Making public policy work ONE P.Eng. at a time

Engineers are looking at new ways to apply their learning, leadership and technical skills to effect better rounded public policy.

By
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PEO's legal victory over Ontario's housing ministry relating to regulation of engineers in the building design area has fostered a new era of political activism for the regulator and its membership.

Nothing better reflects this new awareness of the need for the profession to maintain a high profile among policy-makers than PEO council's recent decision to establish the Ontario Centre for Engineering and Public Policy.

A new facet of PEO's Government Liaison Program (GLP), the centre's focus will be on developing policy papers and related research activity to bring engineers' collective learning to bear to help solve society's technical challenges. It is envisioned the centre would eventually be entirely independent of PEO, to which PEO and others with an interest–such as universities and organizations like Engineers Canada and the Ontario Society of Professional Engineers–could belong, and that it would publish a journal dedicated to the engineering and public policy link.

In the past, PEO has tried to go it alone in making available unbiased technical discussion on public issues, most recently in 2005 when it brought together some 25 experts from various energy sectors to prepare *Sorting Through the Noise*, a position paper that tested the application of value analysis to the energy supply sector. Although the paper was well received by the energy ministry, the province declined to take PEO up on its offer to partner in sponsoring a value analysis of the energy conservation challenge. In the future, with the new centre and many potential partners, such efforts should be more frequent and, perhaps, more fruitful.

Gail Krantzberg, PhD, director, Dofasco Centre for Engineering and Public Policy, McMaster University, says PEO's initiative in establishing the centre will be an ideal opportunity to link the regulator with university programs supporting engineering and public policy study.

"It is generally true that policy-makers are not well versed in engineering and science," Krantzberg says. "It is also generally true that many engineers are unfamiliar with the process of formulating and implementing public policy. As a result, there is an inherent tendency for engineering and public policy to operate in separate professional worlds."

However, Gul Nawaz, a former lieutenant governor-in-council appointee to PEO council, believes government relations and public policy influence go hand-in-hand with engineering.

"It is very important for engineers to get involved with public policy work, at both municipal and provincial levels," Nawaz says. "To me, every engineer should play their role and at every level of the government. I think it is very important that professional engineers should participate when the government is making policies and decisions about their profession. The government is not the best judge, but the profession can guide the government when formulating the policies."

LONG-RECOGNIZED NEED

The engineering profession has long recognized the need to maintain a profile within government. Engineers Canada, for example, revitalized its own federal government relations program in 1999 to strengthen its link with federal MPs and to have greater influence on federal policy that might impact on public safety and the engineering profession nationally.

Most of Canada's provincial engineering regulators also have well-established government relations programs to keep parent ministries apprised of regulatory initiatives, and to monitor new government proposals that might have some bearing on engineering practice and regulation.

Another avenue of influence might be to encourage professional engineers to consider running for political office at the municipal, provincial and even federal levels. PEO's goal is to have 11 P.Engs

elected to the Ontario legislature in 2011, from a full slate of P.Eng. candidates.

The influence of engineers as constituents is also important, and has been the main thrust of PEO's GLP to date, through meetings of P.Eng. volunteers with their local politicians; the attendance of legislators at such chapter events as licence certificate presentation ceremonies and public town hall meetings; and through annual Queen's Park receptions. PEO's third reception since 2005 is scheduled for September 24.

The regulator has also convened two engineering and public policy conferences in conjunction with its last two annual general meetings. The most recent conference, in Windsor last May (see *Engineering Dimensions*, July/August 2008, pp. 12-14), highlighted cross-border issues.

A LEARNED SKILL

The link between engineering and public policy has also caught the attention of both engineering educators and engineering undergraduates. The University of Toronto (U of T), for example, recently established its School of Public Policy & Governance (SPPG), which has active liaison with the university's engineering faculty.

Heather Maclean, PhD, P.Eng., a U of T civil engineering professor affiliated with the SPPG, says the time is now for engineering educators to emphasize the public policy issue with students and future practitioners.

"I believe it is critical that all engineers have an awareness of public policy issues, how they as engineers can impact public policy, and also how public policy impacts them," she told *Engineering Dimensions*.

Maclean also teaches a course, called Topics in Engineering and Public Policy, to masters degree students. The course aims to provide students an understanding of how decision makers in government use technical and scientific information in developing public policy.

Kaleb Ruch, a University of Waterloo mechanical engineering graduate, is about to enter the second year of the SPPG program. He believes it's natural for engineers trained to find mechanical and technological answers to apply their experience to solve social problems.

"The engineer has a role to play in policy creation and social development, like any other profession," Ruch says. "The expertise and philosophy of the profession as a whole represent a huge resource of practical knowledge that I think is under-represented in social decision making."

McMaster University has also made the engineering and public policy connection. In 2005, it established a master's in engineering and public policy (MEPP) program through the Dofasco Centre for Engineering and Public Policy. The program is designed to prepare engineers from the public and private sectors to interact more effectively with public policy-makers.

Director Krantzberg says MEPP graduates aren't necessarily looking to become politicians. "Some of the graduates want to apply their understanding of technology to better policy development within government, but not as a politician," she says. "Some might want to serve as a senior bureaucrat or as a senior member of an industrial consortium. A few students see themselves going on to further their graduate degree, go on to a PhD and get politically active. They definitely want to take a deep understanding of how technology can influence society and put that not only into informed policy-making, but also to get 'political' around it."

Krantzberg has recently produced a primer for MEPP students about how governments translate stakeholder input into official policy. She believes that if engineers come to better understand the entire policy formation process, their efforts with government relations are more likely to find success.

CRITICAL PERSPECTIVE

MEPP student Adam Guy, who completed the program last September after graduating in industrial engineering from U of T, believes the pace of technological change practically forces engineers to consider their public policy contributions.

"The engineering or technical perspective is absolutely critical and cannot be overlooked in the policy-making process," Guy says. "Problems need to be tackled by a set of individuals with differing backgrounds, and engineers need to be at the table when government leaders are making decisions. That being said, public policy is influenced by all sorts of players and engineers contribute directly or indirectly, whether they work for governments or not."

Guy adds that engineers should not only look to have input into public policy, but also work in industry to interpret and challenge public policy. "It's essentially this knowledge gap that the policy-trained engineer is now needed to fill more than ever. Without

them, we are no longer using our democratic systems to effectively manage our technological progression."

Ruth-Anne Vanderwater is another recently graduated engineering student caught up in the role of the engineer in shaping effective policy in the public interest. The past president of the Engineering Student Societies' Council of Ontario, Vanderwater is about to begin her master's degree studies at the University of Waterloo and believes the input of engineers might carry more weight than that of the members of a typical lobby or public interest group.

"Since professional engineers must meet certain requirements prior to designing systems that impact public safety, it is reasonable to say that they have the technical knowledge required to support and advise policy-makers or, better yet, become the policy-makers. Other lobby groups don't necessarily have a mandate to protect public safety," Vanderwater says.

She suggests that it should be left to individual engineers to decide if they want to influence public policy by running for election or by acting as trusted advisors to policy-makers. "I think this is true for anyone wishing to influence government policy, not just of engineers," she adds. "And this is a decision each engineer would have to make should his or her interest lie in contributing to government policy. That being said, there are various levels of involvement, each requiring different amounts of commitment. This can make it easier for those who are more interested in their engineering career to still contribute in some way. Those who want to personally make the big changes may already be willing to put their engineering pursuits aside."

REGULATOR'S ROLE?

Yet as interest in government relations among engineers, engineering educators and engineering graduates grows, there continues to be debate about the proper role of a regulator in attempting to influence government policy. Clearly, any government initiative that has a direct impact on PEO's role in setting the qualifications for engineering practitioners and the standards for engineering practice is fair game for PEO response. In addition, PEO has raising awareness of the role of the association as an additional object under the *Professional Engineers Act*. But where should PEO draw the line between its role in this area and the role of the Ontario Society of Professional Engineers (OSPE)?

As the voice of engineers in Ontario and a member service organization, OSPE has a keen interest in the regulator's public policy efforts, since advocacy is its primary function. Its Political Action Network (PAN), for instance, recently completed its second year of government outreach work through the efforts of volunteer engineers. PAN, states OSPE CEO Angela Shama, P.Eng., "has been extremely successful, and fully supports our members' expectations of advocacy efforts at the grassroots level."

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U OF T SCHOOL OF PUBLIC POLICY & GOVERNANCE

STARTING CLOSE TO HOME

One of the basic precepts of political science is that individuals become more socially engaged by taking part in decisions affecting their lives and work. For engineers, where better to start than by volunteering for their own profession? Not only might this serve as an apprenticeship for future political involvement, but it would also help practitioners gain experience in corporate policy-making.

Volunteering in the governance of public boards, commissions and professional associations might also be valuable training for wider political involvement. Σ