Inspiring CONFIDENCE

PEO actively works to maintain public trust in the engineering profession. Here's what the regulator is doing.

BY SHARON ASCHAIEK

In Canada, engineering is generally viewed as a trusted and respected profession. In survey after survey, Canadians rank engineering as a valued and prestigious occupation, alongside doctors, pharmacists or architects. The most recent example is the 2016 Leger Profession Barometer. Among the Canadians surveyed, 79 per cent said they trust engineers and 89 per cent said they would encourage a young person to become an engineer. In a country where buildings stand solidly for generations, our utilities operate smoothly and our telecommunication systems keep us connected, people trust that engineers know how to create infrastructure that lasts and keeps us safe.

In Ontario, PEO never treats as a given the public's confidence in the engineering profession. The regulator actively works to maintain and strengthen this confidence. A major part of this work involves ensuring its 85,000 licence and certificate holders understand and follow the requirements of the *Professional Engineers Act* (PEA). Sometimes, this involves clarifying certain practice requirements to engineers, or addressing any gaps in the PEA by introducing new performance standards. At other times, it means holding licence holders accountable when they knowingly or unknowingly break its laws, or taking formal action against individuals who falsely present themselves as licensed engineers. Finally, PEO also focuses on creating awareness about the important work of engineers through coordinated outreach with elected officials and with the public, two groups whose perceptions about engineering are critical to the profession's status in Ontario.

KEEPING HIGH STANDARDS

As a self-regulator, PEO works to ensure that the practice of engineering in Ontario meets standards and complies with the laws of the profession. The PEA gives PEO's council the authority to establish standards of practice that must be adhered to by all practitioners. Developed by PEO's Professional Standards Committee, these performance standards provide licence holders with benchmarks that help them determine the appropriate level of service they need to provide. The performance standards describe the required outcome of an engineer's activities, and leave the method for accomplishing these goals to the discretion of the engineer. As the engineering profession continues to evolve, and as incidents and issues relating to engineering practice arise, PEO creates new performance standards or updates existing ones to provide further clarification on an engineer's professional obligations. Among the new standards PEO has introduced in recent years are those relating to building construction, enlargement, alteration and demolition; drinking water system evaluation; environmental site assessment reports; and tower crane inspections.

PEO strives to help practitioners meet these performance standards by developing practice guidelines that clarify certain areas of practice. These guidelines define the roles and responsibilities of an engineer and explain what is expected of a reasonable and prudent engineer practising in a particular area. In 2014, PEO introduced the practice guideline *Engineering Evaluation Reports for Drinking Water Systems*, which came about after the E. coli contamination of the water supply in Walkerton, Ontario. Earlier this year, PEO issued the guideline *Forensic Engineering Investigations*, to clarify that licence holders must avoid biases when providing forensic engineering services.

"The process for developing both performance standards and guidelines is always evidence-based, meaning there has to be evidence of a problem. The guideline is developed

as a way to provide clarity about a licence holder's responsibilities under the act," says José Vera, P.Eng., manager of standards and practice at PEO.

Sometimes, the evidence for creating new performance standards and practice guidelines comes from the input of licence holders through emails to PEO or through calls to its practice advisory team. PEO tracks these calls and emails to help it determine if there is enough need for a new standard or guideline. Vera says about one-fifth of inquiries from members relate to the proper use of the engineering seal, which is why PEO council recently approved plans to create a subcommittee to revise the *Use of the Professional Engineer's Seal* guideline, which was last updated in 2008. Other questions have dealt with the PEA's Code of Ethics, the duty to report, conditions affecting public safety, and conflict-of-interest provisions, which resulted in the *Professional Engineering Practice* guideline in 2012; and reviewing the work of another engineer, which led to the guideline *Professional Engineers Reviewing Work Prepared by Another Professional Engineer* in 2011.

PEO also issues practice bulletins, which are designed for time-sensitive issues or to interpret aspects of guidelines, which may be later incorporated into guidelines. An example of a recent bulletin was *Structural engineering assessments of existing buildings*, which Vera says was developed in response to the flood of queries PEO received from members about their function following the partial collapse of the Algo Centre Mall in Elliot Lake in 2012. "After that, many engineers called us and said, 'I'm being asked to assess a building or a parking structure by a client–what are my professional responsibilities?' We felt we had to act quickly, so we wrote it down and made it clear in a bulletin," Vera says.

Other ways PEO works to help engineers follow PEA requirements and professional performance standards is by providing webinars to members, and conducting visits to organizations to deliver presentations on practice issues. Altogether, PEO's efforts to help its members understand their professional and ethical obligations play an important role in reassuring the public that engineers are being held to a high standard of practice.

"Our work gives the public a good idea of the responsibilities of engineers and shows that we are supporting them in achieving best practices," Vera says.

Barry Steinberg, P.Eng., C.E.T., chief executive officer of Consulting Engineers of Ontario (CEO), which represents approximately 200 consulting engineering firms in the province, agrees that PEO's performance standards and practice guidelines are useful in helping engineers better understand their obligations under the PEA so they can do their jobs more effectively. However, he says the regulator could do a better job of issuing new standards in a more timely manner, and of ensuring they are developed with adequate input from engineering companies. "I think it sometimes takes way too long to get the standards out…a little bit longer than the rest of us would like," he says.

When creating new performance standards, PEO engages with stakeholders, such as government ministries and practitioners who are doing the actual work, to clarify and define the problem before moving forward with its creation. According to Vera, this can take anywhere from a week to several months. "Unfortunately, PEO's Professional Standards Committee often finds that the problem definitions provided are not clear, and analysis must be done," he says.

MAINTAINING LAW AND ORDER

Upholding the PEA and its regulations is a key PEO priority. The act addresses performance standards for professional engineers; expectations for professional and ethical conduct; sanctions for incompetence and misconduct; procedures for filing formal complaints, and much more. PEO's regulatory compliance department administers the act for both licensed members and unlicensed individuals. The complaints and investigations group is responsible for ensuring licence holders practise in ways that comply with the regulations. The enforcement group, meanwhile, is responsible for taking action against individuals who publicly refer to themselves as engineers or to their work as engineering when they, in fact, don't have an engineering licence. The work of both groups is overseen by PEO's deputy registrar of regulatory compliance, and occurs in conjunction with

two PEO committees: the Complaints Committee, which considers complaints against licence holders, and the Enforcement Committee, which offers input on enforcement policy.

Much of the work of the complaints and investigations group is informed by public reports about the conduct of engineers. These take the form of complaints by users of engineering services, which might include individuals, companies big and small, government agencies and other organizations. Each year, PEO receives approximately 70 complaints about licence holders–including full, temporary, provisional or limited licence holders as well as Certificate of Authorization (C of A) holders–and responds to those complaints relating to the quality of their engineering work or their level of professionalism (as opposed to complaints involving the practitioners' business practices, which are generally out of PEO's purview). Complaints about technical competency may involve the service provider being perceived as negligent in their practice, failing to apply an appropriate code or standard, practising outside their area of expertise, or failing to safeguard the client's health or property. Other complaints may relate to the practitioner's conduct–for example, if it involved harassment or a conflict of interest.

In fulfilling its duty to regulate engineering for the protection of the public interest, PEO is required to respond to all complaints filed. PEO's Complaints Committee investigates the specific details of each case and determines which course of action to take. In some cases, it sends a letter to the practitioner advising them about the concern, or requesting them to submit a written commitment to PEO indicating they will change how they conduct their engineering practice. About 10 per cent of the time, the infraction meets the threshold of seriousness and evidence for being referred to PEO's Discipline Committee. This committee holds formal hearings at PEO's offices to review allegations of professional misconduct or incompetence and to make a determination on the merits of the case that is independent of the decision to refer the matter. If the hearing results in a finding against the practitioner, sanctions may include suspending or revoking a licence, limiting a scope of practice, or requiring the respondent to take technical examinations. As well, PEO shares information about discipline cases with its members by publishing discipline decisions in the Gazette section–or the "blue pages"–of *Engineering Dimensions*.

"It's our obligation as a regulator to investigate every complaint and determine if there has been professional misconduct, incompetence or a breach of PEO's Code of Ethics," says Cliff Knox, P.Eng., manager of enforcement at PEO.

Knox's group deals directly with all cases of individuals who use the engineer title, or who advertise that they offer engineering services, when they do not have an engineering licence. These cases may involve individuals who have never had an engineering licence, or who have had their licence expire. Knox says PEO receives 350 to 400 inquiries per year on these matters–typically by anonymous emails or phone calls. At other times, PEO conducts Internet searches to proactively identify engineering companies where there is no licensed engineer on staff and no C of A in place. Most of the time, PEO contacts the offending individuals and lets them know they are breaking the law, and must stop falsely representing themselves as engineers or providers of engineering services. Or, it advises them to obtain a licence, which would allow them to use the engineer title, or a C of A, and offer engineering services to the public. In the few instances where unlicensed practitioners continue to misrepresent themselves and there is a clear risk to public safety, PEO prosecutes them in court, and publicizes these cases in order to inform and protect the public.

"Generally, we don't seek to punish, we seek compliance. We're trying to correct behaviour and minimize the instances of it. However, sometimes we have to take a stronger stand," Knox says. "It's showing the public that we're not just sitting back and answering the phone, that we're taking steps against these kinds of offences."

George Comrie, P.Eng., FEC, PEO's current president, agrees that by and large, the regulator does a good job at both complaints and enforcement. However, he says the regulator largely operates reactively versus proactively, meaning it responds to incidents–whether it be an uncontained demolition or a building collapse–after they happen and the harm has already been done, rather than trying to do something to prevent them from happening in the first place. "Given the diversity of the scopes of engineering practice, this is an area that requires more attention," Comrie says.

Knox says PEO's enforcement group has begun stepping up its proactive efforts by hiring another enforcement and outreach officer, whose role includes communicating with key stakeholders on regulatory compliance issues. Also, he says, much of PEO's proactive work cannot be publicized unless it leads to a hearing at PEO's discipline tribunal or to a court prosecution.

REACHING OUT

Another area in which PEO takes a proactive approach is in its efforts to build productive relationships with Ontario's elected officials. The regulator has a robust Government Liaison Program (GLP) that has been in effect since 2005, and features a wide range of initiatives that involve building ties between practitioners and elected officials to collaboratively solve public interest issues related to professional engi-

neering. Developed by PEO in consultation with Brown & Cohen Communications & Public Affairs, the program has a comprehensive three-pronged approach: building and maintaining strong relationships between chapter members and elected officials; monitoring proposed policies that may affect the profession; and expressing PEO's policy positions to government. By playing an active role in providing input on engineering-related policies, PEO hopes to increase understanding about the valuable work engineers do, and to raise the level of respect for the profession.

PEO's government relations activity began at the grassroots level, with each chapter establishing a GLP chair to meet local elected officials and organize chapter-based activities to address engineering-related policy matters. Since then, new initiatives have been added to the program, including: regional academies and congresses for members to learn about approaching and engaging elected officials; campaign colleges, which encourage PEO members to pursue elected office at the provincial level; an annual reception for GLP volunteers and MPPs at Queen's Park; Take Your MPP to Work Days, where an MPP can see engineering work in action at a company in their riding; and sharing news about GLP activities with PEO members through updates in *Engineering Dimensions* and through the online publication *GLP Weekly*. All of this activity is orchestrated by PEO's Government Liaison Committee, which includes representatives from the Ontario Society of Professional Engineers, Consulting Engineers of Ontario, Engineers Canada, engineers from a provincial riding association, as well as an engineering intern (EIT) and an engineering student.

"Our Government Liaison Program lets the government know that we are a large regulatory body that oversees more than 85,000 licence and certificate holders in the province, and that the work we do is in the protection of the public's safety and welfare," says Jeannette Chau, P.Eng., manager of the student and government liaison programs at PEO. "We want MPPs to know that if they have questions or concerns about issues or policies involving engineering, they can come to us for information."

In its recent review of the GLP program, PEO identified many successes. The Queen's Park Day MPP reception has become a popular, high-profile event that now attracts dozens of MPPs from all parties, including ministers, opposition party leaders and, on one occasion, the premier. PEO town hall meetings have been used as a venue for Ontario cabinet ministers to make major announcements. As well, 15 MPPs have participated in a Take Your MPP to Work Day since the initiative began in 2013. Since the inception of the GLP program, PEO has held more than 200 meetings with government officials.

"Engineering is now right up there with medical doctors and other professions in being on the government's radar. It's good for the profession, and it's certainly good for government, because we're getting a whole lot more advice, and better advice, on our infrastructure projects," says David Zimmer, MPP (Willowdale), minister of aboriginal affairs, and a former parliamentary assistant to the attorney general. "When we need input on the viability of our plans for building or rebuilding bridges, roads or electricity grids and how to get the best value for the dollar, one of the groups we certainly look to is the engineering profession."

For PEO, outreach also includes engaging with the public to highlight the achievements of engineers and their important contributions to society. Each year, the regulator runs two awards events to acknowledge the accomplishments of engineers. Established in 1947, the Ontario Professional Engineers Awards honour engineers who have made outstanding contributions to the profession and to their community. The Order of Honour, meanwhile, recognizes practitioners who have made substantial contributions to the operation of the profession or its professional status. As well, each year, PEO joins Engineers Canada and fellow engineering regulators across the country to organize National Engineering Month, Canada's largest celebration of engineering excellence. The month features more than 500 events demonstrating different engineering disciplines and highlighting the rewards of an engineering career. Finally, chapter volunteers organize a wide variety of local events throughout the year to promote the engineering profession.

Going forward, PEO is looking at significantly ramping up its public outreach and engagement efforts through a comprehensive public information campaign that would increase awareness about the value of professional engineering and the role of PEO in regulating the profession. The move would support one of the mandates of the PEA–promoting public awareness of the role of the association. PEO is currently in the process of putting together a task force to explore the matter further and identify an agency to assist with developing the campaign.

Says Comrie: "The public needs to understand what it is that engineers do, how much they contribute to society, our prosperity and our safety, and how PEO works to regulate the profession in a way that protects the public interest." Σ