FINAL AGENDA OF THE 192nd ENGINEERS CANADA BOARD MEETING December 10, 2018 (10:00 a.m. – 3:00 p.m. ET)

Sir Guy Carleton Room (2nd Floor)
The Residence Inn by Marriott
161 Laurier Avenue West
Ottawa, Ontario

Please refer to the **Board Policy Manual** and **By-law**

1	CALL TO ORDER AND APPROVAL OF AGENDA	A. Bergeron
	THAT the agenda be approved, and the President be authorized to modify the order of discussion.	
2	APPROVAL OF ACCREDITATION BOARD NOMINATIONS (attachments) p. 3	G. Faulkner
	a) THAT the Board approve the appointment of Ramesh Subramanian, new member representing Ontario, for a three-year appointment for the term December 10, 2018 to June 30, 2021.	
	THAT the Board approve the extension of the current one (1) year terms of the Accreditation Board Vice-Chair, Chair and Past-Chair by an additional one (1) year, so that each of the terms that are currently approved to end on June 30, 2019 will instead end on June 30, 2020: b) Bob Dony as Vice-Chair for the period July 1, 2019 to June 30, 2020 c) Luigi Benedicenti as Chair for the period July 1, 2019 to June 30, 2020 d) Wayne MacQuarrie as Past-Chair for the period July 1, 2019 to June 30, 2020	
3	APPROVAL OF QUALIFICATIONS BOARD NOMINATIONS (attachment) p. 10	D. Lynch
	THAT the Board approve the extension of the current one (1) year terms of the Qualifications Board Vice-Chair, Chair and Past-Chair by an additional one (1) year, so that each of the terms that are currently approved to end on June 30, 2019 will instead end on June 30, 2020: a) Mahmoud Mahmoud as Vice-Chair for the period July 1, 2019 to June 30, 2020 b) Ron LeBlanc as Chair for the period July 1, 2019 to June 30, 2020 c) Dennis Peters as Past-Chair for the period July 1, 2019 to June 30, 2020	
4	APPROVAL OF QUALIFICATIONS BOARD DOCUMENT (attachment) p. 13	R. LeBlanc
	THAT the Board approve the White Paper on Qualified Persons to be posted on the public side of Engineers Canada's website.	

5	APPROVAL OF THE 2019-2021 QUALIFICATIONS BOARD WORK PLAN (attachments) p. 28	R. LeBlanc
	THAT the Board approve the Qualification Board's 2019-2021 work plan.	
6	APPROVAL OF 2019 BUDGET (attachments) p. 49	A. Bergeron
	 a) THAT the 2019 operational budget of \$10.3 million in revenue and \$11.3 million in expenses be approved. b) THAT the 2019 capital budget of \$47,500 be approved. c) THAT the CEO be directed to use \$529,840 from reserve funds for the Accreditation Improvements Program, the Space Program and the Governance, Strategic Planning, and Consultation project 	
7	FUNDING TASK FORCE (attachment) p. 86	D. Gelowitz
	THAT the Funding Task Force receive an extension to provide an analysis of the impacts of the current and alternative funding models by March 1, 2019, and a recommendation by May 24, 2019.	
8	IN-CAMERA SESSION	A. Bergeron
	THAT the meeting move in-camera and be closed to the public at the recommendation of the Executive Committee. The attendees at the in-camera session shall include Board members, regulator staff, the regulator Presidents or their delegates, and Engineers Canada staff.	
9	CLOSING	A. Bergeron

Briefing note

For Board decision

Title of agenda item: Approval of Accreditation Board nominations			Agenda item 2a				
Purpose:	То	approve the appointment of	a new CEAB member representing Ontario.				
Motion(s) to consider:	a)	a) THAT the Board approve the appointment of Ramesh Subramanian, PhD, P.Eng., FEC as the new member representing Ontario, for a three-year appointment for the term December 10, 2018 to June 30, 2021.					
Vote required to	х	Simple majority					
pass:		Two-thirds majority					
		Two-thirds: 60% majority (refer to articles 5.7 and 5.8 of the bylaw.)					
Authority:	En	gineers Canada Board					
Transparency: (all meetings, debates, and decisions shall be open, except for certain subject matters as described in GP-7.1)	x Open session In camera, reason (check all that apply): The security of the property of the organization Personal matters about an identifiable individual The proposed or pending acquisition of assets by the organization Labour relations or employee negotiations Litigation or potential litigation The receiving of advice that is subject to solicitor-client privilege Another matter as the Executive Committee or Board determines						
Prepared by: Lynn Villeneuve, Manager, Accreditation							
Presented by:	Ga	ary Faulkner, Chair of the Accr	editation Board Nominating Committee				

1. Problem/issue definition

In May 2018, the Engineers Canada Board of Directors appointed Bob Dony to be the vice-chair of the CEAB. At that time Dr. Dony was the regional member for Ontario on the CEAB. The vice-chair appointment created a vacancy for the regional member for Ontario.

Under the current **CEAB** terms of reference the following is stated:

Subject to 5.9 (a), when an opening exists for an individual to be appointed by a region or province, the regulator affected will be informed of the qualifications required of that committee member. It will then be asked to put forward the name of a candidate. Unless the Nominating Committee has justifiable objections, the candidate put forward by the association/ordre will be recommended to the EC Board for appointment. The Nominating Committee may suggest candidates to the regulator for its consideration.

On August 1, 2018 the Board Secretary reached out to Professional Engineers Ontario regulator to request the name of a candidate to fill the vacancy. A nomination was provided by PEO on September 27, 2018. It is attached as an appendix to this briefing note.

The CEAB Nominations Committee met by teleconference on October 11, 2018 to review the nomination. The nominee, Ramesh Subramanian, PhD, P.Eng., FEC, has extensive accreditation visit experience both as a program visitor and as a vice-chair. His current curriculum vitae was provided. The CEAB Nominations Committee agreed unanimously to recommend this candidate to the Engineers Canada Board.

2. Proposed action/recommendation

That the Engineers Canada Board approves the nomination of: Ramesh Subramanian, FEC, P. Eng. (Member from Ontario)

3. Other options considered:

No options were considered.

4. Risks

Should the Board choose not to approve the nomination, the Accreditation Board might not have the resources needed to deliver on its mandate.

5. Financial implications

The approval of the new member will not bring additional cost to Accreditation Board as it is part of the regular expenses.

6. Benefits

The Accreditation Board will have support to carry its mandate.

7. Consultation

As described under section 1.

8. Next steps (if motion approved)

The Accreditation Board Nominating Committee will notify the new member of his nomination. The Accreditation Board Secretariat will start their on-boarding process immediately thereafter.



Thursday, September 27, 2018

Lynn Villeneuve, LLB, FEC (Hon.)
Manager, Accreditation
Engineers Canada | Ingénieurs Canada
300-55 rue Metcalfe Street
Ottawa ON K1P 6L5

Dear Lynn,

Thank you for the invitation extended by the Canadian Engineering Accreditation Board (CEAB) for a PEO member to be nominated to the Board as a *Member from Ontario*.

This confirms that Councillor Ramesh Subramanian, PhD, P.Eng., FEC, has been nominated to serve as a *Member from Ontario* on the Canadian Engineering Accreditation Board (CEAB, for a three-year term.

Councillor Subramanian can be contacted by email at: RSubramanian@laurentian.ca or by phone at (705) 675-115, ext. 2274.

Enclosed is an updated resume for the above member for your records and review. Please contact me if you require any additional information on this appointment.

Sincerely,

Margaret Braun MEd, CHRE

(Acting) Director, People and Development

Tel: 416.840.2275

Email: mbraun@peo.on.ca

Cc: Ramesh Subramanian, PhD, P.Eng., FEC

Johnny Zuccon, P.Eng. Interim Registrar

Professional Engineers Ontario

Briefing note

For Board decision

Title of agenda iten Board nominations	n: Approval of Accreditation Agenda item 2b-d					
Purpose:	To approve the extension of the terms of the Accreditation Board Executive Committee members.					
Motion(s) to consider:	THAT the Board approve the extension of the current one (1) year terms of the Accreditation Board Vice-Chair, Chair and Past-Chair by an additional one (1) year, so that each of the terms that are currently approved to end on June 30, 2019 will instead end on June 30, 2020: b) Bob Dony as Vice-Chair for the period July 1, 2019 to June 30, 2020 c) Luigi Benedicenti as Chair for the period July 1, 2019 to June 30, 2020 d) Wayne MacQuarrie as Past-Chair for the period July 1, 2019 to June 30, 2020					
Vote required to pass:	x Simple majority Two-thirds majority					
	Two-thirds: 60% majority (refer to articles 5.7 and 5.8 of the bylaw.)					
Authority:	Engineers Canada Board					
Transparency: (all meetings, debates, and decisions shall be open, except for certain subject matters as described in GP-7.1)	In camera, reason (check all that apply):					
Prepared by:	Lynn Villeneuve, Manager, Accreditation					
Presented by:	Gary Faulkner, Chair of the Accreditation Board Nominating Committee					

1. Problem/issue definition

The <u>Accreditation Board</u> (AB) is responsible for the accreditation of Canadian engineering programs at higher education institutions (HEIs) for the use of the provincial and territorial regulators in the engineering licensure process.

All Accreditation Board members are engineers licensed to practice in Canada. There are academic and industry members on the Accreditation Board. There is representation from various disciplines. 35 per cent of Accreditation Board members are women and 50 per cent of members are bilingual.

Since 2003 the Accreditation Board succession planning has been based on two-year terms for executive committee members. This has facilitated the retention of the core knowledge of the AB and has supported the stability, consistency, training capacity, and potential trust of HEIs in the AB. The nominations report recommendations significantly change the term limits of all members. Immediate implementation of those recommended changes may not allow for the AB to do appropriate succession planning. Time is required to do the appropriate succession planning to ensure stability of the AB and the high-quality accreditation services it provides on behalf of regulators.

Visits

Currently, six out of 17 AB members are in their first terms (three years or less). Of those six members four were appointed late in 2017 and were only able to observe visits (rather than serve as vice-chair) in the 2017/2018 visit cycle. Normally AB members do not serve as team chairs until they have served as a vice-chair. In the 2018/2019 visit cycle the new members will participate on visits, most as vice chairs. Once new members are ready to be first-time team chairs, they are strongly encouraged to have a senior AB member serve as their vice chair.

For the 2019/2020 visit cycle, it is anticipated that there will be 12 visits. This would require a sufficient number of experienced members in 2019/2020 to

- a) act as vice chairs on teams lead by first time chairs, and
- b) chair the larger, most complicated visits.

Executive Committee members have significant experience and have dealt, either as team chairs or as AB members with all HEIs across Canada. Their collective experience contributes to consistency in accreditation decision making thanks to their knowledge of the programs across the country. They are more experienced with performing substantial equivalency visits where they deal with accreditation systems in other countries. With the Executive Committee terms ending in June 2019, the AB and Engineers Canada is at risk of losing a core mass of knowledge and experience both regarding Canadian engineering education programs and with regards to accreditation systems of Engineers Canada's international counterparts.

Strategic Priority 2: Accountability in Accreditation

In May of this year, Engineers Canada's board adopted the 2019-2021 **Strategic Plan.** Strategic Priority 2 has the intended outcome that higher education institutions "report greater knowledge and

predictability of accreditation visits and decisions, and satisfaction with the Accreditation Board's collaborative approach to change." The predictability of decisions is overseen by the executive committee, who review all decisions in terms of consistency at the AB meetings. The executive committee is also tasked with ensuring that feedback in decisions has consistent wording so that deans are aware of their level of compliance with accreditation criteria.

Strategic Priority 2 also has the outcome of "providing annual, data-driven reporting". Since late 2017, performing a statistical analysis on the time-variance of accreditation units has been a significant project, currently under the leadership of the past-chair and the chair. In addition, the objective of addressing "the issue of the required number of AUs" is part of the work of the AU Task Force. The vice-chair of the Accreditation Board is the chair of the AU Task Force.

2. Proposed action/recommendation

Under the current <u>CEAB terms of reference</u>, the initial one-year terms of the AB Vice-Chair, Chair, and Past-Chair may be extended for an additional year. This option would also likely be available under exceptional circumstances as part of the proposed revisions to the nominations process. Given the level of risk identified above, it is proposed that the exceptional circumstances provision be applied.

As a result, it is recommended that the Engineers Canada Board extend the current one (1) year terms of the AB Vice-Chair, Chair, and Past-Chair by an additional one (1) year, so that each of the terms that are currently approved to end on June 30, 2019 will instead end on June 30, 2020:

- Bob Dony as Vice-Chair for the period July 1, 2019 to June 30, 2020
- Luigi Benedicenti as Chair for the period July 1, 2019 to June 30, 2020
- Wayne MacQuarrie as Past-Chair for the period July 1, 2019 to June 30, 2020

3. Other options considered:

The term of the AB executive committee could end in June 2019. This option is not recommended, given the level of risk associated with the loss of expertise, mentorship, and knowledge transfer.

4. Risks

Given that all members of the AB Executive Committee have received their regulators' support, there is no risk with proceeding with the extension.

5. Financial implications

There are no financial implications associated with the extension.

6. Benefits

The AB will maintain an important level of knowledge and experience, which will help it accomplish its mandate, including Strategic Priority 2 and Operational Imperative 1.

7. Consultation

Regulators of the respective nominees were contacted and approved their re-appointments. They also confirmed that all three members are in good standing.

8. Next steps (if motion approved)

The chair of the CEAB Nominating Committee will notify executive committee members of their reappointments.

Briefing note

For Board decision

Title of agenda item Board nominations		pproval of Qualifications Agenda item	3			
Purpose:		approve the extension of the terms of the Qualifications Board Executive mmittee members.				
Motion(s) to consider:	Qu so	AT the Board approve the extension of the current one (1) year terms of the valifications Board Vice-Chair, Chair, and Past-Chair by an additional one (1) year, that each of the terms that are currently approved to end on June 30, 2019 will stead end on June 30, 2020: a) Mahmoud Mahmoud as Vice-Chair for the period July 1, 2019 to June 30, 2020 b) Ron LeBlanc as Chair for the period July 1, 2019 to June 30, 2020 c) Dennis Peters as Past-Chair for the period July 1, 2019 to June 30, 2020				
Vote required to	х	Simple majority				
pass:	$\bigsqcup^{ }$	Two-thirds majority				
	$\bigsqcup^{ }$	Two-thirds: 60% majority (refer to articles 5.7 and 5.8 of the bylaw.)				
Authority:	En	gineers Canada Board				
Transparency: (all	х	Open session	_			
meetings, debates, and decisions shall		In camera, reason (check all that apply):				
be open, except for certain subject		The security of the property of the organization				
matters as		Personal matters about an identifiable individual				
described in GP- 7.1)		The proposed or pending acquisition of assets by the organization				
7.1,		Labour relations or employee negotiations				
		Litigation or potential litigation				
	 	The receiving of advice that is subject to solicitor-client privilege				
		Another matter as the Executive Committee or Board determines				
Prepared by:	M	élanie Ouellette, Manager, Qualifications				
Presented by:	Da	vid Lynch, Chair of the Qualifications Board Nominating Committee				

1. Problem/issue definition

The <u>Qualifications Board</u> (QB) is responsible for developing and maintaining national guidelines, model guides, and white papers on admission, continuing professional development, environmental, and practice matters. To deliver high-quality products, QB relies on the expertise of its members, which is typically gained by sitting on QB for at least 2, three-year terms.

Currently, 9 out of 14 QB members are in their first terms (three years or less), with six of the members having only recently started their QB service on July 1, 2018. This is a highly unusual QB experience profile, given the learning curve associated with the variety of files and what is normally expected for similar technical, expertise-based committees. Executive Committee members represent an important portion of the most experienced members and provide key mentorship for new QB members. With the Executive Committee terms ending in June 2019, QB is at risk of losing a core mass of knowledge and experience, which could negatively impact the quality of its products and the on-boarding/mentorship process for the large contingent of new members.

2. Proposed action/recommendation

Under the current <u>CEQB Terms of reference</u>, QB Vice-Chair, Chair and Past-Chair terms can be extended for an additional year. This option would also likely be available under exceptional circumstances as part of the proposed revisions to the nominations process. Given the level of risk identified above, it is proposed that the exceptional circumstances provision be applied.

As a result, it is recommended that the Engineers Canada Board extend the current one (1) year terms of the Qualifications Board Vice-Chair, Chair and Past-Chair by an additional one (1) year, so that each of the terms that are currently approved to end on June 30, 2019 will instead end on June 30, 2020:

- Mahmoud Mahmoud as Vice-Chair for the period July 1, 2019 to June 30, 2020
- Ron LeBlanc as Chair for the period July 1, 2019 to June 30, 2020
- Dennis Peters as Past-Chair for the period July 1, 2019 to June 30, 2020

3. Other options considered:

The term of the QB Executive Committee could end in June 2019. This option is not recommended, given the level of risk associated with the loss of expertise, mentorship, and knowledge transfer.

4. Risks

Given that they received their regulators' support, there is no risk with proceeding with the extension.

5. Financial implications

There are no financial implications associated with the extension.

6. Benefits

The QB will maintain an important level of knowledge and experience, which will help it deliver its 2019-21 work plan. It will also help the large contingent of new members increase their level of expertise on national matters and become fully engaged in the activities of the Qualifications Board.

7. Consultation

Regulators of the respective nominees were contacted and approved their re-appointments. They also confirmed that all three members are in good standing.

8. Next steps (if motion approved)

The Chair of the QB Nominating Committee will notify Executive Committee members of their reappointments.

Briefing note

For Board decision

Approval of Qualifi	ions Board document Agenda number	ſ 4		
Purpose:	ne purpose of this agenda item is to receive approval on the draft White Paper on ualified Persons, as directed by the Engineers Canada Board at its September 201 peeting.			
Motion(s) to consider:	HAT the Board approve the White Paper on Qualified Persons to be posted on the ublic side of Engineers Canada's website.	е		
Vote required to	Simple majority			
pass:	Two-thirds majority (refer to articles 5.7 and 5.8 of the bylaw.)			
Authority:	The Board has tasked the QB to develop this item under its 2017-19 Work Plan. It also supports the Board in delivering the 2019-21 Strategic Plan's Operational Imperative 3: Providing Services and Tools that Foster Excellence in Engineering Practice and Regulation.			
Transparency: (all meetings, debates, and decisions shall be open, except for certain subject matters as described in Board Policy 7.9)	Open session In camera, reason (check all that apply): The security of the property of the organization Personal matters about an identifiable individual The proposed or pending acquisition of assets by the organization Labour relations or employee negotiations Litigation or potential litigation The receiving of advice that is subject to solicitor-client privilege Another matter as the Executive Committee or Board determines			
Prepared by:	lélanie Ouellette, Manager, Qualifications			
Presented by:	Ron LeBlanc, Chair, Qualifications Board			

1. Problem/issue definition

In the context of engineering, demand-side legislation is generally understood to mean legislation and regulations, other than engineering legislation, stipulating certain tasks and duties must be performed by "qualified persons", a term used to describe various categories of individuals, which may include engineers, other regulated professionals, or persons who possess certain specified knowledge, skills, training, experience, or other requirements.

Demand-side legislation affects several jurisdictions in various sectors. Although demand-side legislation is generally viewed as beneficial by Engineers Canada and engineering regulators, concerns have been raised that in certain cases, demand-side legislation might be violating engineering legislation by allowing persons to engage in the practice of engineering without a license, thereby putting the public at significant risk.

The purpose of this white paper is to reiterate the exclusive authority of engineering regulators to self-regulate the profession of engineering, to present a stance against the introduction of any parallel/competing governance structures, and to present a number of recommendations to be considered when demand-side legislation is being contemplated, developed, and implemented.

2. Proposed action/recommendation

It is recommended that the Engineers Canada Board procee with approving the public dissemination of the white paper.

3. Other options considered:

Given that QB received direction from the Engineers Canada Board to submit the white paper for final approval, no other options were considered.

4. Risks

- Given the complexity of the file, a legal counsel was hired to draft the white paper.
- Given that the white paper has gone through two national consultations, not approving the document could negatively impact relationship with regulators.
- While initial concerns of making the document public were voiced by APEGA, the white paper received its support at the September 2018 Engineers Canada Board meeting.

5. Financial implications

There are no financial implications as existing internal resources will be used to publish the white paper.

6. Benefits

- Engineering regulators:
 - Regardless of their jurisdiction-specific issues, regulators will have a white paper that promotes the importance of self-regulation, which they can use to influence their governments against the creation of any parallel/competing governance structures and highlight why they should be included in discussions on the creation, development, and implementation of demand-side legislation.
- Others:
- Governments, at all levels, will be informed on the national position of the engineering profession on demand-side legislation.

7. Consultation

A significant level of consultation efforts was undertaken for this document. All of the documentation related to the following steps is available on the consultation webpage (log-in required).

- a. A general direction was released for consultation between September and November 2017. The general direction was also discussed during meetings of the National Practice Officials Group and the National Discipline & Enforcement Officials Group. Feedback was compiled, and the Qualifications Board responded to every comment. The summary table was shared with the National Practice Officials Group, the National Discipline & Enforcement Officials Group, and individual regulators, all of whom provided feedback.
- b. A draft white paper was released for consultation between April and June 2018. The draft white paper was also discussed during meetings of the National Practice Officials Group and the National Discipline & Enforcement Officials Group. Feedback was compiled, and the Qualifications Board responded to every comment. The summary table was shared with the National Practice Officials Group, the National Discipline & Enforcement Officials Group and individual regulators who provided feedback.

8. Next steps (if motion approved)

• The white paper will be published on the public website.

9. Appendix

• The white paper is attached.

White paper on qualified persons in demand-side legislation

"Demand-side legislation" is generally understood to mean legislation stipulating certain activities that must be performed by "qualified persons." In this context, the term "qualified person" (or equivalent terms such as "authorized person", "approved person," or "certified person") are used to describe various categories of individuals, which may include engineers, other regulated professionals, or persons who possess certain specified knowledge, skills, training, experience or other requirements.

In Canada, the profession of engineering is self-regulated by provincial/territorial engineering regulators, pursuant to statutory authorities set out in enabling legislation. Although demand-side legislation is generally viewed as beneficial by Engineers Canada and engineering regulators, concerns have been raised about the possibility of demand-side legislation violating regulatory engineering legislation if it were to allow qualified persons to engage in the practice of engineering without a licence or being supervised by an engineering license holder. The existence of any such scenario would place the public at significant risk.

Developed in consultation with all twelve provincial and territorial engineering regulators, the purpose of this white paper is to provide governments with a document that: reiterates the exclusive authority of engineering regulators to self-regulate the profession of engineering; outlines how any parallel/competing governance structures established by demand-side legislation can jeopardize the public interest; and presents recommendations to be considered when demand-side legislation is being contemplated, developed and implemented.

BACKGROUND

In Canada, the profession of engineering is self-regulated by provincial/territorial engineering regulators, pursuant to a statutory mandate set out in engineering legislation. The delegation of regulatory function recognizes the specialized knowledge of the profession and its ability to develop and maintain standards of competency and conduct to ensure that the public interest is served and protected. In fulfilling their statutory mandates, engineering regulators are entrusted with a variety of responsibilities, including regulating the practice of engineering and the use of the engineer title.

The "practice of engineering": Only an engineering licence holder can engage in the independent practice or take responsibility for engineering work, which is defined as any act of planning, designing, composing, evaluating, advising, reporting, directing or supervising, or managing any of the foregoing, that requires the application of engineering principles and that concerns the safeguarding of life, health, property, economic interests, the public welfare, or the environment.

The use of engineer title: Only engineering licence holders can call themselves professional engineers (or engineer) and affix an engineering seal to their work, which demonstrates to the public that an engineer has taken responsibility for the engineering work.

Engineering licence holders are legally bound by their Code of Ethics to only practice in their areas of competence; maintain their knowledge, skills, and abilities throughout their careers; and hold paramount the safety, health and welfare of the public and the protection of the environment.

To ensure that only competent individuals practice or take responsibility for engineering work, engineering regulators set standards of practice, ethics and continuing competence. They investigate complaints of unprofessional conduct, and impose disciplinary sanctions including revocation of engineering license when appropriate. Engineering regulators also take action against persons who call themselves engineers but do not possess an engineering licence or are practising engineering without a licence. Their work protects public interest.

RECOMMENDATIONS

The following recommendations are being put forward for governments and other parties involved in the contemplation, development and implementation of demand-side legislation that authorizes qualified persons to perform various tasks and duties, which may include the practice of engineering.

1. Demand-side legislation must not undermine the exclusive jurisdiction of engineering regulators to self-regulate the practice of engineering.

Engineering legislation in all provinces and territories provides engineering regulators with the clear and exclusive mandate to regulate the practice of engineering in the public interest. In fulfilling this legal obligation, engineering regulators use their specialized knowledge to establish professional and ethical standards, develop codes of conduct and administer the regulatory processes set out in engineering legislation. By so doing, engineering regulators protect and enhance public health, safety, welfare and the environment.

The exclusive authority of engineering regulators to regulate the practice of engineering was re-affirmed in <u>Association of Professional Engineers of Ontario (PEO) v. Ontario (Municipal Affairs and Housing)</u> (2006), where the Divisional Court held that legislative amendments to the Building Code were invalid and/or not applicable to engineering licence holders as they conflicted with the exclusive regulatory jurisdiction of the engineering regulator under the <u>Professional Engineers Act</u>.

2. Demand-side legislation must not permit persons other than engineering licence holders to perform or take responsibility for engineering work.

Demand-side legislation is generally viewed as a useful model to help achieve various public interest objectives and is supported by engineering regulators provided that it does not authorize unlicensed persons, sometimes called "qualified persons," to perform or take responsibility for engineering work.

In the event that demand-side legislation were to authorize non-licence holders to engage in the practice of engineering, it would be violating engineering legislation and placing the public at significant risk. It could also be inconsistent with and/or overlap with the comprehensive regulatory structures

overseen by engineering regulators. Such situations could also create significant public confusion as to whether or not the work is being performed by a licensed engineer. Potential examples of such additional standards and requirements may include but not be restricted to the:

- Establishment of additional registration or certification requirements to perform certain work;
- Imposition of additional standards of practice or codes of ethics; and
- Imposition of a parallel disciplinary regime.
- 3. Demand-side legislation must be specific in describing the work to be performed and the results to be achieved.

To ensure that non-engineers are not engaging in the independent practice of engineering or taking responsibility for engineering work, demand-side legislation must ensure that it is specific in describing the nature of the work to be performed and the results to be achieved. By being specific, it will be easier to identify work that constitutes the practice of engineering, which can only be performed or supervised by engineering licence holders.

4. Demand-side legislation must not attempt to set out the qualifications and requirements of engineering licence holders.

Engineering regulators have the legislated mandate to define the qualifications and requirements of engineering licence holders. In instances where demand-side legislation sets out the qualifications and other requirements expected of engineering licence holders, it would be violating engineering legislation as it would be impinging upon the exclusive regulatory jurisdiction of engineering regulators to determine what constitutes the practice of professional engineering and the standards of practice of the profession. Demand-side legislation must only describe and set out the objective of the work to be performed and let engineering regulators determine the qualifications and other requirements needed to perform or take responsibility for engineering work.

Similarly, where demand-side legislation provides that work is to be performed by engineers and other types of regulated professionals, it must rely on the knowledge and expertise of the applicable regulated professional association(s) to determine if the work falls under their respective profession and how the work is to be performed.

5. Requiring that "qualified persons" work be performed by members of regulated professional associations, including members of the engineering profession, enables demand-side legislation to assure a high level of accountability.

Regulated professional associations are mandated by their enabling legislation to govern their members in the public interest, which includes the licensing and disciplining of members and setting and maintaining standards of competency and conduct.

Members of regulated professional associations are subject to significant oversight and must adhere both to the legislation applicable to their profession and the standards established by their regulator.

On the contrary, unregulated persons are not subject to the above-described regulatory oversight. Rather, their regulation is typically limited to the rules and requirements set out in demand-side legislation.

To ensure a high level of accountability and maintain public trust and confidence in the work being performed, it is recommended that demand-side legislation utilizes members of regulated professional associations as qualified persons.

6. Demand-side legislation must ensure that it uses an appropriate term to describe the categories of qualified persons authorized to perform the work in question.

It is recommended that demand-side legislation use terminology that accurately describes the categories of qualified persons who are authorized to perform the work in question, especially when dealing with regulated professions such as engineering. As such, it is recommended that if demand-side legislation contemplates that part of the work is to be performed only by regulated professionals, it considers using the term "professional" when describing persons that are members of professional associations and refrain from using the term "professional" otherwise.

7. Government must ensure that engineering regulators are engaged in all aspects of demand-side legislation.

The success of any demand-side legislation that relates to engineering is contingent on the support of the engineering profession, as represented by engineering regulators. As such, it is essential that engineering regulators be thoroughly engaged in demand-side legislation that relates to engineering. In this regard, government must ensure that it:

- Gives serious consideration to all proposals made by engineering regulators in respect of demand-side legislation, including the rationale for its development;
- Engages in comprehensive consultations with engineering regulators regarding contemplated demand-side legislation and places significant weight on the input provided;
- Involves engineering regulators in the development and drafting of demand-side legislation;
- Involves engineering regulators in the implementation of demand-side legislation, including the
 establishment of any administrative body created by demand-side legislation; and ensuring that
 any such body does not impinge upon the exclusive regulatory jurisdiction of engineering
 regulators;
- Engages engineering regulators in periodic reviews of demand-side legislation to obtain their input regarding its effectiveness and improvement suggestions; and
- Places significant weight on concerns expressed by engineering regulators regarding demandside legislation and works collaboratively with engineering regulators to find solutions.

To realize the benefits of the increased engagement proposed above, it is essential that government does not view engineering regulators as stakeholders, but rather as co-regulators with similar public protection mandates to fulfill.

8. Government must retain engineering licence holders to evaluate and oversee engineering work being performed pursuant to demand-side legislation.

To ensure that the public interest is protected, it is imperative that government retains engineering licence holders to evaluate and to oversee engineering work established by demand-side legislation. This will ensure that its public servants possess an appropriate level of technical knowledge and training, and that the work is overseen by competent persons who are required to practice in accordance with engineering legislation and the standards established by engineering regulators.

9. Government should consider adopting standards of disclosure for demand-side legislation work. Demand-side legislation should include requirements for qualified persons to disclose conflicts of interest. Adopting disclosure standards across all demand-side legislation sectors will support the provision of unbiased evidence, transparency, and maintain public confidence in regulation.

CONCLUSION

Although demand-side legislation is generally viewed as beneficial by engineering regulators, it is imperative that the contemplation, development and implementation of all such legislation receive significant attention to ensure that it does not conflict with engineering legislation and the exclusive authority of engineering regulators to regulate the practice of engineering. It is essential that government and engineering regulators work collaboratively to ensure that they achieve their respective objectives and jointly protect and serve the public interest.

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Briefing note

For information

Proposed draft 20	19-2	-2021 Qualifications Board work plan	genda item 5			
Purpose:	Solicit Engineers Canada Board approval of the Qualifications Board's draft proposed 2019-21 work plan					
Motion(s) to consider:	TH	HAT the Board approve the Qualification Board's 2019-2021 work plan				
Transparency: (all meetings, debates, and decisions shall be open, except for certain subject matters as described in GP- 7.1)	Х	X Open session In camera, reason (check all that apply): The security of the property of the organization Personal matters about an identifiable individual The proposed or pending acquisition of assets by the organization Labour relations or employee negotiations Litigation or potential litigation The receiving of advice that is subject to solicitor-client privilege;				
Prepared by:	М	lélanie Ouellette, MA, MBA, Manager, Qualifications				
Presented by:	y: Ron LeBlanc, FEC, P.Eng., Chair, Qualifications Board					

1. Problem/issue definition

- The Qualifications Board (QB) develops and maintains national guidelines, model guides, white
 papers, and examinations syllabi that enable the assessment of engineering qualifications, foster
 excellence in engineering practice and regulation, and facilitate mobility of practitioners within
 Canada.
- In September 2018, the QB sent a draft proposed 2019-21 work plan to the Board for information and consultation with their respective jurisdictions.
- The purpose of this briefing note is to request final approval of the 2019-21 QB work plan.

2. Proposed action/recommendation

• It is recommended that the Engineers Canada Board approve the 2019-21 work plan.

3. Other options considered:

• Given that national consultations have been conducted, and that QB is trying to align its work to the 2019-21 Engineers Canada Strategic Plan, no other options have been considered.

4. Risks

• If the work plan is not approved, there is a risk that regulators will be frustrated that Engineers Canada does not meet their requests in a timely fashion, which could negatively affect their responsiveness when providing consultation feedback and their use of QB products. Also, there is a risk that QB volunteers might become disengaged, which could negatively affect the timeliness and quality of QB products.

5. Financial implications

- At its September 2018 meeting, the Board received an initial proposed budget that would support the delivery of the QB Work Plan in 2019. Given the projected overall budget for the organization, the Board directed the Chief Executive Officer to submit a balanced budget for final approval in December 2018.
- QB recognizes the need for a balanced budget. The proposed balanced budget calls for the removal of the White Paper on Evolution and the deferral of the Step-by-Step CPD Guide from the 2019 budget. QB would like to offer the following information and recommendations:
 - White Paper on Evolution of Assessment of Applicants for Licensure as a Professional Engineer in Canada: As highlighted in Appendix A, this item did not receive support from the National Admission Officials Group nor the CEO Group. \$50K was budgeted to support the delivery of this white paper. Given that the CEO Group and the National Admission Officials Group did not support this item, QB is recommending that it be removed from the final 2019-21 work plan and also from the 2019 budget.
 - 2008 Step-by-Step Guide for the Preparation and Implementation of an Individual Continuing Professional Development Plan: As highlighted in Appendix A, this item was proposed by QB members, and the CEO Group supported the initial QB proposal. \$15K was budgeted for this item. Given that the CEO Group supported this item, QB is recommending that it be kept in the final 2019-21 work plan, but that the budget for this item be deferred to 2020.
 - Given consultation results, QB is recommending that the White Paper on Evolution would not be included in the final approved work plan but that the review of the Stepby-Step CPD Guide be included.
 - At its September 2018 meeting, QB adopted a new syllabus review protocol, which now
 establishes the review of syllabi every six years, to better align with the Canadian
 Engineering Accreditation Board accreditation six-year timelines. As a result, the
 number of syllabi up for review of the next three years is smaller than originally
 distributed in the Engineers Canada Board package in September 2018. A revised 201921 work plan is presented in Appendix B for the Engineers Canada Board's
 consideration.
 - Besides the white paper and the step-by-step guide, all other work plan items were suggested by officials groups. Under the upcoming 2019-21 Strategic Plan, the Board has instructed QB to deliver products that are timely and serve the needs of regulators.
 Delaying items that were requested by officials groups and/or choosing not to complete

items that were requested by them would be detrimental to QB's relationship with regulators and reinforce the perception that QB does not respond to their requests.

• The QB is requesting that the Board take all of the above into account when approving QB's proposed 2019-2021 work plan.

6. Benefits

• QB will provide services and tools that enable the assessment of engineering qualifications, foster excellence in engineering practice and regulation, and facilitate mobility of practitioners within Canada, and which are timely and serve the needs of the regulators.

7. Consultation

 National consultations of the Admission Officials Group, the Discipline & Enforcement Group, the Practice Officials Group, and the CEO Group were conducted between June and September 2018. Appendix A, which was also included in the September 2018 Engineers Canada Board package, was updated to include the National Admission Officials Group and CEO Group's consultations results on the proposed White paper on evolution of assessment of applicants and the Aeronautical engineering and aerospace engineering syllabus.

8. Next steps (if motion approved)

The Qualifications Board would like to thank the Board for its ongoing support and is looking forward in delivering on the 2019-21 work plan.

9. Appendices

- Appendix A Work plan feedback table
- Appendix B Proposed draft 2019-21 Qualifications Board work plan

Appendix A

Feedback Received and Responses from QB on the

2019-2021 Qualifications Board work plan

Consultation Period: June to September 2018

Table 1. Feedback on Question 1: Are there any additional issues for guidelines/model guides/white papers that QB should be starting to develop as of January 2019? If so, can you please identify the top three priorities for your group?

Group	Comments	QB's Response to Officials Groups' Feedback	QB's Work Plan Proposal to CEOG	CEOG's Response	QB's Work Plan Recommendation to Engineers Canada Board
NAOG	NAOG requests that QB ensures that the use of syllabi is fully addressed within the model guide on assessment on non-CEAB applicants.	QB will make sure that the use of syllabi is fully addressed in the Model Guide. NAOG will have the opportunity to validate if QB has fully addressed the use of the syllabi in the draft Model Guide in the upcoming consultation process.	N/A	N/A	Carry forward the work on the Model Guide on the Academic Assessment of non-CEAB Applicants as a priority.
NAOG	NAOG also requests that the use of competencies for the Canadian Environment experience requirement be included within the Experience Guideline.	QB will make sure that the use of competencies for the Canadian Environment experience requirement be included within the Revised Experience Guideline. NAOG will have the opportunity to validate if QB has fully included the use of competencies through the consultation process.	N/A	N/A	Include in work plan as a priority.
ND&EG	There is unanimous consent among the Discipline and Enforcement Officials that the QB should prepare content (e.g. PowerPoint with speaking notes) for use by regulators in their online ethics courses. It is well known that ethics is the basis for almost all complaints.	Given that the 2019-21 Engineers Canada Strategic Plan defines the QB mandate as developing guidelines, model guides and white papers. As a result, undertaking the development of online ethics courses content is outside QB's mandate. Also, some regulators have previously expressed concerns about QB's attempt to develop online training content. As per the Strategic Plan, Engineers Canada staff is facilitating and coordinating the collection and distribution of ethics training content for regulators use. The Engineers Canada staff responsible for this file has been informed of this request.	N/A	N/A	Do not include in work plan.

Group	Comments	QB's Response to Officials Groups' Feedback	QB's Work Plan Proposal to CEOG	CEOG's Response	QB's Work Plan Recommendation to Engineers Canada Board
NPOG	The group would like to see some guidance with the topic of offshore engineering: increased mobility, advanced technologies, and globalization are increasing the demand for cross-jurisdictional and offshore engineering. What can regulators do to ensure that licensure, compliance and public safety are controlled in these circumstances?	In the 2019-21 Engineers Canada Strategic Plan, the work of the Qualifications Board falls under Operational Imperative 3: "Providing services and tools that: enable the assessment of engineering qualifications, foster excellence in engineering practice and regulation, and facilitate mobility of practitioners within Canada". As this topic relates to the practice of engineering outside Canada, and therefore falls under Operational Imperative 7: "Managing risks and opportunities associated with mobility of work and practitioners internationally", this work is outside QB's mandate.	N/A	N/A	Do not include in work plan.
Ind. #1	None	N/A	N/A	N/A	N/A
Ind. #2	A new guideline that focuses on the 30x30 initiative, and specifically how engineering employers can create a healthy environment that attracts, retains, and develops women.	The development of this Guideline is outside the scope of its mandate. The recruitment, retention, and the professional development of women in the engineering profession is addressed under the Strategic Priority n. 3 of the 2019-21 Engineers Canada Strategic Plan and the Engineers Canada staff responsible for this file has been informed of this request.	N/A	N/A	Do not include in work plan.

Group	Comments	QB's Response to Officials Groups' Feedback	QB's Work Plan Proposal to CEOG	CEOG's Response	QB's Work Plan Recommendation to Engineers Canada Board
QB	QB would like to suggest a White Paper on		White Paper on Evolution of	In July 2018, the CEOGs noted that the	NEW: Do not include in work plan.
	Evolution of Assessment of Applicants for		Assessment of Applicants for	QB proposed to develop a White Paper	
	Licensure as a Professional Engineer in		Licensure as a Professional Engineer	on Evolution of Assessment of	
	Canada be developed. Changes have		in Canada	Applicants for Licensure as a	
	occurred over the past several years in			Professional Engineer in Canada. Given	
	many of the policies, procedures, processes			that this proposal was not brought	
	and approaches used by the regulators with			before any of the Officials Groups as	
	respect to the assessment of the academic			part of the consultations, the CEOG	
	and experience qualifications of applicants			stated that it was not in a position to	
	for professional engineering licensure in			support commencing work on this white	
	Canada. The goal of this document would			paper until such input has been sought.	
	be to summarize current assessment				
	practises amongst regulators, identify best			NEW: In response to the CEOG comment	
	practises, and consider options for future			above, the NAOG was consulted in	
	changes in assessment practices for			August 2018 on the White Paper. NAOG	
	regulators' consideration.			stated that they did not support the	
				development of the White Paper. The	
				CEOG was subsequently consulted in	
				September and stated that it did not	
				support the QB pursuing the White	
				Paper.	

Table 2. Feedback on Question 2: Are there any guidelines/model guides/white papers scheduled for review that QB should be starting to review as of January 2019? If so, can you please identify the top three priorities for your group?

Group	Comments	CEQB's response to Officials Groups' feedback	CEQB's work plan proposal to CEOG	CEOG's response	CEQB's work plan recommendation to Engineers Canada Board
NAOG	NAOG requests that the review of the Basic Studies Syllabus be prioritized over all other syllabi.	QB will prioritize the review of this syllabus.	Include in work plan	In support	Include in work plan as a priority.
NAOG	NEW: NAOG supports the development of a combined aeronautical and aerospace syllabus	QB will prioritize the development of this syllabus.	Include in work plan	NEW: The CEO Group does support the QB updating the Aeronautical Engineering and Aerospace Engineering Syllabus.	Include in work plan as a priority.

Group	Comments	CEQB's response to Officials Groups' feedback	CEQB's work plan proposal to CEOG	CEOG's response	CEQB's work plan recommendation to Engineers Canada Board
ND&EG	The Discipline and Enforcement Officials support the environmental engineering white paper and want to be included in the development. The white paper should include a definition of practice similar in style to the software engineering white paper so that the document is useful for addressing misuse of title and unauthorized practice enforcement.	QB will ensure that the environmental engineering white paper includes a definition of practice similar in style to the software engineering white paper. The Discipline and Enforcement Group will have the opportunity to validate if QB has properly defined environmental engineering through the upcoming consultation process.	Include in work plan	In support	Include in work plan as a priority.
ND&EG	The Discipline and Enforcement Officials do not want to see the authentication guideline continue, and QB efforts should be refocused on other tasks.	The Qualifications Board will not undertake any work on the existing Model Guide on Authentication of Engineering Documents. The Qualifications Board's Practice Committee passed a motion to recommend to the Qualifications Board that this Model Guide be rescinded, taken off the website and that this recommendation would be sent to the Engineers Canada Board for approval.	N/A	N/A	Rescind the Guideline and remove it from website at the September 2018 meeting.
ND&EG	The Discipline and Enforcement Officials support the review of the software engineering syllabus.	It is expected that the Qualifications Board will approve an updated Software Engineering Syllabus at its September 2018 meeting. As per the Syllabus Review Protocol, an update is also anticipated in 2021.	N/A	N/A	Given that a review of the syllabus will be completed in 2018, include in the work plan but not in high priority list.
NPOG	The 2012 Model Guide: Risk Management was identified as the highest priority for review.	QB will prioritize the review of this Model Guide.	Include in work plan	In support	Include in work plan as a priority.
NPOG	2009 Model Guide on Authentication of Engineering Documents: APEGA has prepared a new version of its own authentication guideline that will go for general consultation in Sept/Oct 2018. With 12 regulators, there is often someone revising their sealing guideline and it may not be practical for QB to schedule their review around all others. However, QB should be aware and consider whether a review of the national guideline concurrently or shortly after major regulator updates may cause confusion among members.	The Qualifications Board will not undertake any work on the existing Model Guide on Authentication of Engineering Documents. The Qualifications Board's Practice Committee passed a motion to recommend to the Qualifications Board that this Model Guide be rescinded, taken off the website and that this recommendation would be sent to the Engineers Canada Board for approval.	N/A	N/A	Rescind the Guideline and remove it from website at the September 2018 meeting.

Group	Comments	CEQB's response to Officials Groups' feedback	CEQB's work plan proposal to CEOG	CEOG's response	CEQB's work plan recommendation to Engineers Canada Board
NPOG	2016 Guideline on the Code of Ethics: Why is it necessary to review this document when regulators are still aligned to the pre-2016 version and have not changed their regulations or bylaws to keep up?	As per the QB Guideline Review Protocol, QB considers if a document over five years old should be reviewed or not. As the new work plan extends to 2021, QB was bound to consider the review. Given the concerns expressed by the Practice Officials Group, a decision was made not to review the document in the upcoming work plan.	Do not include in work plan	N/A	Do not include in work plan.
Individual #1	2009 Model Guide on Authentication of Engineering Documents; 2012 Guideline for the Engineer-In-Training Program; 2016 Guideline on Returning to Active Practice	The Qualifications Board will not undertake any work on the existing Model Guide on Authentication of Engineering Documents. The Qualifications Board's Practice Committee passed a motion to recommend to the Qualifications Board that this Model Guide be rescinded, taken off the website and that this recommendation would be sent to the Engineers Canada Board for approval. The other documents were not identified as part of the consultation process and were not retained as priorities but will remain on the list.	N/A	N/A	Rescind the Guideline and remove it from website at the September 2018 meeting.
QB	2008 Step-by-Step Guide for the Preparation and Implementation of an Individual Continuing Professional Development Plan; 2009 Guideline for Assessment of Engineering Work Experience; 2012 Model Guide: Risk Management; Basic Studies Syllabus.		Review of 2008 Step-by-Step Guide for the Preparation and Implementation of an Individual Continuing Professional Development Plan; 2009 Guideline for Assessment of Engineering Work Experience; 2012 Model Guide: Risk Management; Basic Studies Syllabus.	The CEOs were pleased to see that the Officials Groups' suggestions for the relative priority of certain documents have been considered and, as such, we can support the priority ranking put forth in your Briefing Note to us.	Include the review of 2008 Step-by-Step Guide for the Preparation and Implementation of an Individual Continuing Professional Development Plan; 2009 Guideline for Assessment of Engineering Work Experience; 2012 Model Guide: Risk Management; Basic Studies Syllabus as priorities

Table 3. Feedback on Question 3: In the 2017-19 work plan, QB had identified that it would develop a New Guideline on Enabling Entrepreneurship. Do you still see this as a useful item for your group? What priority would you assign to its development?

Group	Comments	CEQB's response to Officials Groups' feedback	CEQB's work plan proposal to CEOG	CEOG's response	CEQB's work plan recommendation to Engineers Canada Board
NAOG	NAOG is unclear as to the purpose of the document. How does it differ from existing QB products?	As recommended by the Discipline and Enforcement Officials, QB will	Given the support received on this item throughout the	The support from the Officials Groups on this item would appear	Proceed with developing a one-pager and confirm with all officials groups and the CEO
	O C P C C C C C C C C C C C C C C C C C	proceed with first developing a one-	consultation process, QB is	to be tepid, at best. The CEO	Group before developing the General
	For what areas of regulation is this paper intended? Is it	pager to clarify the intent of the	proposing to keep this item on	Group remains to be convinced of	Direction.
	anticipated that it will primarily focus on registration, or the	paper. A workshop will be held to	its next work plan but to first	the need for such a guideline and	
	practice of engineering as an entrepreneur?	define this one-pager, and officials	develop a one-pager to confirm	would not assign it a high priority.	
		will be invited to attend and provide	the purpose and scope of this	However, the CEO Group would	
	NAOG requests that more information and rationale about the	early input in this process. Then, a	issue before proceeding with	be willing to sanction the	
	guideline be provided prior to deciding on whether to proceed or	decision will be made to proceed	the General Direction stage.	development a one-pager to	
	not.	with the Guideline or not.		confirm the purpose and scope of	
				this issue. We would not condone	
				any further work on this subject until we and the Officials Groups	
				and have been consulted on the	
				merits of the proposal put forth in	
				said one-pager.	
ND&EG	The Discipline and Enforcement Officials support the development	As recommended by the Discipline	Given the support received on	The support from the Officials	Proceed with developing a one-pager and
	of a white paper or a one-pager on this subject rather than a	and Enforcement Officials, QB will	this item throughout the	Groups on this item would appear	confirm with all officials groups and the CEO
	guideline. The white paper should scope the issues and a guideline	proceed with first developing a one-	consultation process, QB is	to be tepid, at best. The CEO	Group before developing the General
	may follow depending on what is uncovered. The audience of the	pager to clarify the intent of the	proposing to keep this item on	Group remains to be convinced of	Direction.
	white paper should be regulators, and the one-pager (that may	paper. A workshop will be held to	its next work plan but to first	the need for such a guideline and	
	follow the white paper) should be for practitioners. Specifically,	define this one-pager, and officials	develop a one-pager to confirm	would not assign it a high priority.	
	the white paper should focus on compliance with requirements	will be invited to attend and provide	the purpose and scope of this	However, the CEO Group would	
	for being an engineer-in-training and emphasize the importance of	early input in this process. Then, a	issue before proceeding with	be willing to sanction the	
	supervised work as an engineer-in-training. The white paper	decision will be made to proceed	the General Direction stage.	development a one-pager to	
	should address the challenges of new graduates wanting to start	with the Guideline or not.		confirm the purpose and scope of this issue. We would not condone	
	their own businesses without engineering work experience. The engineers-in-training cannot meet the requirements for			any further work on this subject	
	registering as a corporation and need guidance on how they can			until we and the Officials Groups	
	become compliant. The white paper should also include a scan			and have been consulted on the	
	from universities that offer entrepreneurial/innovation programs			merits of the proposal put forth in	
	to get an understanding of how common it is.			said one-pager.	

Group	Comments	CEQB's response to Officials Groups' feedback	CEQB's work plan proposal to CEOG	CEOG's response	CEQB's work plan recommendation to Engineers Canada Board
NPOG	The subject of enabling entrepreneurship remains of interest to some Practice Officials. A survey of what provincial legislation would allow, as well a scan of university programs that offer entrepreneurial/innovation courses may help regulators understand how prevalent pursuing entrepreneurship opportunities may be among newer graduates and EITs and how flexible regulators can be. If there is little demand or if this initiative is unsupportable by provincial legislation, expending effort on this initiative is not recommended. Alternatively, if demand is significant, and legislation supports such action by EITs, there may be merit in providing greater clarity on what registration and compliance requirements. If clarification is warranted, a guideline may not be the most effective tool to encourage discussion and promote collaboration. Developing a white paper for regulators, possibly followed by a one-pager for practitioners, might be more appropriate. These documents could outline issues such as the importance of supervised work for EITs, and guidance on how EITs can incorporate yet still remain in compliance with provincial engineering legislation.	As recommended by the Discipline and Enforcement Officials, QB will proceed with first developing a one-pager to clarify the intent of the paper. A workshop will be held to define this one-pager, and officials will be invited to attend and provide early input in this process. Then, a decision will be made to proceed with the Guideline or not.	Given the support received on this item throughout the consultation process, QB is proposing to keep this item on its next work plan but to first develop a one-pager to confirm the purpose and scope of this issue before proceeding with the General Direction stage.	The support from the Officials Groups on this item would appear to be tepid, at best. The CEO Group remains to be convinced of the need for such a guideline and would not assign it a high priority. However, the CEO Group would be willing to sanction the development a one-pager to confirm the purpose and scope of this issue. We would not condone any further work on this subject until we and the Officials Groups and have been consulted on the merits of the proposal put forth in said one-pager.	Proceed with developing a one-pager and confirm with all officials groups and the CEO Group before developing the General Direction.
Individual #1	Not useful and low priority	As recommended by the Discipline and Enforcement Officials, QB will proceed with first developing a one-pager to clarify the intent of the paper. A workshop will be held to define this one-pager, and officials will be invited to attend and provide early input in this process. Then, a decision will be made to proceed with the Guideline or not.	Given the support received on this item throughout the consultation process, QB is proposing to keep this item on its next work plan but to first develop a one-pager to confirm the purpose and scope of this issue before proceeding with the General Direction stage.	The support from the Officials Groups on this item would appear to be tepid, at best. The CEO Group remains to be convinced of the need for such a guideline and would not assign it a high priority. However, the CEO Group would be willing to sanction the development a one-pager to confirm the purpose and scope of this issue. We would not condone any further work on this subject until we and the Officials Groups and have been consulted on the merits of the proposal put forth in said one-pager.	Proceed with developing a one-pager and confirm with all officials groups and the CEO Group before developing the General Direction.

Group	Comments	CEQB's response to Officials Groups' feedback	CEQB's work plan proposal to CEOG	CEOG's response	CEQB's work plan recommendation to Engineers Canada Board
QB	Given the support received on this item throughout the consultation process, QB is proposing to keep this item on its next work plan but to first develop a one-pager to confirm the purpose and scope of this issue before proceeding with the General Direction stage.		Given the support received on this item throughout the consultation process, QB is proposing to keep this item on its next work plan but to first develop a one-pager to confirm the purpose and scope of this issue before proceeding with the General Direction stage.	The support from the Officials Groups on this item would appear to be tepid, at best. The CEO Group remains to be convinced of the need for such a guideline and would not assign it a high priority. However, the CEO Group would be willing to sanction the development a one-pager to confirm the purpose and scope of this issue. We would not condone any further work on this subject until we and the Officials Groups and have been consulted on the merits of the proposal put forth in said one-pager.	Proceed with developing a one-pager and confirm with all officials groups and the CEO Group before developing the General Direction.

Table 4. Additional Feedback

Group	Comment	CEQB response
NAOG	NAOG appreciates the opportunity to provide feedback on the development of QB's new workplan. In this instance, the timing of the consultation aligned with NAOG's annual meeting and was conducive to having the required dialogue to contribute in an effective way. It was generally felt that the discussions were a good use of our time, and we welcome aligning this consultation with our future face-to-face	Thank you for your collaboration. We are hopeful that the next iteration of the work plan consultation process will allow for more consultation time and face-to-face discussions.
	meetings. That said, had the timing not been aligned, the collection of NAOG's feedback in an effective manner within this limited timeframe would not have been possible.	
NPOG	White Paper on Qualified Persons: The timing for release of this white paper is a concern for APEGA because of its ongoing discussions with the technologists.	Thank you for voicing your concerns. The Qualifications Board's Executive Committee has requested a decision on whether the work should cease or not from the Engineers Canada Board.
NPOG	Model Guide on Concepts of Professionalism: A request to simplify the guideline resulted in the addition of a one-page addendum instead. There were questions about the value of the document from the beginning of the review, but QB proceeded. The Practice Officials are concerned that their feedback is not being considered and have no visibility to feedback tables.	Thank you for voicing your concerns. The Qualifications Board's Practice Committee passed a motion to recommend to the Qualifications Board that this Model Guide be rescinded, taken off the website and that this recommendation would be sent to the Engineers Canada Board for approval.
NPOG	Some Practice Officials are still unclear how to make the best use of the QB products and feel that in some ways QB is continuing to produce documents no one uses.	Thank you for voicing your concerns. The Qualifications Board welcomes any feedback on how it can improve its products and hopes that this new work plan development process will ensure that its products are useful to a majority of regulators.

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Appendix B

FOR ENGINEERS CANADA BOARD APPROVAL: 2019-21 Qualifications Board work plan

As part of the <u>2019-21 Strategic Plan</u>, the Qualifications Board (QB) develops and maintains national guidelines, model guides, white papers, and examinations syllabi that enable the assessment of engineering qualifications, foster excellence in engineering practice and regulation, and facilitate mobility of practitioners within Canada.

Given the fact that the National Admission Officials Group and the CEO Group did not support the development of a white paper on evolution of assessment of applicants for licensure as a professional engineer in Canada, QB is not recommending that it be included in the final 2019-21 work plan. A description of the proposed white paper is included at the end of the document for the Board's information.

A. 2019 Priorities

Given that the development of new guidelines and review of the existing take between 12 and 24 months, the following priorities are recommended commencement or continuation in 2019:

New item

• New Aeronautical engineering and aerospace engineering syllabus

Carried forward items

- Model guide on the use of syllabi
- White paper on environmental engineering
- Guideline on enabling entrepreneurship¹

Documents to review

- 2009 Guideline for assessment of engineering work experience
- 2012 Model guide: Risk management
- 2004 Basic studies syllabus
- 2004 Software engineering syllabus
- 2004 Biomedical/biochemical engineering syllabus
- 2007 Structural Engineering Syllabus

¹ QB is proposing to keep this item on its next work plan but to first develop a one-pager at which time a decision will made whether or not to proceed with the General Direction stage.

2020-21 Items (pending confirmation)

As per the Guideline and examinations review protocols, the Qualifications Board is also expecting to review the following documents:

Guidelines/Model Guides/White Paper for Review

- 2008 Step-by-step guide for the preparation and implementation of an individual continuing professional development plan
- 2012 Guideline for the engineer-in-training program
- 2012 Guideline on the practice of engineering in Canada
- 2013 Guideline on good character
- 2014 Model guide: Conflict of interest
- 2014 Model guide: Principles for character investigations
- 2016 Guideline on returning to active practice
- 2016 Guideline on assuming responsibility for the work of engineers-in-training

Examinations syllabi and associated textbooks for review (2020-21)²

- 2004 Agricultural/biosystems/bioresource/food engineering syllabus
- 2004 Forest engineering syllabus
- 2007 Building engineering syllabus
- <u>2010 Metallurgical engineering syllabus</u>
- 2011 Complementary studies syllabus

² At its September 2018 meeting, QB adopted a new Syllabus Review Protocol, which now establishes the review of syllabi every six years, to better align with the Canadian Engineering Accreditation Board accreditation six-year timelines. As a result, the number of syllabi up for review of the next three years is smaller than originally distributed in the Board package in September 2018.

Proposed White paper on the evolution of assessment of applicants for licensure as a professional engineer in Canada

BACKGROUND

<u>Engineers Canada</u> is the national organization of the provincial and territorial associations that regulate the practice of engineering in Canada and license the country's 295,000 members of the engineering profession. Engineers Canada's mandate is to support provincial and territorial regulators in the development and adoption of similar processes, facilitate international and interprovincial labour mobility and provide tools for regulators in assessing candidates for licensure. Engineers Canada hosts and supports two volunteer-led organizations, the <u>Canadian Engineering Accreditation Board (CEAB)</u>, and the <u>Canadian Engineering Qualifications Board (CEQB)</u>, which play fundamental roles in supporting assessment processes throughout the country.

With the rapid increase over the past two decades in the numbers of applicants without CEAB-accredited degrees and rapid proliferation of international institutions offering engineering-related degrees, regulators have adopted a risk-based approach to assess non-CEAB applicants. Each regulator has statutory autonomy to set its own processes and there is no requirement that all regulators have identical assessment processes given that regulation of professions is a provincial/territorial matter under the Canadian constitution. The specific assessment processes used in each Canadian provincial or territorial jurisdiction have some variability among the twelve engineering regulators due to jurisdictional differences in governing legislation and other regulator-specific factors.

The current academic and experience assessment process for applicants is broadly illustrated in the National Admission Officials Group's flowchart provided in Annex 1 and can be typically described as following:

- 1. Once an application is received, a regulator authenticates and validates the academic documents either through the work of their own staff/volunteers or a contracted service provider (such as <u>World Education Services</u> or WES).
- 2. An initial risk assessment is performed based on received documentation. If the applicant's education includes a CEAB-accredited degree, then the applicant is deemed to have satisfied the academic requirements for licensure. If the applicant's education is not a CEAB-accredited degree, then the regulator will utilize other means to assess their level of confidence in the education of the applicant including, but not restricted to, consulting the International Institutions Degrees Database (IIDD), the lists of degrees accredited by signatories to the Washington Accord and other education-related Mutual Recognition Accords (MRAs), the lists of international degree programs deemed to be <u>substantially equivalent by the CEAB</u>, or other lists of institutions/programs that the regulator might have internally generated.
- 3. If a certain level of confidence in the education of the applicant is not obtained, the regulator will either assign a confirmatory examination program to confirm knowledge (either require successful completion of a small number of examinations usually based on CEQB syllabi, or require successful completion of the National Council of Examiners for Engineering and Surveying Fundamentals of engineering exam (NCEES FE)), or instead assign a specific examination program (a larger number of examinations relative to a confirmatory assignment).

- 4. While the experience/competency based assessment requirement applies to both CEAB and non-CEAB degrees applicants, the regulator may choose to waive some or all confirmatory examinations if a certain level of confidence is obtained concerning the applicant's competency to safely practise engineering. To perform this experience assessment, the regulator uses highly-qualified professionals to conduct work experience reviews and/or competency-based assessments.
- 5. Applicants are notified of the status of their applications at various stages of the assessment process and proceed accordingly.

CONSIDERATIONS

Under the <u>Canadian Free Trade Agreement</u>, jurisdictions are typically required to accept each other's license holders without any additional requirements. Jurisdictionally-based assessment processes that produce substantially equivalent outcomes are desirable. Engineers Canada plays an important role by providing tools and services that foster consistency of processes across jurisdictions. In the development and approval process for the <u>Engineers Canada 2019-2021 Strategic Plan</u>, regulators identified the support of their applicant assessment processes through the services of the CEAB and the CEQB, and through Engineers Canada staff-supported assessment services activities, as the highest priority area of focus (see Strategic Plan Strategic Priorities 1, 2, and 4, and Operational Initiatives 1, 2, 3, and 7).

CEQB examinations syllabi are meant to assign examinations to sample the knowledge of an applicant. While they are generated from CEAB-accredited programs, syllabi are not the quantitative nor the qualitative equivalent of CEAB degrees. If interpreted by regulators as such through "matching" syllabi content against non-CEAB degrees, it could be possible that holders of non-CEAB degrees would be held to a different requirement to gain access to the profession. The syllabus is a legally defensible tool, as long as that they continue representing a broad consensus of the education content of similar disciplines of CEAB-accredited programs. It is important to note that a 2017 review of legal cases across the country has demonstrated that there does not seem to be any known discipline case of negligence related to the education of a non-CEAB degree license holder.

Some regulators are increasingly using or considering using different tools for both academic and experience requirements (Examinations Syllabi versus Accreditation Units or AUs assessment and Experience versus Competency-based assessments). While the academic and experience requirements are generally consistent across the country³, regulators use different tools throughout the process. Changes to the assessment processes have generally been incremental in nature where successive improvements have been made to specific aspects of the assessment processes including tools developed and supported by Engineers Canada. Although the public would not be well served if applicants submit their applications to several regulators in an attempt to exploit differences, they likely do not create added legal risk unless vastly different standards are developed that may be compared and contrasted between jurisdictions and pitted against one another in any potential legal challenge.

³ Ontario Office of the Fairness Commissioner: Entry-to-Practice Requirements for Five Professions in Five Canadian Provinces, consulted on July 10 2018, online, http://www.ontla.on.ca/library/repository/mon/24006/301656.pdf

Some concerns have been voiced on the current assessment of CEAB and non-CEAB degrees applicants, including by some deans of the value/cost of CEAB accreditation and some regulators on how the CEAB and non-CEAB streams could perhaps be more closely comparable. There is also concern that, despite CEAB applicants not having to undertake confirmatory examinations, workload for some regulators and their volunteers is increasing given the increase in number of non-CEAB degree applications over the last decades. There might be an opportunity to leverage a risk-based approach to reduce the workload associated with the assessment process by identifying potential efficiencies and/or other tools.

It is proposed that this White paper on evolution of assessment of applicants for licensure take a comprehensive view of the assessment process and provide information to regulators on the following questions:

- 1. What are the strengths, weaknesses, opportunities, and threats (SWOT), as well as the resource requirements (financial, volunteer effort, etc.), associated with the current overall professional engineering licensure assessment process, and also associated with each of its individual subprocesses (such as those listed in Annex 1)?
- 2. What are the current professional licensure assessment approaches and trends among other professional associations (law, medicine, dentistry, accounting, etc.) in Canada? Are there any best practices that can be adopted by the Canadian engineering profession?
- 3. What are the current professional engineering licensure assessment approaches and trends internationally? Are there any best practices for the Canadian engineering profession?
- 4. If the current professional engineering assessment process used in Canada did not exist, is the current approach the exact licensure assessment process that the engineering profession would create today?
- 5. What alternatives, if any, to the current engineering licensure assessment processes (and subprocesses) should be examined? What are the pros and cons associated with any alternatives? An example of a possible transformative alternative would be the development and implementation of a psychometrically-sound Canadian entry to practice examination program for all applicants (CEAB and non-CEAB) that would replace almost all of the assessment subprocesses contained in Annex 1. Additional alternatives should also be examined.

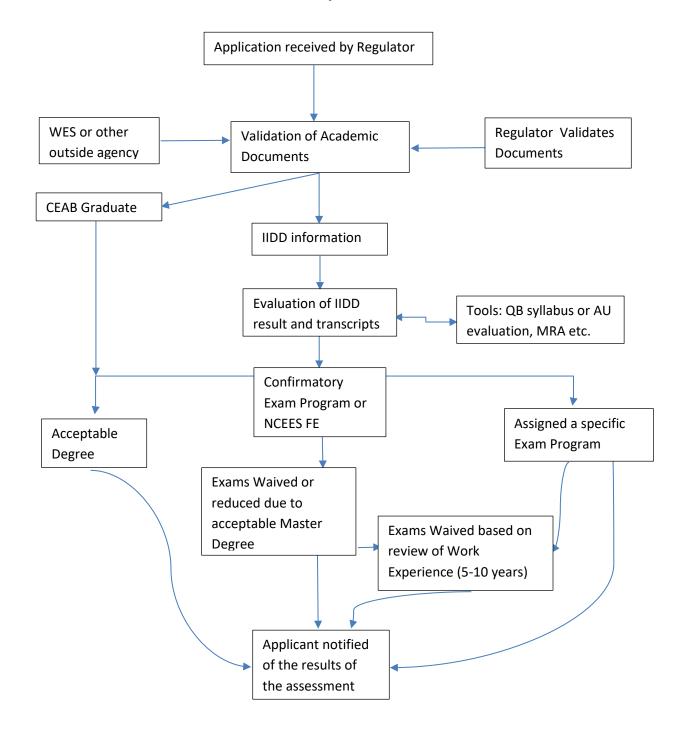
NEXT STEPS

If approved as part of the 2019-2021 Qualifications Board work plan, the white paper milestones will be:

- Conduct an environmental scan and identify best practices;
- Hold a national workshop with regulators, CEAB representatives and other individuals to identify scope and objectives;
- Consult regulators on the General Direction to determine Guiding Principles prior to conducting the analysis;
- Draft a white paper that provides these recommendations for regulators' consideration;
- Seek Engineers Canada Board approval; and,
- Publish the white paper on the <u>members-only page</u> (log-in required) of the Engineers Canada website.

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ANNEX 1: Academic Qualification review process



Briefing note

For Board decision

2019 Budget		Agenda item 6		
Purpose:	pprove the 2019 operational budge use of unrestricted reserves.	t, capital expenses, capital reserve balance		
Motion(s) to consider:	THAT the 2019 operational budget and \$11.3 million in expenses be ap			
	THAT the 2019 capital budget of \$4	7,500 be approved.		
	c) THAT the CEO be directed to use \$529,840 from reserve funds for the Accreditation Improvements Program, the Space Program, and the Governance, Strategic Planning, and Consultation project.			
Vote required to	Simple majority			
pass:	Two-thirds majority			
	X Two-thirds -60% majority (refer to articles 5.7 and 5.8 of the <u>bylaw</u> .)			
Authority:	roving the 2019 operational budget 1 strategic plan and the 2019 operat	will allow for achievement of the 2019 - ional plan.		
Transparency: (all	Open session			
meetings, debates, and decisions shall	In camera, reason (check all that app	oly):		
be open, except for certain subject	The security of the property of the	organization		
matters as	Personal matters about an identifia	ble individual		
described in GP- 7.1)	The proposed or pending acquisitio	n of assets by the organization		
,	Labour relations or employee negot	ciations		
	Litigation or potential litigation			
	The receiving of advice that is subje	ct to solicitor-client privilege		
	Another matter as the Executive Co	mmittee or Board determines		
Prepared by:	e Monterrosa, Controller			
Presented by:	esh Shreewastav, Chair – Finance Co	mmittee		

1. Problem/issue definition

The 2019 operational budget enables achievement of all Engineers Canada work in line with the priorities established by the Board.

2. Proposed action/recommendation

Approval of the 2019 operational budget and authorization to use reserve funds.

3. Other options considered:

The 2019-2021 Strategic Plan is the catalyst for changes in the work required of Engineers Canada and our operational budget. These changes and this direction are integrated into the 2019 budget. The operating budget has been analyzed to achieve as many savings as possible, given current commitments and the strategic direction.

4. Risks

The budget must align with the priorities established by the Board and members, and address regulator needs.

5. Financial implications

The proposed budget is a deficit budget. The Board has previously:

- Directed Engineers Canada that the total of all reserve funds must not become so large as to threaten the not-for-profit status of Engineers Canada, nor to give the regulators reason to question whether member assessments are excessive (Board policy 7.6 Reserve Funds)
- Approved 2016, 2017, and 2018 budgets with excess of expenses over revenues to reduce the reserves
- Directed Engineers Canada to use up to \$1,000,000 from reserves to implement the competencybased assessment of engineering work experience project (Motion 5442, May 23, 2014)

6. Benefits

Authorizing a balanced operating budget while at the same time using unrestricted reserves to fund existing programs that continue to serve the regulators and advance strategic change will position Engineers Canada for future success.

7. Consultation

- The 2019 budget is based on the 2019 operational plan.
- The 2019 operational plan is based on the Board's strategic plan.
- The budget was developed by staff and validated by the senior leadership team at Engineers Canada.

8. Next steps (if motion approved)

The CEO will report on financial status of the overall budget and the projects funded from reserves at the regularly-scheduled Board meetings in 2019.

9. Appendices

See attached 2019 budget note.

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Engineers Canada budget 2019

This budget is presented for the approval of the Engineers Canada Board of Directors on December 10, 2018.

Summary

- a) The 2019 budget includes \$10.3 million in revenue and \$11.3 million in expenses.
- b) Capital expenditures for 2019 are estimated to be \$47,500.
- c) The total cost for major projects to be funded from reserves is \$529,840 for the Accreditation Improvement Program, the Space Program and the Governance, Strategic Planning, and Consultation (GSPC) project. Spending for the Competency-Based Assessment Project has been previously approved, and 2019 spending is budgeted to be \$490,101. This results in total project-related spending of \$1,019,941 for 2019.

2019 Budget summary

The proposed 2019 budget is a deficit budget of \$991,000 with revenues of \$10.3 million and total expenses at \$11.3 million. Note that \$1,019,941 of total spending relates to major projects, which are to be funded by drawing down on reserves.

Revenues are to see a reduction of \$485,000, compared to the 2018 budget, as Engineers Canada ends activities related to the Public Infrastructure Engineering Vulnerability Committee (PIEVC) Protocol and the Infrastructure Resilience Professional (IRP) credential, which accounted for \$430,000 of revenues in the 2018 budget. In addition, there has been a \$50,000 reduction in the expected investment income for 2019, based on 2018 actuals.

Expenditures have two main components: operating expenses and expenditures related to large projects. The 2019 operating expenses are \$10.3 million and are \$515,000 lower than the 2018 budget.

2019 Budget (000's)

Category	2019 Budget	2018 Budget	Q3 Forecast	2019 vs 2018	2019 vs 2018 %	Notes
Revenue	10,315	10,800	10,801	(485)	-4%	1
Accreditation	516	360	355	156	43%	2
Affinity and Insurance Programs	846	893	954	(46)	-5%	3
Assessments	25	115	101	(90)	-79%	4
Communications	378	339	333	40	12%	5
Community Engagement	312	283	324	29	10%	6
Discipline and Enforcement	46	54	44			
Executive Expenses	822	951	820	(129)	-14%	7
Facilities and General Expenses	370	384	405			
Foreign Credential Recognition	5	65	15	(61)	-93%	8
Globalization & Sustainable Development	49	325	273	(276)	-85%	9
Human Resources	5,408	5,388	5,440	20	0%	10
Information Services	243	157	137	85	54%	11
Legal	122	122	122			
Mobility and International	51	152	146	(101)	-66%	12
Office Expenses	42	40	30			
Organizational Excellence	47	47	60			
Public Affairs	52	62	58	(10)	-16%	13
Qualifications	181	250	250			
Rent and Occupancy	614	617	575			
Research	20	59	18	(39)	-66%	14
Admin - Finance	138	139	154			
Total Operating Expenses:	10,285	10,800	10,614	(515)	-5%	
Operating Suplus/Deficit:	29	0	186	29		
Major projects:						
Accreditation Improvement Project	386	318	357	68	22%	
Competency-Based Assessment Project	490	362	278	128	35%	
GSPC	97	699	631	(602)	-86%	
Space program	46	200	154	(154)	-77%	
Total Major Projects expenditures:	1,020	1,580	1,420	(560)	-35%	
	-	-	-	-		
Surplus/Deficit	(991)	(1,580)	(1,234)	589	-37%	
Potential additional affinity revenue	2,000	-	2,140	2,000		15
Surplus/Deficit incl. additional affinity revenue	1,009	(1,580)	906	2,589		

Notes on variance 2019 budget vs 2018 budget

- 1. Revenues variance (\$485,000): Reduction in revenues due to wind up of revenue generating activities related to PIEVC and IRP. In addition, there is a \$50,000 reduction in the expected income from investments.
- 2. Accreditation: The 2019 accreditation budget is higher than the 2018 budget due to the new work assigned under Strategic Priority 2, additional work on training and criteria improvements (Accreditation Unit (AU) Task Force and linking of Graduate Attributes and Continuous Improvement criteria), and increases to the costs of program visits.
- **3. Affinity and insurance programs:** The 2019 budget is lower than in 2018 as the costs related to the Secondary Professional Liability Insurance Program (SPLIP) program are \$40,000 lower in 2019.
- **4. Assessments:** The 2019 assessment budget is lower than the 2018 budget due to re-categorization of the CEO Group meeting costs (moved from Assessment to Executive expenses), and to a move from three face-to-face meetings per year of the Admissions Officials to one per year.
- 5. Communications: The 2019 budget is higher due to four factors. The review of the awards program (\$10,000) and scholarships program (\$10,000) is new work resulting from the Strategic Plan; this work will be research and evaluation initiatives, and not "strategy development". In addition, meals and wine for the Awards Gala (\$14,000) have been transferred from the major meetings budget to the Awards budget. There is no increase in spend; it is simply being accounted for in a different location.
- 6. Community Engagement: The 2019 budget for Community Engagement is higher than the 2018 budget due to the development of three new strategies (one for women in engineering, one for diversity and inclusion, and one for outreach and promotion) as required by the new Strategic Plan (\$45,000); and costs for two initiatives moved from the former Research budget: EngScape (\$8,400); and Indigenous Peoples (\$49,000).
- 7. Executive expenses: The 2019 Executive expenses are lower than the 2018 budget due to fewer face-to-face meetings of Board committees and lower costs for the Board meetings based on actuals. The 2018 forecast is significantly lower than budgeted due to significantly lower costs for the AGM, the January Board meeting, the GSPC project, and the board committee meetings than originally budgeted.
- 8. Foreign credential recognition: The 2019 FCR budget is much lower than the 2018 one due to the deferral of the International Institutions & Institutions Improvement (IIDD) Improvement project. The project was originally forecast at \$60,000, with all money spent in 2018. As planning has progressed, we now estimate a total project cost would be \$150,000, with \$30,000 spent in 2018 and \$120,000 still required to complete the project (note that this final investment, and the project, have been deferred for 2019).
- 9. Globalization and Sustainable Development: The 2019 budget for Globalization and Sustainable Development is lower than the 2018 budget. It is important to note that the 2018 budget included expenses that are "flow-through" expenses (i.e., Engineers Canada receives revenues that generally offset

- the expenses) as well as other activities that, in 2019, will be discontinued due to the requirement in Engineers Canada's strategic plan to divest the PIEVC and IRP programs. In addition, costs associated with travelling to participate in meetings with the federal government which were previously held within the Globalization and Sustainable Development budget (\$7,500) and costs associated with the Globalization Committee (\$30,500) have been transferred to the Public Affairs budget.
- **10. Human Resources:** The 2019 budget is essentially the same as 2018. Proposed staff salary increases have been offset by lower recruitment and consultant costs.
- 11. Information Technology: The 2019 budget is higher to cover the final phases of the Space Program as reviewed by the Board in December 2017 in the Space Program Business Case (\$93,000) and as result of increased licence and subscription fees for new services [Office 365, Amazon WEB Services (cloud-based data storage), accounting system, Envisio (strategic plan management), HR information system (specific application to be determined late in 2018), GoTo Meeting, and Armature (Accreditation Management System)].
- 12. Mobility & International: The 2019 Mobility and International budget is lower than the 2018 due to the elimination of two initiatives: attendance at the 2019 World Federation of Engineering Organizations (WFEO) meeting and visits to France to monitor accreditation activities in support of our Mutual Recognition Agreement (MRA), as well as fewer attendees at the meetings that we do attend.
- **13. Public Affairs**: The 2019 budget for Public Affairs is lower than the 2018 budget due to the decision to forego Hill Day for 2019 and also due to a reduction in costs for in-person meetings for the Public Affairs Advisory Committee, which are held at the same time as the in-person board meetings.
- **14. Research:** The 2019 Research budget is lower than the 2018 version due to decisions to do work in-house as opposed to using consultants. The 2018 forecast is also much lower than budgeted due to this area being unstaffed since January of this year. Work has been deferred as much as possible to deal with this staffing shortage.
- **15. Potential additional affinity revenue:** Should PEO remain as a non-participant regulator of the affinity program, there will be approximately 2 million dollars in 2019 in additional revenue for Engineers Canada. The Board of Engineers Canada will then need to decide on the best use of these additional funds.

2019 Budget by strategic goal (000's)

In 2018 the Board of Directors approved a new strategic plan that will span a three-year period (2019 to 2021). The Plan outlines 12 specific areas that are to be the focus of Engineers Canada during said period: these are the 10 operational imperatives plus corporate and secretarial services. To report on the utilization of resources as Engineers Canada progresses towards achieving said goals, the 2019 budget has been structured to show the planned allocation of resources to each of these areas. Additional detail on planned spending per strategic goal is provided on single-page documents that highlight the major components of each portfolio. (Please see appendices attached hereto).

Portfolio v	Original 2019 budget	Revised 2019 budget 🔽	Change 🔽
Revenue	10,315	10,315	-
Accreditation	733	729	(4)
Advocating to the federal government	125	61	(63)
Corporate services	7,277	7,121	(156)
Diversity and inclusion	176	176	-
Fostering working relationships	141	109	(32)
International mobility	214	56	(158)
National programs	930	885	(45)
Promotion and outreach	357	380	23
Protect official marks	122	122	-
Research and regulatory changes	150	20	(130)
Secretariat services	1,147	1,106	(41)
Service and tools	610	541	(69)
Total expenses	11,982	11,305	(677)
Surplus/(Deficit)	(1,668)	(991)	677
Potential additional affinity revenue	2,000	2,000	
Surplus/(Deficit)incl. additional affinity revenues	332	1,009	677

2019 Budget - Net expenses by strategic goal, including staff costs

The following table is provided for analysis purposes. It shows proposed 2019 spending by strategic goal along with a breakdown of corporate services.

Category ▽	Operating Expenses ▼	HR ▽	Total ▼	Percentage Total	Regulator Priority Ranking	Notes	✓
SP1 - Accreditation Improvement Program	386,400	112,524	498,924	5%	1		
SP2 - Accountability in Accreditation	119,000		119,000	1%	1		
SP3 - Women in Engineering	99,000	114,602	213,602	2%	4		
SP4 - Competency-Based Assessment Project	490,101		490,101	5%	2		
Accreditation	396,710	513,516	910,226	9%	1		
Diversity and inclusion	77,400	151,163	228,563	2%	4		
Service and tools:							
QB	181,000	297,065	478,065	5%	2		
Nat'l Membership Database Maintenance	2,000	•	2,000	0%			
Fostering working relationships	109,350	213,215	322,565	3%	3		
National programs	207,239	449,385	656,624	6%	9	1	
Advocating to the federal government	61,156	301,415	362,571	3%	7		
Research and regulatory changes	20,000	51,546	71,546	1%	6		
International mobility	55,600	210,970	266,570	3%	8		
Promotion and outreach	154,550	187,808	342,358	3%	5	2	
Protect official marks	122,256	155,694	277,950	3%	10		
Secretariat services	781,675	397,246	1,178,921	11%		3, 4	
Corporate services:							
Rent	585,516		585,516	6%			
IT	288,704		288,704	3%			
Other	1,018,843	2,071,668	3,090,511	30%		5	
Total Expenses:	5,156,500	5,227,818	10,384,318	100%			

Notes:

- 1 Net expense with adjustment for related revenues of 678,000
- 2 Net expense with adjustment for related revenues of 225,000
- 3 Net expense with adjustment for related revenues of 18,000
- 4 AB and QB meetings costs moved to AB and QB budget lines
- 5 Breakdown of Corporate services other:
 Deprecation expense 300,000
 Communications 134,000
 HR admin costs 180,000
 Facilities 143,000
 Finance & Admin 138,000
 Executive expenses 78,000
 Org. excellence 39,000

Changes to the 2019 budget since September 2018 presentation to the Board

The following items are part of the original 2019 budget which have been brought forward by management to ensure that operating expense do not exceed revenues. Please see portfolio analysis sheets for detail:

Portfolio 📢	Item for deferral	Amount 🔽	Type of Expense 🗐
Accreditation	SP2: Acccountability in accreditation	100,000	one time
Accreditation	Accreditation Improvement Project	(113,000)	one time
Advocating to Federal Government	reduce number of fed govt commitments supported	3,500	one time
Advocating to Federal Government	globalization committee study/report (final charge)	25,000	one time
Corporate Services	Space program project Manager	(1,200)	one time
Corporate Services	comms - engineerscanada.ca upgrades	38,000	one time
Corporate Services	comms - web accessibility project	2,000	one time
International Mobility	IIDD improvement project	120,000	one time
National Programs	move some PIEVC divestiture activities to 2020	17,500	one time
National Programs	move some IRP divestiture activities to 2020	5,000	one time
National Programs	Affinity legal expenses	20,000	one time
Research	Labour mrkt study	90,000	one time
Research	Emerging areas of practice	25,000	one time
Research	Feasibility of task force on threats to self-regulation	15,000	one time
Secretariat Services	GSPC	(23,592)	one time
Service & Tools	QB - White Paper on Evolution	50,000	one time
Service & Tools	QB - CPD step by step guide	15,000	one time
Service & Tools	QB - promotion of EIT webpage	4,000	one time
	Sub-total - one time costs:	392,208	
Accreditation	AB criterial development	17,700	ongoing
Advocating to Federal Government	Hill day	30,550	ongoing
Advocating to Federal Government	reduce number of PAAC f2f mtgs	4,425	ongoing
Corporate Services	New finance system (budgeting function)	25,200	ongoing
Corporate Services	comms - social media engagement	4,000	ongoing
Corporate Services	comms - branded merchandise	3,000	ongoing
Corporate Services	comms - annual report	3,000	ongoing
Corporate Services	Executive consulting & misc fees	20,000	ongoing
Corporate Services	CEO travel	5,000	ongoing
Corporate Services	Repairs and maintenance	4,500	ongoing
Corporate Services	Non-capital furniture and equipment	4,700	ongoing
Corporate Services	Promotional items	8,275	ongoing
Corporate Services	HR - reduce COLA sal. increase by .5%	20,000	ongoing
Corporate Services	HR - reduce staff perform. alloc. by .5%	20,000	ongoing
Fostering Working Relationships	NDEOG meeting	5,000	ongoing
Fostering Working Relationships	NPOG meeting	4,500	ongoing
Fostering Working Relationships	NAOG meeting	20,000	ongoing
Fostering Working Relationships International Mobility	NAOG work plan	2,500	ongoing ongoing
International Mobility	ABET meeting NSPE meeting	4,950 4,200	ongoing
International Mobility	NCEES meeting	4,200	ongoing
International Mobility	IEA meeting	24,950	ongoing
National Programs	fall Supplier Reporting meetings - f2f in Toronto	2,550	ongoing
Promotion & Outreach	TD Scholarship payouts	(22,500)	ongoing
Secretariat Services	Hospitality suites	7,400	ongoing
Secretariat Services	AB Executive Committee meetings	1,325	ongoing
Secretariat Services	Governance Committee	5,518	ongoing
Secretariat Services	Annual meeting of members	56,000	ongoing
Secretariat Services	Fall Board Meeting	23,000	ongoing
Secretariat Services	Winter Board Meeting	15,000	ongoing
Secretariat Services	Late Fall Board Meeting	(44,000)	ongoing
	Sub-total - ongoing costs:	284,943	. Jg
	Total:	677,151	

Capital budget

Asset Type	2019 Budget	2018 Budget
Office furniture and equipment	10,500	14,000
Projects		
Computer hardware	37,000	43,800
Software		
Leasehold Improvements (including		
workstations)		5,500
Total:	47,500	63,300

In 2019 the capital budget will be used to replenish computer hardware that will be coming to the end of its life cycle. The remaining portion will be used to improve the connectivity of several of our meeting spaces throughout the Engineers Canada's offices.

Status of reserves

Board policy 7.6 Reserve Funds requires that the total of all reserve funds must not become so large as to threaten the not-for-profit status of Engineers Canada, nor to give the regulators reason to question whether member assessments are excessive.

Reference	▼ Target Value ▼	2019 Year-end (Target) ▼	2018 Year-end (Projected)	2017 Year-end (Audited)
Operational	\$4,000,000	4,000,000	4,000,000	4,000,000
·	"sufficient to enable fit-up of leased facilities at the			
Capital *	expiry of the office lease."	300,000	250,000	250,000
Legal	\$1,325,000	1,325,000	1,325,000	1,325,000
Additional reserves	n/a	-56,481	1,031,701	2,328,861
Sub-total		5,568,519	6,606,701	7,903,861
Potential increase to Additionareserves (Affinity program)	ıl	2,000,000	2,140,000	0
Total (incl. potential increase				_
from Affinity program)		9,708,519	8,746,701	7,903,861

* In April 2017, a motion was passed to set the capital reserves at \$100,000 and increase by \$100,000 per year to ensure that \$1,000,000 would be available by 2026 when the lease expires. At that time, the capital reserves contained \$250,000. They were <u>not</u> reduced in 2017, and instead, the same level is maintained and \$50,000 will be added in 2019 to ensure that we are on track for \$1,000,000 in 2026:

<u>Year</u>	<u>Value</u>	<u>Year</u>	<u>Value</u>
2018	250,000	2022	600,000
2019	300,000	2023	700,000
2020	400,000	2024	800,000
2021	500,000	2025	900,000
		2026	1,000,000

In recent years the reserves have been both reduced and increased. This is good practice in terms of our not-for-profit tax status as well as in demonstrating to the regulators that their assessment fees are necessary and used.

Reserves: inflows and outflows	2019	2018	2017	2016	2015	2014
Potential increase to reserves (from Affinity program)	2,000,000	2,140,000				
Projected surplus from operations	29,259	186,209				
Capital purchases	-47,500	-63,300				
Funding of major projects	-1,019,941	-1,420,069				
CEO changeover and GSPC			- 724,661			
Strategic initiative projects				- 26,785		
Office relocation					- 335,739	
Added to the reserves						24,693

Major projects

There are four major projects affecting the unrestricted reserves in 2019. They are:

- The Accreditation Improvement Program (2021 end date)
- The Competency-Based Assessment Project (2020 end date)
- The Governance, Strategic Planning, and Consultation Project (2019 end date)
- The Space Program (2019 end date)

The operational budget will have to be carefully managed to ensure the required minimum reserve is maintained.

Item	2018 forecast	2019	2020	2021
Accreditation Improvement Program	357,400	386,400	197,000	43,000
Competency-Based Assessment Project	277,926	490,101	107,000	
Governance, Strategic Planning, and Consultation Project	630,743	97,240		
Space Program	154,000	46,200		
Total	1,420,069	1,019,941	304,000	43,000

Revenue

Detail analysis

Description: Engineers Canada revenues are made up two main components: Affinity Program sponsorships and the annual dues received from provincial regulators. These two components make up 88% of the 2019 revenues. The remaining portion contains revenues that are for specific endeavours which have related expenses such as: the Secondary Professional Liability Insurance Program (SPLIP), the Awards and Annual Meeting of Members, Future City funding, and NCDEAS revenues. These five components make up ten percent of total revenues. The final two percent of revenues are made up of income and appreciation of investments, rent revenue, and interest earned on bank balances.

Budget details:

Number 👱	Description	2019 budget 🖳	2018 budget 👱	Change 👱
1	Affinity and Insurance Programs - Sponsorships	5,990,637	5,959,122	31,515
2	Provincial Annual Dues	3,056,000	3,091,000	(35,000)
3	Affinity and Insurance Programs - SPLIP Revenue	678,319	718,000	(39,681)
4	Awards Sponsorship	175,000	115,000	60,000
5	Investment Income	150,000	165,000	(15,000)
5	Changes in the Fair Value of Investments	150,000	200,000	(50,000)
	Future City	50,500	53,000	(2,500)
	Admin - Finance - Rent Revenue	30,180	28,800	1,380
6	Admin - Finance - NCDEAS Revenue	17,500	17,500	-
	AGM Sponsorship	12,500	12,500	-
	Admin - Finance - Other Revenue	2,000	2,000	-
	Interest Bank Accts (CND)	2,000	2,000	-
	SEV Costa Rica		5,000	(5,000)
7	PIEVC Onsite		115,000	(115,000)
7	IRP Course Revenue		251,200	(251,200)
7	P.I.E.V.C. Committee Workshop Revenue		65,000	(65,000)
	Total revenue:	10,314,636	10,800,122	(485,486)
8	Potential additional Affinity Program revenues	2,000,000	2,140,000	(140,000)
	Total Revenue including potential additional affinity revenues	\$ 12,314,636	\$ 12,940,122	\$ (625,486)

Rationale for 2019 budget:

- 1. The Affinity Program revenues for 2019 are determined by the agreements signed, the largest of which is the TD home and auto insurance program. 2018 is the first year of a 12-year agreement with TD for the home and auto insurance program. The TD revenues are calculated based upon the total written premium value for 2018. This figure will not be known with certainty until early in 2019. The 2019 estimate is based upon total written premium projections provided by TD.
- 2. The annual dues from provincial regulators are calculated based on the annual membership level estimates received from each regulator. Based on the 2019 membership projections received, Engineers Canada expects a slight decrease in annual dues in 2019.

- **3.** SPLIP program revenues are based on estimates for 2019 participation levels. These estimates show a slight decrease for 2019. This is a flow through revenue which is offset by an equivalent expenditure.
- **4.** Awards sponsorships are higher in 2019. In 2018, \$60,000 in Awards sponsorships were budgeted for in the Affinity Program revenues. In 2019, all Awards sponsorships are included in this budget line.
- **5.** Expected investment income and the expected appreciation in value of investment holdings in 2019 has been adjusted to reflect best estimates.
- **6.** The NCDEAS revenue is a flow through revenue that is offset by an equivalent expenditure.
- **7.** Revenues related to PIEVC and IRP activities are not part of the 2019 budget as Engineers Canada has begun the process of winding down work in these two areas.
- **8.** These are potential additional revenues that will come to Engineers Canada should PEO decide to remain as a non-participant regulator in the home and auto insurance affinity program. The decrease in this revenue from 2018 to 2019 results from a contract signing bonus that was awarded in 2018.

Considerations for the Board:

 The potential additional Affinity Program revenue is significant both due to the amounts involved and the uncertainty around whether the funds ultimately remain with Engineers Canada. The Board will have to decide how to manage this uncertainty and how the funds will be used (should the additional funds remain with Engineers Canada).

Accreditation Portfolio detail analysis

Portfolio: Accreditation business and improvements to the accreditation processes and systems.

Description: This portfolio contains all the work in Operational Imperative 1 (the regular business of the CEAB), and strategic priorities SP1 (Accreditation Improvement Program, assigned to the CEO) and SP2 (Accountability in accreditation, assigned to the CEAB).

Budget details:

	Cost element	2019
1.	Accreditation business (OP1)	\$235,160
2.	Accreditation Improvement Program (SP1)	\$386,400
3.	Accountability in accreditation (SP2)	\$107,000
	Totals	\$728,560

Rationale for 2019 budget:

- 1. This includes the costs for program visits, the costs for training of visitors and staff from the Higher Education Institutions (HEIs), and the cost of the work to develop, maintain, and improve accreditation criteria and procedures.
- 2. This project, whose first year was approved by the Board in the 2018 budget, is captured in Strategic Priority 1 and is assigned to the CEO. It includes the development of a new software tool to manage accreditation data, improvements to the training and communications associated with accreditation, and the development of a continual improvement process for accreditation.
- 3. The annual objectives defined for Strategic Priority 2 are to collaboratively develop an accreditation assessment system with the establishment of a standing committee to support the system, as well as the resolution of the number of required Accreditation Units (AUs). Costs include budget for the committee to meet twice face-to-face, as well as a consultant to develop a framework for assessment, and staff to support the consultant and provide accreditation expertise.

Considerations for the Board:

- The CEAB's total 2019 budget is \$800,674 (as compared to \$678,000 in 2018). Costs for Secretariat Services (i.e. the costs to host the regularly-occurring CEAB meetings) are included in the Secretariat Services Portfolio.
- Strategic Priority 2 has not been fully planned. These costs are an estimate, with a high level of uncertainty. Costs will be refined as planning progresses.

Changes to budget since September Board meeting

- \$100,000 was eliminated from the budget for Strategic Priority 2: Accountability in Accreditation as a result of more detailed planning now having been done, including establishment of a high-level work plan and schedule for SP2. The saving comes from a decision to use fewer consultants and apply staff expertise instead. We do not expect this to have an impact on the quality or scope of the initiative as we will be using the continual improvement process developed in the AIP project for SP2 as well.
- \$17,700 in savings were achieved by capturing all criteria development work in the meetings of the Policies & Procedures Committee ("the P&P"). This will not have an impact on the quality or scope of the work of the P&P or the accreditation criteria. Criteria development work is typically the responsibility of the P&P, and this budget change does not result in any changes in responsibility or workload for the committee members. Instead, committee members will work remotely and use the P&P meetings for the portion of the criteria work that must be done face-to-face.
- The 2019 cost for the Accreditation Improvement Program (AIP) has increased. Due to an unanticipated delay in signing the contract with Armature, some work will not be able to be done in 2018, as originally planned. This work, and the corresponding budget, are therefore pushed into 2019. There is no change to the total project budget, and since the AIP is funded from reserves, there is no change in the operational budgets for either 2018 or 2019.

Advocating to the federal government Portfolio detail analysis

Portfolio: Advocating to the Federal Government

Description: This portfolio contains all of the items under Operational Imperative 5 including ongoing work and the development of a new advocacy strategy.

Budget details:

	Cost Element	2019
1.	Ongoing advocacy	\$40,656
2.	Development of new advocacy strategy	\$15,000
3.	Globalization Committee	\$5,500
	Totals	\$61,156

Rationale for 2019 budget:

- 1. This includes budget for ongoing advocacy including: costs associated with travelling to participate on federal government panels and committees; and the cost of the two in-person meetings for the Public Affairs Advisory Committee, which are held at the same time as the inperson board meetings. A few tangible examples of advocacy successes include: the federal government extending invitations to Engineers Canada to participate in and provide testimony on key issues at a number of House of Commons and Senate committee meetings and expert panels; invitations to Engineers Canada to provide submissions to the federal government on key issues; and the inclusion of professional engineers as one of the few professions authorized to provide attestation regarding climate considerations in applications for federal government funding for infrastructure projects under the Climate Lens.
- **2.** This includes the development of a new advocacy strategy, a requirement of Engineers Canada's new strategic plan. This cost includes only the cost of one consultation.
- 3. The Globalization Committee liaises with the federal government to provide information, policy advice and recommendations on the trends and nature of the globalization of engineering services. The Committee was established in 2016 with six charges. Of the six charges, five are complete and one remains to be completed: the study of the globalization of engineering services to be undertaken in collaboration with the federal government and other organizations with which Engineers Canada is currently in discussions. Engineers Canada has proposed that the costs of the study be covered in their entirety by the federal government and other organizations. In return, Engineers Canada would provide in-kind services to lead and facilitate study completion. This budget includes Committee costs to complete the final charge.

Considerations for the Board:

2019 is an election year, with Canadians heading to the polls on October 21st. Members of
Parliament will be in election-mode throughout 2019, making a spring 2019 Hill Day
unproductive. After the elections in fall 2019, it will take several weeks for Cabinet
appointments to be made, and for ministerial staff to undertake their roles and become
acquainted with their files. There will be no Hill Day in 2019; Hill Day has been deferred to spring
2020.

Changes to budget since September Board meeting:

- Reductions to the budget for ongoing advocacy work (item 1 in the table above) as follows:
 - \$30,550 due to deferring Hill Day to spring 2020; costs associated with Hill Day (including travel, accommodation, meals, marketing and promotional materials, etc.) for the Bridging Government and Engineers Committee (\$22,200) and 50% of the costs for the retention of the public affairs firm (\$8,350) will be deferred to the 2020 budget, a total of \$30,550. The other 50% of the cost of the public affairs firm (\$8,350) would be retained in the 2019 budget to be used in the fall of 2019 to secure a firm for the start of the planning for a Hill Day in the spring of 2020
 - \$4,425 due to moving from three in-person Public Affairs Advisory Committee (PAAC) meetings to two in-person PAAC meetings in 2019 to reflect that there will be two inperson Board meetings in 2019
 - \$3,500 due to reducing the number of commitments to participate on federal government panels and committees
- Reduction to the budget for Globalization Committee work (item 3 in the table above) as follows:
 - \$25,000 Of the Committee's six charges, one remains to be completed: the study of the globalization of engineering services to be undertaken in collaboration with the federal government and other organizations. Engineers Canada has proposed that the costs of the study be covered in their entirety by the federal government and other organizations. In return, Engineers Canada would provide in-kind services to lead and facilitate study completion.

Corporate Services: Other Portfolio detail analysis

Portfolio: Corporate Services

Description: contains work included under Internal Enablers including miscellaneous corporate services such as information technology, communications, facilities, corporate memberships, discretionary executive budgets, and CEO travel.

Budget details:

Cost Element	2019
Administration and Finance	\$112,300
Executive expenses including corporate memberships and CEO travel	\$78,250
3. Communications	\$134,380
4. Facilities and general expenses	\$365,901
5. Human Resources	\$5,408,418
6. Information Technology	\$267,704
a. Space Program	\$46,200
7. Office expenses	\$42,312
8. Organizational excellence	\$46,900
9. Rent and occupancy	\$618,516
Totals	\$7,120,881

Rationale for the 2019 budget:

- 1. Includes expenses such as corporate insurances, audit fees, investment fees, and bank service fees.
- 2. Includes expenses related to general and miscellaneous travel expenses for the CEO (i.e. travel not related to a specific meeting such as a CEO Group meeting or a Board meeting); executive team consulting and miscellaneous expenses; and corporate memberships.
- 3. Expenses include corporate communications strategy, external communication services (e.g. paid media, media relations, graphic design, etc.) to advance initiatives, refresh of the Roadmap to Engineering website, corporate communications services, and public website development and management.
- 4. Includes amortization.
- 5. The 2019 budget is essentially the same as that for 2018. Staff salary increases have been offset by a lowering of recruitment and consultant costs.
- 6. The 2019 operational budget is increased to cover the final phases of the Space Program as reviewed by the Board in December 2017 in the Space Program Business Case (\$48,000). This is a one-time project cost. The budget is also increased as result of new recurring licence and subscription fees for new services (Office 365, Amazon WEB Services (cloud-based data storage), accounting system, Envisio (strategic plan management), HR information system (specific

application to be determined late in 2018), GoTo Meeting, and Armature (Accreditation Management System).

Considerations for the Board:

• The cost of CEO travel continues to reduce as we work to account for the CEO's travel under the initiative that it supports, as much as possible (e.g. travel costs for consultations on the Strategic Plan were included in the costs of the Governance, Strategic Planning, and Consultation project).

Changes to budget since September Board meeting:

- Reductions to the budget for Communications (item 3 in the table above) as follows:
 - \$38,000 due to the upgrade of engineerscanada.ca to Drupal 8, described in note 3 above, being deferred to 2020; as a result Engineers Canada will carry the cost of two server environments one optimized for Drupal 7 sites and another for Drupal 8 sites as exploreengineering.ca will be upgraded in 2018, and the Roadmap to Engineering website is to be upgraded as part of the 2019 refresh (i.e., \$40,000 Drupal 8 upgrade minus \$2,000 in additional server costs)
 - o \$2,000 in limiting the scope of the web accessibility project to in-house work
 - \$4,000 in reducing the scope of social media paid promotion to rely on initiative promotional budgets for social media boosts or ads only
 - \$3,000 in branded merchandise
 - o \$3,000 due to no external graphic design or paid promotion for the annual report
- The Space Program (included in item 4 in the table above) will continue to its originally planned conclusion at the end of 2019. However, \$45,000 of project management consulting fees have been removed from the project budget. Project management activities will be handled using internal staff resources.
- Cost of new finance software reduced by \$25,200 by excluding access to the budgeting function within the new system.
- Reductions to the budget for Facilities (item 4 in the table above) as follows:
 - \$4,500 in the contingency for repairs
 - o \$4,700 for the purchase of non-capital furniture items
 - \$8,275 for the purchase of branded promotional items
- CEO travel has been reduced by a further \$5,000; Executive consulting and miscellaneous fees have also been reduced by \$20,000.
- Reduced COLA salary increase to 2.5% to reflect actual forecasted inflation rate.
- Reduced staff performance allocation by 0.5% to 2.5%.
- Reserve draw down of \$46,200 deferred to 2019 due to slower than anticipated project spending in 2018. No overall increase in project cost.

Promote diversity and inclusion in the profession Portfolio detail analysis

Portfolio: Diversity and Inclusion

Description: This portfolio contains Strategic Priority 3 and Operational Imperative 9, including ongoing work and the development of new strategies and action plans for diversity and inclusion work.

Budget details:

	Cost element	2019
1.	SP3: Women in Engineering ongoing work	\$74,000
2.	P3/OP9: Consultations + training	\$25,000
3.	OP9: ongoing diver. & inclusion	\$62,400
4.	OP9: Consultations	\$15,000
	Totals	\$176,400

Rationale for 2019 budget:

- This budget includes: ongoing work for the recruitment, retention, and professional development of women in the engineering profession in Canada; costs associated with the 30 by 30 Champions; Canadian Federation of Engineering Students (CFES); and producing materials for 30 by 30 work.
- 2. Includes the cost of one consultation for the development of a new strategy to address the recruitment, retention, and professional development of women in the engineering profession in Canada, a requirement of Engineers Canada's new strategic plan. Training costs involve a diversity training workshop to be provided by EngiQueers to 30 by 30 Champions in 2019, which is a resource requested by the Champions at their in-person meeting in January 2018.
- 3. Ongoing diversity and inclusion work includes the work of the Indigenous Peoples Participation in Engineering working group, support for the Canadian Region of the American Indian Science and Engineering Society (.calSES), and the Canadian Indigenous Advisory Council to the American Indian Science and Engineering Society, as well as EngScape, which was previously under the Research portfolio. The Indigenous program budget was also previously under Research.
- 4. This includes the development of a new strategy to address bridging and/or support programs that facilitate Indigenous people entering and graduating from undergraduate engineering programs in Canada, a requirement of Engineers Canada's new strategic plan. This cost includes only the cost of one consultation.

Considerations for the Board:

No additional considerations.

Changes to budget since September Board meeting:

No changes.

International mobility of engineering work and practitioners Portfolio detail analysis

Portfolio: International mobility of engineering work and practitioners

Description: This portfolio contains the items under Operational Imperative 7 including memberships in and attendance at international organizations and their conferences; maintenance and development of mobility agreements at both the academic and full professional level; maintenance and improvements to our foreign credential recognition tools (Roadmap to Engineering website, International Institutions and Degrees Database (IIDD), and customer support to regulators and the public); and the education of key stakeholders about our international partnerships, memberships, and agreements (a pre-cursor to the development of a new strategy for this portfolio in 2020).

Budget details:

	Cost element	2019
1.	US-based organizations (ABET, NSPE, NCEES)	\$13,350
2.	International organizations (IEA)	\$31,950
3.	Foreign credential recognition tools	\$4,500
4.	Stakeholder education	\$5,800
	Totals	\$55,600

Rationale for 2019 budget:

- 1. This includes the costs for one person to attend the annual meeting of each of these organizations: ABET (the US accreditation board), the National Society of Professional Engineers (NSPE), and the National Council of Examiners in Engineering and Surveying (NCEES).
- 2. This includes the costs for two people to attend the annual meeting of the International Engineering Alliance in Hong Kong as well as our annual membership fees.
- **3.** The includes the cost to maintain the IIDD and the cost of keeping the Roadmap to Engineering website up-to-date.
- **4.** This includes the cost for one person to attend meetings of officials' groups, the CEAB and the CEQB to educate our stakeholders about our international commitments, opportunities, and risks.

Changes to budget since September board meeting:

- Attendance at all US-based events has been reduced from two people to one person, saving \$13,350
- Attendance at the IEA meeting has been reduced from four people to two people, saving \$24,950
- The IIDD Improvement project has been deferred providing savings of \$120,000. This means that the tool will continue to be available, in its current format, but will not be improved as per the requirements established by the National Admissions Officials Group in 2017 and 2018. The IIDD is a tool that provides information to help regulators evaluate the academic credentials of international engineering graduates (IEGs). Of the nine regulators who evaluate IEGs, four use the IIDD as a primary source and two use it as a secondary source. The IIDD is not used at all by the three largest regulators.

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Offering national programs Portfolio detail analysis

Portfolio: Offering national programs

Description: This portfolio contains the items from Operational Imperative 4, including the costs for the affinity programs as well as the cost of PIEVC and IRP divestiture.

Budget details:

	Cost element	
1.	Affinity programs	\$167,920
2.	Secondary Professional Liability Insurance Program (SPLIP)	\$678,319
3.	PIEVC and IRP	\$39,000
	Totals	\$885,239

Rationale for 2019 budget:

- **1.** This includes estimated consultant fees, marketing and promotional materials, and travel and meeting costs.
- 2. This is a flow-through cost (i.e., this expense is balanced by an equal amount of revenue). The Secondary Professional Liability Insurance Program (SPLIP) protects members who are in good standing. Ten of the 12 regulators participate in the program; PEO and OIQ do not participate. The SPLIP ensures that the member, the public, and the reputation of the engineering profession stay protected in numerous cases involving professional services. Engineers Canada manages the SPLIP on behalf of the participating regulators.
- 3. Included in the strategic plan that was approved at the Annual Meeting of Members in May was the direction that Engineers Canada divest itself of the PIEVC Protocol and the IRP credential. This line includes the estimated costs of PIEVC and IRP divestiture work in 2019.

Considerations for the Board:

No additional considerations.

- Reductions to the budget for Affinity programs (item 1 in the table above) as follows:
 - \$2,550 due to holding fall suppliers' meetings in Engineers Canada's offices in Ottawa instead of in suppliers' Toronto offices
 - \$20,000 due to the assumption that no new members services programs are introduced in 2019 and therefore no legal services will be required

- Reductions to the budget for PIEVC and IRP divestiture (item 3 in the table above) as follows:
 - o \$17,500 due to moving selected PIEVC divestiture activities to 2020
 - \circ \$5,000 due to moving selected IRP divestiture activities to 2020

It is anticipated that the overall divestiture timeline commitments will not be impacted.

Recognition of the value of engineering and sparking interest in the next generation Portfolio detail analysis

Portfolio: Promotion and Outreach

Description: This portfolio contains all of the work under Operational Imperative 8, to foster recognition of the profession (promotion) and to spark interest in the next generation of engineers (outreach), including the development of a new strategy for the portfolio and reviews of the awards and scholarship programs.

Budget details:

	Cost element	2019
1.	Ongoing promotion and outreach	\$120,500
2.	Awards, scholarships, and fellowships	\$244,050
3.	New outreach and promotion strategy	\$15,000
	Totals	\$379,550

Rationale for 2019 budget:

- 1. This includes budget for Future City (\$71,000), National Engineering Month (\$35,500), Girl Guides Canada (\$7,000), Scouts Canada (\$5,000 new for 2019); and Go ENG Girl program (\$2,000). Except for \$5,000 for Scouts Canada, this budget line includes only the costs of ongoing work. Whether Engineers Canada will continue some or all of this ongoing work in the future will depend on the outcome of the new outreach and promotion strategy. Additional details regarding these expenditures and why they are not candidates for deferral in 2019 are as follows:
 - Future City: The schools involved in Future City have already integrated Future City into their curriculum for 2018-2019 and have begun their work. It would cause great disruption to schools and, in some cases, to school boards if Future City was deferred. This would also be a reputational risk for Engineers Canada. As part of the development of the aforementioned strategy, Engineers Canada will consult with the Future City partners and regulators in 2019. The \$71,000 consists of: \$21,500 regional coordination support (i.e., administration, equipment, teacher training, translation, etc.); \$43,600 travel and accommodations (i.e., student team travel to regional finals, winning teams from regional finals travel to finals in U.S., Engineers Canada staff travel to finals in U.S.); and \$5,900 awards and swag. Note that Engineers Canada will receive \$50,500 in sponsorships, which will reduce Engineers Canada's Future City cost from \$71,000 to \$20,500 in 2019. The sponsorships are: \$24,000 NSERC PromoScience; \$10,000 TD Insurance; \$10,000 Great-West Life; and \$6,500 Manulife.
 - National Engineering Month (NEM): NEM is implemented in partnership with the regulators. Engineers Canada provides \$25,500 in NEM swag items to the regulators, as

- well as \$10,000 for national social media promotion. If Engineers Canada was considering deferring NEM for 2019, the regulators would need to be consulted. If Engineers Canada chose to defer NEM support, this would be a reputational risk.
- Girl Guides Canada: Engineers Canada created the Engineering crest in partnership with Girl Guides Canada (GGC). The crests continue to be ordered by new guides from across the country for their engineering activities. Engineers Canada provides \$7,000 for the purchase of new crests and to support mailing the crests to guides across the country. Discontinuing the crest program in 2019 would be a reputational risk for Engineers Canada. As part of the development of the aforementioned strategy, Engineers Canada will consult with the GGC and the regulators.
- Scouts Canada: This is a new program, based on the success of the Girl Guides Canada program. Scouts Canada is aware that the program is pending the approval of Engineers Canada's budget by the Board.
- O Go ENG Girl: Engineers Canada provides \$2,000 to support new universities (outside Ontario) to run Go ENG Girl for the first time. This initial investment is aimed to encourage national growth of the Ontario Network of Women in Engineering's (ONWiE) very successful outreach to grade 9 girls. If Engineers Canada chose to defer Go ENG Girl support, this would be a reputational risk.
- 2. This includes operation of the awards program, the scholarship program, the fellowship program, the review of the awards program, and the review of the scholarship program.
- 3. This cost includes one consultation for the development of a new outreach and promotion strategy, a requirement of Engineers Canada's new strategic plan.

Considerations for the Board:

No additional considerations

- Increase to the budget for Awards, scholarships and fellowships (item 2 in the table above) as follows:
 - o \$22,500 due to scholarship payments

Protect official marks Portfolio detail analysis

Portfolio: Oversee registration and enforcement of Engineers Canada's trademarks and official marks, administer the federal incorporation process, and provide internal legal services to support the work of Engineers Canada.

Description: This portfolio contains all of the work in OP 10, and Program 12.6, including trademarks, official marks, federal incorporation administration, and internal legal support.

Budget details:

	Cost element	2019
1.	Trademark enforcement	\$116,603
2.	Texts and subscriptions	\$5,653
	Totals	\$122,256

Considerations for the Board:

None. (There is no change in the budget compared to 2018).

Fostering relationships between and amongst the regulators Portfolio detail analysis

Portfolio: fostering relationships between and amongst the engineering regulators' staff.

Description: contains all of the work under Operational Imperative 2, including supporting the officials and CEO groups and their work plans.

Budget details:

	Cost element	2019
1.	Officials groups	\$68,400
2.	CEO Group	\$40,950
	Totals	\$109,350

Rationale for 2019 budget:

- 1. This includes the costs to host a one-day meeting each of the National Practice Officials and the National Discipline & Enforcement Officials, a two-day meeting for the National Admissions Officials, including paying the travel costs for one staff person from each regulator. Also included here are travel costs for staff to support delivery of their work plan.
- 2. This includes the costs for hosting the CEO Group meetings, as well as supporting the travel costs of the smallest regulators (Engineers PEI, NAPEG, and Engineers Yukon) to attend all meetings, and travel costs of all those with less than 10,000 registrants for the summer meeting (smallest plus Manitoba, New Brunswick, Nova Scotia, and Newfoundland).

- The meetings of the National Practice Officials and the National Discipline & Enforcement Officials have been reduced from two days each to one day each for a savings of \$9,500
- The meetings of the National Admissions Officials Group have been reduced from two two-day meetings, to a single two-day meeting, for a savings of \$20,000
- Travel by staff to support the work of the National Admissions Officials has been cut in half for a savings of \$2,500
- These cuts are not expected to have a significant impact on the support for and delivery of work with the officials groups and CEOs.

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Monitoring, researching, and advising on engineering and regulation Portfolio detail analysis

Portfolio: Research into the engineering profession and regulation in general

Description: This portfolio contains all of the work in Operational Imperative 6: monitoring, researching, and advising on changes and advances that impact the Canadian regulatory environment and the engineering profession. In 2019 the work encompasses ongoing research, the development of a new research strategy, and a new feasibility study about establishing a task force on threats to self-regulation.

Budget details:

Cost element	2019
Ongoing research work	\$5,000
2. Feasibility study re task force on threats to self-regula	ation \$0
3. New research strategy	\$15,000
7	Totals \$20,000

Rationale for 2019 budget:

- 1. This includes pre-existing research work regarding emerging areas of engineering practice.
- 2. This feasibility study was mandated in the 2019-2021 Strategic Plan and will be done with in-house resources only.
- 3. The development of a new research strategy was mandated in the 2019-2021 Strategic Plan.

Considerations for the Board:

• The <u>labour market study</u> is normally updated bi-annually, but the current data is now three years old. The work is on hold until the new research strategy is established.

- The Labour Market Study has been eliminated from the operating budget for a savings of \$90,000. This means that work will not be done, and the information will not be updated in 2019.
- A decision was made to do both the emerging areas of engineering study and the feasibility study regarding a potential task force on threats to self-regulation with in-house resources instead of using consultants, for a savings of \$40,000. This will have an impact on the scope and quality of both initiatives as staff will not be able to dedicate as much time to this task as a consultant would have.

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Secretariat services Portfolio detail analysis

Portfolio: Secretariat services

Description: This portfolio contains all of the Board Responsibilities (1-6) and the expenses related to supporting the Board, its committees, and the National Council of Deans of Engineering and Applied Science (NCDEAS).

Budget details:

	Cost element	2019
1.	Board and committee meetings	\$622,035
2.	Governance, Strategic Planning, and Consultation project	\$97,240
3.	CEAB meetings	\$173,550
4.	CEQB meetings	\$132,450
5.	President's travel	\$78,000
6.	NCDEAS	\$2,400
	Totals	\$1,105,675

Rationale for 2019 budget:

- 1. This includes costs for the Board's February, May, September and December meetings; the May Annual Meeting of Members; the June Board workshop retreat; and all meetings of the Presidents Group, of Board committees and of Board task forces (except for CEAB and CEQB).
- 2. This includes the costs to conclude the Governance 2.0 work in 2019. All other deliverables of the Governance, Strategic Planning, and Consultation project (revised Guiding Principles and Purposes, 2019-2021 Strategic Plan, Consultation Program, and Strategic Planning Program) will be completed in 2018.
- **3.** This includes the costs for three face-to-face CEAB meetings, as well as costs for face-to-face meetings of the CEAB's Executive and Policies & Procedures Committees.
- **4.** This includes the costs for two face-to-face CEQB meetings, and the costs for face-to-face meetings of the CEQB's Executive Committee.
- **5.** This includes the costs for the President to travel within Canada. Costs for travel to specific events (e.g. the International Engineering Alliance) are included in each items' budget.
- **6.** This includes costs for the CEO (or his designate) to attend two NCDEAS meetings and maintain a relationship with the group.

Considerations for the Board:

- The CEAB's total 2019 budget is \$800,674 (as compared to \$678,000 in 2018). Costs for delivery of their ongoing accreditation work items are included in the *Accreditation* Portfolio Detail Analysis Sheet.
- The CEQB's total 2019 budget is \$181,000 as compared to \$250,000 in 2018. Costs for delivery of their work plan items are included in the *Services and Tools* Portfolio Detail Analysis Sheet.
- The costs for Board and committee meetings are almost \$100,000 lower than in 2018. The breakdown of the Board meetings is:

\$118,650	Winter meeting
\$223,435	Spring meeting and annual meeting of members
\$102,550	Summer retreat / workshop
\$110,600	Fall meeting
\$50,000	Late fall meeting

- Reductions to the budget for Board and Committee meetings (Item 1 in the table above), as follows:
 - Spring meetings (Board and Annual Meeting of Members) reduced by \$56,000 based on a detailed review of actual expenses from the last three annual meetings
 - Winter Board meeting reduced by \$15,000 based on 2018 actual expenses
 - Fall Board meeting reduced by \$23,000 based on 2018 actual expenses and by limiting attendance to Board members only
 - The Governance Committee expenses reduced by \$5,418 by holding their face-to-face meeting at the EC offices and eliminating any consultant fees
 - \$7,400 of savings realized as a result of removing all hospitality suites
 - There is a partially off-setting increase to the budget of \$44,000 as a result of the late fall (December) Board teleconference being replaced by a Board members-only, face-to-face meeting. This change required the original budget for the meeting to be increased from \$6,000 to \$50,000.
- The cost of the Governance, Strategic Planning and Consultation project has increased due to a decision to pay for the travel and accommodations of the CEOs and Presidents who will be participating in consultations at the February board meeting and to consult one-on-one with APEGA (at their request). The increase is \$16,516.
- A slight savings to the CEAB's Executive Committee budget has been realized by only holding face-to-face meetings in conjunction with Accreditation Board meetings for a savings of \$1,325

Providing services and tools for regulation and professional practice Portfolio detail analysis

Portfolio: Providing services and tools that enable assessment, facilitate national mobility, and enable excellence in engineering practice and regulation. These services are provided by both the Qualifications Board (through the production of examination syllabi, guidelines, model guides, and white papers) and by Engineers Canada staff.

Description: This portfolio contains all of the work in Operational Imperative 3 including the work plan of the Qualifications Board (CEQB), the National Membership Database (NMDB), and Strategic Priority 4, the Competency-Based Assessment (CBA) project.

Budget details:

	Cost element	2019
1.	CEQB work plan items	\$48,550
2.	National membership database	\$2,000
3.	Competency-Based Assessment project (SP4)	\$490,101
	Totals	\$540,651

1. This includes budget for the delivery of the 2019 CEQB work plan items. The 2019-2021 CEQB work plan is also being presented for approval today. At present, the budget includes money for:

Model guide on risk management (revision)	New for 2019	\$20,000
White paper on environmental engineering (new)	Carried forward	\$14,000
Model guide on assessment of non-CEAB applicants (new)	Carried forward	\$10,000
Liaison with the regulators (officials groups and individual	n/a	\$ 4,550
regulators)		
TOTAL		\$48,550

2. These costs include the development fees paid to Engineers and Geoscientists BC (\$445,500) as well as costs to support the User's Group and the business model groups. These are the groups of regulator staff and CEOs contributing to the development of the online assessment tool.

Considerations for the Board:

- The budget for the CEQB's work plan items matches what is proposed in the Draft Qualifications Board 2019-2021 Work Plan which is presented today for approval.
- The CEQB's total 2019 budget is \$181,000, versus \$250,000 in 2018. Costs for Secretariat Services
 (i.e. the costs to host the regularly-occurring QB meetings) are included in the Secretariat Services
 portfolio.
- The CEQB uses consultants to support the delivery of their work plan items. This allows for a high quality of documents, while managing workload for staff.

• The Board has previously authorized spending \$1M from reserves for the Competency-Based Assessment project (Motion #5442). Engineers Canada has signed a \$650,000 contract with Engineers & Geoscientists BC to re-develop their online assessment tool into a national tool over the period 2018 to 2020.

Changes to budget since the September Board meeting:

 The budget for the CEQB work plan has been reduced based on the elimination of the White Paper on the Evolution of Assessment of non-CEAB Applicants and the deferral of an update to the Stepby-Step Guide for Developing a CPD guideline from the 2019 budget. In addition, work to promote the revised EIT webpage will be done in-house instead of externally.

Briefing note

For Board decision

Approval of term e	ktension for Funding Task Force Agenda number 7		
Purpose:	The Funding Task Force is requesting an extension to present funding models for consideration in March, and to present a final report in May.		
Motion(s) to consider:	THAT the Funding Task Force receive an extension to provide an analysis of the impacts of the current and alternative funding models by March 1, 2019, and a recommendation by May 24, 2019.		
Vote required to	x Simple majority		
pass:	Two-thirds majority (refer to articles 5.7 and 5.8 of the bylaw.)		
Authority:	This extension will allow adequate time for the Funding Task Force (FTF) to present funding model options as well as collect feedback from regulators on said options. This will ensure that a funding model that is both equitable and sustainable is presented to the Board for its consideration.		
Transparency: (all meetings, debates, and decisions shall be open, except for certain subject matters as described in Board Transparency: (all x Open session In camera, reason (check all that apply): The security of the property of the organization Personal matters about an identifiable individual The proposed or pending acquisition of assets by the organization			
Policy 7.1)	Labour relations or employee negotiations Litigation or potential litigation The receiving of advice that is subject to solicitor-client privilege Another matter as the Executive Committee or Board determines		
Prepared by:	Jorge Monterrosa, Controller, Engineers Canada		
Presented by:	Dwayne Gelowitz, Chair, Funding Task Force		

1. Problem/issue definition

 The Funding Task Force is requesting an extension to further develop the current and alternative funding models for Engineers Canada. An extension would allow adequate time for consultation before providing a final report.

2. Proposed action/recommendation

 Approval to extend the Funding Task Force's mandate to present proposed models to the Board on March 1, 2019, followed by a period of consultation with a final report to be presented May 24, 2019.

3. Other options considered:

None

4. Risks

 Without the extension, the Funding Task Force will not have adequate time to carry out its mandate. The Funding Task Force would not have the opportunity to consult with or collect critical feedback from regulators about the proposed funding models.

5. Financial implications

None

6. Benefits

• Adequate time for consultation on proposed recommendations will yield a more robust and complete report on possible funding models.

7. Consultation

 The Funding Task Force agreed on November 7, 2018 that more time was needed to fulfill its mandate.

8. Next steps (if motion approved)

- Continue the work of the Funding Task Force and present the funding models that the Task Force is recommending for consultation to the Board on March 1, 2019.
- Provide a final report to the Board post consultation May 24, 2019.

9. Appendices

N/A