

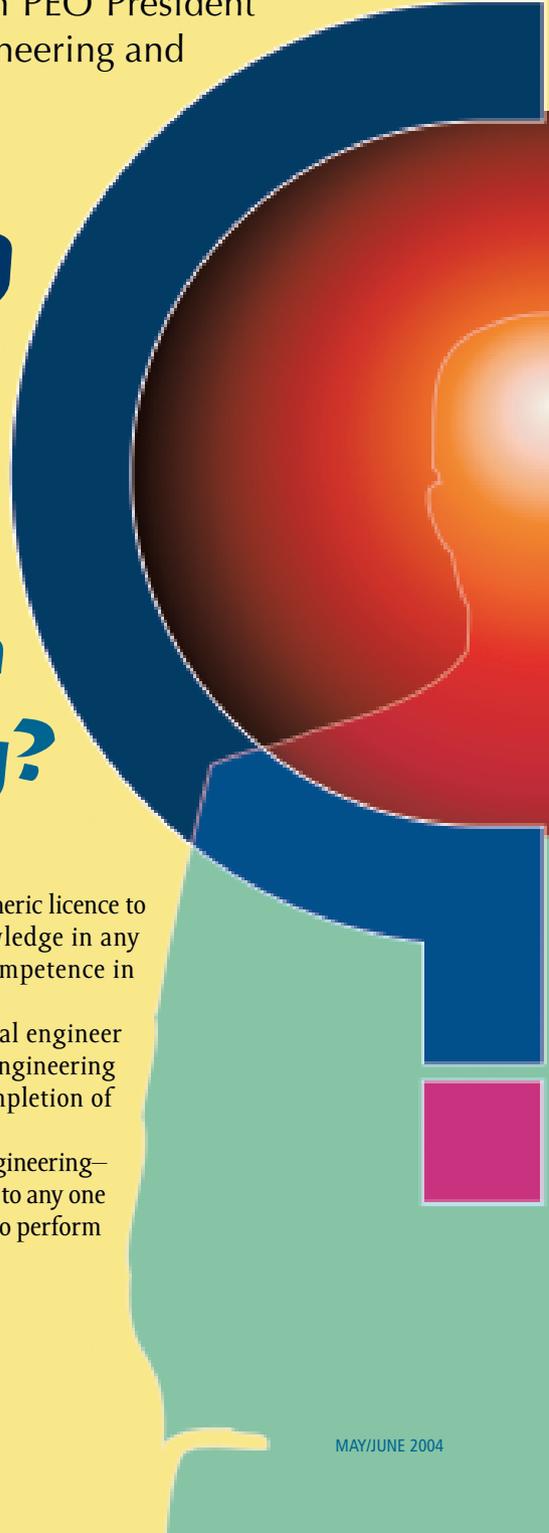
Any examination of the engineering “team” invites questions about qualifications for membership. Is it time to expand today’s licensing classifications, or go with the status quo? There are arguments on both sides, but at the core of the issue is a practitioner’s commitment to ongoing competence and professional development. The viewpoint below is based on then PEO President Ken McMartin’s presentation at last November’s Engineering and Technology Forum.

## *The Evolving Role of the P.Eng.— Is certification Necessary?*

**T**he question often asked and debated within the profession is whether the generic licence to practise remains appropriate in today’s world, where the depth of knowledge in any particular field is so large, and clients and governments expect proof of competence in particular specialties.

As most are aware, the current requirements for licensure as a professional engineer in Ontario are an accredited undergraduate degree or equivalent, four years engineering experience with at least 12 months experience in Canada and successful completion of the Professional Practice Exam.

The degree and work experience will typically fall within one discipline of engineering—civil, mechanical or chemical, for example. Yet the licence to practise is not restricted to any one discipline. The onus is on the engineer to undertake work he or she is competent to perform by virtue of the practitioner’s training and experience.



At the same time, employers and regulators want more education packed into undergraduate programs. Employers want soft skills, such as communication, teamwork and project management promoted in the classroom, while PEO would like to see increased attention to ethics and professionalism.

Meanwhile, government is making public policy relating to accountability—as was the case with the *Ontario Building Code* (OBC). The Ontario Ministry of Municipal Affairs and Housing's Building Regulatory Reform Advisory Group (BRRAG) voiced concerns about the lengthy processes for building permit application. There were also concerns regarding the delays in issuing permits resulting from the large number of errors in permit applications.

BRRAG recommended that those involved with building permit applications be required to demonstrate their knowledge of the OBC. The ministry responded with Bill 124. Now, revisions to the OBC under Bill 124 require designers to

ministry agreed that PEO could administer the registration and qualification of professional engineers under the OBC. This was granted with the provision that PEO agree to introduce similar revisions in its legislation that would emulate the requirements outlined in Bill 124. The process of making the necessary changes is now underway to allow PEO to exercise its delegated authority. While the OBC is a product of the provincial government, engineers have a responsibility to be familiar with its various provisions.

Critics of Bill 124 say the government is over-regulating the industry and that professional engineers already know the OBC and work in full compliance. In fact, under section 72(2)(d) of Regulation 941, "professional misconduct" includes "failure to make responsible provision for complying with applicable statutes, regulations, standards, codes, by-laws and rules in connection with work being undertaken by or under the responsibility of the practitioner." Critics similarly maintain that a professional engineer's seal on a drawing should demonstrate that the design was done in full compliance with the OBC.

In the process of outsourcing functions, however, the government wants to be assured that those given the legislative right to do the work are properly qualified.

## By Ken McMartin, P.Eng.

take examinations to demonstrate knowledge and understanding of the code in order to submit permit applications. The reforms were designed to streamline the application process and provide greater accountability to the public.

Among the provisions of the bill are mandatory qualifications for building officials and mandatory registration for certain classes of designers and Registered Code Agencies, including mandatory qualifications and professional indemnity insurance. Over the next year and a half, building practitioners must meet these new qualification and registration requirements.

In recognition of the self-regulatory authority of the engineering profession, the

The message on this is clear: There is an increasing demand for greater accountability relating to the use of engineering services.

In addition to issues of accountability, the question of certification has been raised by the Ministry of the Environment through Bill 56—the *Brownfields Statute Law Amendment Act*. The bill will require a "qualified person" (QP) to sign the record of site condition for contaminated site assessment and remediation. To ensure the necessary qualifications and accountability of QPs, PEO and the Association of Professional Geoscientists had initially proposed to the ministry that they develop a recommended procedure to identify and qualify licensed professional engineers and/or professional geoscientists as QPs. However, the bill, as currently drafted, permits non-licensed practitioners to act as QPs.

While acknowledging that certified practitioners certainly have strong qualifications in their respective areas, can the public and government be guaranteed the same accountability as is required of a licensed professional who is accountable under a provincial statute and legislated mandate?

Currently, the only professional engineering specialty designation granted by PEO is the restricted title of Consulting Engineer. The designation is granted to professional engineers with at least five years experience after conferral of their degree, whose primary business is providing independent professional engineering services and whose work in independent practice has been vouched for by their peers.

In engineering, there are high standards of initial qualification through the admissions process to licensure. Engineering also has a specific “internship” process (the experience requirement), which leads to a generic licence to practise.

A parallel can be made with the legal profession, through its use of restricted titles. In 1986, the Law Society of Upper Canada created its Specialistrestricted titles, similar to that of consulting engineer, to iden Certificate Program that bestows tify those in the profession with demonstrated ability and experience in particular fields of law. The certification, which has a five-year term, was designed to act as a check for maintaining performance standards and to demonstrate quality assurance to the public.

The program is voluntary, however, and no lawyer is required to be certified as a specialist to practise in the area of law covered by that specialty. Only those certified by the Law Society may refer to themselves as specialists.

On the other hand, the model of the medical profession involves practice restrictive specialist certification. Physicians can be certified in 60 specialties after completing an MD. Certification for these areas of specialty rests with the national accrediting bodies and has been in place for several decades.

The Royal College of Physicians and Surgeons of Canada sets the criteria for the designation of a specialty, develops and defines the education objectives and national standards for medical, laboratory and surgical specialties, and conducts examinations for specialist certificates. For a specialist certificate, physicians must complete the requirements of postgraduate residency education and pass examinations.

In engineering, there are high standards of initial qualification through the admissions process to licensure. Engineering also has a specific “internship” process (the experience requirement), which leads to a generic licence to practise. The question being posed is: Is this enough to ensure continuing competence? I don’t have all the answers, and a made-in-Ontario solution wouldn’t help much if the other associations favour a different path.

Opponents of certification beyond the P.Eng. say licensure via the *Professional Engineers Act* should be all the assurance needed, and a certification program would mean only more bureaucracy and higher costs for practitioners, which may be passed on to consumers. They say certifications beyond

the licence would weaken the value of the licence and that engineers are already bound by the threat of disciplinary action and by the Code of Ethics, which warns against practising outside one’s area of expertise.

Supporters of the concept, on the other hand, argue that additional demonstrations of expertise can only be marketable add-ons to their licence because they enhance accountability to the public (see related article by David Sims, pp. 50-52 of this issue). Some think we should be licensing all professional engineers by discipline with a defined scope of practice.

Such a move is possible, but not without significant challenges. Implementation would require an enormous effort. For example, the system would need to handle those who switch from one branch of engineering to another. As well, some disciplines today are markedly different from the time members graduated. These time-related differences could be as significant as those among the various disciplines.

Others feel we should continue to grant generic licences, but add a level of specialization. And how about the other members of an engineering team—the technologists and technicians, the computer professionals and chemists? Is it in the interests of the public to license these professionals with an exclusive scope of practice?

The test governments have applied is that of public safety. To protect the public, is it necessary to restrict employment to carry out certain jobs only to those who are licensed?

It has to be said, however, that the current system has and continues to serve us well. The incidence of licence suspension and revocation for incompetence is extremely low. The Complaints Committee reviews approximately 30 complaints a year, and 10 to 15 of these are referred to the Discipline Committee. These are extremely low numbers given the number of licence holders. It indicates to me that there is no widespread problem with incompetent practitioners.

Again, I don’t claim to have the answers, but I ask the questions in order to generate a dialogue and invite feedback. PEO welcomes debate on these issues and looks forward to assessing any and all requirements needed to fulfil our mandate of regulating the profession in the public interest. ♦

*Ken McMartin, P.Eng., is Past President of Professional Engineers Ontario.*