

Lecture 23 — Professional Engineers Act & Ontario Regulation 941

Jeff Zarnett
jzarnett@uwaterloo.ca

Department of Electrical and Computer Engineering
University of Waterloo

August 20, 2016

Acknowledgments: Douglas Harder [1], Julie Vale [2]

The Professional Engineers Act is a provincial law (statute) that governs the practice of engineering.

The professional association – Professional Engineers Ontario – is empowered and mandated by this act to regulate the practice in Ontario.

The association was established 14 June, 1922 and consists of multiple chapters by region (e.g., “Grand River”).

The Act, in section 2, officially recognizes PEO as the official regulator.

Principal Object of the Association

Section (3) of the Act says:

The principal object of the Association is to regulate the practice of professional engineering and to govern its members, holders of certificates of authorization, holders of temporary licences, holders of provisional licences and holders of limited licences in accordance with this Act, the regulations and the by-laws in order that the public interest may be served and protected.

(In this usage, “object” is like “objective”.)

For the purpose of carrying out its principal object, the Association has the following additional objects:

- 1 To establish, maintain and develop standards of knowledge and skill among its members.
- 2 To establish, maintain and develop standards of qualification and standards of practice for the practice of professional engineering.
- 3 To establish, maintain and develop standards of professional ethics among its members.
- 4 To promote public awareness of the role of the Association.
- 5 To perform such other duties and exercise such other powers as are imposed or conferred on the Association by or under any Act.

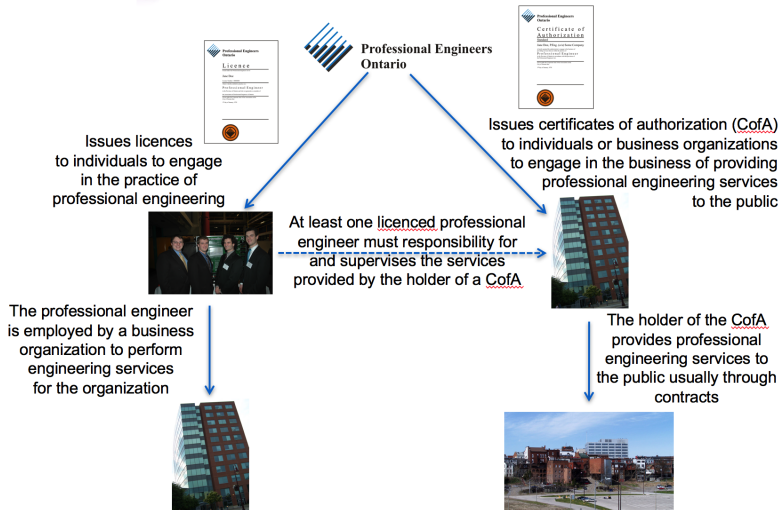


Image Credit: D. W. Harder

The act defines:

- The objectives of the association and its council
- Meetings, membership, regulations, by-laws, and publications
- The powers of the Attorney General
- The framework for licensure and certification
- The duties and powers of the various committees and councillors
- The requirement for insurance
- Details regarding discipline and enforcement

The legislative branch of parliament enacts statutes.

Only an act of parliament can compel the government to spend money.

The executive branch may enact regulations, codes, orders-in-council, etc. PEO may make regulations through the approval of the Lieutenant Governor.

Regulations are subject to review by the Attorney General.

The Attorney General is a member of the Cabinet or Executive Council.

The Attorney General is the chief legal advisor to the government with the responsibility for the oversight of the justice system within the province.

The reason that this is a provincial act and not an act of the federal Parliament of Canada is that the Constitution of Canada prescribes:

*In each Province the Legislature may exclusively make Laws in relation to Matters coming within the Classes of Subjects next hereinafter enumerated; that is to say,
10. Local Works and Undertakings ...*

The practice of professional engineering falls, at least, under that clause.

How Does Regulation Work?

Section 7(1) of the Professional Engineers Act specifies those items with respect to which PEO may make regulations.

The regulations are published under Ontario Regulation 941.

There are 34 items listed in the act (a couple of which are repealed).

There are 88 sections in O.Reg. 941.

Each of the 88 sections must in some way regulate at least one aspect of one of the items in the act.

PEO regulates the practice of professional engineering through:

1. Issuing of licences to those qualified to engage in the practice of professional engineering.
2. Issuing of Certificates of Authorization for to organizations wishing to do business offering professional engineering services to the public.

Licence, *n.*

A formal, usually a printed or written permission from a constituted authority to do something, e.g. to marry, to print or publish a book, to preach, to carry on some trade, etc.; a permit.

License, *v.*

To grant (a person) a licence or authoritative permission to hold a certain status or to do certain things, e.g. to practise some trade or profession, to hold a curacy, to preach, to use armorial bearings, to keep a dog, to carry a gun, etc.

Source: Oxford English Dictionary

PEO issues licences to natural persons who have satisfied:

The general requirements for licensure stated in the Professional Engineers Act
AND the specific requirements for licensure listed in the regulations.

14. (1) The Registrar shall issue a licence to a natural person who applies therefor in accordance with the regulations and,

- (a) ~~Repealed: is a Canadian citizen;~~
- (b) is not less than eighteen years of age;
- (c) has complied with the academic requirements specified in the regulations ..., including passing such examinations as the Council sets or approves ..., or is exempted by the Council from complying with the requirements;
- (d) has complied with the experience requirements specified in the regulations for the issuance of the licence;
- (e) has complied with any other requirements specified in the regulations for the issuance of the licence; and
- (f) is of good character.

33. (1) Each applicant for a licence shall comply with the following rules:

- 1 The applicant shall demonstrate that he or she has obtained,
 - i) a bachelor's degree in an engineering program from a Canadian university that is accredited..., or
 - ii) equivalent engineering educational qualifications
- 2 48 months of experience in the practice of professional engineering that provides sufficient experience
- 3 Up to 12 months of the practical experience referred to in paragraph 2 may be acquired after the applicant has completed one-half of the classroom component of the degree...
- 4 At least 12 months of the balance shall be acquired in a Canadian jurisdiction
- 5 The applicant shall successfully complete the Professional Practice Examination

Canadian Experience Requirement

Experience acquired outside Canada satisfies the requirements of paragraph 4 of subsection (1) if,

- (a) it is obtained while the applicant is,
 - i) employed by an employer whose head office is located in Canada, and
 - ii) supervised by one or more persons who are legally authorized to engage in the practice of professional engineering in a Canadian jurisdiction; and
- (b) in the Council's opinion, the experience provides the applicant with,
 - i) the necessary practical skill for the practice of professional engineering, and
 - ii) sufficient familiarity with the applicable Canadian codes, regulations and standards for the practice of professional engineering.

Is a civil engineer allowed to engage in the field of electrical engineering?

Konrad Zuse, who designed the first programmable electronic computer – which happened to be Turing complete, was a civil engineer.

When you get your licence, you will note that there are no restrictions.

In theory, someone who studies electrical engineering can approve a building's construction.

Is this a good idea?

Holders have a responsibility to not undertake work they are not competent to perform by virtue of their training and experience.

Doing so is professional misconduct...

The members of PEO are those who have licences to engage in the practice of professional engineering.

The majority of the Council are Members who are elected by Members.

Members comprise the majority of all committees:

- Executive Committee
- Academic Requirements Committee
- Experience Requirements Committee
- Registration Committee
- Complaints Committee
- Discipline Committee
- Enforcement Committee
- Fees Mediation Committee

As well as other committees...

The all-or-nothing approach that requires everyone who engages in the practice to have a license, or be supervised by someone with one, is a little strict.

Consider the following scenarios:

What if a professional engineer from another jurisdiction needs to be brought in for one specialized project?

What if a professional engineer from another country has immigrated to Ontario, has all the requisite experience except experience in Canada?

What if an individual has specialized knowledge but does not have a complete engineering degree?

What if a certified engineering technician would like to offer engineering services as a technician to the public?

Should there be other forms of license for these situations? Why (not)?

Temporary licenses do exist and they require the payment of a fee and one of:

- 1** Residence in a province or territory of Canada other than Ontario and membership in an association of professional engineers in another province or territory of Canada that has objects similar to the objects of the Association and that requires qualifications for membership at least equal to the qualifications required for the issuance of a licence to engage in the practice of professional engineering in Ontario.
- 2** Qualifications at least equal to the qualifications required for the issuance of a licence to engage in the practice of professional engineering in Ontario.
- 3** Wide recognition in the field of the practice of professional engineering in respect of which the work to be undertaken under the temporary licence relates and not less than ten years experience in such field.

- 1** Every temporary licence must specify,
 - (a) the works, facilities, machinery, equipment or other property in Ontario to which the temporary licence relates;
 - (b) the name of the person, firm or corporation by whom the holder of the temporary licence is employed or engaged to perform services in Ontario within the practice of professional engineering;
 - (c) the name of the Member, if any, with whom collaboration is required under this Regulation; and
 - (d) the period of time, not exceeding twelve months, for which the temporary licence has been issued.
- 2** It is a condition of every temporary licence that the services within the practice of professional engineering that may be provided by the holder of the temporary licence are limited to the services specified in the temporary licence.

Provisional licenses may be granted to those who have adequate engineering experience but lack the 12 months of it being in Canada.

It comes with two conditions:

- 1 It is valid for 12 months and may be renewed maximum once.
- 2 The holder of the provisional license must be supervised by a professional engineer.

See O.Reg. 941, section 44.1.

The requirements for a limited license are:

1. One or more of the following:

- i) A three-year diploma in engineering technology or a Bachelor of Technology degree in engineering technology from an institution approved by the Council.
- ii) A four-year honours science degree in a discipline and from a university approved by the Council.
- iii) Academic qualifications accepted by the Council as equivalent to a diploma or degree mentioned in subparagraph i or ii.

The requirements for a limited license are:

2. Thirteen years of experience in engineering work acceptable to the Council, including the years spent in obtaining the post-secondary academic training referred to in paragraph 1 with at least one year of such experience under the supervision and direction of a Member or Members or under the supervision of a person authorized to practice professional engineering in the province or territory in Canada in which the experience was acquired and at least the last two years of the experience in the services within the practice of professional engineering with respect to which the limited licence is to apply.

... as well as payment of the fee, passing the professional practice examination, and good character.

In technical fields associated with professions, should technicians and technologists be allowed to practice independently?

Should dental hygienists be allowed to provide teeth-cleaning services independent of being employed by a dentist?

Should paralegals be allowed to provide legal services for lower level courts and administrative tribunals?

Should pharmacy technicians be allowed independent practice under certain restrictions?

There is already a class of certified engineering technicians and technologists who may practice the application of engineering

12. (1) The work performed by a certified technician, a certified engineering technician, applied science technologist or a certified engineering technologist consists of providing technical services,

- (a) within the framework of practices, codes and standards that are established or enforced under an Act of Ontario or of Canada
- (b) within the framework of published standards in the applicable industry or field; and
- (c) under the technical direction of a licensed member of an appropriate profession ...

CETs, however, must be associated with the holder of a Certificate of Authorization if they wish to offer services to the public.

The most recent changes to the Profession Engineers Act allow for an engineering technologist class of limited licence.

With a LET, an individual can acquire a Certificate of Authorization and provide technical services to the public.

A licence identifies an individual as being qualified to engage in the practice of professional engineering.

Such an individual can be hired through an employment contract to provide professional engineering services to the employer.

Such contracts are subject to the Employment Standards Act.

What happens if a legal person is not in a position to hire a professional engineer as an employee?

Recall, from the definition of a profession:

... prepared to exercise that skill in the interests of *the public*.

For an engineer, the public is anyone other than the engineer him or herself or the engineer's employer.

An engineer who provides services to the public is said to be in **independent practice**.

Such an engineer is said to be **retained** by the client.

Employment vs Independent Practice

Employment	Independent Practice
You work exclusively for one business entity	You are free to provide your services to more than one business entity
Your employment contract addresses non-disclosure, ability to control work hours and time off, expectations related to performance, notice, termination and remuneration	Your relationships are independent contracts or relationships, or business entities purchase your time from an agency
Expenses are reimbursed	You invoice your expenses
You are paid a salary or wage	You are not paid if services are not performed
You are provided an office and equipment on business premises	You acquire your own business facilities
You have set work hours	You are not restricted as to the hours of work
You are provided benefits, e.g., vacation pay	You receive no vacation pay or bonuses
Your work is covered under the business entity's professional liability insurance policy	You require your own professional liability insurance

Source: http://www.peo.on.ca/offering/CofA%20_Infoguide.pdf

The concept of certifying the offering of professional engineering services to the public is currently limited to Ontario.

In other provinces, having a licence implies you may offer your services to the public.

The need for certification will become more clear once we look at the requirements associated with certificates of authorization.

From the PEA, section 15:

The Registrar shall issue a certificate of authorization to a natural person, a partnership or a corporation that applies therefor in accordance with the regulations if the requirements and qualifications for the issuance of the certificate of authorization set out in the regulations are met.

From the PEA, section 17:

It is a condition of every certificate of authorization that the holder of the certificate shall provide services that are within the practice of professional engineering only under the personal supervision and direction of a holder of a licence, temporary licence or limited licence.

The requirements and qualifications for the issuance of a certificate of authorization are:

- 1 The applicant must designate one or more holders of a licence, temporary licence or limited licence, each of whom has at least five years of professional engineering experience following the conferral of a degree ... or the completion of an equivalent engineering education.
- 2 The application for the certificate of authorization must state that the persons named in paragraph 1 are,
 - i) the applicant for the certificate of authorization,
 - ii) employees of the applicant,
 - iii) partners in the applicant, or
 - iv) employees of partners in the applicant,and will devote sufficient time to the work of the applicant to carry out the responsibilities set out in paragraph 1.

There is also a requirement of:

- Liability insurance.
- Mandatory disclosure of not having liability insurance.
- Exemption from liability insurance due to one of the few exceptions (aviation hazards, shipping hazards, nuclear hazards...).

The requirements are then, condensed:

- Accountability
- Commitment
- Insurance

When a professional engineer provides a service to a member of the public, the engineer applies his or her seal onto the document.

53. Every holder of a licence, temporary licence, provisional licence or limited licence who provides to the public a service that is within the practice of professional engineering shall sign, date and affix the holder's seal to every final drawing, specification, plan, report or other document prepared or checked by the holder as part of the service before it is issued.

It is a sign of: authorship, responsibility, and reliance.



When sealing documents:

- The original document must remain unsealed and it must be kept by the engineer.
- Only duplicates of final documents should be sealed and disseminated.
- If a preliminary or draft document must be sealed for registration purposes, the document must clearly show that it is not to be relied upon; e.g., the word “DRAFT” appearing both as a watermark and in bold close to the seal.
- Electronic documents should contain an electronic copy of the seal and the electronic document must be signed using a digital signature.

It is significantly more work to work in independent practice than it is to work for an employer.

Independent practice requires significantly more varied skills and organization and often such skills can only be honed with practice.

How can a professional engineer identify him or herself as being experienced in independent practice?

The Act makes provisions for the designation of consulting engineer.

- 1** The Council shall designate as a consulting engineer every applicant for the designation who,
 - (a) is a Member;
 - (b) is currently engaged, and has been continuously engaged, for not less than two years or such lesser period as may be approved by the Council, in the independent practice of professional engineering in Canada;
 - (c) has, since becoming a Member, had five or more years of professional engineering experience that is satisfactory to the Council;
 - (d) has passed the examinations prescribed by the Council or has been exempted therefrom, pursuant to subsection (2).
- 2** The Council may exempt an applicant from any of the examinations mentioned in clause (1) (d) where the Council is of the opinion that the applicant has appropriate qualifications.

Throughout this course, these definitions will be used:

A **member** is a professional engineer and member of the Association of Professional Engineers Ontario (PEO).

A **practitioner** is any Member, any holder of either a Certificate of Authorization or a temporary, provisional or limited licence.

A **holder of a licence** is any Member or any holder a temporary, provisional or limited licence.

PEA: <https://www.ontario.ca/laws/statute/90p28>

O.Reg.941: <https://www.ontario.ca/laws/regulation/900941>

- [1] D. W. Harder, "ECE 290 Lecture Materials," 2013.
Online; accessed 31-May-2016.
- [2] J. Vale, "ECE 290 Course Notes," 2011.

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