use of seal issues – 19 non-conformances
- Lack of knowledge around professional practice guidelines – 9 non-conformances

- Issues around documenting the checks of engineering and geoscience work – 6 non-conformances
- Issues around retention of documents – 5 non-conformances
- General knowledge of OQM – 1 non-conformance

As of August 2016, 205 organizations have received OQM certification and 233 organizations have initiated the certification process. Organizations of all different sizes have received OQM certification—31% are sole practitioners, 30% have 1-5 professionals, 19% have 6-20 professionals, 16% have 21-100 professionals, and 4% have 100+ professionals. APEGBC estimates that about a quarter of organizations practising engineering and geoscience in BC are involved in various stages of the OQM process.

The OQM Program in BC is a unique consideration for the issue of regulatory oversight for corporate practice. The program is seen by certified firms, APEGBC, and outside parties as highly effective. In March 2016 Engineers Canada approached APEGBC and expressed their interest in making OQM a national program offered on a voluntary basis to organizations employing professional engineers. As a result, in July 2016 Engineers Canada and APEGBC organized a meeting with staff from two constituent engineering associations and 8 engineering firms located outside of BC. A pilot program is currently underway to evaluate the merits of making OQM a national program. This is a coordinated initiative between APEGBC and Engineers Canada with the participation of engineering firms in New Brunswick and Ontario.

5.3 What would corporate regulation mean for APEGBC's Organizational Quality Management Program?

APEGBC's OQM program is seen as valuable by many members and stakeholders. As per the Advisory Task Force's Terms of Reference, if APEGBC's Council decides to pursue regulatory authority for corporate practice, the Advisory Task Force will examine regulatory measures that would not be detrimental to OQM, but would compliment and support it.

6. Corporate practice options

The central question that we are examining is:

Should organizations that practise engineering and geoscience in BC be regulated?

To answer this question, we are examining the potential benefits and costs of taking a regulatory or a non-regulatory approach to corporate practice. We have reviewed 11 corporate regulatory models to identify similarities and differences in approaches across Canada with respect to regulatory coverage, regulatory requirements and responsibilities, compliance mechanisms and fee structures. Based on this review, we have structured six options for the purposes of this discussion paper that represent distinctly different approaches that could be taken. This section describes these options and presents a preliminary assessment of these options.

It must be emphasized that we have only been mandated by APEGBC's Council to advise on whether APEGBC should seek regulatory authority over corporate practice and to define the types of organizations, if any, that should be subject to APEGBC regulatory oversight. The purpose of exploring and evaluating these options is only to inform these recommendations. If APEGBC's Council decides to seek regulatory authority over corporate practice, a more comprehensive evaluation of options for corporate regulation will be needed and the Provincial Government will need to initiate any changes to the *Act.*

The six distinct options are summarized in Table 1. **Option 1** is the status quo approach that represents the continuation of APEGBC's current regulatory system. **Options 2 to 5** represent

different approaches to corporate regulation that could enhance public protection. Through the jurisdictional scan, we concluded that the requirements, responsibilities and compliance mechanisms in corporate regulatory models can be grouped into two broad approaches: *basic* and *quality management focused*. These models can then be applied to different types of engineering and geoscience organizations. Options 2 to 5 apply either the basic or quality management focused model with two different levels of regulatory coverage. **Option 6** considers other measures to enhance public protection as a comparison to implementing corporate regulation. While exploring these other measures is not the focus of our review, we believe consideration of these other measures is relevant for informing our recommendations.

6.1 Regulatory coverage for options 2 to 5

Based on an examination of corporate regulatory models applied in other jurisdictions, a minimum and maximum level of corporate regulatory coverage can be characterized as follows:

- **Minimum coverage:** The minimum level of corporate regulatory coverage is requiring consulting organizations that provide engineering and geoscience services to the public to obtain a certificate/permit and excluding sole practitioners from needing a license. All jurisdictions in Canada that regulate engineering and geoscience organizations have at least this level of minimum coverage. The rationale for regulating only consulting organizations is that these organizations provide engineering and geoscience services directly to the public and thus have the most influence on public protection. The rationale for excluding sole practitioners is that since they practise on their own there is no organizational influence on their practice.
- **Maximum coverage:** The maximum level of regulatory coverage is requiring all organizations that *practise* engineering and geoscience to obtain a certificate/permit, including sole practitioners. Note that there's a clear distinction between organizations that *practise* engineering/geoscience and organizations that have P.Eng/P.Geo on staff. Regulating all organizations that practise engineering and geoscience would include **consulting organizations** (including sole practitioners), businesses that practise for **internal consumption purposes only** (organizations that consume engineering and/or geoscience services internally for the production of a product—e.g., engineered product companies, resource companies), and **public sector organizations** (e.g., provincial crown corporations, public utilities, municipal governments and provincial agencies). The rationale for regulating all organizations that practise engineering/geoscience is that any practise of engineering/geoscience has implications for public protection and should be in compliance with the *Act*, Bylaws, and Code of Ethics.

For simplicity, we have structured options for this discussion paper that would include either the minimum or maximum level of regulatory coverage. Options 2 and 4 include the minimum level of coverage. Options 3 and 5 include the maximum level of coverage. Levels of regulatory coverage exist between these minimum and maximum levels and these are described in Appendix 1. If we decide to make a recommendation to APEGBC's Council to pursue regulatory authority over corporate practice, the next step will be a more detailed analysis of which organizations should be regulated.

Discussion Questions

If APEGBC decides to pursue regulatory authority for corporate practice, do you think all organizations practising engineering and geoscience in BC should be regulated? Why or why not?

If not, what types of organizations should be excluded?

6.2 Option 1: Status quo

Option 1 involves the continuation of the status quo approach to regulation of the engineering and geoscience profession in BC. Key elements describing the status quo approach include:

- **No regulation of corporate practice:** There would be no requirements for organizations that practise engineering and geoscience to register with APEGBC, and APEGBC would have no mandate to regulate the organizational influence on professional practice.
- **Continue with the voluntary Organizational Quality Management (OQM) Program:** APEGBC would continue to encourage engineering and geoscience organizations practising in BC to voluntarily certify through the OQM program. As of August 2016, APEGBC estimates that about a quarter of organizations practising engineering and geoscience in BC are involved in various stages of the OQM process.
- Continue with the regulation of individual professionals:
    - 7 Quality management standards for individual professionals;
    - 100 individual practice reviews per year; and,
    - Other regulatory mechanisms for individual professionals (e.g., complaints from the public, investigations, etc.).

Options 2 to 6 would involve APEGBC doing more than the status quo approach for the purposes of enhancing public protection. Options 2 to 5 would enhance public protection through implementing corporate regulation. Option 6 would look for other measures to enhance public protection.

6.3 Options 2 and 3: Basic models

Most Canadian jurisdictions apply a similar model for engineering and geoscience organizations that can be considered the 'basic model' (e.g., SK, MB, YK, NWT & NU, ON, PEI, NL). The requirements to receive a permit/certificate in a basic model are completion of an application form and payment of a fee. A few jurisdictions also require the submission of supporting documents. The basic model provides the following functions:

- **Prohibits the practice of professional engineering and geoscience by regulated organizations unless they obtain a permit/certificate.** This provides an entry barrier to the practice of the professions by regulated organizations.
- **Provides for a registry of regulated organizations practising engineering and geoscience in the jurisdiction**. A number of the regulatory associations publish this registry on their websites to allow members of the public to verify whether an organization is registered and has a permit/certificate. This registry also provides a means for the regulatory association to communicate relevant information about the professions.
- **Ensures regulated organizations employ professional engineers, geoscientists, and/or licensees**. Having at least one professional engineer, geoscientist or licensee on staff is a prerequisite to obtaining a permit/certificate and being registered. This system provides some checks to prevent regulated organizations from practising engineering and geoscience without a qualified professional on staff. Some regulatory associations (e.g., Newfoundland) ask for corporate representatives to be identified for each discipline practised by the organization, which provides an additional check that organizations are employing professionals with the appropriate qualifications.
- **Specifies the responsibility of regulated organizations to comply with the Act regulating engineering and geoscience in the jurisdiction, and the Bylaws and Code of Ethics of the regulatory authority.** In theory, this responsibility is supposed to address any conflicts of interest within an organization that would compromise the practice of the profession for achieving another organizational objective. However, this responsibility is

typically conveyed to organizations only at a high-level with little guidance around what it means to adequately fulfill this responsibility.

- **Designates corporate representatives that assume some responsibility for supporting corporate practice that complies with the Act, Bylaws and Code of Ethics.** Each jurisdiction has corporate representatives, but describes the responsibilities of corporate representatives differently. At a minimum, they serve as a key point of contact between the regulatory authority and the organization. They can also take on responsibilities for the personal supervision and responsible direction of a specific portion of the organization's professional practice (see Table 6 in Appendix 1).
- **Provides the regulatory association the authority to investigate regulated organizations in the event of an incident or complaint and the authority to require the production of relevant documents to inform the investigation.** While other legal mechanisms exist that can be used to investigate organizations implicated in a major incident, these mechanisms are not undertaken from the perspective of the engineering and geoscience professions' duty to protect the public and the documents in these investigations are not always available to regulators (sometimes a settlement is reached and the documents are confidential).

The basic model can be described as a reactive approach to public protection. It provides a disciplinary system in the event of a public incident or complaint regarding violations of the Act, Bylaws and Code of Ethics. The disciplinary system provides a deterrent to poor practice but does not actively encourage good practice.

Options 2 and 3 would implement a basic model for regulating organizations alongside APEGBC's current regulatory system for individual professionals. Option 2 applies the basic model with the minimum level of regulatory coverage (i.e., engineering and geoscience consulting organizations excluding sole practitioners). Option 3 applies the basic model with the maximum level of regulatory coverage (i.e., consulting organizations including sole practitioners, businesses that practise for internal consumption purposes only, provincial crown corporations, public utilities, and municipal governments).

6.4 Options 4 and 5: Quality management focused models

Quality management focused models include all of the functions of the basic model and add requirements and compliance mechanisms to proactively encourage good practice and reduce risks to public protection. The only corporate regulation in Canada for engineering and geoscience organizations that applies a quality management component is in Alberta. For regulated organizations to obtain their permit to practice from the Association of Professional Engineers and Geoscientists of Alberta (APEGA), they must develop and submit a Professional Practice Management Plan. Responsible Members are also required to attend Permit to Practice seminars that inform them of their duties and of how to create a Professional Practice Management Plan. APEGA requires a Professional Practice Management Plan to contain the following five elements: (1) organizational chart, (2) ethical standards, (3) professional and technical resources, (4) quality control, (5) professional documents and record retention. Aside from prescribing that the Plan must cover these five elements, APEGA does not prescribe the content for the plan. It is the responsibility of the regulated organization to develop a Professional Practice Management Plan that is appropriate to their industry and practice discipline.

BC's voluntary OQM Program (described in the section Corporate regulation in BC and across Canada) provides another model for quality management focused corporate oversight. The OQM program certifies participating organizations only after they have developed processes and procedures for quality management that meet the standards established by the program. Processes and procedures are implemented in seven areas: (1) APEGBC practice guidelines, (2)

retaining project documentation, (3) checking engineering and geoscience work, (4) independent review of structural designs, (5) use of APEGBC seal, (6) direct supervision, and (7) field reviews.

OQM differs from APEGA's approach because OQM establishes minimum bars for quality management that every organization certified through OQM must meet.

Both Alberta's corporate regulatory model and the OQM Program use audits to verify compliance. If issues are identified in the audits, the associations enter into proactive discussions on how the issue can be resolved. APEGA informed us that they find the audit system to be a useful and effective mechanism for identifying and resolving compliance issues. APEGBC reported to us that in their experience, the OQM audit helps organizations identify where their quality management practices can be improved and provides a framework for making those improvements. This, in turn, helps organizations to increase efficiencies and customer satisfaction, reduce risk, and support their professionals in meeting their professional requirements. In addition, auditors frequently receive positive feedback on the audit process from organizations and are regularly asked by organizations to conduct additional audits.

A quality management focused corporate regulation in BC could be modeled after the approach implemented in Alberta, the OQM Program, or could be hybrid model that incorporates elements of both the Alberta model and the OQM Program.

Options 4 and 5 would implement a quality management focused model for regulating organizations alongside APEGBC's current regulatory system for individual professionals. Option 4 applies the quality management focused model with the minimum level of regulatory coverage (i.e., engineering and geoscience consulting organizations excluding sole practitioners). Option 5 applies the quality management focused model with the maximum level of regulatory coverage (i.e., consulting organizations including sole practitioners, businesses that practise for internal consumption purposes only, and public sector organizations practising engineering and geoscience).

6.5 Option 6: Other approaches to public protection

While our focus to this point has been on the exploration of potential corporate regulatory models, we are also considering possible other approaches to improve public protection that could be pursued instead of regulation over corporate practice. One other approach that we have discussed is the scaling up of individual practice reviews that are currently carried out. APEGBC's Practice Review Program is intended to be an educational and professional development process for the benefit of members, as well as a proactive quality assurance check on their practices. Approximately 100 individual practice reviews are carried out each year on a random selection basis within one or more disciplines, areas of practice and/or other relevant risk factors. Increasing the number of practice reviews would have more outreach and opportunities to support/educate members on the quality of their professional practices, but it would not prevent the perception of a corporate regulatory gap and would not address any corporate influences that may be adversely affecting members' professional practices. If other approaches are identified through the course of consultation, these will also be compared to implementing corporate regulation.

Discussion Questions

Do you think that other approaches to enhancing public protection with respect to the practice of the profession should be further explored as an alternative to potentially regulating corporate practice?

Table 1: Detailed description of options

Components of Options			Option 1: Status Quo	Option 2: Basic model with minimum coverage	Option 3: Basic model with maximum coverage	Option 4: Quality management focused model with minimum coverage	Option 5: Quality management focused model with maximum coverage	Option 6: Other measures to enhance public protection
Based off of models in:			N/A	SK, MB, YK, NWT, NU, ON, PEI, NL		AB		N/A
Corporate Regulatory Coverage	**Private Sector**	Sole Practitioners	X	X	✓	X	✓	X
		Consulting Firms	X	✓	✓	✓	✓	X
		Internal Consumption	X	X	✓	X	✓	X
	Public Sector	Crown Corps.	X	X	✓	X	✓	X
		Municipal Gov't	X	X	✓	X	✓	X
Requirements for Regulated Organizations	Compliance with Act, Bylaws and Code of Ethics		X	✓	✓	✓	✓	X
	Designation of corporate representative(s)		X	✓	✓	✓	✓	X
	Quality mgmt requirements		X	X	X	✓	✓	X
Compliance	Reactive approach to ensuring regulated organizations are in compliance (e.g., complaints from public, association can investigate and require production of docs)		X	✓	✓	✓	✓	X
	Proactive audits of regulated orgs		X	X	X	✓	✓	X
Other			APEGBC continues with current regulatory system for individual professionals	Corporate regulation is implemented alongside current regulatory system for individual professionals				APEGBC regulatory system for individual professionals is enhanced through more individual practice reviews

6.6 Options assessment

Based on input from members and stakeholders heard to date, we have identified five broad objectives as important when considering regulatory and non-regulatory options for corporate practice: (1) public protection, (2) value to the professions, (3) administrative cost and effort, (4) fairness, and (5) private sector effects. Within these broad objectives, we identified more specific assessment criteria to help characterize the performance of the options.

Table 2 presents a *preliminary* assessment of the six options. This assessment is necessarily at a coarse or high level as consultation activities are ongoing and we have not yet determined if we will recommend regulatory authority over corporate practice. We encourage feedback from stakeholders and members on this assessment. Feedback on the following questions will be especially helpful at this point in the review process:

- **Are there any objectives or criteria that you think are missing from this assessment and that you think are important considerations in assessing the pros and cons of these different options?**
- **Do you agree with the characterization of the performance of these options? If not, why not?**
- **Are there other approaches to corporate regulation that you think we should evaluate that are not represented in this discussion paper?**

The expected performance of the options against the assessment criteria is described below. This assessment is based on the information that we have reviewed to date, input we have heard from members and stakeholders and discussions at the Task Force table. The assessment represents our best guess of how the options would affect the objectives. We present the information here to support a dialogue with members and stakeholders—*do we have this assessment right, or are there other considerations?*

Public protection – Quality of practice: A basic model (Options 2 and 3) is expected to result in some minor improvements to quality of practice. In particular, a basic model would establish a responsibility on the owners or executives of an organization to maintain an organization in which the practice of engineering and geoscience can be conducted in accordance with the requirements in the *Act*, Code of Ethics and Bylaws. In the basic model, APEGBC would engage in educational efforts to increase awareness and understanding among regulated organizations of their responsibilities. However, they would not actively review the compliance of organizations. The basic model's compliance mechanism is a reactive approach and depends on complaints and investigations regarding events that have already happened. A quality management focused model (Options 4 and 5) would provide more specific guidance and standards on what it means to have an organization that supports professional practice in accordance with the requirements of the *Act*, Code of Ethics and Bylaws. A quality management focused model would then have a proactive compliance approach aimed at preventing problems from occurring due to poor practice or misconduct. With both the basic model or quality management focused model, the greater the regulatory coverage, the higher the level of public protection.

Public protection – Individual professional responsibility: As discussed in the Key Considerations section, corporate regulation will not change individual professional responsibilities, but it may have an impact on the perception of these responsibilities. If corporate regulation is implemented, care would need to be taken to ensure that corporate regulation does not result in the *perception* that individual professional responsibilities have changed.

Value to the professions – Value to individual professionals: The basic model (options 2 and 3) would provide some value to individual professionals by better aligning the legal responsibilities of professionals with the legal responsibilities of the organizations in which they work. This value would be greater for individual professionals working for organizations with owners and/or mangers that are not professional engineers and geoscientists and therefore have less awareness and/or commitment to the professions' *Act*, Code of Ethics and Bylaws. The quality management focused model (options 4 and 5) would provide the same types of values as the basic model and additionally would ensure organizations have structures and processes in place to support professional practice. Scaling up individual practice reviews (option 6) would not address the organizational influence on professional practice and therefore would not be able to provide the same types of values to individual professionals as options 2 to 5. In addition, scaling up individual practice reviews would likely not have the same reach as options 2 to 5 and is therefore expected to have less value to individual professionals.

Value to the professions – Reputation of the professions: In the status quo approach, perception of a regulatory gap between BC and most other jurisdictions in Canada could pose reputational risk for the professions. Perceptions of a regulatory gap would continue to be highlighted whenever an incident happens (e.g., Mt. Polley, Burnaby Save-on-Foods roof collapse). Implementation of corporate regulation (options 2 to 5) would prevent the perception of a regulatory gap. A quality management focused model (options 4 and 5) would be seen by the public and government as proactive approaches to improving the quality of practice and would therefore improve the reputation of the professions in BC relative to the basic model, but it is unclear by how much. For option 6, scaling up individual practice reviews are expected to have less of an improvement on the overall reputation of the profession than options 2 to 5. Scaling up individual practice reviews would likely not have the same visibility to the public and government as implementing corporate regulation and would likely not be seen as substitutes for addressing the perceived regulatory gap.

Administrative costs and effort – Fees: The cost to APEGBC of implementing any corporate regulatory model could be recovered with fees from regulated organizations. So the higher the costs to implement and administer corporate regulation, the higher the fees would be. From discussions with the regulatory associations implementing the basic model of corporate regulation, we estimate that this model requires about half the time of a full time employee (FTE) at the regulatory association to implement. APEGA has informed us that it requires about 2.5 FTEs to implement their program. The OQM program is run on a cost-recovery basis and 2 FTEs are employed at APEGBC currently to implement the program. Note that the number of FTEs for other corporate regulatory programs and the OQM program are not directly comparable because the number of FTEs is dependent on the number of organizations in the program.

Administrative effort for organizations: The administrative effort for regulated organizations in the basic model is low. The basic model typically involves filling out a form that requires answering the following types of questions:

- What engineering and/or geoscience disciplines are practised by the organization?
- Who in the organization has the authority and will accept responsibility for ensuring the practice of the professions can be conducted in accordance with the requirements described in the *Act*, Code of Ethics and Bylaws?
- Who are the professional engineers, geoscientists, and/or licensees in the organization that will have responsibilities such as responsible direction and personal supervision?

A quality management focused model would require more effort than the basic model for regulated organizations (see description of requirements for the APEGA model and OQM in the

section on Option 4 and 5). The level of effort would be variable across organizations depending on the quality management systems already set up in the organization.

Fairness – Regulatory burden on small organizations: A system of requirements and fees has the potential to have a disproportionate burden on small organizations compared to large organizations. Fee structures that are scaled to the size of organizations (e.g., number of professionals on staff) have been implemented in corporate regulatory models that make the fees fairer. For example, Yukon's fee structure exempts sole practitioners from annual dues. Saskatchewan's fee structure provides a 50% discount on annual fees for organizations with less than 5 professionals. The OQM program has a unique fee structure that is generally viewed as a fair system by participating organizations. A fundamental principle of the program is that fees are set on a cost-recovery basis. The fee formula is 200 multiplied by the square root of the number of professional engineers and/or geoscientists employed by the organization, resulting in a fee of $200 for an organization with one professional and $2,000 for an organization with 100 professionals.

The basic model will typically not scale regulatory requirements according to the size of organization since the level of effort to meet requirements is low. Quality management focused models do provide some flexibility so that requirements fit the context of the organization. APEGA approaches this by mandating the topics that must be covered in an organization's Professional Practice Management Plan but does not mandate the content. Organizations are responsible for developing a Professional Practice Management Plan that is appropriate to their practice and in the event of an audit, they are expected to be able to demonstrate that their Plan is adequate. The OQM program's certification process is also scalable according to an organization's size and discipline(s), but has less flexibility compared to the APEGA approach.

Private sector effects – Business environment: There's an interest in not negatively affecting engineering/geoscience companies through regulating corporate practice. The basic model, in and of itself, is not expected to have an effect on the business environment as the fees and regulatory requirements are low.

The effects of a quality management focused model on the BC business environment are unknown. We have discussed whether a quality management focused model has the potential to reverse (or slow) the trend in commodification of engineering/geoscience services, which refers to the growing emphasis on lowering costs rather than doing a job well or correctly (this benefit, if realized, would also contribute to improving the quality of practice). More discussion and investigation into this potential benefit is needed.

6.7 Summary

The options assessment shows that corporate regulation could provide several benefits over the status quo approach (e.g., benefits to quality of practice, individual professionals, and reputation of the profession). However, corporate regulation would result in additional fees and effort for regulated organizations. A quality management focused model could provide greater benefits than a basic model, but also requires more costs and effort from regulated organizations. We are interested in hearing from members and stakeholders on whether you think the benefits of corporate regulation outweigh the costs and effort required to implement it. We encourage you to provide feedback between October 4, 2016 and November 30, 2016 through an online survey accessible through apeg.bc.ca/corporatepractice or by sending an email to corporatepractice@apeg.bc.ca. Other consultation opportunities, such as live presentations and a webcast will be listed on the APEGBC website at apeg.bc.ca/corporatepractice as they become available.

Discussion Questions

Do you think the benefits of corporate regulation outweigh the costs and effort? Why or why not?

If APEGBC decides to pursue regulatory authority for corporate practice, do you think a basic model for corporate regulation or quality management focused model should be applied?

Are there refinements to these models that you think would offset the costs/effort or improve the benefits?

Table 2: Options Assessment Matrix (based on current available information before the Advisory Task Force)

Objective	Assessment Criteria	Option 1: Status Quo	Option 2: Basic Model with minimum coverage	Option 3: Basic Model with maximum coverage	Option 4: Quality Mgmt focused model with minimum coverage	Option 5: Quality Mgmt focused model with maximum coverage	Option 6: Other measures to enhance public protection – scaling up individual practice reviews
Public protection	**Quality of practice**	No change	Minor improvements to quality of practice	Increasing coverage would increase improvements to quality of practice compared to option 2	Substantive improvements to quality of practice compared to options 2 and 3.	Increasing coverage would increase improvements to quality of practice compared to option 4	Potential to improve quality of practice, but difficult to compare to corporate regulation
	Individual professional responsibility	No change in individual professional responsibilities in Options 1 to 6. For options 2 to 5, actions would need to be taken to ensure corporate regulation does not result in the perception that individual professional responsibilities have changed.					
Value to the profession	**Value to individual professionals**	No change	Better alignment of the legal responsibilities of professionals with the legal responsibilities of the organizations in which they work.		Would ensure organizations have structures and processes in place to support professional practice in line with the Act, Code of Ethics, and Bylaws.		Would have value to the professionals benefiting from practice reviews, but would not address organizational influence
	Reputation of the profession	No change – but potential reputational risk	Could improve reputation – meets expressed public expectations and closes perceived regulatory gap		Reputation could improve more so than in options 2 and 3 but it is unclear by how much.		Could improve reputation, but would likely have a lower impact than options 2 to 5.

Legend:
Green shading – indicates improvements compared to the status quo. The darker the shade of green, the larger the expected improvement.
Red shading – indicates diminishing performance compared to the status quo. The darker the shade of red, the lower the expected performance.
No shading – indicates no change, uncertainty in performance, or performance that depends on other factors.

<table>
<tr><th>Objective</th><th>Assessment Criteria</th><th>Option 1: Status Quo</th><th>Option 2: Basic Model with minimum coverage</th><th>Option 3: Basic Model with maximum coverage</th><th>Option 4: Quality Mgmt focused model with minimum coverage</th><th>Option 5: Quality Mgmt focused model with maximum coverage</th><th>Option 6: Other measures to enhance public protection – scaling up individual practice reviews</th></tr>
<tr><td rowspan="2">Adminis-trative cost and effort</td><td>Expected Fees for organizations</td><td>No fees</td><td colspan="2">Lower fees than the quality management focused model (Options 4 and 5)</td><td colspan="2">Higher fees than the basic model (Options 2 and 3)</td><td>No fees</td></tr>
<tr><td>Administrative effort for organizations</td><td>No effort</td><td colspan="2">Low effort for regulated organizations</td><td colspan="2">Higher effort for regulated organizations</td><td>No effort</td></tr>
<tr><td>Fairness</td><td>Regulatory burden for small organizations</td><td>No requirements on small organizations</td><td colspan="4">The potential exists for corporate regulation to be implemented in a way that has a disproportionate burden (in terms of fees and requirements) on small organizations compared to large organizations. Mechanisms exist to make the regulatory burden more equitable across different sizes of organizations.</td><td>No requirements on small organizations.</td></tr>
<tr><td>Private sector effects</td><td>Business environment</td><td>No change</td><td colspan="2">No change – fees and regulatory requirements are not high enough to affect business environment</td><td colspan="2">Uncertain – more investigation needed</td><td>No change</td></tr>
<tr><td colspan="8">Legend:
Green shading – indicates improvements compared to the status quo. The darker the shade of green, the larger the expected improvement.
Red shading – indicates diminishing performance compared to the status quo. The darker the shade of red, the lower the expected performance.
No shading – indicates no change, uncertainty in performance, or performance that depends on other factors.</td></tr>
</table>

Appendix 1 – Corporate Regulation of Engineering and Geoscience Organizations across Canada

Every province and territory in Canada regulates engineering and geoscience organizations under a mandatory legislated authority except BC and Quebec. The Advisory Task Force has reviewed 11 of these corporate regulatory models to identify similarities and differences in approaches across Canada with respect to regulatory coverage, regulatory requirements and responsibilities, compliance mechanisms and fee structures (see Table 3 and Table 4 for summary).

Regulatory coverage

Each regulatory model has a unique definition for what types of engineering and geoscience organizations require a permit/certificate (see Table 5 for these details). All regulatory models require specific types of organizations that practise professional engineering and geoscience to obtain a permit/certificate. None of the regulatory models require organizations to have a permit/certificate just because they employ professional engineers or professional geoscientists. The similarities and differences of these regulatory models with respect to regulatory coverage include:

- **Consulting firms:** All 11 regulatory models in Canada require consulting organizations that provide engineering and geoscience services to obtain a permit/certificate. Four regulatory models exclude sole-proprietor consultants from needing a permit/certificate.

- **Organizations that practise for internal consumption purposes only:** There is a mixed approach toward organizations that practise engineering and geoscience for internal consumption purposes only (i.e., they do not provide engineering or geoscience services to another external entity). Three regulatory models require all organizations that practise for internal consumption purposes only to obtain a permit/certificate. Five regulatory models only require some of these organizations to get a permit/certificate, for example if they are undertaking custom designs or manufacturing engineered products that will be used by the public. Three regulatory models don't require these organizations to get a permit/certificate.

- **Federal/provincial/territorial government agencies:** None of the regulatory models require federal, provincial or territorial ministries that practise engineering and geoscience to obtain a permit/certificate.

- **Public utilities:** Two regulatory models require public utilities to obtain a permit/certificate (e.g., Yukon Energy, NWT Power Corporation).

- **Municipal governments:** Yukon, Northwest Territories, and Nunavut require municipal governments to obtain a permit/certificate, and Alberta requires municipal governments to obtain a permit/certificate if they are incorporated. All other jurisdictions do not require municipal governments to obtain a permit/certificate.

Table 3: Jurisdictional Scan Summary Table – Regulatory Coverage and Requirements[1]

Juris-diction	Profession	Mandatory corporate regulation	Name of Regulatory Tool	Regulatory Coverage				Regulatory Requirements			
				Private Sector		Public Sector		Compliance with Act, bylaws, Code of Ethics	Declaration of corporate represent-tative(s)	Corporate mark on professional work	Other
				Consulting	Internal Consumption	Crown Corps/ Utilities	Municipal Gov't				
BC	**Eng/Geo**	**X**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
AB	Eng/Geo	✓	PtP	✓ (excludes SP)	✓	X	✓ (if incorporated)	✓	✓	Permit #	Profnl Practice Management Plan
SK	Eng/Geo	✓	CoA	✓ (excludes SP)	✓	X	X	✓	✓	Corporate Practice Seal	-
MB	Eng/Geo	✓	CoA	✓	X	X	X	✓	✓	CoA Stamp	Profnl Liability Insurance
YK	Eng	✓	PtP	✓	✓	✓	✓	✓	✓	Permit Stamp	-
NWT & NU	Eng/Geo	✓	PtP	✓ (excludes SP)	✓ (exemptions apply)	✓[2]	✓[3]	✓	✓	Permit Stamp	-
ON	Eng	✓	CoA	✓	✓ (custom designs only)	X	X	✓	✓	X	Profnl Liability Insurance[4]
QC	Eng	X	-	-	-	-	-	-	-	-	-
NB	Eng/Geo	✓	CoA	✓ (excludes SP)	✓[5] (products used by public)	X	X	✓	✓	X	Profnl Liability Insurance
NS	Eng	✓	CoC	✓	X	X	X	X	X	X	-
NS	Geo	✓	CoA	✓	X	X	X	X	X	X	-
PEI	Eng	✓	CoA	✓	✓ (custom designs only)	X	X	✓	✓	X	-
NL	Eng/Geo	✓	PtP	✓	✓ (custom designs only)	X[6]	X	✓	✓	Permit Stamp	Profnl Liability Insurance

Notes:
✓ = Yes
X = No

SP = sole proprietorships
Consulting = organizations that provide engineering and/or geoscience services to an external client
Internal consumption = organizations that consume engineering and/or geoscience services internally for the production of a product
CoA = Certificate of Authorization
PtP = Permit to Practice
CoC = Certification of Compliance
Profnl = Professional

Table 4: Jurisdictional Scan Summary Table – Compliance Mechanisms and Fees

Jurisdiction	Profession	Compliance Mechanisms			Fees	
		Permit or Certificate can be revoked for non-compliance?	Complaints from public accepted?	Association can investigate and require production of docs?	Application Fee	Annual Fee
BC	**Eng/Geo**	-	-	-	-	-
AB	Eng/Geo	✓	✓	✓	$520	$520
SK	Eng/Geo	✓	✓	✓	$325	$400 (<5 professionals) & $800 (>=5 professionals)
MB	Eng/Geo	✓	✓	✓	-	$250 (Sole Practitioner) & $500 (multiple professionals)
YK	Eng	✓	✓	✓	$100	$240 (sole practitioner exempt from annual fee)
NWT & NU	Eng/Geo	✓	✓	✓	$100	$390
ON	Eng	✓	✓	✓	$330	$330
QC	Eng	-	-	-	-	-
NB	Eng/Geo	✓	✓	✓	$286	$357.5
NS	Eng	✓	X	X	-	$84 (sole practitioner) & $335 (other)
NS	Geo	✓	X	X	$287	$230 (sole practitioner) & $862 (other)
PEI	Eng	✓	✓	✓	-	$150
NL	Eng/Geo	✓	✓	✓	$253	$649-$1186 (varies by # of disciplines permitted)

Notes:
✓ = Yes X = No

Regulatory requirements and responsibilities
Below is a summary of the regulatory requirements and responsibilities across the 11 regulatory models in Canada that were reviewed.

- **Registration and fees:** All 11 corporate regulatory models require regulated organizations to complete an application form and pay fees to the regulatory association. Completion of the application form and payment of the application fee are the basic requirements for receiving a permit/certificate. To maintain the permit/certificate, the forms have to be re-submitted every year, an annual fee has to be paid, and the regulated organization needs to comply with any other requirements and responsibilities for holders of permits/certificates.

- **Compliance with Act, Bylaws, and Code of Ethics:** Out of the 11 regulatory models reviewed, all of the models except Nova Scotia's require organizations that hold a permit/certificate to comply with the engineering and/or geoscience Act of the jurisdiction and the Bylaws and Code of Ethics passed by the regulatory association. Most regulatory associations do not provide any specific guidance on what exactly is required of regulated organizations in order to be in compliance with the Act, Bylaws and Code of Ethics.

- **Corporate representatives:** All regulatory models except the ones in Nova Scotia require that organizations identify corporate representative(s) on their application form for permits/certificates. In some jurisdictions, these corporate representatives are restricted to professional engineers and geoscientists. Other jurisdictions ask for corporate representatives from the senior executive of the organization in addition to corporate representatives that are professional engineers and/or geoscientists (see Table 6 for details on corporate representatives).

- **Corporate mark on professional work:** A mixed approach exists across the regulatory models for whether regulated organizations have to put an additional mark on professional work (other than the stamp of the individual professional). Five regulatory models provide a corporate stamp/seal to regulated organizations and this stamp/seal must be on all professional work. Alberta just requires the permit to practice registration number to be on professional work. The other five regulatory models have no requirements in this regard.

- **Professional liability Insurance:** A less common requirement across the regulatory models is for organizations to have professional liability insurance. Three regulatory models (MB, NB, and NL) require all regulated organizations to have a minimum amount of professional liability insurance. Ontario requires all regulated organizations to have professional liability insurance but exempts engineering consulting organizations if they declare to clients that they do not have this insurance.

- **Quality management**: Alberta is the only jurisdiction in Canada with a corporate regulation that includes a quality management component for regulated organizations. In Alberta, permit holders are required to have a Professional Practice Management Plan that describes the corporate policies, procedures, and systems used to ensure that engineering and/or geoscience work done on behalf of the company is done responsibly and meets all legal requirements.

Compliance mechanisms
Compliance mechanisms across the corporate regulatory models are quite similar. They are mostly reactive mechanisms, meaning they are applied after an incident of non-compliance as opposed to proactive mechanisms, which would be applied to prevent incidents of non-compliance. Reactive mechanisms include:

- Providing the regulatory association with the authority to revoke a permit/certificate for non-compliance;
- Accepting complaints from the public against regulated organizations; and,
- Investigating organizations that receive complaints and requiring the production of documents relevant to the investigation.

Across the regulatory models there are only a few examples of proactive compliance mechanisms. In Ontario and Newfoundland, the regulatory association requires the submission of academic and experience qualifications for any corporate representative assuming responsibility for professional practice. These qualifications are reviewed to verify the corporate representative has adequate competency to assume responsibility for that area of practice.

Alberta applies the most proactive compliance mechanism out of all the regulatory models—random audits of permit holders. The Professional Practice Management Plan is the starting point for these audits and permit holders are expected to be able to show the regulator that the plan is appropriate for the kind of work that the company is doing. If issues are identified by the audit, the regulator works with the permit holder to get their organization into compliance. If the organization does not address these issues, the regulator has the authority to revoke the organization's permit to practice—however, there are no known instances of this happening.

Fee structures
Across Canada, there are three different types of fee structures:

- Flat-fee (all regulated organizations pay the same fees);
- Pro-rated fee based on the number of professional engineers and/or geoscientists employed by organization; and,
- Pro-rated fee based on the number of disciplines practised by an organization.

For the regulatory models that have pro-rated fees based on the number of professionals employed, most models distinguish between two sizes of organizations—sole-practitioner organizations and organizations with two or more professionals. Yukon's fee structure exempts sole practitioners from annual dues. Saskatchewan's fee structure is unique, providing for a 50% discount on annual fees for organizations with less than 5 professionals.

Table 5: Jurisdictional Scan – Corporate Oversight Coverage

Jurisdiction	Profession	Corporate Oversight Coverage
BC	Eng/Geo	Does not have corporate regulation. The voluntary Organizational Quality Management (OQM) Program is available to all organizations that employ professional engineers or professional geoscientists in BC and provide products or services requiring the application of professional engineering or professional geoscience. "Organization" is defined as any firm, corporation, partnership, government agency, sole proprietor or other legal entity.
AB	Eng/Geo	AB's *Engineering Geoscience Professions Act* requires that partnerships,

Jurisdiction	Profession	Corporate Oversight Coverage
		corporations and other such entities which practise engineering or geoscience require a Permit to Practice. Sole-proprietors are not required to have a Permit to Practice unless they are incorporated.
SK	Eng/Geo	SK's *Act* requires all partnerships, associations of persons or corporations practising engineering and geoscience to obtain a Certificate of Authorization. Sole proprietorships do not require CoAs because they are not considered a partnership, association of persons or corporation. If a sole proprietor becomes incorporated then he/she will require a CoA.
MB	Eng/Geo	*The Engineering and Geoscientific Professions Act* in MB requires that any corporation, partnership or other legal entity which contracts to, or otherwise engages in the provision of services which constitute the practice of professional engineering or practice of professional geoscience, directly or indirectly, must hold a Certification of Authorization (Section 16). Sole proprietorships are not required to hold a CoA because they are not incorporated entities. For the purposes of distinguishing "one person" corporations for fee consideration and to identify corporations which are not required to hold a CoA, APEGM has established the following three categories of entities: A **sole-practitioner entity** is a partnership, corporation or other entity owned and controlled by a single professional engineer or geoscientist, has no other professional engineers/geoscientists in employment and has fewer than five employees. An **operating entity** is a partnership, corporation, or other entity where all professional services are consumed internally in the creation of the product that the operating entity sells, and no professional services are offered directly to anyone (person or company) outside the operating entity for a fee or other consideration. A **practising entity** is a partnership, corporation, agency or other entity which does not meet all of the criteria of either a sole-practitioner entity or operating entity. This category includes those organizations that offer professional services to clients or customers, directly or indirectly. In MB, sole-practitioner entities and practising entities are required to hold a CoA. Operating entities are not required to hold a CoA.
YK	Eng	YK's *Engineering Professions Act* requires that all partnerships, corporations and other such entities that practise engineering have a Permit to Practice. YK does not differentiate between size of an organization or whether the organization is practising for internal or external reasons—if an organization is practising engineering, then it requires a Permit to Practice. This includes sole proprietorships.
NWT and NU	Eng/Geo	NWT's *Engineering and Geoscience Professions Act* and NU's *Consolidation of Engineers and Geoscientists Act* require all firms (defined as partnerships, corporations, and associations of persons) practising engineering and/or geoscience in NWT and NU have a Permit to Practice. A sole proprietor (who is not incorporated and not practising through a firm) is not required to hold a Permit to Practice.

Jurisdiction	Profession	Corporate Oversight Coverage
		Section 23 (6) of NWT's *Engineering and Geoscience Professions Act* and Section 5 (3) of NU's *Consolidation of Engineers and Geoscientists Act* exempts firms from needing a permit to practice professional engineering and geoscience if the work: (a) is performed by an employee who is a member or licensee, (2) is used exclusively by the firm and is not used by or delivered to another party, (3) does not affect the safety of any person.
ON	Eng	ON's *Professional Engineers Act* states "No person shall offer to the public or engage in the business of providing to the public services that are within the practice of professional engineering except under and in accordance with a certificate of authorization." Professional Engineers Ontario (PEO) describes the following criteria to determine if you are providing engineering services to the public and require a CoA: • If you advertise and promote yourself—either personally or through a legal entity such as a company or partnership—as offering professional services; or, • If you provide professional engineering services to the public through the sale of a product that is custom-designed or an original (as opposed to an off-the-shelf product); or, • If you work for others, but offer professional engineering services directly to the public on a part-time, moonlighting, or volunteer basis.
QC	Eng	No mandatory corporate regulation or voluntary corporate oversight.
NB	Eng/Geo	In NB, only persons who are members of the association, or licensees, or holders of certificates of authorization may practise engineering and geoscience (*Engineering and Geoscience Professions Act,* Section 9). A Certificate of Authorization is required by any partnerships, associations of persons, or corporations that offer or provide services to the public within the practice of engineering or geoscience.
NS	Eng	In NS, every organization that provides professional engineering services directly to the public is required to obtain a certificate of compliance. Those business entities that practise professional engineering for their own use are not required to obtain a certificate of compliance.
NS	Geo	NS's *Geoscience Professions Act* states that a "partnership, association of persons or body corporate may undertake and carry out the application of geoscience in its own name if one of its principal and customary functions is the application of geoscience and such application of geoscience is carried on under the supervision of a member or full-time permanent employee of the partnership, association or body corporate who holds a certificate of registration or a license to practice." Only if a partnership, association of persons or body corporate meets this criterion will it be issued a certificate of authorization (Section 14).
PEI	Eng	In PEI, partnerships, association of persons, and corporations require a Certificate of Authorization to offer and provide engineering services to the public. PEI defines "offering and providing engineering services to the public" in the same way as Ontario.
NL	Eng/Geo	In NL, the *Engineers and Geoscientists Act* requires that a professional member, partnership or corporation that provides the services of a

Jurisdiction	Profession	Corporate Oversight Coverage
		professional member directly to the public have a Permit to Practice. In NL, an individual who is a professional member or licensee of PEGNL who provides professional services to the public in his or her own name or through a company requires a Permit to Practice even if the member is the only member of the organization. "Providing services to the public" includes consulting companies and those for which customized engineering or geosciences services are a significant portion of the product they offer to their clients.

Table 6: Declaration of Corporate Representatives

Jurisdiction	Profession	Application form requirements for designation/declaration of individuals
BC	Eng/Geo	OQM (a voluntary program) has an **attestation form** that needs to be submitted with applications for OQM certification. The attestation form reads: "I [name of appointed senior APEGBC professional in organization] am a senior APEGBC professional in [name of organization] and I have the authority to sign for the organization. I confirm that, [name of organization] has APEGBC professionals on active staff in each area of our engineering and/or geoscience practice and that **we have documented and implemented policies and procedures consistent with all of the applicable quality management requirements** listed above."
AB	Eng/Geo	Application form asks for: • Declaration by a **Chief Operating Officer**. Declaration reads: "I [name] occupy the position of [title] in the applicant's organization and in that position have authority and undertake to maintain an organization in which the practice of the professions indicated above **can be conducted** in accordance with requirements described in the *Engineering and Geoscience Professions Act* with specific reference to Parts 1 [Scope of Practice] & Part 4 [Registration] of the *Act* and Part 7 of the Regulations [Registration of Permit Holders]." • Declaration of **Responsible Member**(s) that reads: "I [legal name],[prof. designation], APEGA Member [Member Number], occupy the position of [job title] at [legal name of Organization] declare that I am a professional member or licensee of APEGA and as such undertake to provide responsible direction and personal supervision to that portion of the applicant's professional practice performed by the organization unit described below [Describe what aspect(s) of professional practice you are taking responsibility for)]. • Declaration of Responsible Members needs to be signed and professional stamped/sealed.
SK	Eng/Geo	Application form asks for: • Names of professional engineers and professional geoscientists who will be **in charge** of professional engineering or professional geoscience on behalf of the Applicant (professionals designated as "in charge" don't have to sign the application form); • An **official representative(s)** whose duty it is to ensure that the Act and Bylaws are complied with by the Applicant (Official representative(s) must be members or licensees of APEGS and must sign the application form);

Jurisdiction	Profession	Application form requirements for designation/declaration of individuals
		• an "**Authorized Signing Officer**" to certify the information in the application is true and complete.
MB	Eng/Geo	• Application uses same language as APEGA for declaration of Chief Operating Officer and Responsible Member(s).
Yukon	Eng	Application form asks for: • Declaration from a **Chief Operating Officer** to declare that he/she has authority and can undertake to maintain an organization in which the practice of the professions in the identified engineering discipline(s) **can be conducted** in accordance with requirements described in the *Engineering Professions Act*. • Declaration by members for "**Licensees Assuming Responsibility for the Professional Practice**". Declaration reads "I, the undersigned, am a professional member or licensee of Engineers Yukon and as a full time employee or member of the firm undertake to provide **responsible direction** and **personal supervision** to that portion of the applicant's professional practice performed by the organizational unit described below. I have read the relevant sections of the *Engineering Professions Act* and the Regulations reproduced herein and I agree to conduct the professional practice for which I have assumed responsibility in strict accordance with the requirements of relevant legislation and regulations."
NWT and NU	Eng/Geo	• Application uses same language as APEGA for declaration of Chief Operating Officer and Responsible Member(s).
ON	Eng	Application form asks for: • Names (but no signatures) of the sole practitioner, partners or employees who hold licenses with PEO and **will assume responsibility** for the services provided within the practice of professional engineering; • Names and addresses of the owners/top executives of an organization (sole practitioner, all partners, or all officers and directors of organization); • Signature from the person certifying that the information in the form is true and correct.
QC	Eng	• N/A
NB	Eng/Geo	Application form asks for: • Names (but no signatures) for the officers/partners of the firm; • Names (but no signatures) of all engineers and geoscientists who will be **in charge** of the engineering or geosciences done by the firm; • Signature by an **Authorized Signing Officer** that certifies all information in the application is true and correct.
NS	Eng	• No designation of "responsible member"; • Application form asks for the member #, name, position and email of "Engineers providing engineering services for Nova Scotia"; • Application form asks for a contact person; • A company representative needs to sign the form to certify that the information is "in all respects current and accurate."
NS	Geo	Application form asks for:

Jurisdiction	Profession	Application form requirements for designation/declaration of individuals
		• Names of members and licensees under whose **supervision** geoscience is applied; • Signature that certifies all information in the application is complete, true and correct.
PEI	Eng	Application form asks for: • Names (but no signature) of the officers of the firms; • Name, discipline and signature of all engineers **in charge of engineering** being done by the firm.
NL	Eng/Geo	• PEGNL licenses permit holders by discipline and requires at least one member in responsible charge for each discipline under the permit to practice.

[1] This table has been reviewed by the regulatory authorities in New Brunswick, Northwest Territories and Nunavut, and Yukon and are informed by teleconferences with the regulatory authorities in Alberta, Saskatchewan and Nova Scotia. The information for all other jurisdictions are based off of information on the websites of the regulatory authorities, downloaded in May 2016.

[2] NWT Power Corporation and Northland Utilities have permits to practice.

[3] City of Yellowknife has a permit to practice and NAPEG is currently working on getting more municipalities registered.

[4] In Ontario, engineering consulting companies can be exempt from the professional liability insurance requirement if: (1) **Class exemption -** the applicant is not required to have professional liability insurance in accordance with clause 74(2)(c) as the applicants practice would be in respect of pollution hazards, nuclear hazards, aviation hazards or shipping hazards, or (2) **Compulsory Disclosure –** the applicant will comply with clause 74(2)(d) in the manner provided by that clause by notifying each person to whom the applicant intends to provide professional engineering services that the applicant is not insured in accordance with the minimum requirements of the clause, and obtain the client's written acknowledgment of this disclosure .

[5] APEGNB states that companies practising for internal consumption purposes only are typically not required to have a Certificate of Authorization, but there are exceptions. The requirement for a CoA is for firms where the public reasonably expects that the firm performs engineering work. Typically, this applies to firms doing fee-for-service engineering for the public. For manufacturing firms, this might include the engineering performed in-house or on-site on a manufactured product which would be used by the public.

[6] Provincial ministries don't appear to be regulated, but Newfoundland Power Inc, a public utility, has a permit to practice.