

2019 PEO Annual General Meeting Member Submission

WHEREAS Objective 2 of PEO's 2018-2020 Strategic Plan states that "PEO will better understand where, how and by whom professional engineering is being performed in Ontario, and under what conditions";

WHEREAS many EITs are performing professional engineering work, often in safety critical areas with no means to be directly supervised by a licensed Professional Engineer;

WHEREAS the difficulty of engaging a local Professional Engineer to act as a voluntary monitor is particularly aggravated in the case of EITs working in emerging and non-traditional disciplines;

WHEREAS finding a local Professional Engineer to act as a voluntary monitor for an EIT, supervising them in their workplace for 30 hours per month and assuming responsibility for their engineering work is not a feasible, viable or scalable solution to the growing issue;

WHEREAS the 2018 National Membership Report by Engineers Canada estimates that only "approximately 47.7 per cent of the 2013 cohort proceeded along the path to licensure and became licensed in 2017";

WHEREAS Engineers Canada's Monitoring Report on the Educational Credential Assessment Project (2015), found that "currently only 15% of engineering immigrants apply for licensure in Canada";

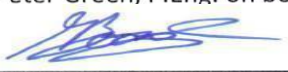
WHEREAS Objective 8 of PEO's 2018-2020 Strategic Plan states that to "create a seamless transition from student member to EIT to licence holder, PEO will establish coordinated and integrated systems and outreach programs to allow engineering students to seamlessly proceed through the licensure process";

WHEREAS The Institute for Canadian Citizenship (ICC) report on barriers to licensure for international engineering graduates (IEGs) observed that "the path to licensure is long and frequently opaque" and recommended "competency-based assessment processes like Engineers and Geoscientists BC's pilot program, the Canadian Environment Experience Requirement Project, should be adopted by regulators across Canada to satisfy the Canadian work experience requirement";

WHEREAS Objective 2 of PEO's 2018-2020 Strategic Plan states that, to "augment the applicant and licence holder experience, PEO will address any perceived barriers and friction points between itself and its applicants and licence holders, and build "customer satisfaction" into all its regulatory processes and initiatives";

THEREFORE BE IT SUBMITTED THAT, PEO Council form a task force to assess and report on barriers for licensure in emerging/non-traditional disciplines and develop an equitable and sustainable process for EITs and IEGs, who are not directly supervised by a licensed Professional Engineer, to satisfy the Canadian work experience requirement defined in The Professional Engineers Act Regulation 941, Section 33.4. The report and recommendations should be presented to Council for approval no later than the end of 2020.

Moved by: 
Peter Green, P.Eng. on behalf of Madeline Van Der Paelt, EIT

Seconded by: 
Guy Boone, P.Eng., FEC, Eastern Regional Councillor

Date: April 15, 2019

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Background Information

The current process of obtaining and using a monitor to assess an EIT's competency and experience is not feasible for many EIT's trying to obtain licensure in emerging fields like Computer Engineering or who are entrepreneurs and are self-employed. These fields are rapidly changing and highly competitive, and many companies are not comfortable with allowing an outside P.Eng to observe an EIT on the job for 30 hours per month as part of the current monitor program. That is, if a suitable P.Eng is even available nearby, and willing to assume responsibility for the EIT's engineering work.

There are only 1366 registered Computer Engineers in Ontario according to PEO's Directory of Practitioners. This is very minor compared to more traditional disciplines like electrical (17000), or mechanical engineering (22600). As a result, there are no Professional Engineers available to supervise new computer engineers as they work towards licensure. The PEO 2018-2020 Strategic Plan states among its objectives that the PEO would like to "create a seamless transition from student member to EIT, to licence holder". The 2018-2020 objectives also state that to "augment the applicant and licence holder experience, PEO will address any perceived barriers and friction points between itself and its applicants and licence holders, and build "customer satisfaction" into all its regulatory processes and initiatives". One of the largest barriers to licensure among EIT's in emerging fields is supervision from a licensed Professional Engineer. If the licensure process does not change for these EIT's, there will never be licensed Professional Engineers to supervise new EIT's in emerging disciplines.

Currently, those who aren't directly supervised by an engineer may acquire the help of a licensed Professional Engineer acting as a monitor to become licensed. According to the Guide to the Required Experience for Licensing as a Professional Engineer in Ontario, a monitor must observe the EIT in their workplace for 30 hours per month, provide guidance to the intern, assume responsibility for the EIT's engineering work and be able to evaluate their engineering experience.

There are two main issues with the current system. First, the monitor must observe the EIT in their workplace for 30 hours per month. This is problematic in many regards; it is hard to find someone nearby, with relevant experience, who is available to volunteer for 30 hours per month during typical working hours. This is a known issue. According to the PEO Experience Requirements Committee's public meeting minutes from the fall of 2018, the committee has already proposed to council that the 30 hour requirement be removed. The second issue is the requirement that the monitor "assumes responsibility for the services within the practice of professional engineering that the engineering intern or provisional licence holder is undertaking in accordance with section 12.3(b) of the Professional Engineers Act". Section 12.3(b) of the Act states that a person such as an EIT may do engineering work, when licences or certificates required, as long as a P.Eng "assumes responsibility for the services within the practice of professional engineering to which the act is related". This has no bearing on emerging disciplines, such as Computer Engineering, where there are no licences or approval required. Many of these companies are self-insured, taking responsibility for their employee's work, and do not require a P.Eng. Therefore, there is little incentive for a company to allow a monitor in the workplace, or even support an EIT in the licensure process.

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The proposed monitor program would consist mainly of 3 parts:

- A detailed weekly log book of the EIT's work
- Monthly on-site visits by the P.Eng monitor for 1 year (12 visits total)
- Occasional reports sent by the monitor to the PEO

The EIT would coordinate with the PEO to find and approve a suitable monitor. The EIT would work with their company prior to the first meeting, to ensure that they had support and any NDA's or other documentation the company would require in place for the monitor. At the first meeting, the monitor would visit the EIT's workplace, meet their team leads and peers, and gain an understanding of the type of work done on site. The monitor would assess the EIT's work, establish if it meets the requirements of "engineering work", and provide their initial assessment in a report to the PEO. The PEO would then need to approve the placement in a reasonable time period (2-4 weeks).

Upon approval, the EIT and monitor would meet monthly at the EIT's workplace and the EIT would continue to keep a weekly log of their work and send it regularly to the monitor. In the monthly meetings, the EIT would review their work with the monitor. This could include discussing internal documentation, conducting demonstrations, and reviewing the EIT's log book. While on site, the monitor would validate the EIT's log entries by meeting with the EIT's supervisor and peers. The monitor would gauge the EIT's progress over the course of the year to make sure they are gaining responsibility and acceptable experience.

Throughout the year, the monitor would be available as necessary to provide guidance and support to the EIT. They could assist with issues that were non-technical, such as management of engineering projects, communication skills and social/ethical questions. Periodically, the monitor would report to the PEO on the status of the EIT and their growth.

The monitor would not assume liability or responsibility for the EIT or their work. The detailed weekly work log and on-site review should provide sufficient information to the monitor, such that they feel comfortable to determine the extent of the engineering experience and suitability for licensure. In other provinces, such as New Brunswick and Newfoundland, the engineering regulatory bodies also require that EIT's keep a detailed log book, however they only require *quarterly* meetings with the P.Eng.

Such an approach would also prepare EIT's well for the PEAK program. PEAK requires licensed members to complete an annual, online self-assessment which is used to determine the recommended amount of time a member should spend on continuing knowledge. PEAK advertises itself as flexible and relevant, allowing members to design their own knowledge plan and focus on areas specific to their work. This model should be applied to other areas of licensure as well, such as the monitor program. PEAK "is not a one-size-fits-all solution", and the monitor program shouldn't be either. It must be flexible enough to work with emerging fields in engineering, otherwise there will never be an appropriate representation of those disciplines in the profession.