

# ADAMS striving for responsive, inclusive ERA of LEADERSHIP



A new conciliation-minded president hopes to build opportunities for engineers while enhancing the name and reputation of the still invisible profession.

*By Sharon Aschaiek*

**T**he expression “If you’re not moving forward, you’re moving backward” has never been more relevant to the practice of engineering. Shifts big and small in everything from the demise of manufacturing in Canada, to the advent of new technologies that shape the way engineers operate, to even the very definition of engineering are forces that have, and continue, to shape the engineering profession in Ontario. Yet perhaps the biggest change may be the way globalization has affected the way Ontario engineers can and do practise—and it’s a change PEO needs to address more proactively to stay current, says new PEO President J. David (“Dave”) Adams, P.Eng., FEC.

“I don’t see a great visionary policy in Canada on our place in the global picture of engineering. We have been seeing shifting trade patterns emerging with China, India and South America, and if our engineers in Ontario want to be successful, we should be a part of it. I think our association should be involved in fostering international opportunities for Ontario engineers,” says Adams.

On this front, Adams would like to see the welcoming to Canada of more engineering students and practitioners from abroad, so as to give the country a worldwide engineering advantage. He also says PEO’s Ontario Centre for Engineering and Public Policy (OCEPP) should push to vastly expand government-assisted export contracts for supplying Canadian goods, services and infrastructure projects to poorer countries.

Enhancing PEO’s ability to enable Ontario engineers to do business in the global context will be one of several priorities for Adams, who was elected by the membership to lead the association for the 2011-2012 term.

#### **FILLING THE VOID**

In his inaugural address to the membership, Adams said: “Having chosen free trade in a worldwide marketplace economy, it is our job to fill the void with new initiatives.” Part of taking on this challenge, Adams says, involves

getting to the root of and remedying the low rate of PEO licensure among engineering graduates: currently, about 5000 to 6000 students graduate each year from university engineering programs, but only 2500 of them end up pursuing their professional licence. Although no one is officially keeping track, it’s thought that many or most of the rest never actually practise, particularly as they discover the limited number of job opportunities in post-industrial Canada.

“Where a lot of this attrition comes from is that graduates can’t find jobs in engineering, partly because of the destruction of the industrial fibre of our country. When I was a grad, I had four or five job offers. Today, it’s very hard for engineers to get even one. Employers don’t want anyone who doesn’t have five years’ experience, which is difficult when you’re a new graduate,” says Adams. “What I would really like to focus on this term is the labour market situation and why people aren’t joining. I think if our association could collaborate with employers to provide young engineers with some kind of internship, it would help us keep people in the profession.”

The way engineers are trained may also need to be reviewed and revised, Adams says, to ensure graduates are optimally equipped to take advantage of global job opportunities.

“We shouldn’t kid ourselves that the education here is the best it could be. We have to be sure that the disciplines are being taught in ways that are *au courant* with what’s happening in major schools. We should be comparing our programs to those at UC Berkley, MIT and the California Institute of Technology, even to some in China and India, as well as to our own universities within the province and within Canada, to make sure we’re offering the right training that helps graduates pursue international jobs,” he says.

Adams says that to keep up with emerging fields of practice, it would be useful to create new engineering disciplines, for example, in

the areas of nanotechnology and cyber security, with defined scopes of practice and that are supported and governed by new accredited university programs. He would also like for PEO to examine the syllabi for current university engineering programs. As well, he says, in light of the increasing technological demands in the engineering field and the elimination of Grade 13 from Ontario high schools, it may be worthwhile to explore adding an additional year of study to engineering programs.

Another recent change in the profession, brought on last October by the passing of Bill 68, Ontario's Open for Business legislation, is a change to the national definition of engineering, which now excludes any mention of natural scientists. The development sparked some concerns among members of the natural science community, who fear they will face enforcement action by PEO for doing what they consider to be their normal work. But Adams says the missing clause should not be a cause for concern, so long as natural scientists stick to the traditional confines of their work.

"I don't see a conflict here. Scientists come up with new scientific principles, and engineers are the ones who put it into practice—we're applied scientists. When scientists start applying what they're doing to the realm of public consumption, then it becomes the practice of engineering, and that's where boundaries get crossed," he says.

Bill 68 also brought on another significant change—the phasing out from the *Professional Engineers Act* of the industrial exception introduced in the 1984 version of the act, which allowed non-licensed people to do engineering work relating to equipment or machinery used in their employers' facilities to produce products for their employer. Adams has long viewed the exception as being an unfair and potentially dangerous loophole, and says its elimination is essential to maintain the integrity of engineering's self-governing status.

"This exception was brought in by big companies who wanted to control their own affairs without a regulator interfering. This

kind of exemption doesn't exist in any of the other provinces. If we're a self-regulating profession, we should all be taking personal responsibility for our work," he says.

### **ENGINEERING ALMOST A VOCATION**

These are some of the main issues Adams would like to tackle during his tenure, and, as an accomplished mechanical engineer with decades of work experience, extensive involvement in PEO, and a passion for the profession ignited by a family tradition in engineering, he feels he's well-suited to make a difference as leader of the association.

Engineering is in Adams' blood: his grandfather invented the first flax pulling machine, and his father, an aeronautical engineer, was a pilot in the First World War and designed and built airplanes before and during the Second World War. Adams is trained in both engineering and business, studying arts and science at Carleton University before obtaining a bachelor of engineering from McGill University and an MBA in finance and marketing from the University of Western Ontario. He also has extensive work experience that has included roles at the National Research Council, the Alberta oil fields, CIL, Cockshutt, Abitibi and Rio Tinto (England), Canadian Gypsum and Massey Ferguson.

Currently, Adams runs Maple Leaf Engineering, a consulting firm specializing in lean design and manufacturing processes, wood product manufacturing facilities, sawmill and dry kiln design.

Adams' participation in PEO has included a previous presidential term from 2008 to 2009 (only the fourth engineer since the association's inception in 1922 to be elected president twice); two stints as a regional councillor; and several years of chapter, committee and task force service, including chairing the Governance Task Force and the Audit and Finance committees and serving on the Building Committee, through which he was instrumental in acquiring PEO's new headquarters.

In 2009, Adams was recognized as a fellow of Engineers Canada (FEC) for his noteworthy service to the profession.

“PEO now has about 80,000 licence holders and engineering interns and earns annual revenues approaching \$21 million, so it needs senior engineers with enough experience to lead it. This is a substantial organization and it should be run as such,” he says.

To deal with the monumental changes affecting the profession, Adams has undergone his own change, saying he’s planning to embrace a more inclusive and responsive leadership style during his second term as president. Still smarting a bit from the backlash by his first-term council against his Ten-point Work Plan—a list of priorities for sustaining and strengthening the profession he says he pulled straight from PEO’s strategic plan at the time—Adams says he is now taking a less top-down approach and working to build consensus on the most pressing issues facing engineering.

Part of this strategy involved holding a workshop in June for councillors to share their insight on and give priorities to the key objectives PEO should address this year, based on a list compiled by consulting with chapter and committee chairs and nominees from the recent presidential election.

“A lot of people seemed to resent it when I selected those 10 points and said let’s get down to work and solve some of these. I didn’t expect that kind of reaction from the councillors,” Adams says. “So I said, let’s turn it around and have everyone come up with the issues this time and select what’s most important. I’m sure there will be co-operation on resolving them because they will be everyone’s issues.”

It’s an approach that will be critical to Adams as he deals with a council he feels has moved slightly away from functioning in a way that supports true self-governance. In particular, Adams is concerned by the motion passed by council in November—after he had been elected as president-elect—that will in 2013 remove the direct election of the PEO president by members in favour of council members choosing the president and vice president from among the member-elected members of council. Many PEO members

complained that the move violated their democratic right to elect a president directly, and Adams agrees.

#### **REFERENDUM BY MEMBERSHIP**

“I don’t think we should take away a democratic right from constituents without their approval. I would never have done such a thing without having a referendum,” says Adams, but adds that he’s hopeful the arrival of several new council members who support authentic self-determination may lead to the reversal of the motion in the next presidential election. Among the other issues Adams hopes to put on the front burner is to enhance the public profile of the profession by improving the way PEO contributes to public discourse and policy-making that could benefit from an engineering perspective. In his inaugural address, he said: “Now is the time to bring forth the vision, the expertise and the sound technical advice our governments need for public policy initiatives.”

Like many of his contemporaries, Adams worries about the “invisible” nature of engineering, and sees a need for practitioners to more actively provide their technical insights on relevant policy matters. “I think engineers need to do far more speaking out on the correct engineering solutions for public problems—for example, energy issues—so that we can help generate correct policies. We’re not out to run the country, but we certainly should be providing technical advice to the government where suitable, and so I would like to see PEO increase its government liaison efforts,” he says.

Other tasks Adams sees as important include working to develop a national engineering licence to allow engineers to practise more easily across Canada; renovating PEO’s new building with a focus on “cost, worth and value” to suit PEO’s needs; and better leveraging the participation of the association’s approximately 900 volunteers to enhance the way PEO operates.

Says Adams: “We have a lot of work ahead of us, but if we can get on track to address these issues, we’ll continue to have a first-class profession with a modern regulatory organization, the highest standards and easy mobility for practitioners.” Σ