



Professional Engineers
Ontario

ENGINEERING DIMENSIONS

NOVEMBER/DECEMBER 2013

REPEALING THE INDUSTRIAL EXCEPTION

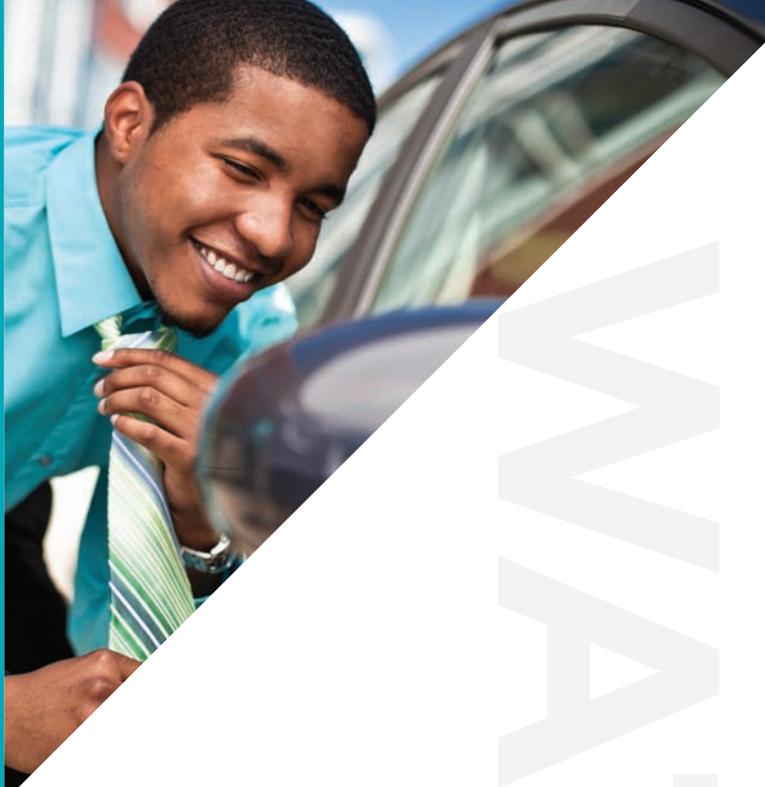
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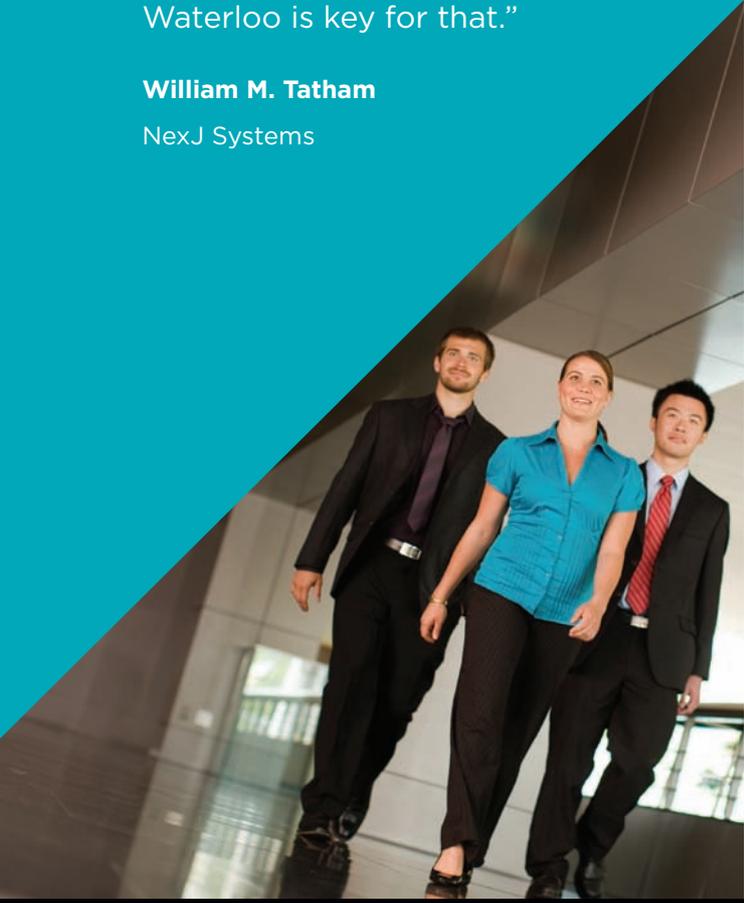
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ENGAGEMENT IN THE PROFESSION



Annette Bergeron, P.Eng.
President

IT'S HARD TO believe we've already reached the halfway point in the 2013-2014 council term. It has been a hectic six months but we have made progress on many important issues.

Council decided in September to support, in principle, the implementation of a continuing professional development program. PEO is the only Canadian engineering regulator without such a formal program, which was questioned by Commissioner Paul Bélanger of the Elliot Lake Inquiry. To begin, we have asked the Professional Standards Committee to review and

comment on a 2013 report by the Ontario Society of Professional Engineers, entitled *Continuing Professional Development, Maintaining and Enhancing Our Engineering Capability*. The committee has also been directed to gather written and oral comments from PEO licence holders during its review, and to report its preliminary findings and proposed plan of action to council at its February 2014 meeting. More and more, professions are being asked to demonstrate an accountable and qualified membership, and PEO must not fall behind on this front.

Councillor Chris Roney, P.Eng., BDS, FEC, and I look forward to attending the Elliot Lake Inquiry Roundtable in Ottawa on November 20 and 21. My thanks to Councillor Roney for fielding the anticipated questions and to our Elliot Lake Task Force for all their work in a short span of time.

At our annual Queen's Park reception, we acknowledged Bruce Power, COM DEV and Vale for voluntarily complying with legislation to repeal section 12(3)(a) of the *Professional Engineers Act*, despite the Ontario government's decision in June to defer its September 1, 2013 proclamation, without yet setting a new effective date for this change. These industry leaders have shown a tremendous commitment to increasing workplace safety standards by having accountable, PEO licence holders in place to oversee their process equipment design. I was delighted that 56 MPPs, including the premier, attorney general and leader of the opposition, took the time to participate. It was very important that our MPPs see the regulation of our profession in action. Meanwhile, our efforts to see the repeal implemented continue.

One item that was troubling to council from the outset of the term was the low voter turnout for the last election. In the 2013 PEO council election, of those eligible to vote only 8.9 per cent cast a ballot—a concerning statistic to say the least. By comparison, Engineers Nova Scotia recently achieved a 33 per cent turnout by electronic ballot for the second year. They are a smaller association but a benchmark for us to strive for.

PEO has been investigating potential reasons for the lack of member engagement, including conducting a survey of members during the summer. The survey allowed for consultation on broader election

issues, including perceptions of PEO council and the organization's election process. My thanks to the 7400 members who took the time to share their views with us. The results told us, in part, that:

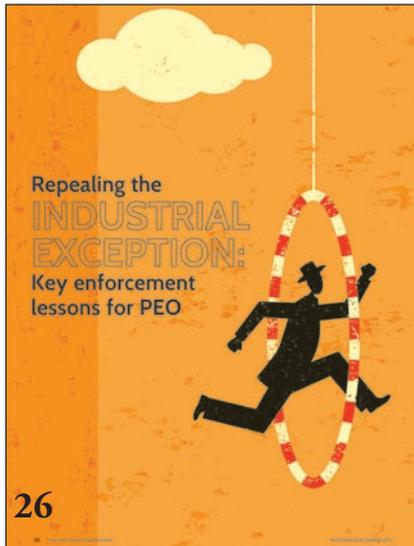
- professional engineers are looking for new ideas for the engineering profession and new candidates who haven't run for a seat on PEO council before;
- a strong minority are unfamiliar with the voting process;
- the electronic voting process was well received; and
- a large majority of those familiar with the voting process are satisfied, with:
 - satisfaction highest for the ease of casting a vote, followed closely by the ease of access to information on the process of voting and the clarity of information on the process, and
 - satisfaction lower for the ease of access to information about candidates, the quality of candidates, and the quality of information on the candidates.

Council is still reviewing the information gathered through the survey, which is helping us to understand the opportunities and challenges for us if we are to engage eligible voters in the election process. As a first step, council directed at its September meeting that the elections be conducted by electronic means only since this method was so well received in the 2013 election. Council also approved the voting and election publicity procedures for next year's election, both of which are available on PEO's website and are included in this issue of *Engineering Dimensions*. Information on the candidates will be distributed as a supplement to the January/February 2014 issue of the magazine, available on PEO's website, and sent to you with the list of candidates. I urge you to participate in the 2014 election, as we continue to seek additional improvements to make this important part of the governance of the profession more meaningful to you.

Lastly, we're finalizing the appointment of a registrar for PEO and I look forward to sharing that news with you soon. Σ

ENGINEERING DIMENSIONS

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Volume 34, No. 6



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Professional Engineers
Ontario

PUBLICATIONS STAFF

Publisher
Connie Mucklestone
416-840-1061
cmucklestone@peo.on.ca

Editor
Jennifer Coombes
416-840-1062
jcoombes@peo.on.ca

Associate editor
Michael Mastromatteo
416-840-1098
mmastromatteo@peo.on.ca

Associate editor
Nicole Axworthy
416-840-1093
naxworthy@peo.on.ca

Senior graphic designer
Stephanie Katchmar
416-840-1063
skatchmar@peo.on.ca

Graphic designer
Cindy Reichle
416-840-1067
creichle@peo.on.ca

ADVERTISING SALES

Sales manager
Beth Kukkonen
bkukkonen@dvtail.com

Gillian Thomas
gthomas@dvtail.com

Dovetail Communications
30 East Beaver Creek Road
Suite 202
Richmond Hill, ON
L4B 1J2
Tel: 905-886-6640
Fax: 905-886-6615

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Through the *Professional Engineers Act*, Professional Engineers Ontario governs licence and certificate holders and regulates professional engineering in Ontario to serve and protect the public.

THIS ISSUE: Much has been made in *Engineering Dimensions* of the so-called industrial exception and the problems it poses for PEO. Little has been made, however, of the lessons learned from the effort to have the exception repealed. This issue, we look at how the exception is proving to be a learning experience for PEO in terms of enforcing the *Professional Engineers Act* and in working with the government to rectify this long-standing concern.

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Address all communications to The Editor, *Engineering Dimensions*, PEO, 40 Sheppard Avenue West, Suite 101, Toronto, ON M2N 6K9. Tel: 416-840-1062, 800-339-3716. Fax: 416-224-9525, 800-268-0496. US office of publication, Adrienne & Associates, 866 Humboldt Parkway, Buffalo, NY 14211.



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Contact: Nicole Axworthy, 416-840-1093, naxworthy@peo.on.ca
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REPEAL STILL ON PEO'S RADAR



Jennifer Coombes
Editor

NOW OVER FIVE months since the Ontario government's June decision to defer the repeal of section 12(3)(a) of the *Professional Engineers Act* at the 11th hour, the industrial exception remains top of mind here at PEO. Far from in a holding pattern on the issue, however, PEO is missing no opportunity to restate to the government, industry, universities, licence holders and the public what the troublesome exception means for workplace safety in Ontario and the difficulties it poses in enforcing the licensure requirements of the act.

While a new date has not been set for the repeal, PEO remains confident that it is inevitable and has no intention of slowing its outreach to government officials and the manufacturing sector. And, PEO is not without support in its quest for a positive outcome. Several large industry players have been working with PEO in anticipation of the repeal and have taken steps to comply voluntarily. Vale, COM DEV and Bruce Power were honoured at PEO's seventh Queen's Park reception on October 9 (p. 9) for the proactive steps these companies have taken.

PEO President Annette Bergeron, P.Eng., seized the opportunity to reiterate PEO's position on the repeal at the Queen's Park reception, to an audience comprising Premier Kathleen Wynne, 12 cabinet ministers, and 43 MPPs, saying: "PEO believes proclamation of the repeal will not only improve workplace health and safety in Ontario, but is also crucial to our ability to regulate the entire practice of engineering in the province."

Bergeron made an appearance on TVO's *The Agenda with Steve Paikin* the previous day to discuss the issues surrounding the repeal (www.tvo.org/video/195901/annette-bergeron-ontarios-industrial-exception) and her confidence that the government will soon announce a proclamation date.

In the meantime, it pays to take stock of what has been learned through PEO's efforts to repeal section 12(3)(a) and use that information to improve its proactive enforcement efforts. Over three years of work on the repeal has uncovered some misconceptions about what engineering is and who must be licensed that PEO can use in its future work to regulate the profession and enforce the provisions of the act ("Repealing the industrial exception: Key enforcement lessons for PEO," p. 26).

While the winter PEO election season is not quite upon us, if you have ever thought about serving on PEO council, 2014 may be the year to throw your hat into the ring. An Ipsos-Reid survey of PEO members about the election process conducted over the summer (p. 41) revealed that one of the reasons for the record low voter turnout for the 2013 election was that, in general, PEO's membership is uninspired and is looking for new faces, particularly younger and/or female faces, with fresh new ideas. Check out page 43 for full details of what you need to know to become a candidate for a position on PEO council. Σ

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Structural Design for Lateral Loads and Stability	04-0109-2285	Mississauga	Jan 28-30, 2014	21
Life Cycle Cost Analysis for Pavement Design	04-0203-2285	Mississauga	Feb 3-4, 2014	12
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AutoCAD Civil 3D for Transportation Design Professionals	04-1210-2279	Mississauga	Dec 5-6, 2013	14
AutoCAD Plant 3D Introduction	04-1211-2279	Mississauga	Dec 9-11, 2013	21
Inventor Simulation and Analysis	04-1212-2279	Mississauga	Dec 12-13, 2013	14
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Time Management	1101-WEB13	12:30-2:00pm	Nov 25, 2013	N/A
Advanced Internet Research Techniques	1105-WEB13	12:30-2:00pm	Nov 26, 2013	N/A
Electrical Engineering Fundamentals for Non-Electrical Engineers	1201-WEB13	12:30-2:00pm	Dec 9-13, 2013	8

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PEO mixes business with celebration at QUEEN'S PARK GATHERING

By Michael Mastromatteo

PEO COMBINED ITS push for the repeal of section 12(3)(a) of the *Professional Engineers Act* with a celebration of engineering at its seventh annual Queen's Park reception October 9 in Toronto.

With a theme of service in the public interest, the reception attracted an appearance by Ontario Premier Kathleen Wynne, 12 other members of her provincial cabinet and 43 members of parliament from all three major political parties. It was one of the largest turnouts for any engineering reception at Queen's Park.

PEO President Annette Bergeron, P.Eng., hosted the event and called on MPPs to move forward with the repeal of the industrial exception, which was announced for September 1, but put on hold in June by the provincial government.

"PEO believes proclamation of the repeal will not only improve workplace health and safety in Ontario, but is also crucial to our ability to regulate the entire practice of engineering in the province," Bergeron said.

In his remarks, Ontario Attorney General John Gerretsen, LLB, did not address the repeal issue, but praised engineers for their contributions to the safety and durability of the province's infrastructure and other components of the built environment.

He later cited PEO for its registration practices, which he called among the most open and transparent of all senior, self-regulated professions.

Jim McDonnell, P.Eng., Progressive Conservative MPP (Stormont-Dundas-South Glengarry), and one of only two engineers elected to the Ontario legislature, said it's becoming increasingly important for engineers to have input to decision making and policy matters, while New Democratic Party (NDP) MPP Catherine Fife (Kitchener-Waterloo), praised

Ontario Attorney General John Gerretsen, LLB, praised engineers for their commitment to safe infrastructure during his remarks at the October 9 engineering reception at Queen's Park.

Ontario Premier Kathleen Wynne (centre) caught up with current PEO President Annette Bergeron, P.Eng. (left), and former president Catherine Karakatsanis, P.Eng., FEC, prior to the formal part of the proceedings.

Progressive Conservative MPP Jim McDonnell, P.Eng., saluted PEO and engineers for looking to get more involved in policy development.



New Democratic Party MPP Catherine Fife spoke on behalf of the NDP at the Queen's Park reception.

Ontario Society of Professional Engineers President and Chair Paul Acchione, P.Eng., brought greetings on behalf of the advocacy organization.

engineers for making workplace safety a priority by advocating for repeal of the industrial exception.

"There is certainly a reliance that we [MPPs] have in this legislature on the expertise and the knowledge of engineers," Fife said. "We look forward to building a stronger relationship with you, going forward."

This year's reception included award presentations to Ontario companies COM DEV International Products, Bruce Power L.P. and Vale Canada Ltd. for their voluntary compliance with the repeal of the industrial exception. PEO's Scarborough Chapter, represented by Chapter Chair Madu Suthanan, P.Eng., and chapter Government Liaison Program Chair Narayana Asogan, P.Eng., took this year's GLP Award for efforts in government relations work.

The annual MPP awards, given out to elected officials especially supportive of PEO's legislative initiatives, went to Liberal MPP Glen Murray, Progressive Conservative MPP Frank Klees, and Fife.

Others attending the reception included Paul Acchione, P.Eng., president and chair, Ontario Society of Professional Engineers; Kim Allen, P.Eng., FEC, CEO, Engineers Canada; Barry Steinberg, P.Eng., CEO, Consulting Engineers of Ontario; PEO President-elect David Adams, P.Eng., FEC; and PEO Past President Denis Dixon, P.Eng., FEC.

PEO began holding an engineering reception at Queen's Park in 2005 as a means of building stronger relations between professional engineers and elected officials. The receptions have also become the occasion for the presentation of awards and certificates of appreciation to MPPs, Government Liaison Program volunteers, and individual organizations for their support of and co-operation with PEO initiatives.



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Minister of Training, Colleges and Universities Brad Duguid (left) with Urszula Adach, P.Eng., a member of the Scarborough Chapter Government Liaison Committee, and PEO council members Santosh Gupta, P.Eng., FEC, and Thomas Chong, P.Eng., FEC.



NDP MPP Michael Prue, engineering student Dante Zegarac, Minister of Economic Development Eric Hoskins, MD, student Kristina Lee, Speaker of the House David Levac, and Lisa Belbeck, president of the Canadian Federation of Engineering Students.

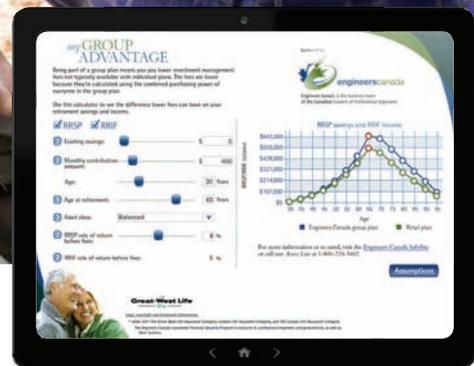
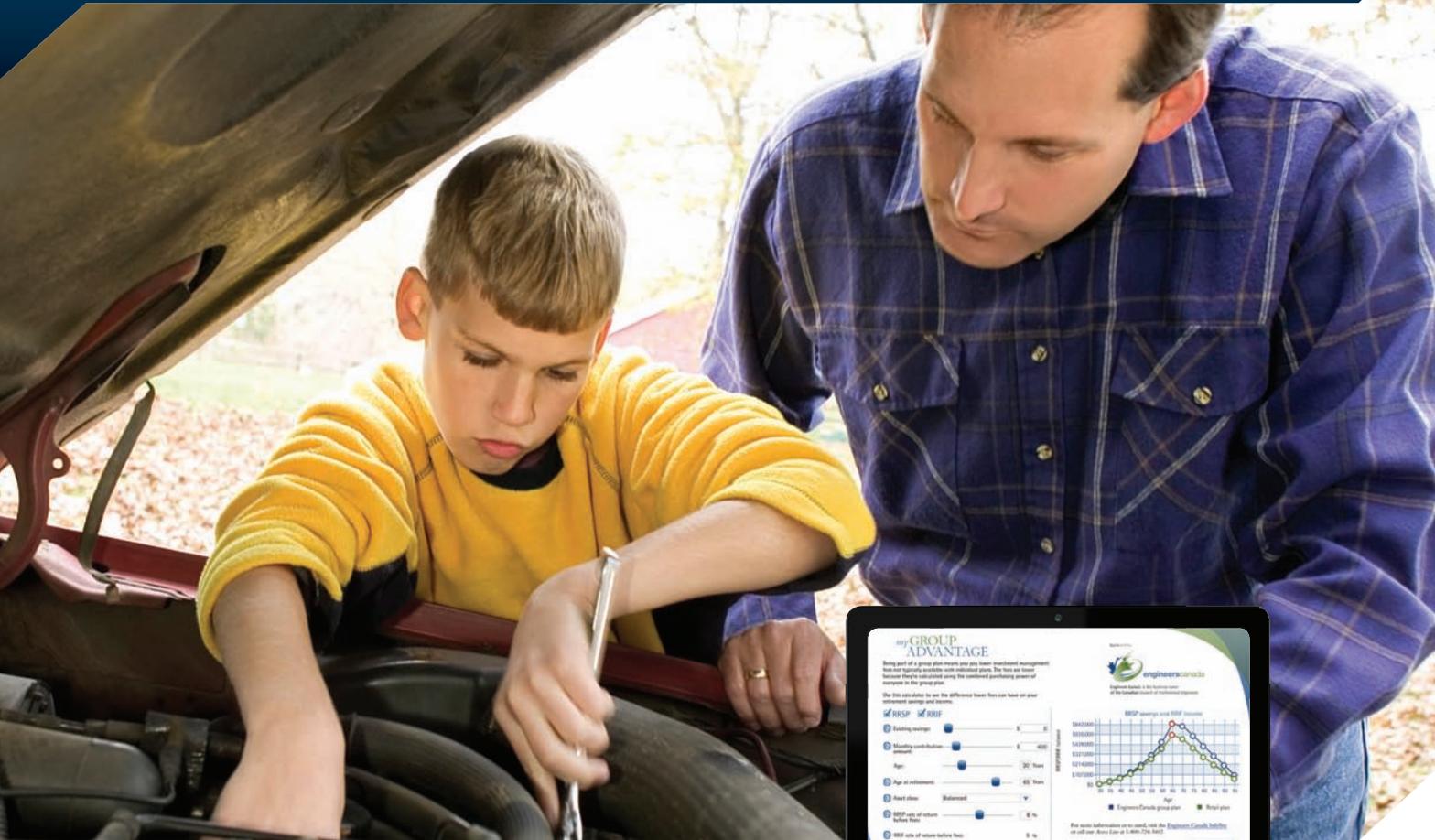


Engineers Canada CEO (and former PEO CEO/registrar) Kim Allen, P.Eng., FEC (right), was joined by (left to right) Mark Dietrich, CEO of the Ontario Society of Professional Engineers, Eric Hoskins, MD, and PEO LGA council member Bill Kossta.

NDP MPP Jagmeet Singh (centre) with Ravinder Panesar, P.Eng., of the Brampton Chapter Government Liaison Committee (left), and PEO councillors Rakesh Shreewastav, P.Eng., FEC, and Santosh Gupta, P.Eng., FEC.

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Madu Suthanan, P.Eng., chair of PEO's Scarborough Chapter, Attorney General John Gerretsen, LLB, Narayana Asogan, P.Eng., chair of the Scarborough Chapter GLP Committee, Barry Steinberg, P.Eng., CEO, Consulting Engineers of Ontario, and Jeannette Chau, P.Eng., PEO manager, government and student liaison programs. The Scarborough Chapter took this year's Chapter Government Liaison Program (GLP) award.

Harmail Basi, P.Eng. (second from left), of the Grand River Chapter, accepts honourable mention for the Chapter GLP Award. With him are (left to right) Attorney General John Gerretsen, LLB; Barry Steinberg P.Eng., CEO, Consulting Engineers of Ontario; and Jeannette Chau, P.Eng., PEO manager, government and student liaison programs.

This year's MPP Award went to Glen Murray (second from right), Ontario's minister of transportation and infrastructure. With him are (left to right) Attorney General John Gerretsen, LLB, Barry Steinberg, P.Eng., CEO, Consulting Engineers of Ontario, and Jeannette Chau, P.Eng., PEO manager, government and student liaison programs.

PEO's Acting CEO/Registrar Michael Price, P.Eng, FEC (right), with Premier Wynne and PEO President Annette Bergeron, P.Eng.

Huge turnout for this year's QUEEN'S PARK RECEPTION

A TOTAL OF 56 MPPs from all three major political parties took in PEO's October 9 engineering reception at Queen's Park, making it one of the largest turnouts since its inception.

THOSE WHO CAME OUT

Provincial cabinet

- Premier Kathleen Wynne (Don Valley West)
- Hon. Jim Bradley (St. Catharines)
- Hon. Brad Duguid (Scarborough Centre)
- Hon. John Gerretsen (Kingston and the Islands)
- Hon. Michael Gravelle (Thunder Bay-Superior North)
- Hon. Eric Hoskins (St. Paul's)
- Hon. Jeff Leal (Peterborough)
- Hon. John Milloy (Kitchener Centre)
- Hon. Reza Moridi (Richmond Hill)
- Hon. Glen Murray (Toronto Centre)
- Hon. David Oraziatti (Sault Ste. Marie)
- Hon. Teresa Piruzza (Windsor West)
- Hon. Yasir Naqvi (Ottawa Centre)

MPPs

Liberal

- Laura Albanese (York South-Weston)
- Bas Balkissoon (Scarborough-Rouge River)
- Mike Colle (Eglinton Lawrence)
- Grant Crack (Glengarry-Prescott-Russell)
- Dipika Damerla (Mississauga East-Cooksville)
- Bob Delaney (Mississauga-Streetsville)
- Helena Jaczek (Oak Ridges-Markham)
- Monte Kwinter (York Centre)
- Dave Levac (Brant)
- Phil McNeely, P.Eng. (Ottawa-Orléans)

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- Steve Clark (Leeds-Grenville)
- Victor Fedeli (Nipissing)
- Michael Harris (Kitchener-Conestoga)
- Tim Hudak (Niagara West-Glanbrook & leader of the official opposition)
- Sylvia Jones (Dufferin-Caledon)
- Rob Leone (Cambridge)
- Lisa MacLeod (Nepean-Carleton)
- Jim McDonell, P.Eng. (Stormont-Dundas-South Glengarry)
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- Todd Smith (Prince Edward-Hastings)
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- John Yakabuski (Renfrew-Nipissing-Pembroke)

New Democrat

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- Gilles Bisson (Timmins-James Bay)
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- France Gélinas (Nickel Belt)
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- Rosario Marchese (Trinity-Spadina)
- Paul Miller (Hamilton East-Stoney Creek)
- Taras Natyshak (Essex)
- Michael Prue (Beaches-East York)
- Peggy Sattler (London West)
- Jonah Schein (Davenport)
- Jagmeet Singh (Bramalea-Gore-Malton)
- John Vanthof (Timiskaming-Cochrane)

PEO still sounding out PROVINCE ON REPEAL IMPLEMENTATION

By Michael Mastromatteo



The engineering regulator is still working with the provincial government to determine when implementation of the repeal of section 12(3)(a) of the *Professional Engineers Act* (PEA), otherwise known as the industrial exception, will take place.

The exception allows unlicensed people to carry out acts of professional engineering in relation to machinery or equipment, other than equipment of a structural nature, for use in the facilities of their employer in the production of products for their employer.

In June, the province backed away from the September 1 implementation date it had set for the repeal and has yet to set a new date. Earlier, it had set March 1 for proclamation of this 2010 amendment to the PEA, but in late February changed the date to September 1.

During the summer, PEO President Annette Bergeron, P.Eng., met with Premier Kathleen Wynne's chief of staff and three provincial cabinet members to discuss the exception as an impediment to safer workplaces and a hindrance to PEO's enforcement of the PEA.

Other measures PEO is taking to convince the province that implementation is overdue include ongoing dialogue with Ontario's ministers of labour, economic development and the attorney general, and engagement with opposition members at Queen's Park.

Marisa Sterling, P.Eng., PEO enforcement officer and project leader for the repeal, said October 1 that many companies have already taken advantage of PEO's industry support initiatives by choosing to comply voluntarily with the repeal. PEO support includes the holding of professional practice examination seminars for company employees who have applied for licensing, local sittings of the exam over the next year and a substantial discount on the cost of licensing.

PEO is also continuing to work with the Ontario government to assess perceived gaps in the pre-start health and safety review regime, and examining the causes of current workplace injuries and fatalities with a view to how the repeal might improve workplace safety.

Additionally, PEO Acting CEO/Registrar Michael Price, P.Eng., FEC, is expected to update firms that have submitted compliance plans, and communicate with manufacturers to clarify what among their activities would be considered to be acts of professional engineering.

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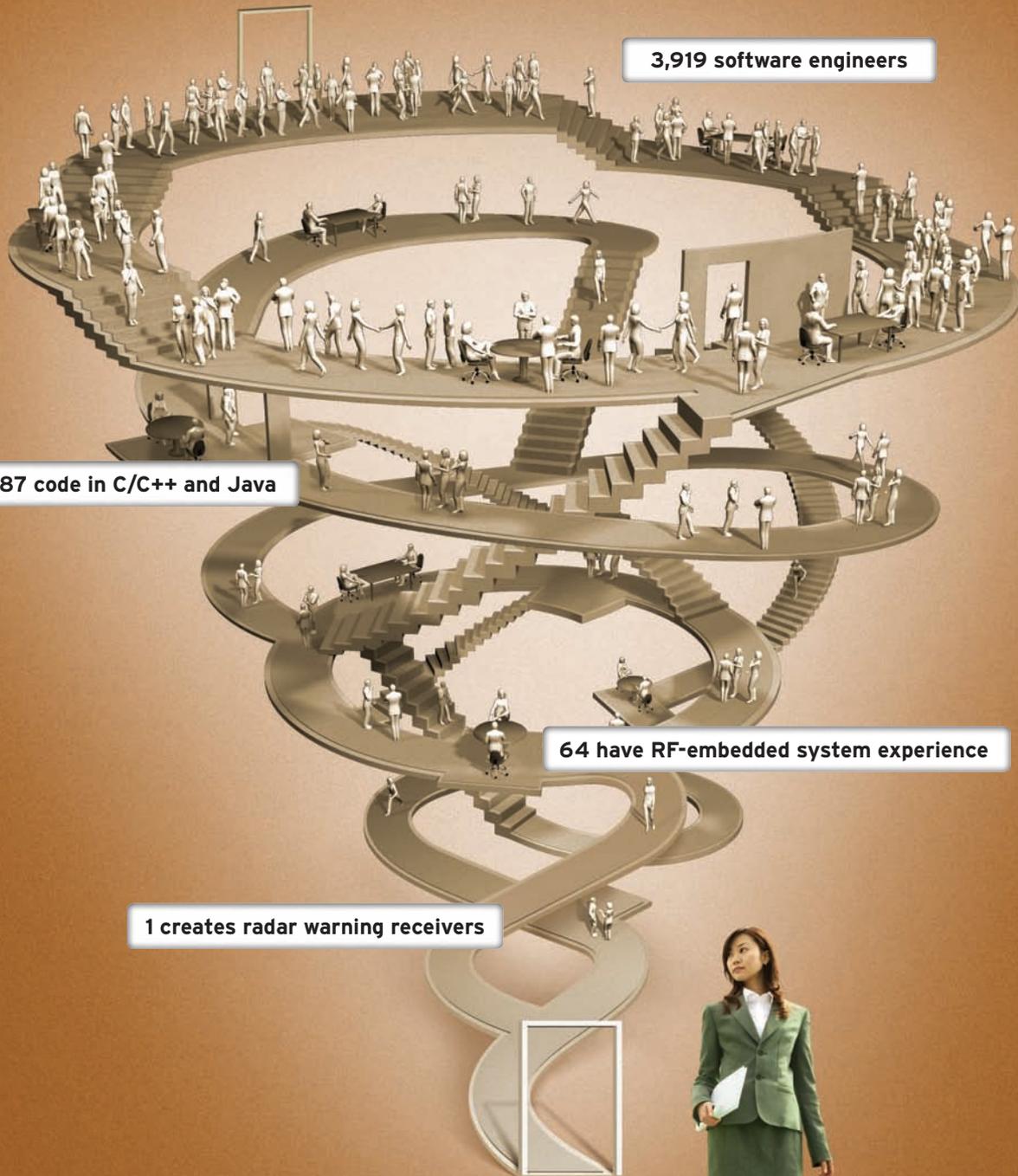
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PEO to participate in ELLIOT LAKE INQUIRY POLICY ROUNDTABLES

By Michael Mastromatteo



FOLLOWING UP ON its July 19 closing submission and recommendations to the Elliot Lake Commission of Inquiry (available at www.peo.on.ca/index.php/ci_id/27051/la_id/1.htm), PEO has been invited as an expert to participate in the inquiry's policy roundtable on the Role of Professionals and Other Consultants, November 20 to 21 in Ottawa.

The Elliot Lake Inquiry is looking into the events leading to the partial collapse of the rooftop parking lot of the Algo Centre Mall on June 23, 2012, which killed two Elliot Lake residents, injured several others and created significant economic disruption to the northern Ontario community. PEO was granted standing in Part I of the inquiry, dealing with events prior to the collapse.

The commission is holding two policy roundtable sessions as required by its terms of reference, with the first session, on Part I, scheduled for November 18 to 21. The second session, on Part II, dealing with emergency response, is slated for December 5 to 6. Others participating in the roundtable in which PEO is participating are the Ontario Society of Professional Engineers, Ontario Association of Architects (OAA), Ontario Association of Certified Engineering Technicians and Technologists (OACETT), Dale Craig, P.Eng., chairman, J.L. Richards and Associates Ltd., who is the commission's retained engineering expert, and Professor Jag Humar, P.Eng., Carleton University. The other Part I roundtables are to explore Increas-

ing Public Safety (November 18) and Improved Sharing of Reports and Information (November 19).

Chris Roney, P.Eng., BDS, FEC, member of PEO's Elliot Lake Advisory Committee (ELAC), will represent PEO at the roundtable, for which each participant has been asked to submit in advance and discuss at the roundtable its answers to 11 questions drafted by the commission. The questions deal with such issues as whether the term "prime consultant" should be defined; whether consultants should be required to clearly advise clients of the scope of their expertise and which elements of a building they are qualified to provide an opinion on; whether PEO, OAA and OACETT should provide clearer standards for the inspection of an existing building, including best practices; whether engineers and architects should be required to advise clients (past and present) of licence suspensions or revocations; whether the provincial engineer concept should be adopted in Ontario; whether PEO should put in place a structural engineering specialty; and whether PEO should put in place a system of mandatory continuing education for licensees. The full list of questions is available at www.elliottlakeinquiry.ca/roundtables/pdf/QUESTIONS_FOR_ROUNDTABLES_Oct.4_13.pdf. PEO's answers to the questions, which ELAC is formulating, is due to be submitted to the commission by November 1.

Meanwhile, at its September meeting, PEO council authorized the Professional Standards Committee (PSC) to develop a guideline on structural engineering assessments of existing buildings and other structures, and a performance standard on structural engineering assessments of existing buildings. In asking for authorization to proceed, the PSC noted that PEO staff has received requests for information on best practices in this area and that the inquiry hearings have uncovered several misconceptions of engineers' responsibilities in this type of work.

PSC will now recruit a subcommittee of practitioners to begin work on the documents, which will involve consulting with practitioners and other parties, including members of the public affected by professional engineers carrying out this kind of work. When drafts of the guideline and performance standard are ready, they will be posted on the PEO website for general review and comment by PEO members. In November 2012, the PSC issued a practice bulletin, *Structural Engineering Assessments of Existing Buildings*, to provide immediate guidance for practitioners in the aftermath of the collapse.

PEO has also opened investigations into what part, if any, the conduct of its licence and certificate holders might have played in the tragedy.

Part II of the inquiry began September 3 and evidentiary hearings ended on October 9. Hearings were expected to resume on November 12 with the Part II closing oral submissions.

PEO chief named TO TOP 25 LIST

By Michael Mastromatteo

PEO PRESIDENT Annette Bergeron, P.Eng., has been named one of 2013's Top 25 Women of Influence in Canada by *Women of Influence Magazine*.

In its third year, the top 25 list is designed to celebrate the achievements of the most influential Canadian women in business, health, non-government organizations, professional services, and the public sector, over the course of the last year.

Bergeron made the list in the non-government organization category.

The top 25 list includes women from various backgrounds, educational levels, skill sets, personality types, sectors, professions, regions and interests.

Those who made this year's ranking were selected on the size of their reach and influence over the last 12 months, based on previous award recognitions and the answers to a question-

naire about their work and their experience with business, fundraising, staff management and activity with boards of directors.

"What drives me generally is to make a difference, and one of those differences is to encourage, first, girls to consider a career in engineering, and second, women to both get licensed and to volunteer for their profession, whether it's PEO or the Ontario Society of Professional Engineers," Bergeron told *Engineering Dimensions* September 17. "Lastly, I'd like to think that PEO is influential with government. This award leverages our work by increasing awareness in the public of what women and men can do in engineering."

A profile of President Bergeron will be part of the Winter 2013 issue of *Women of Influence Magazine*, and a video interview will be featured online at www.womenofinfluence.ca.

ENGINEERING NOT READY to eliminate Canadian experience requirement

By Michael Mastromatteo



The chair of PEO's Experience Requirements Committee remains committed to the Canadian experience requirement, despite a recent Ontario Human Rights Commission (OHRC) report calling for elimination of Canadian experience as a requirement of professional licensure.

As reported in the September/October 2013 issue of *Engineering Dimensions* (p. 14), the commission says Canadian experience requirements could constitute prima facie discrimi-

nation against international applicants for professional licences and should be allowable only in very limited circumstances.

PEO and all other Canadian engineering regulators still have one year of Canadian experience—under the supervision of a Canadian-licensed engineer—as a requirement for licensing.

The OHRC report says it's important for employers and regulatory bodies to ask applicants about previous work experience, but that where they got their experience should not matter. The commission encourages regulators to develop practices, policies and programs that do not result in discrimination.

But Santosh Gupta, P.Eng, FEC, chair of PEO's Experience Requirements Committee (ERC), says the requirement is necessary and useful for international applicants.

"The requirement helps [applicants] to learn and understand how engineering is, and should be, practised in Canada in an ethical and safe manner," Gupta told *Engineering Dimensions*. "Suffice it to say that what is considered unethical practice in Canada can be considered quite ethical in some other countries. Learning on the job is much more effective than just reading about the subtle differences, because it instills the concepts in the engineer's brain and they become second nature."

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Gupta also says the Canadian experience requirement is essential for familiarizing applicants with Canadian codes, standards, and regulatory rules and requirements that must be respected by all practitioners providing engineering services.

“In my view, a clear understanding of this is absolutely essential for the protection of public safety and interest,” he said.

All regulators have noticed increased pressure to do away with Canadian experience requirements as a condition of professional licensing. An October 24 to 25 conference of the Canadian Network of National Associations of Regulators (CNNAR) featured a number of workshops examining the perceived conflict between human rights and Canadian experience expectations. Some groups are calling for the creation of a national competency-based assessment program as a replacement for Canadian experience requirements.

PEO has long worked to ease the transition to Ontario licensure for internationally educated engineering graduates, including creating

the provisional licence for applicants who have fulfilled all the requirements for licensing except the 12 months of Canadian experience, enabling potential immigrants to apply for licensure and begin their assessment process from offshore, and eliminating the Canadian citizenship or permanent residency requirement for the granting of a licence.

Nationally, Engineers Canada is participating in an Association of Professional Engineers and Geoscientists of British Columbia project exploring the desired outcomes of the one year of Canadian work experience. Results are expected by February 2014.

Excitement building for NEM 2014... VOLUNTEERS WELCOME!

By Erica Lee Garcia, P.Eng.



Radwa Rawoof explains the difference between two water filters—one from Malawi and one from Canada—to some young visitors to the CNE, in a lead-up to National Engineering Month 2014 in March.



Canada’s largest celebration of engineering is just a few months away! National Engineering Month (NEM) 2014 will, once again, happen across the country in March. Events in Ontario, under the theme of “Make a world of difference,” will be happening throughout the month. NEM in Ontario is a coalition of PEO and the Ontario Society of Professional Engineers, both founding organizations, and the Ontario Association of Certified Engineering Technicians and Technologists, Engineers Without Borders and the Engineering Student Societies’ Council of Ontario.

NEM 2014 is not only the best chance to show young people how engineers are uniquely positioned

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to solve some of the most challenging issues of our global community, but, for volunteers, also a chance to reflect on why we chose careers in engineering and technology, and how we are contributing to the world around us.

Volunteers were the lifeblood of NEM 2013. Our network of engineers, engineering technologists and students delivered 142 hugely successful events across Ontario that showcased the important role of engineers in the province. And NEM 2014 is on track to generate even more excitement.

Showing young people (and everyone who influences them) there is a place for them in our profession requires commitment from professionals like you. If you share a passion for inspiring tomorrow's engineers, please

sign up for the Engineering Outreach newsletter (nemontario.ca/engineering-outreach-resources) to connect with other outreach enthusiasts from across the province—sharing workshop ideas, best practices and tips for running great youth outreach.

For NEM 2014, we think it's important that we strive to improve our messaging even more, by including more personal stories and emphasizing inclusiveness to attract a diversity of skills and thinking styles to the profession.

The deadline to apply for funding for your NEM event is November 15, 2013, so time is of the essence. For NEM 2014, we are offering special "innovation funding" in addition to regular event funding for PEO, OACETT and Engineers Without Borders chapters that want to try something new. For more information about joining us for NEM 2014, please visit nemontario.ca.

Whether you have been running youth outreach events for years, or are just beginning, we're eager to work with you to help inspire the next generation of engineers!

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WINDSOR CHAPTER SCORES BIG WITH INNOVATION CHALLENGE

By Michael Mastromatteo

PEO'S WINDSOR-ESSEX CHAPTER is making new inroads with students and the local community in promoting engineering as a rewarding, socially responsible profession.

The chapter's Windsor-Essex Engineering Innovation Challenge, held September 13 to 15 at the Devonshire Mall, attracted nearly 25,000 visitors and guests to a display of local engineering expertise and innovation.

Omega Tool of nearby Chatham captured the experimental development/new or improved product prize for its presentation, plastic injection mold shut-height reduction.

A second top prize, experimental development/new or improved process, went to Greenfield Ethanol, for its work in integrating ethanol plant and greenhouse operation technology.



Engineer judges review the Omega Tool display at the 2013 Windsor-Essex Chapter's engineering innovation challenge. Left to right are: Shawna Pelletier of Omega Tools, Sean McCann, P.Eng., Darryl Danelon, P.Eng., Peter Frize, PhD, P.Eng., Frank Cipparrone of Omega Tools, and Pawel Lukawski, P.Eng.

Organized by a committee led by chapter member Asif Khan, P.Eng., manager of industrial engineering at Chrysler LLC, and chair of the chapter's Lean Manufacturing Committee, the contest helps showcase engineering to young people and to the broader southwestern Ontario community.

Other committee members were Stacey Shyshak, P.Eng., Sean McCann, P.Eng., Wanda Juricic, P.Eng., Al Cook, P.Eng., Brent Gusba, P.Eng., Dan Castellon, P.Eng., Stephen Tsui, P.Eng., and non-chapter members Pawel Lukawski, P.Eng., and Irek Kusmierczyk.

Khan says a big part of his motivation in setting up the competition was to emphasize the importance of engineering and technology to students. "It's my hope that the competition excites students about engineering and gives them some idea as to what benefits the profession can bring to the community," he says.

Khan is concerned that with the anticipated retirement of thousands of engineers over the next 10 years, the profession could face a severe

shortage of experienced practitioners. Among the aims of the competition, he says, is to encourage students to consider engineering- or technology-related careers, and to expose young people to the many possibilities in various engineering disciplines.

Competing companies had the option of entering their innovation project in one of three categories: basic research, applied research, or experimental development (new or improved product or new or improved process). This year, only the two experimental development prizes were awarded.

The projects were judged in four areas: objectives/solutions and achievements, level of complexity of innovation, contributions to the improvement of social, economic and environmental quality of life, and overall presentation.

Windsor-Essex Chapter Chair Andrew Dowie, P.Eng., says the competition has gained in popularity and public awareness in its three-year existence.

"It has quickly become the signature public event for PEO's Windsor-Essex Chapter, representing our best opportunity to connect with the community at large and with youth considering an engineering career," Dowie says. "Asif Khan and his team brought this event to life three years ago through enthusiasm and dogged determination."

This year's event featured a student bridge-building competition, a reappearance of robotics presentations, and an expanded roster of community partners, including the Ontario Association of Certified Engineering Technicians and Technologists Windsor-Essex Chapter, Canada South Science City, St. Clair College and the University of Windsor. It also featured "record amounts of enthusiasm and anticipation by our organizers and partners," Dowie says.

Khan expects the Windsor-Essex event will expand in 2014 and beyond, because "the competition angle has given local engineering firms an opportunity to shine and to gain positive publicity from the event."

A growing number of PEO chapters are turning to engineering innovation competitions to promote the profession in their local communities and to forge stronger links among engineers, students and the business community.

PEO's York Chapter, for example, in February organized its first-ever Engineering Project of the Year competition, which rewarded competitors for developing innovative projects having significant impact on the local community. The chapter will be repeating the contest in 2014.

New membership DATABASE SYSTEM TAKING SHAPE

By Michael Mastromatteo

Ontario's engineering regulator is now in the design phase of a long-term project to replace its member database system with Aptify, a licence holder management system that allows users greater flexibility and customization in designing databases and other information resources.

Although the new system will be used primarily by PEO employees in the conduct of PEO's core licensing, complaint and discipline functions, it will eventually enable licence and Certificate of Authorization applicants to apply online and track the progress of their applications, and increase self-service capabilities for licence holders.

Scheduled for completion by early 2015, Aptify will replace the existing LicenseEase database program, which PEO has been using since 2001. Over the years, the limitations of LicenseEase have grown, including an aging user interface, a lack of built-in online compatibility, and the impending withdrawal of technical support by the original supplier.

According to Alan Zimmermann, PEO's acting director of information technology and facilities, the new system will significantly reduce PEO's paper-based processes and enable an online application process that will be integrated with PEO's web services.

PEO council approved the purchase of the Aptify system at its February 2013 meeting. The project will cost about \$1.2 million and be implemented over the next 18 to 20 months.



In determining which new database management system to purchase, PEO benefited from the experience of the Association of Professional Engineers and Geoscientists of Alberta (APEGA), which adopted the Aptify system in 2008. APEGA information technology staff and consultants have been working with their PEO counterparts to prepare for the changeover.

"Aptify has played a major role in APEGA's online presence, including the online application system, which was launched in 2010," says Omid Fekri, APEGA's manager of information technology and general services. "Overall, the switch over to Aptify has been very positive."

PEO staff is currently receiving training on Aptify and providing input to designers in tailoring the system to PEO's specific needs.



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A consulting engineer by trade, **Hanny A. Hassan, C.M., BEng'64 (Civil)**, is currently managing an independent consulting engineering practice, Alef Consulting Inc., and is a long-time volunteer promoting understanding between cultures and religions.



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ONTARIO PROFESSIONAL ENGINEERS AWARDS CELEBRATE ENGINEERING ACHIEVEMENT

By Nicole Axworthy



Sixty-seven years have passed since PEO council awarded its first Gold Medal to C.D. Howe, P.Eng., to recognize his outstanding leadership and contributions to the Canadian war effort during the Second World War. More recently, Gold Medals were awarded in 2009 to the late Victor Milligan, P.Eng., consultant, Golder Associates; in 2010 to Monique Frize, PhD, P.Eng., FCAE, FEC, professor emeritus, School of Information Technology and Engineering, University of Ottawa, and distinguished professor, systems and computer engineering, Carleton University; in 2011 to Michael E. Charles, PhD, P.Eng., FCAE, professor emeritus and dean emeritus, faculty of applied science and engineering, University of Toronto; in 2012 to Bert Wasmund, PhD, P.Eng., FCAE, executive director, Hatch Ltd., and in 2013 to Michael V. Sefton, ScD, P.Eng., university professor, chemical engineering and applied chemistry, and Institute of Biomaterials and Biomedical Engineering, University of Toronto.

IN JUNE 2001, PEO council committed to work with the Ontario Society of Professional Engineers (OSPE) to manage jointly what had been PEO's professional awards program. The Ontario Professional Engineers Awards gala is now held annually in November.

PEO's other awards program, the Order of Honour service awards, is presented annually during the PEO annual general meeting in April.

The Ontario Professional Engineers Awards program comprises three awards.

The **Gold Medal** recognizes conscientious commitment to public service, technical excellence and outstanding professional leadership. It is the program's premier award.

The **Engineering Medal** recognizes professional engineers who have improved quality of life through the ingenious application of their engineering skills. Engineering Medals are awarded in several categories:

- **Engineering Excellence**—recognizing overall excellence in the practice of engineering, where the innovative application of engineering principles has solved a unique problem or produced above-average results;
- **Research and Development**—for developing new and useful applica-

tions, or improving engineering knowledge or applied science, or discovering or extending any of the engineering or natural sciences;

- **Management**—for the management and direction of above-average engineering projects or highly successful enterprises. Recipients are PEO members who have contributed significantly to achieving excellence in engineering, primarily through their management skills;
- **Entrepreneurship**—for applying new technologies that have enabled new

companies to get started, and/or assisted established companies to grow in new directions. Those who earn this award have demonstrated the initiative, energy and spirit it takes to seek out, promote and foster new ideas; and

- **Young Engineer**—for outstanding engineers under the age of 35, who have made exceptional achievements in their chosen fields. This award is given to those who have demonstrated excellence not only in their engineering careers, but also in community and professional participation.

The **Citizenship Award** recognizes community service in two categories, for:

- activities for society outside of an engineering context; and/or
- activities for social betterment within an engineering context (e.g. extensive voluntary involvement with standards-setting groups).

CALL FOR NOMINATIONS

The Ontario Professional Engineers Awards program is administered by an Awards Committee made up of volunteers from PEO and OSPE. The nomination deadline for the 2014 Ontario Professional Engineers Awards is February 28, 2014. **Σ**

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www.peo.on.ca

If you have any questions or need an awards information kit, please call Olivera Tosic at 416-224-1100, or 800-339-3716, ext. 1210. **The deadline for nomination is February 28, 2014.**

[IN MEMORIAM]

THE ASSOCIATION HAS RECEIVED WITH REGRET NOTIFICATION OF THE DEATHS OF THE FOLLOWING MEMBERS (AS OF SEPTEMBER 2013):

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PIERCE, Ralph Huntington Woods, MI	SBROLLA, Donald Domenic Etobicoke, ON	STRZALKOWSKI, Janusz Mississauga, ON	WILSON, Robert Roswell Hannon, ON
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PUTTICK, Edgar Harry Woodrow Ottawa, ON	SEAGRAM, Norman Meredith Toronto, ON	TAM, Chun Pong Mississauga, ON	WOODS, Donald Robert Dundas, ON
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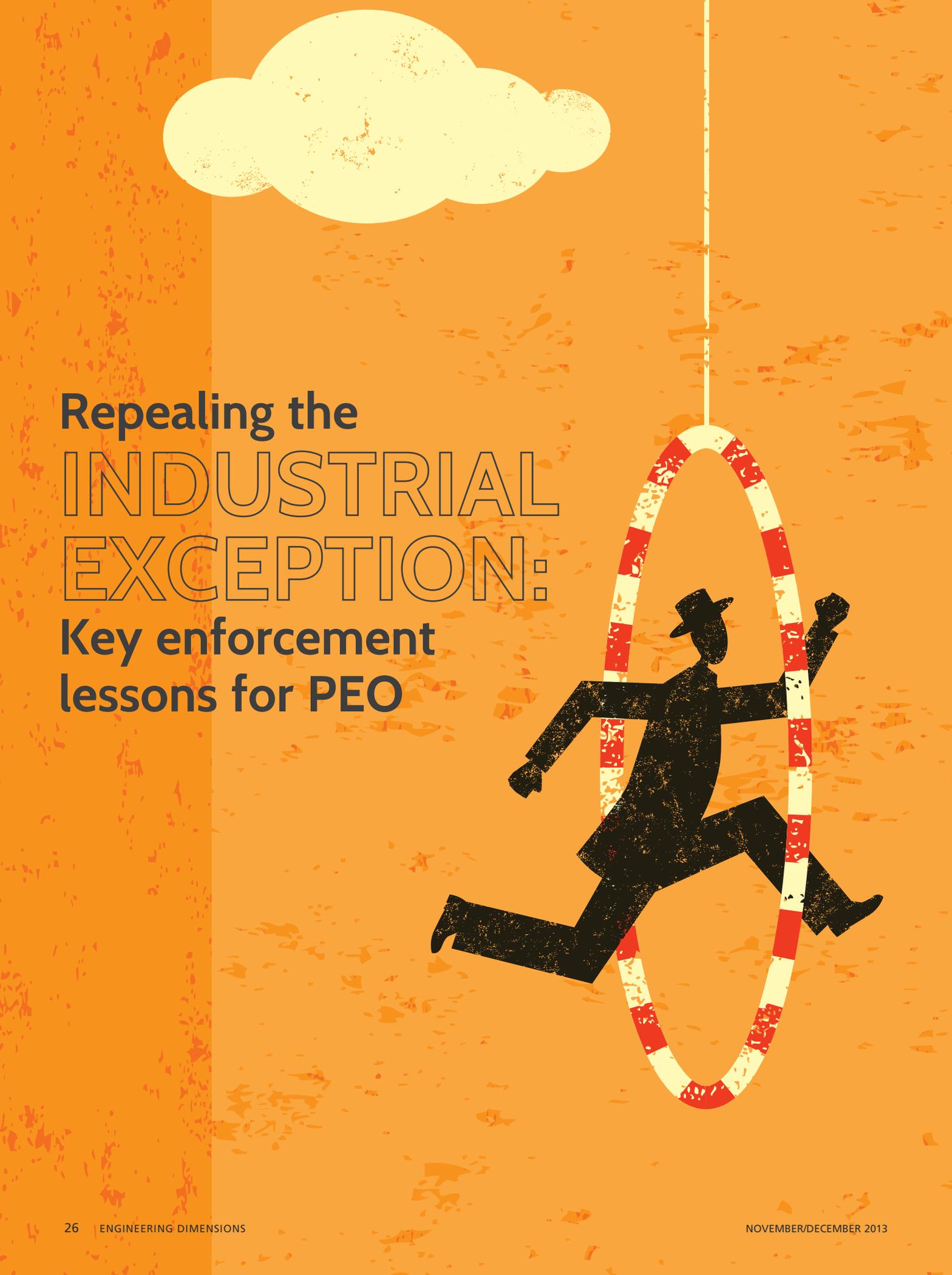
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Repealing the
INDUSTRIAL
EXCEPTION:
Key enforcement
lessons for PEO

Ever since PEO stepped up its proactive enforcement efforts in anticipation of a repeal of the much-debated “industrial exception,” issues have come to the surface surrounding enforcement and what really constitutes engineering work. It’s time to reflect on lessons learned, what has been accomplished over the past three years, and where we go from here.

By Michael Mastromatteo

Back in the fall of 1984, then PEO General Secretary Patrick Ryan, P.Eng., opined in *Engineering Dimensions* that the provision in the then-new *Professional Engineers Act* (PEA) allowing non-licensed employees to perform acts of “in-house engineering,” would likely create wide controversy for some time to come.

Ryan was referring to section 12(3)(a) of the PEA, and he was certainly prophetic in suggesting a period of confusion stemming from the new exception, for although it was intended to apply strictly to certain engineering acts by employees in a production setting, it has been misinterpreted by industry, and even sometimes by engineers themselves, to exempt from licensed practice all types of engineering done by industrial employees (see sidebar “How we got the ‘industrial exception’”). In fact, however, the PEA requires all other engineering work done by industrial employees, including product design, to be done by a P.Eng., or a holder of a temporary or limited licence, unless a P.Eng. or temporary licence holder directs and is responsible for the work. While the scope of Ontario’s section 12(3)(a) exception is small, no other Canadian province or territory has a full machinery exception in their engineering statute, leaving the public in Ontario with less supervision of engineering work by licensed, accountable professionals than in anywhere else in Canada. In addition, the section has in recent years become a potential barrier to interprovincial labour mobility.

ONE STEP FORWARD, TWO STEPS BACK?

When repeal of section 12(3)(a) was among the amendments to the PEA made by the Ontario government’s 2010 *Open for Business Act* (Bill 68), PEO was pleased, for widespread misunderstanding of the exception, combined

with a lack of penalties for employers who contravene it, have caused it significant enforcement difficulties.

Duncan Blachford, P.Eng., vice chair, PEO’s Repeal of the Industrial Exception Task Force (RIETF), is in a unique position to observe how the exception has been applied in industry and the enforcement challenges it has posed. A long-time employee of Dupont Canada, Blachford’s experience made him well suited to argue for the repeal.

In a June 4 letter to the *Belleville Intelligencer*—in response to the claims of a local MPP that repeal of the exception would hurt industry—Blachford described the exception as “a loophole” allowing some industries to compromise worker safety by cutting corners on safety reviews of machinery and equipment.

“I have 38 years of industrial manufacturing experience,” Blachford wrote. “I know what leads to safety incidents in industry. This repeal will be a valuable contribution to safety improvement in Ontario.”

PROACTIVE ENFORCEMENT BEGINS

Marisa Sterling, P.Eng., PEO enforcement officer and project leader for the repeal, says the experience of preparing for the repeal of section 12(3)(a) has forced the regulator to re-examine its enforcement efforts, especially in raising awareness about engineering work and those licensed to perform it.

“When PEO’s proactive enforcement role was created in early 2010, I was starting with a blank page. The question was, How could we raise both public and member awareness of the licensing requirements and title protection provisions for practising professional engineering in Ontario, ultimately with the goal of improving compliance?”

Sterling says the original plan included creating enforcement messages about professional engineering work and the required licences, the use of protected titles, and the potential penalties for contravening the PEA. Part of this messaging highlighted the importance of reporting violations of the PEA to PEO.

The proactive enforcement strategy also involved measuring awareness of PEO’s enforcement messages to establish a baseline for tracking progress, and establishing “formal liaison” with key stakeholders, including government, universities, PEO members and the public.

Sterling says this review of awareness of the PEA has revealed some startling truths. For example, although nearly 70 per cent of Ontarians knew that a licence is required to practise engineering, only 10 per cent could correctly identify a professional engineer, and only one in four recognized actual engineering work. And of particular note to enforcement officials, only 40 per cent had any awareness of offences under the PEA, and even

fewer, 37 per cent, knew to contact PEO to find out about engineering regulation.

“Getting the attention of companies and their workers has been a long-time enforcement challenge for PEO,” Sterling says. “However, with the public announcement of the pending repeal of section 12(3)(a) three years ago, businesses began seeking out PEO for education and support. We learned that employers today are less likely to have the in-house engineering expertise to assess their regulatory requirements for the professional engineering work they conduct or hire service providers to deliver. Therefore, PEO’s proactive enforcement efforts have had to get back to basics starting with educating on the definition of what is professional engineering work.”

One of the most significant knowledge gaps discovered is a lack of awareness that PEO can grant a limited licence to individuals who did not complete a bachelor of engineering degree, but have the necessary education and experience to take responsibility for professional engineering within a defined, limited scope.

During the so-far three-year phase-in of the repeal being proclaimed into force, PEO also increased its investment in enforcement by putting in place a transition plan to assist those companies and employees needing to comply. A compliance toolkit for employers was developed to help them determine what effect, if any, the repeal might have on their operations and a transition regulation was made to provide companies with additional licensing time and support.

To date, PEO has worked alongside key government ministries and met with close to 1000 companies, reached out to over 100 industry associations and held numerous seminars to help employers become compliant. PEO has also invested nearly \$500,000 in direct assistance to employees to get ready for the change.

MYTHS AND KNOWLEDGE GAPS

During this period, many of the myths and knowledge gaps that have long hindered PEO’s regulation of the engineering profession and enforcement of the PEA have also surfaced.

These myths include that:

- the definition of professional engineering requires all managers of engineering departments to be licensed;
- the section 12(3)(a) industrial exception applies to all engineering work conducted in the manufacturing sector, including product design;
- removing the job title “engineer” allows an unlicensed person to do professional engineering work;
- all members of a company’s “engineering team” must hold PEO licenses; and
- a company contracted to design a component of a manufacturing process can do unlicensed engineering work without a Certificate of Authorization under the supervision of a client company.

One of the most significant knowledge gaps discovered is a lack of awareness that PEO can grant a limited licence to individuals who did not complete a bachelor of engineering degree, but have the necessary education and experience to do professional engineering work within a defined, limited scope.

Another noted gap is poor awareness that job titles that include the word “engineer” are reserved for holders of P.Eng. or temporary licences, with a few limited exceptions, and that a limited licence holder cannot use a job title with the word “engineer.”

PEO also learned that employees are not aware that becoming licensed does not require them to carry primary professional liability insurance.

Sterling says the manufacturing sector became the primary focus of PEO’s proactive enforcement work once the government established an initial implementation date for the repeal and the significant knowledge gaps in the sector became clear.

“The proactive enforcement strategy had to be amended to broaden both the enforcement messages and the liaisons within manufacturing and government,” she says. “Enforcement messages now include the narrow circumstances the section 12(3)(a) licence exception applies to, and the public safety rationale behind repealing it. And the liaison work now includes providing individual consultations with businesses to help them assess how the engineering act applies to them.”

VOLUNTARY COMPLIANCE SUCCESSES

Despite the repeal’s still-pending status, PEO is succeeding in raising awareness of engineering practice in industry as a way to improve public safety and well-being. Recently, PEO awarded three Ontario companies, COM DEV International Products, Bruce Power L.P. and Vale Canada Inc., for being among a group of Ontario businesses taking proactive steps to comply voluntarily with the repeal. Certificates of appreciation were presented to the companies during PEO’s October 9 Queen’s Park reception.

Nigel Doran, P.Eng., COM DEV vice president (engineering and quality), told *Engineering Dimensions* PEO’s efforts to enforce the PEA in the shadow of the industrial exception have proved quite instructive

for industry, prompting “many companies to revisit the scope of the engineering work being performed by their staff.”

In accepting the certificate for COM DEV he said: “Once the changes to the engineering act were announced, the management team at COM DEV recognized the opportunity presented by PEO to facilitate licensing at both the P.Eng. and limited licence levels to the maximum number of people.”

Doran added that COM DEV has a diverse, highly valued workforce, reflecting the international basis of the satellite industry, which is “reflected by the large number of foreign-trained engineering graduates” it employs. He said that with PEO’s assistance, COM DEV is “now in a position where most of our foreign-trained and Canadian-trained people have submitted licence applications and are through the licensing process. PEO has supported this initiative through on-site workshops, waiving of applications fees and a willingness to listen to the needs of both the employees and the employer.”

“Overall,” he added, “the repeal of the exception removes much of the confusion surrounding the practice of engineering and will provide the motivation for new graduates to obtain their licence at the earliest opportunity.”

In accepting his company’s certificate, Joel Montgomery, P.Eng., manager of central & specialty engineering at Vale’s Ontario operations, said Vale’s “most important value is ‘life matters most’ and our first and most important priority is the health and safety of our workers. Through the leadership and partnership of organizations such as Professional Engineers Ontario, we continue to put measures in place to achieve our goal of zero harm in our workplace.”

Similarly, Bruce Power’s Gary Newman, P.Eng., chief engineer and senior vice president (engineering), said the company’s efforts to come into compliance with the repeal complement its long-standing “safety first” core value.

“It was for this reason that Bruce Power chose to embrace the need to proactively transition to this new licensing structure,” Newman said at Queen’s Park. “Compliance with these requirements will be achieved by ensuring that engineering work is directly supervised and/or completed by licensed professional engineers. Bruce Power continues to attract highly qualified engineering staff and a preference has been and shall continue to be given to those who can become licensed as part of the required PEO protocol. Having these qualifications will further strengthen our existing high safety standards and contribute to the safe, reliable and low-cost generation of nuclear power.”

Newman told *Engineering Dimensions* that Bruce Power’s engineering division completed an assessment in 2012 to determine the positions within the company that would require licensed staff. From the review, the company identified positions that would be further enhanced through the licensing process. The initial total requirement identified for

this employer—who is highly dependent on skilled, technical personnel—was just under 2 per cent of its workforce: 70 staff with 58 staff remaining to be licensed. The majority of the staff Bruce Power is requiring to be licensed work within its engineering division.

Bruce Power is also ensuring that only licensed engineers will hold the title of engineer and that they will work only within their discipline of study. “To ensure that Bruce Power continues to be in compliance, we have revised our job documents to include the P.Eng. requirement,” he added.



MOVING FORWARD

Although over one-third of the companies PEO has reached out to have decided to comply voluntarily with the repeal, PEO will continue to fine-tune its proactive enforcement approach with the goal of improving public safety and well-being related to engineering matters.

Sterling says strong partnerships are needed between PEO and companies, industry associations and government to fill the knowledge gaps that exist among them and to better serve Ontario’s economy. PEO members, she said, must be participants in this effort, because of their extensive understanding of when industrial and manufacturing work becomes “engineering work.”

“I believe proactive enforcement through education must remain a long-term commitment by PEO to gain a positive shift in top-of-mind awareness of engineering regulation,” Sterling adds. “The pending repeal of section 12(3)(a) has helped move the conversation into the public domain, and the result has been improved compliance.”

How we got the “industrial exception”

Widely, if inaccurately, described as the “industrial exception” or the “industrial exemption,” section 12(3)(a) of the *Professional Engineers Act (PEA)* was part of the Ontario government’s Bill 123, a new engineering act in 1984 comprising many of the recommendations of the Professional Organizations Committee (POC), a body established by the then Ontario Law Reform Commission at the request of the attorney general, to examine Ontario’s self-regulated professions of law, accounting, engineering and architecture. The POC was tasked with making recommendations to the government for comprehensive legislation to set the legal framework within which these professions would operate. The review was to pay particular attention to issues of:

- the appropriateness of the existing division of functions and jurisdiction of the professions;
- the possible creation of new professional groups and subgroups or the amalgamation of groups within the professions;
- the need for the recognition and definition of the roles of paraprofessionals;
- the amount of control the professions should have over the training and certification of members;
- the appropriateness of permitting members of the professions to incorporate their practices;
- the appropriateness of requiring Canadian citizenship or British subject status as a condition of membership in a professional body; and
- any incidental questions raised by the issues.

The POC review process included liaison meetings with stakeholders; 16 POC-commissioned working papers with such titles as *An Analysis of the Practice of Architecture and Engineering in Ontario*, *Public Accountability in the Governing of Professions: A Report on the Self-Governing Professions of Accounting, Architecture, Engineering and Law in Ontario*, *Multidisciplinary Services: Organizational Innovation in Professional Service Markets*, *The Employed Professional and Paraprofessionals and Issues of Public Regulation*; six internal working papers generated by the POC’s research staff; preliminary briefs from 90 individuals and organizations, including PEO; intermediate briefs from 84 individuals and organizations, including PEO; a POC research directorate staff study entitled *Professional Regulation*; final briefs from 175 individuals and organizations, including PEO and several of the other Canadian engineering regulators; oral presentations to POC public hearings from 74 individuals and organizations, including PEO; and the final 291-page *Report of The Professional Organizations Committee* in April 1980.

Among the more contentious of the staff study’s trial balloons was one that suggested: “Except for engineering services specifically required by statute or regulation, all engineering work done by employees of industrial, commercial or government enterprises (not professional firms), would be exempt from the scope of the licence to practise professional engineering.”

In its response to the staff study, PEO recognized the study’s authors’ suggestion was a response to the new and growing substitution of technically educated personnel for professional personnel within the

“engineering team” in workplaces becoming more dependent on technological innovation and employing larger numbers of non-professional graduates of community colleges and institutes of technology.

While recognizing these “rapid changes taking place in technology and the rising threshold of true engineering activity,” PEO rejected the staff study’s “use of blanket exemptions covering most of the engineering work done in Ontario, leaving employers to re-assign staff in such a way as to comply with external regulations when and where applicable,” and proposed instead to retain “the substantial values of universal licensing, while redefining certain specific thresholds, activities and/or qualities of engineering work in a series of specific exemptions from the requirements of the Act.”

Accordingly, PEO suggested modifying the then-definition of the practice of professional engineering to add the concept of “the taking of professional responsibility for” in addition to performing, acts involving professional services in relation to specified engineering works, making the list of “activities not affected” by the act “subject to the terms of any applicable ‘demand-side’ legislation or regulation,” and expanding the list of the activities the act did not prevent a person from doing. PEO’s proposed new exemptions included ones to enable: certified engineering technologists to provide engineering services or engage in engineering activities as long as they were directed or supervised by a professional engineer who accepted professional responsibility for the work; any person to provide engineering services or engage in engineering activities provided they were directed or supervised by a professional engineer who accepted professional responsibility for the work; any person to engage in testing and inspection activities and to report thereon provided the specifications or standards involved had been prepared or approved by a professional engineer; and any person to repair, maintain or operate the equipment and facilities of an employer. In proposing these exemptions, PEO sought to delineate between routine work based on well-established principles that might be performed

by non-engineers under adequate control of a responsible engineer and novel work that must be under the direction of an engineer. By 1984, these concepts had become embodied in a definition of the practice of professional engineering that includes the act of directing and doesn't include such acts as repairing, maintaining, operating, testing or inspecting, and a licence exception that permits anyone to do engineering work providing a professional engineer takes professional responsibility (section 12(3)(b) of the current PEA).

PEO also proposed not preventing "any person from undertaking the design of special production machinery, equipment, tools and dies for use in that employer's facilities for the production of his product." At the time, both PEO and the POC believed employers of engineers (and by extension their employees) were sophisticated, or knowledgeable, "second parties" that did not require protection under engineering regulation. This belief was based on the understanding that employers had sufficient in-house engineering staff and therefore the necessary expertise to assess when their engineering work required a professional engineer to be professionally responsible, and so should be able to decide when to involve a professional engineer in the design of special production machinery, equipment, or tools and dies for their own production facilities.

In its final report, the POC rejected its staff's suggestion of a blanket industrial, commercial and government exemption, noting that existing demand-side legislation did not address the protection of vulnerable third parties who might be affected by engineering and that relying more heavily on demand-side legislation could be "cumbersome, complex, and uncertain." The POC also noted unanimous professional and organization opposition to a blanket exemption, citing such arguments as "an industrial exemption system would rely heavily on extensive and complex demand-side regulation to ensure adequate protection of public safety and welfare"; "it might run counter to efforts aimed at attaining national uniform licensing standards"; "similar exemption provisions found in a large number of U.S. state registration laws have been a source of considerable controversy and friction between the profession and the enterprises which employ



engineers"; and "technical employees...have been unenthusiastic about the proposal." It also notes that "commercial, industrial, and government employers of engineers and technologists who might have expressed an interest in de-regulation did not come forward to support it."

The POC recommended adopting PEO's proposed exemption for employees working on production machinery or equipment in their employer's facilities, but also recommended including in the PEA a provision enabling PEO to seek from Divisional Court "a cease and desist order against any person who knowingly retains, employs, contracts with, or otherwise engages someone who is not a professional engineer for the performance of any act or acts constituting the practice of professional engineering." In commending the provision, the POC said it would be appropriate to "place an onus on the employer to ensure compliance with the Act and to subject employers who encourage or condone the use of completely non-licensed engineering teams to a penalty." The POC also suggested the provision "should protect technical personnel from being manoeuvred or pressured by employers into situations where they might be seen as transgressing the unauthorized practice prohibition and provide an effective and direct way to deal with employers who attempt to sidestep *The Professional Engineers Act* or demand-side legislation."

During the course of legislative drafting over the following four years, PEO's proposed exemption for employees working on production machinery morphed to become section 12(3)(a) of the current PEA, which excepts from the licensure requirement a person "doing an act that is within the practice of professional engineering in relation to machinery or equipment other than equipment of a structural nature, for use in the facilities of the person's employer in the production of products by the person's employer," and 12(3)(c), which excepts a person "designing or providing tools and dies." However, the recommended provision to enable PEO to obtain a cease and desist order against employers who sanction within their facilities unlicensed engineering practice contrary to the PEA was never written into the act. Σ

PEO'S TAKE YOUR MPP TO WORK DAY GAINS MOMENTUM

By Howard Brown, Kaitlynn Dodge and Jeannette Chau, P.Eng.



Oakville MPP Kevin Flynn, Rob Willson, P.Eng., PEO West Central Region councillor, and Ankesh Siddhantakar, EIT, Oakville Chapter's Government Liaison Program chair, get a demonstration of a Siemens electric car by Robert Hardt (left), president and CEO of Siemens Canada and an electrical engineering graduate from Germany. Flynn was taking part in one of PEO's Take Your MPP to Work Days on August 22, which was organized by the Oakville Chapter.

EARLIER THIS YEAR, PEO launched a pilot program called Take Your MPP to Work Day to bring MPPs and engineers in their ridings closer together. The concept was to be tested in a couple of ridings so PEO could learn from the experience and engage more MPPs if it was successful. The basic premise is to invite MPPs to tour a local engineering company or a place that does engineering work in their riding so they can learn more about professional engineers and the important work engineers do.

The three main goals of the event are to:

- help foster a better understanding of engineering work among MPPs;
- increase MPPs' understanding of PEO's regulatory role; and
- develop relationships among MPPs, local engineers and PEO chapters.

Take Your MPP to Work Day is gaining momentum.

The first event was hosted in May by PEO's Niagara Chapter, which invited Cindy Forster, MPP (Welland), to Niagara College to see what local engineers do day-to-day on campus. With positive feedback and good suggestions for future events, we were excited to move forward with the program.

The second event took place in Oakville on August 22. Oakville MPP Kevin Flynn was wowed by the experience. Flynn, who is the parliamentary assistant to the minister of transportation and infrastructure, met with PEO and Oakville Chapter representatives for a tour of Siemens Canada.

PEO representatives and Flynn had a chance to meet and hear from Siemens Canada CEO Robert Hardt prior to the tour of the new building, where he discussed Siemens' plans for the future in Canada and globally. Hardt also touched on the importance of having a skilled workforce of educated engineers in Ontario. The tour was conducted by Siemens Vice President, Low and Medium Voltage Division, Lucy Casacia.

In Flynn's community newsletter, published after the event, he said: "The work these professional engineers do is not only fascinating but it gave me some great insight into the important work they do in the interest of public safety and welfare, along with the focus on long-term prosperity for our province." It's clear from this comment that the objectives of the Take Your MPP to Work Day were met.

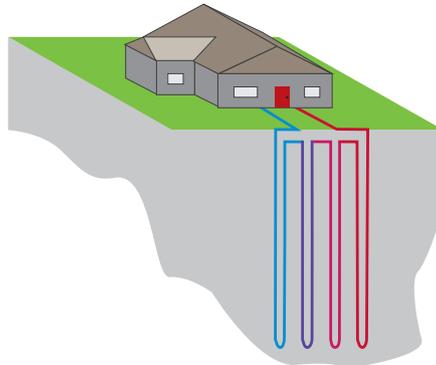
Following these successful Take Your MPP to Work Day initiatives, Government Liaison Committee member Darla Campbell, P.Eng., who attended the Oakville event, has stepped up to chair the Take Your MPP to Work Day organizing committee and is tasked with growing the concept from a pilot project to a larger initiative across the province. Educating politicians and the community about the important role engineers play is a valuable exercise and one well worth doing. Σ

Howard Brown is president and Kaitlynn Dodge is an account manager at Brown & Cohen Communications and Public Affairs. Jeannette Chau, P.Eng., is PEO's manager, student and government liaison programs.

ENGINEERS AND POLICY-MAKERS ADDRESS SAFETY IN GEOTHERMAL DRILLING

By Brian Beatty, P.Eng., and Muktha Tumkur, P.Eng.

GEOTHERMAL SYSTEMS provide a source of “green” heating and cooling in a variety of applications, including residential, commercial, agricultural and industrial, and support the provincial government’s long-term plan to use more renewable energy and eventually close coal plants. Geothermal heating and cooling leverages underground temperatures to heat and cool buildings.



Geothermal systems extract natural heat from the ground to heat or cool domestic or commercial buildings.

As of May 18, 2012, the Ministry of the Environment (MOE) introduced Ontario Regulation 98/12 under the *Environmental Protection Act* to improve public safety and protect the environment by strengthening regulation of vertical closed-loop drilling for geothermal energy systems. The regulation requires geothermal installers to obtain an environmental compliance approval (ECA) for vertical closed-loop geothermal systems. Applicants are required to submit a work plan, prepared by a licensed engineering practitioner or a professional geoscientist, that must include measures to prevent an adverse effect if hazardous gas is encountered while constructing, altering, extending or replacing a system.

The intent of the new regulation and instructions is to protect against the release of hazardous gases, such as natural gas and hydrogen sulphide, while drilling boreholes and installing the grout and U-loop components of geothermal systems.

Key requirements of O. Reg. 98/12 include:

- a work plan prepared by a licensed professional engineer or geoscientist;
- equipment and procedures for monitoring hazardous gases during geothermal drilling;
- a preliminary site assessment and a step-by-step description of all drilling activities;
- that measures and procedures be taken to control the release of hazardous gases during drilling and, if required, to kill the borehole (i.e. prevent release of the gases);
- crews trained in the safe management of hazardous gases during drilling;
- notification to specified individuals if hazardous gas is encountered in a geothermal borehole; and
- a mitigation completion report prepared by a licensed professional engineer or geoscientist if hazardous gas is encountered in a geothermal borehole.

The ministry is also requiring installers to notify landowners, occupants of a building, the municipality, the local fire department and the ministry’s Spills Action Centre if they encounter hazardous natural gas during installation of a vertical closed-loop geothermal system.

The ministry has published a guideline to assist installers, entitled *Instructions for Completing an Application for an Environmental Compliance Approval (ECA): Vertical Closed Loop Ground Source Heat Pumps* (www.ene.gov.on.ca/stdprodconsume/groups/lr/@ene/@subject/@renewable/documents/nativedocs/stdprod_097798.pdf).

Geothermal industry stakeholders Brian Beatty, P.Eng., Stan Reitsma, P.Eng., geothermal drilling contractor, and Ron Schertzer, geothermal equipment supplier, met with senior MOE staff to review the overall parameters for compliant geothermal drilling. Several concerns were raised by the MOE technical reviewers, leading to field tests, observed by MOE personnel, that formed the basis for acceptable procedures.

These procedures led to guidance and requirements that are now contained within the CSA Group standard *CSA-C448-13 Design and Installation of Earth Energy Systems*, which provides more guidance for drillers. The C448 standard applies to new and retrofit installations and also led to a sample work plan template that is available on the Ontario Geothermal Association website (www.ontariogeothermal.ca) for reference by other geothermal drillers in Ontario. However, each drilling company is responsible for preparing and submitting their own ECA application, including a work plan that is suitable for their equipment and procedures.

The C448 standard was developed and approved by technical committees and subcommittees that represent a multi-stakeholder forum representing the geothermal industry across Canada. Σ

Brian Beatty, P.Eng., is a principal, Beatty Geothermal Inc., which specializes in drilling, installation and design of geothermal systems, and is a director on the board of the Ontario Geothermal Association. Muktha Tumkur, P.Eng., is program manager, renewable energy, CSA Group, responsible for developing standards for geothermal ground source heat pumps, solar thermal water heaters, solar photovoltaics, wind energy and marine energy.

NAVIGATING THE SOMETIMES CONTESTED WATERS AMONG POLICY, ENGINEERING AND SUSTAINABILITY

By Greg Evans, PhD, P.Eng., Bryan Karney, PhD, P.Eng., and Andrew Knox



WE ENGINEERS OFTEN take pride in our ability to solve problems. Yet we tend to be more comfortable with physically constrained problems than with the messier variety that occur in political, bureaucratic or more obviously value-laden domains. However, like it or not, policy is quickly becoming a subject in which more engineers need to engage. In fact, this article has a rather simple purpose. It is to argue that engineering and policy considerations are closely coupled—so closely connected, in fact, that any engineer who understands and can navigate in the policy world will enjoy a considerable advantage. Moreover, we engineers must do more than understand the jargon and intention of policy. We must be able to contribute meaningfully to policy. This is crucial since many areas touched by policy necessitate a technical understanding of the world. Thus, to be most effective, engineers must both inform and be informed by policy considerations.

We argue as well that an ability to communicate effectively with policy-makers is particularly

advantageous for engineers concerned with sustainable development. This should be clear since, for any larger system to be sustainable, many sub-fields and components must perform well, too, and these, in turn, often hinge on policy or regulatory considerations. Indeed, any imaginable notion of sustainability requires persistence in time, and such longevity can be conceived only as a comprehensive set of measures that allows for uncontrolled outside influences that might adversely affect system behaviour. Such a set of measures would need to go beyond the exclusively technical, and many would need to be documented in policy. Thus, an understanding of policy discourse is essential to sustainable engineering.

POLICY COMPETENCE IN ENGINEERING WORK

With a little reflection it becomes almost a truism that an engineer who refuses to leave the comfort zone of the purely technical might miss better solutions. A couple of simple examples conclusively demonstrate this. Sometimes the best approach to traffic congestion can simply be to ban cars from an area. As another apt example, Jason McLennan, a sustainable buildings architect, created the Living Building Challenge, one of the requirements of which is that a “living building” only use water falling on its site. This requirement, however, conflicts with policy in the state of Oregon, which prohibits the use of rain water and grey water. So, rather than jumping into purely technical solutions, architects met with policy-makers and simply revised the regulations (Central City Concern).

Thus, the simplest solution is not always a technical one and engineers can waste resources

The articles published in the Policy Engagement section of *Engineering Dimensions* are intended to generate discussion on issues of public policy related to engineering. The views expressed are those of the authors alone and do not necessarily reflect those of the Ontario Centre for Engineering and Public Policy, PEO, or any other organization.

by missing this point. Yet it is certainly interesting to note how different the sometimes negotiable world of policy is from the more inflexible world of technical constraints. An engineer can't negotiate with a physical system to rewrite or suspend the laws of either gravity or energy conservation. A flood will not be arrested by legislation that decrees it to be out of order! Yet policies might well gradually transform the land use pattern in an urban area, causing it to be less susceptible to flooding.

Ontario's Feed-in Tariff (FIT) system offers a good example of how resources can be wasted if engineers misunderstand policy. The FIT provides a high price for electricity generated from renewable energy technology, but the policy also aims to improve Ontario's manufacturing economy. It requires that generation technologies contain a certain percentage of made-in-Ontario components if they are to receive the FIT rates. If a product's business plan relies on FITs but is not designed with the required domestic component content, the designing engineer has failed by virtue of misunderstanding policy. Of course, having a policy with laudable and comprehensible goals brings no assurance of success, any more than good engineering intentions automatically produce good products or design.

Knowing specific regulations is often enough for engineers to design to present requirements and could allow an engineer to design to FIT requirements. But an understanding of policy provides a wider context. This wider context can clarify the direction in which policy and regulations are moving. It can make the difference between an engineer who designs to current minimum regulations and one who intentionally surpasses current regulations to proactively meet expected future requirements. Once regulations are tightened, the more stringent design has an obvious advantage over those trying to quickly bridge the gap by retrofitting a design to meet the new set of standards. Conversely, having a sense of policy momentum might let an engineer know that no changes are upcoming, and designing to existing regulations is sufficient now and in the long term. Focusing too much on regulation and not enough on its policy context can leave an engineer at a disadvantage.

Understanding technology in a policy context helps engineers think about social values and contexts. Often the people encouraged to enter the engineering profession excel not in social understanding, but in intellectual exercises that are abstracted from society (Karney and Mather). Which policies are appropriate is largely a question of societal values (Pal), and values also affect the range of technical tools seen as appropriate in policy implementation. For example, UK social values admit the use of widespread CCTV cameras, while North American social values do not. In engaging in policy thinking, engineers confront the fact that values will affect whether their designs are used. Understanding policy and the related values would help engineers achieve the important "head and heart" balance discussed in the article "Math, policy and responsible action" (Karney and Mather).

At the advent of their profession, policy analysts were hopeful that the "heart" could be removed from the "head and heart" nature of policy-making. They believed that policy analysis could objectify policy-making, leading to rational, values-free, optimal policies (Pal). They were quickly disabused of this notion, coming to understand that values would always have a role, and developed more sophisticated analysis and policy design frameworks that anticipated the impact of values. This is an important anecdote for engineers, who are often frustrated that people and societies do not always make the technically optimal choice.

Engineers can learn from the example of policy studies to accept the fact that people will often not use their technology as designed, just as policy analysts have accepted that decision makers will not always use their analysis as intended. Policy analysis is a great example for engineers of a discipline that has integrated design-for-values into its core, and it is an area that can help engineers understand *why* suboptimal uses arise. With such an understanding, engineers can design around suboptimal use.

POLICY COMMUNICATION AND SUSTAINABLE ENGINEERING

Strong communications skills are a perennial feature on lists of skills engineers require. There is an emphasis on cross-cultural communication as a requirement for tomorrow's global engineer (Rajala). Cross-discipline communication may be just as important a career advantage, and communicating effectively with those in policy-related disciplines will distinguish some engineers from their peers. This is especially the case for engineers seeking to contribute to sustainable development, as environmental outcomes are so often strongly affected by policy. Water, energy and food policies, for example, will be critical in meeting the global sustainability challenge. Sustainability-minded engineers will need to be able to understand and work within these policies.

Not only is it beneficial for engineers to be able to understand policy, it is essential to a sustainable future that engineers are able to contribute to policy. Gibson's principles of sustainable development include a principle of socio-ecological civility and democratic governance (Gibson), which calls for more open and better-informed deliberations. These deliberations will involve engineers informing policy-makers on technical issues and even collaborating in policy development. If engineers can communicate with policy-makers in policy terms, the socio-ecological principle of sustainable development will be better served.

Another reason all engineers need some understanding of policy thinking and policy-centred communication is that all design and, perhaps, particularly sustainable design, requires collaboration with policy-makers. Holistic understanding is required to close all the resource loops, reclaim and make use of all the by-products, minimize energy requirements, and fulfill all the other requirements to make engineering activities sustainable. It is a rare case that any one person can be expert enough to design for every aspect of a sustainable project. Even large teams from within exclusively technical disciplines would have trouble achieving sustainability, as technical knowledge is a necessary, but not sufficient, condition for sustainable engineering (Karney and Venayagamoorthy). Moreover, when sustainability is the goal, purely technical solutions can be not only wasteful of capital, but also a distraction from addressing root problems (Gilmore). At the same time, policy-makers must be wary of environmental policies that may not be complied with if compliance is too costly (Gilmore). Engineers and policy-makers must work together to create environmental policies that can be implemented using affordable technology. Policy and technology for sustainability can be co-developed, but only if engineers can communicate in, or at least understand, policy terms well enough to make collaborative policy-making and engineering teams effective.

POLICY AND THE ENGINEER OF THE FUTURE

There are several reasons an engineer can benefit from engagement in the overlap between engineering and policy. Policy solutions are sometimes simpler than technical ones. Not recognizing the policy constraints on the set of technical solutions can lead to failure. As well, like engineering, policy aims not to create but to solve problems, and policy studies can be a good example for engineers of a problem-solving discipline that routinely and systematically incorporates social values. Adding policy tools to their toolbox, understanding the influence of policy on design space, and learning from policy

analysis to handle the values aspects of design problems, can all be advantages for engineers.

Being able to work proactively within and contribute to public policy will become more important to engineers as the profession grows to require more cross-disciplinary communication, and sustainability considerations become more routine. Policy-oriented thinking can become an effective tool for engineering problem solving, and policies aiming for sustainability will require input from policy-fluent engineers. With all the advantages an understanding of policy can offer to the engineer of the future, it seems prudent to offer engineers policy-themed education that will equip them with these advantages. With this education, engineers will gain a career advantage that can be leveraged into a greater and more constructive edge contribution not only to their field, but to humanity.

Greg Evans, PhD, P.Eng., is a professor in the department of chemical engineering and applied chemistry, University of Toronto (U of T), and the director of the Southern Ontario Centre for Atmospheric Aerosol Research. Bryan Karney, PhD, P.Eng., is the associate dean of the cross-disciplinary programs office in engineering, U of T, a professor of civil engineering, and a director of the consulting firm HydraTek and Associates Inc. Andrew Knox is a U of T engineering PhD student.

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ENERGY PLANNING, POLICY AND PROGRESS IN ONTARIO

By Sommer Abdel-Fattah, PhD, MEPP

“Our destination is determined by our vision of tomorrow and the investment we make today. We must invest wisely, step up to the challenge, and protect what is not ours to waste.”

Chris Bentley, Ontario minister of energy, 2012

ONTARIO FAMILIES, businesses and the economy rely on the efficiency, dependability and sustainability of the electricity system. There is growing awareness that a transition to a more streamlined energy plan is necessary. And it's vital that this system be not only more environmentally efficient and clean but also economically feasible. However, the complexity of the current energy system and the future plans for change have some worried about the fate of energy delivery and its cost in Ontario.

Currently, Ontario's electricity system has a capacity of approximately 35,000 MW of power. Ontario's Long-Term Energy Plan ensures that Ontario becomes coal-free by 2014 in an effort to reach the government's greenhouse gas reduction target. Nuclear energy is expected to replace much of the coal-fired energy, which provides approximately 50 per cent of the province's electricity needs. The Ontario Power Authority (OPA) forecasts that more than 15,000 MW will need to be renewed, replaced or added by 2030. Over the next 20 years, estimated capital investments totaling \$87 billion will be spent on these programs and much of the cost will be passed

on to consumers. Residential bills are expected to rise by 3.5 per cent each year over the next 20 years. Industrial prices are expected to rise by 2.7 per cent each year over the next 20 years (Ontario Ministry of Energy). It's no surprise that electricity pricing and policy is an area of high political and citizen concern (Radwanski).

In 2012, the government announced a plan to save \$25 million in costs by merging the OPA and the Independent Electricity System Operator (IESO). It had also planned a sell-off of municipally owned distribution utilities (Centre for Urban Energy). On April 26, 2012, Ontario's minister of energy introduced legislation to formally amalgamate the two agencies through Bill 75. Bill 75, *Ontario Electricity System Operator Act, 2012*, is an act to amend the *Electricity Act, 1998* to amalgamate the IESO and the OPA, amend the *Ontario Energy Board Act, 1998* and make complementary amendments to other acts. The OPA and the IESO are both planning agencies and do not produce or distribute electricity (Adams). According to the government, the proposed merged agency's new role would be to establish market rules, align contracts and make the electricity sector more responsive to changing conditions (Adams).

The IESO is a not-for-profit corporate entity established in 1998 by the *Electricity Act*. It forecasts consumption throughout the province and collects the best offers from generators to provide the required amount of electricity. The IESO has authority for establishing, monitoring and enforcing reliability standards in the province; all companies within the power system in Ontario must comply (IESO). A peer review showed that its practices in enforcing reliability are exemplary. The OPA serves planning and procurement functions through the integrated power system plan (IPSP).

The proposed legislation (Bill 75) creates a new board of directors, which, including the CEO, is to comprise between eight and 10 members appointed by the minister for an initial term of two years (Centre for Urban Energy). The board of directors of the Ontario Electricity System Operator (OESO) is required to ensure there is an effective separation of functions and activities of the OESO relating to its market operations and its procurement and contract-management activities. The OESO is prohibited from interfering with, reducing or impeding a market participant's non-discriminatory access to transmission or distribution systems. The board of the OESO is also charged with ensuring that there is no conflict of interest between the two key functions of the new agency—managing the electricity market and procuring new supply (Centre for Urban Energy).

[POLICY ENGAGEMENT]

However, in October 2012, the proposed Bill 75 was undergoing a second reading debate when Premier Dalton McGuinty announced that he would resign and prorogue the provincial legislature, cancelling the current session of the legislature and effectively cancelling all legislation that was in process. With the installation of Premier Kathleen Wynne, the possibility exists that bills can be reintroduced at the stage at which they were when the house prorogued—although this has not been common practice in Ontario (Clark).

POLICY IMPLICATIONS

The formerly proposed Bill 75 eliminates two important components of the past legislation, 1. the OPA's ability to develop an IPSP for approval by the OEB; and 2. the OEB's power to review that plan for economic prudence and regulatory compliance. This eliminates public scrutiny of the proposed plans.

Another issue is the difficulty in reconciling the planning and procurement functions of the OPA with the IESO's responsibilities to administer and enforce market rules (APPPrO). It is unclear how these roles will remain separate under one body.

The proposed Bill 75 addresses these concerns through the following measures (APPPrO):

1. The minister takes responsibility for procurement decisions;
2. The OESO's board of directors ensures there is effective separation of issues relating to market operations and procurement and contract management activities;
3. The OESO is prohibited from giving an advantage or disadvantage to any market participant or procurement party; and
4. The board of directors is required to ensure confidentiality.

The ministerial directive power over Ontario's electricity market is likely to attract comment and disagreement (Centre for Urban Energy). Bill 75 gives Ontario's energy minister the power to proceed with new projects and construction of new reactors, without any public review, cost analysis, or determination of the project's environmental impacts. This makes decisions vulnerable to influences that project proponents may have over the minister (Stensil).

BILL 75 GIVES ONTARIO'S ENERGY MINISTER THE POWER TO PROCEED WITH NEW PROJECTS AND CONSTRUCTION OF NEW REACTORS, WITHOUT ANY PUBLIC REVIEW, COST ANALYSIS, OR DETERMINATION OF THE PROJECT'S ENVIRONMENTAL IMPACTS.

Under the proposed bill, the government's electricity plans are no longer required to be reviewed for their cost-effectiveness or contribution to environmental sustainability by the OEB (Stensil). The bill eliminates legal checks and balances designed to protect consumers. It has been suggested that responsibility for policing the market be given entirely to the Market Surveillance Panel, which exists under the OEB (APPPrO). Over the past few years, and particularly with the passage of the *Green Energy and Green Economy Act, 2009* (GEGEA), there has been a significant increase in the use of this ministerial directive power, to the point where many worry about the independence of planning and the ability of the OPA to do its job; regulatory agencies are being undermined (Centre for Urban Energy).

The challenge becomes executing the vision with the needs of society in mind, ensuring smart investment decisions, and using experience that allows energy efficiency to become an integral part of the solution. Collapsing the OPA and the IESO into the OESO is not a holistic solution for Ontario's energy future. This plan must be transparent and have some mechanism for review.

This bill must be amended before it is reintroduced to protect consumers. In 2006, the McGuinty government exempted its electricity plans and nuclear projects from provincial environmental reviews; sustainability issues were to be reviewed as part of the OEB's review process. Bill 75 eliminates this review process and thus provincial consideration of environmental impacts (Stensil).

The following are a few ways Bill 75 could be amended (Stensil):

- **Public review and transparency:** Bill 75 should require electricity demand and supply plans to be issued regularly and reviewed by the OEB;
- **Consumer protection:** The GEGEA requires operators to assume responsibility for cost overruns and poor performance. Bill 75 should require that other operators (such as OPG and Bruce Power) assume the construction and operational risk of their projects;
- **Sustainability:** The OESO should be mandated to advance Ontario's commitment to environmental protection;
- **Conservation and efficiency:** Bill 75 should be modified to give specific direction to the OESO to prioritize conservation and efficiency options before opting for any generation choices; and
- **Renewable energy:** There is no mention of the GEGEA or renewable energy in Bill 75. Renewable energy and clean energy costs are declining and are arguably already below nuclear costs. Nuclear projects approved today could be considerably more expensive than green options when they are finally completed a decade hence. Bill 75 should give direction to the OESO to consider the development of renewables.

In addition, implementing public policy to restrict and reduce civil and industrial energy use may help curb energy costs to users. By enforcing a formal law with rules, regulations and stipulations to follow, legislation could substantially reduce energy consumption and emissions. Government incentives would be key in integrating this system and public acceptability of promoting long-term energy goals. The public may be far more willing to adapt and accept sustainable sources of energy, which may have high initial costs, if they understand the long-term benefits.

DISCUSSION

It was hoped that a new energy plan would promote a better way to meet electrical supplies, promote energy efficiency and find ways to clarify the roles of the various parties involved. It was also hoped that conservation and demand management would be core goals in Ontario's Long-Term Energy Plan. However, Bill 75 doesn't support these objectives. It enables current regimes under new organization. The prorogation of Bill 75 has provided the opportunity for this bill to be further reflected upon and revised before being reintroduced.

One area to highlight for examination is that independently verifying the savings claimed by tracking costs through the shifting responsibilities and projects between the different energy authorities is virtually impossible (Radwanski). Ontario's Long-Term Energy Plan has demonstrated that the government's rate forecast compared to the actual rate trend has proven to be well below actuals (Radwanski). Ontarians are still paying off the debt on their electricity bill from building reactors in the 1970s and '80s. Recent history shows that nuclear operators and the province's electricity planning agencies continue to grossly underestimate the cost of nuclear projects (Stensil).

Proponents of selling off municipally owned distribution utilities argue that putting distribution in the hands of a few private companies would make for a more efficient system, with savings passed down to consumers. Sales would provide municipalities with large cash infusions, reducing the pressure on the province to provide funding for infrastructure and services (Radwanski). Some say the merger will likely cause prices to rise, as a corporation's main goal is to make money for its investors, and this could include cutting corners in infrastructure, and operating in their own interests (not the public's) (Radwanski).

Among the concerns about moving forward to sell municipal utilities is that private companies would acquire only the more profitable distributors, leaving taxpayers to pay for less desirable (often more remote) ones. The biggest worry, politically, is that the government would choose short-term revenues over long-term stability.

CONCLUSION

The prorogation of the Ontario legislature in October 2012 has provided the opportunity for reflection on Bill 75, which presented a significant overhaul of the province's energy sector, and the selling-off of municipally owned distribution utilities.

The proposed merger described in Bill 75 is centred on cost savings. However, some important components are ignored, such as the role of

public review and transparency, and environmental conservation. Public review of major projects and the government's long-term plans is necessary. Public review will confirm whether projects are indeed needed and cost effective.

When reintroduced, the new legislation should aim to supply energy in an efficient way with minimal increased cost burdens for consumers and taxpayers. By implementing programs aimed at reducing our consumption and switching to renewable sustainable energy economies, we could enhance Canada's economic position and environmental conservation. If the merger is successful in the future, it is important that no key functions of the former OPA and IESO, such as procurement and planning, are eliminated. Σ

Sommer Abdel-Fattah, PhD, MEPP, holds a master's degree in engineering and public policy and a PhD in civil engineering, both from McMaster University. She was a winner of the Ontario Centre for Engineering and Public Policy essay competition in 2009.

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NOVEMBER 2013



NOVEMBER 13-15 IEEE Annual Computer Communications Workshop, Niagara Falls, ON
www.cse.buffalo.edu/ccw13

NOVEMBER 15 Pre-Start Health and Safety Review (webinar), online
www.epic-edu.com

NOVEMBER 15-17 ESSCO-PEO Student Conference, Toronto, ON
www.essco.ca

NOVEMBER 15-21 ASME 2013 International Mechanical Engineering Congress & Expo San Diego, CA
www.asmeconferences.org/Congress2013

NOVEMBER 18-20 Ensuring Compliance With the New Ontario Building Code (course), Mississauga, ON, www.epic-edu.com

NOVEMBER 18-21 FABTECH, Chicago, IL
www.fabtechexpo.com

NOVEMBER 18-21 IEEE/ACM International Conference on Computer-Aided Design, San Jose, CA
www.iccad.com

NOVEMBER 18-22 82nd ARFTG Microwave Measurement Conference, Columbus, OH
www.arftg.org/conferences/82nd_conference.html

NOVEMBER 20-22 Greenbuild International Conference & Expo, Philadelphia, PA
www.greenbuildexpo.org

NOVEMBER 23 Ontario Professional Engineers Awards gala, Toronto, ON
www.ospe.on.ca

DECEMBER 2013

DECEMBER 2-4 IEEE 19th Pacific Rim International Symposium on Dependable Computing, Vancouver, BC
prdc.dependability.org/2013

DECEMBER 2-6 2013 International Conference on Connected Vehicles & Expo, Las Vegas, NV
www.iccve.org

DECEMBER 3-4 Data Analytics for Utilities Conference, Toronto, ON
www.utilitydataconference.com

DECEMBER 3-6 IEEE 34th Real-Time Systems Symposium, Vancouver, BC
2013.ieee-rtss.org

DECEMBER 4 Paradigm Shifts in Energy Systems and Transportation Electrification (seminar), Toronto, ON
<https://paradigmshiftsinenergysystems.eventbrite.ca>

DECEMBER 4-6 Construct Canada, Toronto, ON
www.constructcanada.com



DECEMBER 4-7 12th International Conference on Machine Learning & Applications, Miami, FL
icmla-conference.org/icmla13

DECEMBER 7-10 IEEE International Conference on Data Mining, Dallas, TX
icdm2013.rutgers.edu

DECEMBER 8-11 Winter Simulation Conference, Washington, DC
www.wintersim.org

DECEMBER 9-10 12th Annual Workshop on Network & Systems Support for Games, Denver, CO
netgames2013.cs.du.edu

2014 OCEPP Student Essay Competition



Undergraduate and graduate university students registered in a full-time engineering or policy program are invited to enter the Ontario Centre for Engineering and Public Policy's 2014 student essay competition.

There are two categories: undergraduate and graduate. The winner of each category will receive a \$1,000 award and complimentary registration to the centre's 2014 Public Policy Conference in Toronto.

Contest rules and past winners' papers are available on the "For students" page of www.ocepp.ca. Any questions can be sent to info@ocepp.ca. Submission deadline: midnight ET, March 3, 2014.



COUNCIL APPROVES CESC RECOMMENDATIONS TO IMPROVE ELECTION PROCESS

487TH MEETING, SEPTEMBER 26 AND 27, 2013

By Jennifer Coombes

THE SEPTEMBER MEETING opened with a Thursday evening plenary session to discuss issues regarding PEO's council elections. The session began with a presentation by a representative of Ipsos-Reid, the company that surveyed PEO members in late June and early July about council elections. The survey was conducted in an attempt to uncover the reasons behind the record low voter turnout (8.9 per cent) in PEO's 2013 council elections, as well as to consult the membership about broader election issues and processes, and PEO council. It was sent to all licence holders for which PEO had an email address (63,987) with 7401 responding. Highlights of the survey's findings, include:

- PEO's membership is uninspired and is looking for new ideas and new candidates, including younger and/or female candidates;
- Non-voters are a particularly disengaged group, reporting they do not vote because they feel no pressing issue, lack knowledge of candidates, forgot, or were too busy;
- The electronic voting process was well received, with only 4 per cent having difficulties and 5 per cent feeling uncomfortable with it;
- 88 per cent of voters familiar with the voting process reported being satisfied;
- Electronic voting has the potential to increase voting likelihood; and
- Electronic voting had a negative impact on former mail-in ballot voters.

Following the presentation, councillors were invited to discuss and vote on several issues related to the election process.

Council approved the following during the evening:

- continue to conduct PEO elections by electronic means only (Internet and telephone);

- amend the regulations to prohibit a former PEO president from running for president again for four years from the time his or her term expires;
- provide candidates' election publicity material to voters with the voting instructions;
- randomize candidates' names on the elections website each time a voter logs in to vote; and
- reappoint Catherine Redden as chief elections officer.

Council also approved the following recommendations made by the 2013 Central Election and Search Committee (CESC), based on the Ipsos-Reid survey and consultations with key stakeholders in the election process, including returning officers, the official elections agent, the acting CEO/ registrar, and the chief elections officer:

- prohibit PEO staff from handling and resolving complaints and questions;
- include "where to get help" information on voting instructions and better align candidates' names on the ballot;
- amend regulations such that only members who have served for at least two full years on council are eligible for nomination as president-elect. In the case of vice president, the member must have served at least one year on council;
- examine ways council could be more relevant to the membership;
- engage a communications specialist, to be overseen by the CESC, to develop a communications plan for increasing awareness of and participation in the 2014 council election, particularly targeting licence holders who don't typically vote;
- offer incentives for voting (e.g. entering voters in draws for prizes);
- authorize the chief elections officer to direct the voting site to indicate that a candidate has withdrawn from an election;
- continue to choose a chief elections officer who is a non-engineer and has experience addressing complicated issues;
- publish no election-specific articles, including letters to the editor, president's message, etc., in *Engineering Dimensions* during the voting period;
- clarify voting instructions in as many places as possible, including *Engineering Dimensions*, elections website and on printed instructions;
- add to the published election procedures that candidate mass mailings for campaign purposes (email or standard mail) other than PEO-sponsored eblasts are not condoned by PEO;
- establish a PEO help desk for use by potential voters and display the help number prominently on the voting instructions;

[IN COUNCIL]

- indicate on voting instructions that it is not necessary to vote for candidates for every council position to participate in the election process;
- task an appropriate committee to define a “member in good standing”;
- state in the procedures that nomination papers must be submitted only by email or fax for tracking purposes;
- state in publicity procedures that candidates may not use the PEO logo in their material;
- state in publicity procedures that links to PEO publications in candidate materials are not considered to be links to a third party;
- add to procedures that chapter executives must allow equal access to candidates at chapter annual general meetings, and must provide or withhold consent for candidates to attend meetings equally for all candidates;
- amend the protocol for all candidates meetings to include a deadline of noon on the day of the meeting for candidates to submit their material to be read by the moderator;
- inform candidates of protocol for all candidates meetings; and
- task the CESC with investigating the feasibility of holding the all candidates meetings in a debate format.

CONTINUING PROFESSIONAL DEVELOPMENT

Council unanimously supported, in principle, the development of a PEO continuing professional development program and referred a report by the Ontario Society of Professional Engineers’ Continuing Education Working Group to the Professional Standards Committee (PSC) for comment. The report proposes a mandatory program modeled on the program in place for Alberta’s engineers and aligns with the Engineers Canada Canadian Framework for Licensure. The PSC will review and comment on the June 19 report *Continuing Professional Development, Maintaining and Enhancing our Engineering Capability*, with input from PEO’s membership, as well as considering other recommendations for a professional development program. The committee is scheduled to report its findings and proposed action plan at council’s February 2014 meeting.

Currently, PEO has no mandatory professional development program and is the only

Canadian engineering regulator without one. In 2009, PEO council approved requiring licence holders to declare each year that they will maintain competence in the professional engineering services they provide. However, this motion has not been implemented.

STRUCTURAL ENGINEERING ASSESSMENTS OF EXISTING BUILDINGS

Council has authorized the PSC to proceed with the development of a guideline for structural engineering assessments of existing buildings and other structures, and a performance standard for structural engineering assessment of existing buildings.

With the Elliot Lake Inquiry ongoing, PEO has received inquiries on the best practices for assessing existing buildings and other structures, and the inquiry itself has revealed misconceptions concerning engineers’ responsibilities when performing this type of work.

A subcommittee of the PSC will carry out the work in consultation with practitioners and others, including members of the public. The draft documents, when completed, will be posted on the PEO website for general consultation.

COUNCIL WORKSHOP OUTPUT FINALIZED

At its September meeting, council unanimously affirmed the 2013 Council Workshop Report, which establishes council’s priorities for 2013-2014. These priorities are, in order of importance, to clarify PEO’s Code of Ethics, to develop a white paper about the impact of globalization, and to educate council on quality assurance.

ENGINEER-IN-RESIDENCE

The Engineer-in-Residence (EIR) program matches volunteer engineers with elementary and high school classrooms in Ontario to provide hands-on science, technology, engineering and mathematics programming for students. At its July 2012 meeting, council asked the Education Committee to review the EIR program, including options for how it might be overseen to provide accountability and effective delivery. In March of this year, the committee reported on options for the program, which were that its administration remain with The Impact Group (TIG), the company that has delivered the program since its inception, that PEO seek other service providers, that the program be brought into PEO to operate, or that the program be discontinued. The committee’s recommendations were that PEO remain the program sponsor and TIG the service provider, but under an updated contract. After discussion, council referred the issue back to the committee for further deliberation based on the council discussion.

The committee reported back to council at its September meeting, at which council approved the committee’s recommendations that it terminate the current contract with TIG on December 31 and issue a request for proposal for potential service providers for delivering the program. TIG and any other company or organization wishing to deliver the EIR program on PEO’s behalf will have an opportunity to respond to the RFP. Council has authorized up to \$15,000 for legal counsel to develop a contract with the successful proponent. Σ



Professional Engineers
Ontario

2014 COUNCIL ELECTIONS CALL FOR CANDIDATES

ALL PEO MEMBERS ARE INVITED to become candidates for the positions of **president-elect**, **vice president**, **councillor-at-large** and **regional councillor** (one for each of PEO's five regions) on PEO council.

Any member may be nominated for election to council as **president-elect**, **vice president**, or **councillor-at-large**, by at least 15 other members. The nomination must include at least one member resident in each region. [Regulation 941/90, s. 14.(1)]

The position of **president-elect** is for a one-year term, after which the incumbent will serve a one-year term as president and a one-year term as past president.

The position of **vice president** is for a one-year term.

The position of **councillor-at-large** is for a two-year term.

Any member residing in a region may be nominated for election to council as a **regional councillor** for that region by at least 15 other members who reside in the region. [Regulation 941/90, s14.(2) and s. 15.1(2)]

The position of **regional councillor** is for a two-year term.

A member nominated for election to council must complete a nomination acceptance form that states he or she is a Canadian citizen or has the status of a permanent resident of Canada and is a resident in Ontario. [section 3(3) of the *Professional Engineers Act*] and has consented to the nomination [section 15 of Regulation 941].

Nomination petitions for collection of nominator's signatures and nomination acceptance forms may be obtained from the PEO website at www.peo.on.ca, or from the chief elections officer, c/o Allison Elliot, PEO, 40 Sheppard Avenue West, Suite 101, Toronto ON M2N 6K9. Email: aelliot@peo.on.ca, fax: 416-224-5171; 800-268-0496.

Nomination petitions and nomination acceptance forms are to be sent only electronically to the chief elections officer, c/o Allison Elliot, by December 6, 2013. No personal delivery of forms will be accepted.

For further information on becoming a candidate, please contact: Allison Elliot, 416-840-1114, or 800-339-3716, ext. 1114; email: aelliot@peo.on.ca.

2014 VOTING PROCEDURES

The 2014 voting and election publicity procedures were approved by the council of PEO in September 2013. Candidates are responsible for familiarizing themselves with these procedures. Any deviation could result in a nomination being considered invalid. Candidates are urged to submit nominations and election material well in advance of published deadlines so that irregularities may be corrected before the established deadlines. Nominees' names are made available as received; all other election material is considered confidential until published by PEO.

1. The schedule for the elections to the 2014-2015 council is as follows:

Date nominations open	October 28, 2013
Date nominations close	4:00 p.m., December 6, 2013
Date PEO's membership roster will be closed for the purposes of members' eligible to automatically receive election material ¹	January 15, 2014
Date a list of candidates, their statements and voting instructions will be mailed to members	no later than January 24, 2014
Date voting will commence	on the date that the voting packages are mailed to members, no later than January 24, 2014
Date voting closes	4:00 p.m., February 28, 2014

Note: All times noted in these procedures are Eastern Time.

¹Members licensed after this date may call and request that election information be provided to them by regular mail, or by email (upon prior written consent by the member for use of his/her email address for this purpose), or via telephone.

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2. Candidates' names will be listed in alphabetical sequence by position on the list of candidates mailed to members and on PEO's website. However, the order of their names will be randomized when voters sign in to the voting site to vote.
3. A person may be nominated for only one position.
4. Nomination papers are to be submitted only by email or fax, for tracking purposes. Forms will not be accepted in any other format (e.g. personal delivery, courier, regular mail).
5. Candidates will be advised when a member of the Central Election and Search Committee has declared a conflict of interest should an issue arise that requires the consideration of the committee.
6. An independent agency has been appointed by council to receive, control, process and report on all cast ballots. This official elections agent will be identified to the members with the voting material.
7. If the official elections agent is notified that an elector has not received a complete election information package, the official elections agent shall verify the identity of the elector and may either provide a complete duplicate election information package to the elector, which is to be marked "duplicate," by regular mail or email, or provide the voter's unique control number to the voter and offer assistance via telephone. In order to receive such information via email, the elector must provide prior written consent to the use of his or her email address for this purpose.
8. Council has appointed a Central Election and Search Committee to:
 - encourage members to seek nomination for election to the council as president-elect, vice president or a councillor-at-large;
 - assist the chief elections officer as may be required by him or her;
 - receive and respond to complaints regarding the procedures for nominating, electing and voting for members to the council;
 - conduct an annual review of the elections process and report to the September 2014 council meeting.
9. Council has appointed a Regional Election and Search Committee for each region to:
 - encourage members residing in each region to seek nomination for election to the council as a regional councillor.
10. Council has appointed an independent chief elections officer to oversee the elections process and to ensure that the nomination, election and voting are conducted in accordance with the procedures approved by council.
11. The chief elections officer will be available to answer questions and complaints regarding the procedures for nominating, electing and voting for members to the council. Any such complaints or matters that the chief elections officer cannot resolve will be forwarded by the chief elections officer to the Central Election and Search Committee for final resolution. Staff is explicitly prohibited from handling and resolving complaints and questions, other than for administrative purposes (e.g. forwarding a received complaint or question to the chief elections officer).
12. On or before the close of nominations on December 6, 2013, the president will appoint three members or councillors who are not running in the election as returning officers to:
 - approve the final count of ballots;
 - make any investigation and inquiry as they consider necessary or desirable for the purpose of ensuring the integrity of the counting of the votes; and
 - report the results of the vote to the registrar not later than March 22, 2014.
13. Returning officers shall receive a per diem of \$250 plus reasonable expenses to exercise the duties outlined above.
14. If a candidate withdraws his or her nomination for election to PEO council prior to the preparation of the voting site, the chief elections officer shall not place the candidate's name on the voting site of the official elections agent or on the list of candidates sent to members and shall communicate to members that the candidate has withdrawn from the election. If the candidate withdraws from the election after the electronic voting site has been prepared, the chief elections officer shall instruct the official elections agent to adjust the voting site to reflect the candidate's withdrawal.
15. Voting will be by electronic means only (Internet and telephone).
16. All voting instructions, a list of candidates and their election publicity material will be sent by lettermail to members at the address listed on PEO's register. All voters will be provided with detailed voting instructions on how to vote electronically.
17. Verification of eligibility, validity or entitlement of all votes received will be required by the official elections agent. Verification by the official elections agent will be by unique control number to be provided to voters with detailed instructions on how to vote by the Internet or by telephone.
18. The official elections agent shall keep a running total of the electronic ballot count and shall make the results available to the candidates through a secure website not before the close of the voting period and not later than 9:00 p.m. on March 1, 2014. All candidates will be provided with a unique control number giving them access to the secure website of the official elections agent.
19. Voters need not vote in each category to make the vote valid.
20. There shall be an automatic recount of the ballots for a given candidate category for election to council or bylaw confirmation where the vote total on any candidate category for election to council between the candidate receiving the highest number of

votes cast and the candidate receiving the next highest number of votes cast is 25 votes or fewer for that candidate category or where the votes cast between confirming the bylaw and rejecting the bylaw is 25 votes or fewer.

21. Reporting of the final vote counts, including ballots cast for candidates who may have withdrawn their candidacy after the opening of voting, to PEO will be done by the returning officers to the registrar, who will advise the candidates and council in writing at the earliest opportunity.
22. Certification of all data will be done by the official elections agent.
23. The official elections agent shall not disclose individual voter preference.
24. Upon the direction of the council following receipt of the election results, the official elections agent will be instructed to remove the electronic voting sites from its records.
25. Election envelopes that are returned to PEO as undeliverable are to remain unopened and stored in a locked cabinet in the Document Management Centre (DMC) without contacting the member until such time as the election results are finalized and no longer in dispute.
26. Elections staff shall respond to any requests for new packages as usual (i.e. if the member advises that he/she has moved and has not received a package, the member is to be directed to the appropriate section on the PEO website where the member may update his/her information with DMC).
27. DMC staff shall advise elections staff when the member information has been updated; only then shall the elections staff request the official elections agent to issue a replacement package with the same control number.
28. Elections staff is not to have access to, or control of, returned envelopes.
29. After the election results are finalized and no longer in dispute, the chief elections officer shall authorize the DMC to unlock the cabinet containing the unopened returned ballot envelopes so that it may contact members in an effort to obtain current information.
30. After the DMC has determined that it has contacted as many members whose envelopes were returned as possible to obtain current information or determine that no further action can be taken to obtain this information, it shall notify the elections staff accordingly and destroy the returned elections envelopes.
31. Nothing in the foregoing will prevent additions and/or modifications to procedures for a particular election if approved by council.
32. The election publicity procedures form part of these voting procedures.
33. All questions from, and replies to, candidates are to be addressed to the chief elections officer:
 - By email: chiefelectionsofficer@peo.on.ca
 - By lettermail: Chief Elections Officer
c/o Professional Engineers Ontario
101-40 Sheppard Avenue West
Toronto, ON M2N 6K9
 - By fax: 416-224-5171

2014 ELECTION PUBLICITY PROCEDURES

IMPORTANT DATES TO REMEMBER

Deadline for receipt of publicity materials for publication in <i>Engineering Dimensions</i> and on PEO's website, including URLs to candidates' own websites	4:00 p.m., December 12, 2013
Deadline for submission of material for eblasts of candidate material to members	1. January 9, 2014–1st eblast 2. January 23, 2014–2nd eblast 3. February 6, 2014–3rd eblast
Dates of eblasts to members	1. January 16, 2014 2. January 30, 2014 3. February 13, 2014
Date of posting period	January 2014 to February 28, 2014
Dates of voting period	January 24, 2014 to 4:00 p.m., February 28, 2014

Note: All times indicated in these procedures are Eastern Time

1. Names of nominated candidates will be published to PEO's website as soon as their nomination is verified.
2. Names of all nominated candidates will be forwarded to members of council, chapter chairs and committee chairs, and published on PEO's website, by December 9, 2013.
3. Candidates will have complete control over the content of all their campaign material, including material for publication in *Engineering Dimensions*, on PEO's website, and on their own websites. Candidates are reminded that campaign material is readily available to the public and should be in keeping with the dignity of the profession at all times. Material for publishing purposes will be published with a disclaimer.
4. Candidate material may contain personal endorsements provided there is a clear disclaimer indicating that the endorsements are personal and do not reflect or represent the endorsement of PEO council, a PEO chapter or committee, or any organization with which an individual providing an endorsement is affiliated.
5. Candidates will have discretion over the presentation of their material for publishing purposes, including but not limited to font style, size and effects, and are allocated the equivalent of one-half page each in *Engineering Dimensions* (6.531 inches wide x 4.125 inches in height) in which to provide their election material. A template for this purpose can be found in the election publicity procedures at www.peo.on.ca/index.php/ci_id/27174/la_id/1.htm.
6. Candidates will be permitted to include a photograph within their one-half page.
7. All material for publishing on PEO's website and in *Engineering Dimensions* must be sub-

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- mitted to the chief elections officer at chiefelectionsofficer@peo.on.ca and in accordance with Schedule A attached. Candidates shall not use the PEO logo in their election material.
8. Candidates' material for publication in *Engineering Dimensions* and on the website, including URLs to candidates' own websites, must be forwarded to the chief elections officer at the association's offices or via email at chiefelectionsofficer@peo.on.ca so that it is received (both electronic copy and hard copy) not later than December 12, 2013 at 4:00 p.m. and in accordance with Schedule A attached. Candidate material will be considered confidential, and will be restricted to staff members required to arrange for publication, until published on PEO's website. Material will be published for all candidates on PEO's website at the same time.
 9. Candidate publicity material will be published as a separate insert/section in the January/February 2014 issue of *Engineering Dimensions* and to PEO's website in January 2014 and in the mailing to eligible voters with voting instructions.
 10. Candidates may utilize space on PEO's website, provided they email their material to the chief elections officer in the format set out in Schedule A. This material must be received by the chief elections officer no later than December 12, 2013.
 11. Candidates may submit updates to their material on PEO's website once during the posting period. Any amendments to a candidate's name/designations are to be considered part of the one-time update permitted to their posting during the posting period. Candidates may include links to PEO publications but *not* a URL link to a third party in their material that is to be posted on PEO's website. Links to PEO publications are not considered to be to a third party. For clarity, the only URL link that may be included in a candidate's material on PEO's website is the URL to the candidate's own website.
 12. Candidates may post more comprehensive material on their own websites, to which a link will be provided from PEO's website during the posting period. Candidates may include a URL to third parties *only in their own website material*—not in material that will appear in *Engineering Dimensions*, nor in material that is posted on PEO's election site (which includes the 1000-word space they are permitted), nor in eblast material.
 13. PEO will provide three group email distributions to members of candidate publicity material beyond publication in *Engineering Dimensions*. Material must be submitted to the chief elections officer at chiefelectionsofficer@peo.on.ca in accordance with Schedule A.
 14. Candidates are responsible for responding to replies or questions generated by their email message.
 15. The chief elections officer is responsible for ensuring that all candidate material (whether for *Engineering Dimensions*, PEO's website or eblasts) complies with these procedures. Where it is deemed the material does not satisfy these procedures, the chief elections officer will, within three full business days from receipt of the material by the association, notify the candidate or an appointed alternate, who is expected to be available during this period by telephone, fax or email. The candidate or appointed alternate will have a further three full business days to advise the chief elections officer of the amendment. The candidate is ultimately responsible for meeting this deadline.
 16. PEO will provide candidates with the opportunity to participate in All Candidates Meetings, which will be held at PEO offices and which will be video recorded for posting on PEO's website. On the day of the first All Candidates Meeting, an eblast will be sent to members announcing that all such video recordings will be posted to the PEO website within two business days of each meeting.
 17. Caution is to be exercised in determining the content of issues of membership publications published during the voting period, including chapter newsletters. Editors are to ensure that no election candidate is given additional publicity or opportunities to express viewpoints in issues of membership publications distributed during the voting period from January 24, 2014 until the close of voting on February 28, 2014 beyond his/her candidate material published in the January/February issue of *Engineering Dimensions*, and on the PEO website. This includes photos (with or without captions), references to, or quotes or commentary by, candidates in articles, letters to the editor, and opinion pieces. PEO's communications vehicles should be, and should be seen to be, unpartisan. The above does not preclude a PEO publication from including photos of candidates taken during normal PEO activities—e.g. licensing ceremonies, school activities, GLP events, etc., provided there is no expression of viewpoints. For greater clarity, no election-specific or election-related articles, including letters to the editor and president's message, are to be included in *Engineering Dimensions* during the voting period.
 18. Chapters may not endorse candidates, nor expressly *not* endorse candidates, in print, on their websites or through their list servers, or at their membership meetings or activities during the voting period. Where material does not comply with these procedures, the chief elections officer will cause the offending material to be removed if agreement cannot be reached with the chapter within the time available.
 19. Candidates may attend chapter annual general meetings and present their material and network during the informal portion of the meeting, provided they have obtained the prior consent of the chapter executive. If a chapter executive provides or withholds consent, it must provide or withhold consent to all candidates equally and fairly.
 20. While not prohibited, use of candidates' mass mailings (either by post or electronic means) for campaign purposes, other than the email blasts that are sent by PEO on behalf of the candidates, will not be condoned by PEO.

21. The Central Election and Search Committee is authorized to interpret the candidate guidelines and procedures, and to rule on questions and concerns of the candidates on matters around the election process.

22. These election and publicity procedures form part of the voting procedures.

SCHEDULE A: 2014 ELECTION PUBLICITY PROCEDURES

SPECIFICATIONS FOR CANDIDATE MATERIALS

Publication format (in <i>Engineering Dimensions</i> or PEO website)	<p>All material for publication in <i>Engineering Dimensions</i> must fit into the template dimensions: 6.531 inches wide and 4.125 inches in height.</p> <p>All material for publication must be submitted as a PDF document with images in place for reference, and as a formatted Word file, or in a Word-compatible file, showing where photographs are to be placed, accompanied by a hard copy of electronic files.</p> <p>Candidates shall not use the PEO logo in their election material.</p> <p>Candidate material may contain personal endorsements provided there is a clear disclaimer indicating that the endorsements are personal and do not reflect or represent the endorsement of PEO council, a PEO chapter or committee, or any organization with which an individual providing an endorsement is affiliated.</p> <p>The publications staff needs both a PDF file and a Word file of candidate material, as well as hard copies of both these files. This allows them to know how candidates intend their material to look. If there are no difficulties with the material, they will work simply with the PDF file. The Word file is required in case something isn't correct with the submission (just a bit off on the measurement, for example), as it will enable publications staff to fix the problem. Hard copies of both files are required because files can be, and sometimes are, corrupted in translation from one format to another (for example, when they are "dropped" into the InDesign page layout template).</p>
Photographs	<p>Photographs must be at least 5" x 7" in size if submitted in hard copy form so that they are suitable for scanning ("snapshots" or passport photographs are not suitable).</p> <p>If submitted in digital form, they must be JPEG-format files of at least 300 KB but no more than 2MB.</p> <p>Candidates can submit a digital photo at the specifications noted, or hard copy as noted, and preferably both. In case the digital file is corrupted or not saved at a sufficiently high resolution, publications staff can rescan the photo (hard copy) to ensure it prints correctly, as indicated on the PDF.</p>
PEO website	<p>Candidates may also utilize space on PEO's website by submitting a Word or Word-compatible file of no more than 1000 words, and no more than three non-animated graphics in JPEG or GIF format. Graphics may not contain embedded material.</p> <p>Candidates may post additional material on their own websites, to which a link will be provided from PEO's website. URLs for candidates' websites must be active by December 12, 2013.</p> <p>Candidates may include links to PEO publications but <i>not</i> a URL link to a third party in their material that is to be posted on PEO's website. Links to PEO publications are not considered to be to a third party. For clarity, the only URL link that may be included in a candidate's material on PEO's website is the URL to the candidate's own website.</p>
Deadline for <i>Engineering Dimensions</i> and website submissions	<p>Candidates' material for publication in <i>Engineering Dimensions</i> and on PEO's website must be forwarded to the chief elections officer at (chiefelectionsofficer@peo.on.ca) by December 12, 2013 at 4:00 p.m.</p>
Eblast material	<p>Candidates are permitted a maximum of 300 words for email messages. Materials are to be provided in text format only; graphics are not permitted. For clarity, a "graphic" is an image that is either drawn or captured by a camera. If HTML format is to be used for email messages, special design and graphic coordination are the candidate's responsibility.</p>
Deadline eblasts to members	<p>Candidates' material for eblasts to members must be forwarded to the chief elections officer at (chiefelectionsofficer@peo.on.ca):</p> <p>By January 9—for eblast on January 16 By January 23—for eblast on January 30 By February 6—for eblast on February 13</p>
Help	<p>Candidates should contact the chief elections officer (chiefelectionsofficer@peo.on.ca) if they have questions about requirements for publicity materials.</p>



MINUTES OF THE 91ST ANNUAL BUSINESS MEETING

SATURDAY, APRIL 27, 2013

CHAIR: DENIS DIXON, P.ENG., FEC

THE 91ST ANNUAL GENERAL MEETING of Professional Engineers Ontario was held at the Toronto Downtown Eaton Centre Marriott Hotel, Toronto, Ontario, on Saturday, April 27, 2013.

The president advised that for the first time, PEO was webcasting its business meeting. He said adding this online coverage supports PEO's goal of increasing the accessibility of PEO information to more members, no matter where they are located.

Before declaring the business meeting open, the president reminded all eligible PEO voters to pick up their electronic voting keypad at the e-voting desk outside the meeting room entrance.

The president thanked the participants and attendees of Friday's Penta Forum, and said he hoped that everyone found the session as informative and worthwhile as he did.

President Dixon then congratulated the six 2013 Order of Honour award recipients, recognized at the previous evening's gala, for their outstanding and dedicated commitment to the profession.

He also acknowledged the AGM Gold Sponsor, The Personal, and thanked the company for its continued support of the engineering profession.

The president informed the meeting that the 485th meeting of PEO council would be

held following the business meeting and luncheon and that all were welcome to attend.

CALL TO ORDER

The president advised that since proper notice for the meeting had been published in *Engineering Dimensions*, as provided for under section 20(i) of By-Law No. 1, and a quorum was present, the meeting was officially called to order.

INTRODUCTION OF COUNCIL

As the first order of business, the president introduced the members of the 2012-2013 PEO council.

The Executive Committee members: David Adams, P.Eng., FEC, past president; Annette Bergeron, P.Eng., president-elect; George Comrie, P.Eng., FEC, vice president (elected); Rakesh Shreewastav, P.Eng., vice president (appointed); and Ishwar Bhatia, P.Eng., Michael Wesa, P.Eng., FEC, and Rebecca Huang, LLB, councillors; and himself.

The remaining members of council: councillors-at-large Roydon Fraser, PhD, P.Eng., FEC, and Bob Dony, PhD, P.Eng., FEC; regional councillors Sandra Ausma, PhD, P.Eng., and Michael Wesa (Northern Region), Paul Ballantyne, P.Eng., FEC, and Chris Taylor, P.Eng. (Eastern Region), Thomas Chong, P.Eng., FEC, and Denis Carlos, P.Eng., FEC (East Central Region), Wayne Kershaw, P.Eng., FEC, and Len King, P.Eng., FEC (Western Region), Danny Chui, P.Eng., FEC, and Rob Willson, P.Eng. (West Central Region); lieutenant governor-in-council appointees: Ishwar Bhatia, Santosh Gupta, PhD, P.Eng., FEC, Richard Hilton, P.Eng., Rebecca Huang, Bill Kossta, James Lee, PhD, P.Eng., FEC, Mary Long-Irwin, Sharon Reid, C.Tech.; Chris Roney, BDS, P.Eng., FEC, Tarsem Lal Sharma, PhD, P.Eng., Rakesh Shreewastav and Martha Stauch.

PEO's directors to Engineers Canada for 2012-2013: David Euler, P.Eng., FEC, Diane Freeman, P.Eng., FEC, Catherine Karakatsanis, P.Eng., FEC, Phil Maka, P.Eng., FEC, and Chris Roney.

ORDER OF BUSINESS

President Dixon welcomed the special guests attending the meeting and introduced representatives from provincial and national engineering associations from across the country:

- Catherine Karakatsanis, president (and a former PEO president), Kim Allen, P.Eng., FEC, CEO (also in the same role with PEO for a number of years) and Ken McMartin, P.Eng., FEC, director, professional and international affairs (also a former PEO president), Engineers Canada;
- Ann English, P.Eng., CEO and registrar, Association of Professional Engineers and Geoscientists of British Columbia;
- Colin Yeo, P.Eng., president, Association of Professional Engineers and Geoscientists of Alberta;
- Leon Botham, P.Eng., FEC, president, and Dennis Paddock, P.Eng., FEC, executive director/registrar, Association of Professional Engineers and Geoscientists of Saskatchewan;

- Dawn Nedohin-Macek, P.Eng., president, and Grant Koropatnick, P.Eng., executive director/registrars, Association of Professional Engineers and Geoscientists of Manitoba;
- Sarah Deveraux, P.Eng., FEC, president, Engineers Nova Scotia; and
- Etienne Couture, ing., acting general director, Réseau des ingénieurs du Québec.

He also welcomed representatives of PEO's partners in the engineering community in Ontario:

- Nadine Miller, P.Eng., president and chair, Paul Acchione, P.Eng., president-elect, Alourdes Sully, P.Eng., FEC, past chair, and Mark Dietrich, CEO, Ontario Society of Professional Engineers (OSPE);
- Barry Steinberg, P.Eng., CEO, Consulting Engineers of Ontario;
- Rod MacLeod, C.E.T., president, and David Thomson, CEO, Ontario Association of Certified Engineering Technicians and Technologists; and
- Leo Cusumano, president, and Ron Kolbe, chief administrative officer, Ontario Building Officials Association.

President Dixon then reviewed the order of business for the meeting as outlined in section 22 of By-Law No. 1 and in the agenda distributed at the meeting.

IN MEMORIAM

The president asked all present to stand for a moment of silence in remembrance of those PEO members who had passed away in 2012.

ADOPTION OF MINUTES

President Dixon referred members to the minutes of the 2012 Annual General Meeting, which had been published in the November/December 2012 issue of *Engineering Dimensions*, and had also been distributed at the meeting.

It was moved by Thomas Chong, seconded by Wayne Kershaw, that the minutes of the 2012 Annual General Meeting, as published in the November/December 2012 issue of *Engineering Dimensions* and as distributed at the meeting, be adopted.

Motion carried

BUSINESS ARISING FROM THE MINUTES

The president reviewed the actions taken on the five submissions made by members at the 2012 Annual General Meeting.

He stated that one submission, calling for a binding referendum of the membership that would direct PEO council to request the government to remove the requirement for engineer LGAs, was defeated in a show-of-hands vote.

Of the other four, two were voted on and approved, while the remaining two were passed on to council without a vote from the floor.

The first submission of the remaining submissions called for PEO to establish a task force, comprising both elected and appointed members

of council and members at large, to study and report to council on changes required in the governance of PEO council. It also called for task force recommendations to be reported back at the PEO AGM in 2013, and that any proposed changes in the governance be taken to the members of the profession in a binding referendum prior to implementing the changes.

The president said council discussed this submission at its September and November meetings, at which time formal discussion on the nature of PEO governance was removed from the agenda with the understanding that the issue would be reintroduced at an unspecified future date.

Having said that, President Dixon stated that council is always reviewing governance best practices and seeking ways to improve regulation of the profession, regardless of submissions brought forth by the membership. He expressed his confidence that the new council would continue to look for opportunities to advance PEO's leadership of the profession.

The second submission contained two parts, the first of which asked council to rescind its resolution of April 13, 2012, accepting the resignation of Councillor-at-Large Michael Hogan, P.Eng. (which he had withdrawn prior to the meeting), and to reinstate Hogan to PEO council for the balance of his elected term. This part of the submission was defeated.

The second portion of the submission called on council to refrain from attempting to enact in any policy, regulation or bylaw any provision that would empower it to remove any councillor from the council or from any office of the association without his or her formal resignation or consent in writing. This portion of the submission was carried.

The president noted that council appreciated the goal of the submission, but since there was no intention of empowering council with such authority, the 2012-2013 council did not consider the submission further.

The first of the remaining two submissions referred to council by a vote from the floor called for members to reaffirm PEO's historic member-centric model of self governance, and

[AGM MINUTES]

for council to adhere to its policy of full and proper peer review of all substantive policy matters, and to confirm with members before taking any final decisions with respect to them.

The president reported that during its September meeting, council confirmed that the results of two previous legal opinions on this issue had determined that PEO is a hybrid model of a member-centred and board-centred organization. The motion was consequently tabled.

President Dixon reported that the final submission called on PEO council:

- to revert to the policy of appointing PEO's past president as a director of Engineers Canada unless that individual is unwilling or unable to serve in that capacity;
- to establish that the maximum term of appointment as a director of Engineers Canada be three years, unless the director intends to seek the presidency of Engineers Canada, in which case it be four years; and
- to establish that the remaining two PEO directors of Engineers Canada (i.e. those who are not past presidents) be elected by the membership of PEO at the time of the annual council elections from among senior volunteers who will not be members of council at the time of assuming their position on Engineers Canada's board.

The president advised members that in April 2010 council had already approved a selection process for appointing directors to the Engineers Canada board, and that as the 2012 AGM submission was contrary to the approved procedures, no further action was taken.

FINANCIAL REPORT

The president referred members to the auditors' report and the financial statements, which were published to PEO's website in early April and distributed as part of the registration package for the meeting.

He also referred to the booklet entitled *Questions and Answers on PEO Operations* included in the registration package, which he said was compiled to address common questions on all aspects of PEO's operations. He advised that the booklet had been published on the PEO website and that chapters may obtain additional printed copies by contacting their regional councillors.

The president then entertained and addressed questions from the floor regarding the statements.

It was moved by Diane Freeman, seconded by Rakesh Shreewastav, that the financial statements, as presented, be received.

Motion carried

APPOINTMENT OF AUDITORS

President Dixon stated that members must appoint auditors for the ensuing year. He advised that the Audit Committee was recommending the firm of Deloitte LLP be reappointed.

It was moved by Ishwar Bhatia, seconded by Cliff Knox, P.Eng., FEC, that the firm of Deloitte LLP be appointed auditors of the association for the 2013 financial year.

Motion carried

GREETINGS FROM ENGINEERS CANADA

The president advised that the provincial associations and other engineering-related organizations had been invited to provide a written report on their important matters. Received reports were included in the registration packages and also available on the publication desk.

The president then invited Engineers Canada to provide an update.

Catherine Karakatsanis, president, thanked PEO for the invitation to attend the annual meeting. She advised that Engineers Canada is the national body of the 12 provincial and territorial associations across Canada that together regulate the practice of the 250,000 professional members in Canada.

Karakatsanis advised that Engineers Canada:

- had conducted a study and issued a recent report titled *Engineering Labour Market in Canada—Projections to 2020*. She said the report shows that Canada is facing a short supply of engineers with more than 10 years of professional experience, highlighting that immigration will help address some of these shortages. The report can be found on the Engineers Canada website;
- had recently launched a project called "The Roadmap to Engineering in Canada," the details of which may be found at newcomers.engineerscanada.ca. The project provides international engineering graduates with comprehensive information on how to become licensed in Canada before they arrive and is designed to help potential newcomers plan more efficiently. She said the website was created through funding by the federal government with extensive input and support from the associations across Canada and is one of the many steps that Engineers Canada has taken to support and collaborate with the constituent associations and make the profession more accessible for internationally trained engineering graduates;
- has supported a project carried out in Alberta by APEGA called *Ingenious*, which is an online game for children. She called the project an excellent national initiative, and noted the game was launched at the Canadian Science and Technology Museum in Ottawa and is now a permanent feature at the museum; and

- has been working on raising the profile of engineering among government decision makers. She said that with the support of the constituent associations, this activity is making a difference by advocating for sustainable funding for core public infrastructure and proper long-term asset management. She said Engineers Canada is pleased the most recent federal budget proposes measures that will help the engineering profession and the country manage the imminent skills shortage, and noted that a summary of the federal 2013 budget is available on the Engineers Canada website.

Karakatsanis congratulated Michael Price, P.Eng., FEC, PEO acting CEO/registrar, and his team for organizing the annual general meeting and various events. She also congratulated Engineers Canada Director Phil Maka, who was recognized as a Companion of the Order of Honour, and Corneliu Chisu, P.Eng., FEC, who was named an Officer of the Order of Honour, as well as the other well-deserving inductees to the order.

In closing, Karakatsanis noted that PEO is doing an excellent job at the national level and thanked PEO staff and volunteers for their ongoing support of Engineers Canada. She thanked President Dixon for his leadership in Ontario and across the country and indicated she is looking forward to continued collaboration with PEO's incoming President Annette Bergeron.

UPDATE FROM THE ONTARIO SOCIETY OF PROFESSIONAL ENGINEERS

The president invited OSPE to provide an update.

Nadine Miller, president and chair, expressed her appreciation for the invitation to attend the meeting.

Highlights of her comments include:

- While their mandates are separate, both PEO and OSPE are working well together to further their many common goals and contribute to the profile and influence of the profession. Miller thanked Dixon for sharing her commitment to restoring the faith in all of Ontario's engineers concerning OSPE's relationship with PEO. She expressed her confidence that PEO's new leader, Bergeron, and OSPE's new leader, Acchione, will carry on the spirit of collaboration and mutual respect going forward;
- OSPE is working to connect the community of engineers, engineering students and engineering graduates across the province by hosting events, providing valuable services and raising awareness of the importance of the contributions that engineers make to Ontario's economy and quality of life;
- Over the past year, OSPE had led dialogue on engineering-related issues with governments, industry and the public. Issues such as innovation, funding and transportation planning are areas in which OSPE is having a real impact with respect to public policy and decision making; and
- OSPE is also acting on real issues engineers are facing, such as under employment and retraining, and Miller encouraged the support of all engineers across the province, urging those who have not already done so to join OSPE. Miller encouraged anyone with questions about the

important work OSPE is doing to speak to her, Acchione, Sully or Dietrich.

MEMBER SUBMISSIONS

President Dixon stated that, as noted in section 17 of By-Law No. 1, PEO's annual general meeting is held:

- to lay before members reports of the association's council and committees;
- to inform members of matters relating to the affairs of the association; and
- to ascertain the views of the members present on matters relating to the affairs of the association.

He explained that submissions presented to the AGM are a way for members to express their views on matters relating to the affairs of the association, and noted that a guidance document to assist members in making submissions to the AGM is available on the PEO website.

He also encouraged members not to wait until the AGM to bring issues to council, and invited members to submit issues at any time through the policy development process, using an issue identification form available from PEO's manager of policy, or by asking that an item be put on a council agenda. He informed the meeting that items to be placed on a council agenda should be submitted to the corporate secretary three weeks prior to the meeting at which they are to be discussed, and advised that the council meeting schedule is published on the website.

President Dixon reminded members that member submissions are not binding on council, but do give a sense of general direction from licence holders at an AGM.

President Dixon then introduced the first member submission.

Moved by Keith Loucks, P.Eng., seconded by Tom Kurtz, P.Eng.:

WHEREAS any person serving on PEO council is elected to serve the engineering profession and members without prejudice, and

WHEREAS any councillor is required to declare any conflicts of interest on matters that may be related to a person's benefit, real or perceived, and

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WHEREAS David Adams has been ordered to pay his portion of a \$60,000 court award to PEO,

THEREFORE BE IT SUBMITTED THAT:

J. David Adams pay the court costs of \$60,000 for Court File 202/12 before representing the Association of the Professional Engineers of Ontario.

And furthermore, that Mr. Adams refrain from any discussion of the judicial review subject matter at any PEO function during his full term of office.

Motion carried

President Dixon then introduced the next member submission.

Moved by Cliff Knox, seconded by Chantal Chiddle, P.Eng.:

WHEREAS members whose licence renewal fees are in arrears cease to be a “member in good standing” and are normally not allowed to serve on chapter boards or in a fiduciary capacity at PEO. Such members also risk being removed from the register of licensed engineers until such repayment is made, and

WHEREAS any member who is in arrears to PEO for monies relevant to their professional engineering practice or involvement in the affairs of PEO has similarly ceased to be a “member in good standing,” and

WHEREAS it is desirable that no licensee with outstanding payments owing to PEO be in a position that could directly or indirectly influence a decision to defer or excuse payment of the associated debt, and

WHEREAS no specific language exists in Regulation 941 or By-law No. 1 that defines a “member in good standing” or makes provision that members must be in good standing to be able to serve as a volunteer in a fiduciary capacity with PEO,

THEREFORE BE IT SUBMITTED THAT:

Council consider a policy that would suspend any member from serving on PEO council or in a fiduciary capacity on any PEO committee or chapter board while the member has an outstanding payment owing to PEO that has not otherwise been excused by the registrar or by direction from an Ontario court.

Motion carried

President Dixon then introduced the third submission.

Moved by Cliff Knox, seconded by Chantal Chiddle:

WHEREAS the question of eligibility to serve as a volunteer in a fiduciary capacity at PEO has been raised by a separate submission at this annual general meeting,

WHEREAS it is desirable that all candidates for election be eligible to serve, and be free of any real or apparent conflict or bias that might affect their objectivity or performance in the elected office and its associated responsibilities, and

WHEREAS a number of votes cast in the 2013 PEO election for East Central Region councillor were excluded from the official results due to an invalid candidate that remained on the electronic and telephone ballots,

THEREFORE BE IT SUBMITTED THAT:

The 2013 PEO election results for the office of president-elect be reconsidered, pending a review of the eligibility of all candidates to serve free of any conflicts or bias.

In response to a request, Scott Clark, LLB, FEC (Hon), PEO corporate secretary, clarified the apparent discrepancy in voting results to the members’ satisfaction.

President Dixon added that the Central Search and Election Committee would be reviewing the latest election process and making recommendations to council that might improve voter turnout.

Moved by Peter DeVita, P.Eng., FEC, seconded by Len King, that the motion be tabled.

Motion defeated

The main motion was then voted on and carried.

President Dixon introduced the fourth submission.

Moved by Ray Linseman, P.Eng., FEC, seconded by Graham Houze, P.Eng.:

WHEREAS the *Professional Engineers Act* defines the practice of professional engineering as “practice of professional engineering” means any act of planning, designing, composing, evaluating, advising, reporting, directing or supervising that requires **the application of engineering principles** and concerns the safeguarding of life, health, property, economic interests, the public welfare or the environment, or the managing of any such act; (exercice de la profession d’ingénieur),” and

WHEREAS there is no definition of the term “engineering principles,” and

WHEREAS there is no definition of the term “application of engineering principles,” and

WHEREAS the repeal of the industrial exception [paragraph 12(3)(a)] will introduce questions as to what constitutes “the application of engineering principles,” and

WHEREAS it would be prudent for PEO as a self-regulating profession to define “the application of engineering principles” and the term “engineering principles” rather than the courts,

THEREFORE BE IT SUBMITTED THAT:

PEO council should take the necessary steps to have the Ontario legislature add to the *Professional Engineers Act* the ability for PEO to create

regulations to define the terms “engineering principles” and “the application of engineering principles” and any other terms deemed necessary to define the practice of professional engineering.

This item was referred directly to council by consensus of the meeting. President Dixon introduced the fifth submission.

Moved by Ray Linseman, seconded by Graham Houze:

The chapter email address is often sent messages from head office with attachments to forward to the chapter members, which currently is not allowed using distribution lists created on the chapter’s webmail address. PRISM must be used to send email blasts, but does not allow for attachments, so the attachment must be uploaded to PRISM and then HTML and text versions of the email created with links that don’t always work in the attachments.

Sending newsletters by PRISM electronically can be much more time consuming than simply sending them as an email attachment.

When using the normal distribution list for chapter members, it is unclear if the chapter manager and regional councillors get a copy.

There is a concern that any distribution list maintained by the chapter could be out of date.

Distribution lists could have a date stamp added to the name of the distribution list to identify its currency, e.g. PEO TIC P.Eng. Members 2012-12-01 9:00 a.m.

A test creation of a distribution list using an Excel spreadsheet created from data containing names and email addresses extracted from PRISM was successful and demonstrates at least one technique on how the email distribution lists can be created in a reasonably easy fashion but it does require the assistance of PEO IT personnel.

THEREFORE BE IT SUBMITTED THAT:

PEO council should make the necessary resources available to allow email distribution lists on the chapter email address contact lists to be updated by IT staff on a weekly basis, or when necessary, and allow the chapter to use this as a means of sending the chapter members’ email bulletins, chapter newsletters, or other PEO-related business to its members providing that the members’ right to privacy is respected.

Motion carried

Moved by Ray Linseman, seconded by Graham Houze:

That the remaining member submissions be referred to council for consideration.

Motion carried

PRESENTATION TO OUTGOING COUNCILLORS

President Dixon congratulated members of the 2012-2013 council, who had worked diligently in serving the profession.

In recognition of their service, he presented certificates, name badges and desk plaques to retiring members of council: Vice President George Comrie, Eastern Region Councillor Paul Ballantyne, and Western Region Councillor Wayne Kershaw. President Dixon also presented certificates to members of council continuing on council in different positions: Past President David Adams, who would be president-elect for 2013-2014, and

Thomas Chong, who would be vice president for the 2013-2014 term.

REMARKS FROM PRESIDENT DIXON

President Dixon stated he was pleased to have the opportunity to share some of the successes of PEO council over the past year.

He expressed his opinion that co-operation between PEO and OSPE had improved significantly, and noted there was general agreement at the 2012 council workshop that there are functions that OSPE could be doing rather than PEO. While this is, as yet, unresolved, he said he is confident that incoming President Bergeron, who was previously OSPE president, would continue to lead council to more progress.

He then highlighted some of council’s other accomplishments over the year:

- PEO’s IT systems have been upgraded, including:
 - a new website,
 - allowance for council members to participate remotely in council meetings, and
 - making it easier to suggest and submit candidates for awards;
- PEO’s licensing system is being upgraded, using the APTIFY database system for approximately half of the cost of replacing the current database. APTIFY is the same system that PEO’s counterpart in Alberta is using and they have been helpful in sharing their experience to customize the program to suit the needs of the engineering profession in Ontario. This will result in substantial additional savings for PEO and great convenience to members. He expressed PEO’s appreciation to APEGA and its president, Colin Yeo, P. Geo., and said the system is expected to be fully functioning by the end of 2014, and will provide applicants the ability to apply for licensure online, including electronic submission of all necessary documentation. Applicants will also be able to check their status online. Future enhancements will provide members the ability to record their professional development on PEO’s licensing system. This will allow members actively providing professional services to the public, and any others who

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desire, to refer clients to the PEO website to confirm that a member is up to date in his/her fields of expertise. It will also enable a seamless transition to other provinces that do track members' professional development activities;

- PEO's building at 40 Sheppard Avenue West is profitable to the extent of over \$500,000 and the financial report confirms that the net capital assets at year end were nearly \$36.5 million;
- The Ontario Centre for Engineering and Public Policy has conducted very highly rated programs, including a recent co-operative venture with OSPE on reusing nuclear fuel;
- The Government Liaison Program has dedicated volunteers aligned with every MPP at Queen's Park and with all their possible replacements should an election occur. He expressed his appreciation for the expertise that consultant Howard Brown, of Brown & Cohen, brings to enhancing PEO's profile and access at Queen's Park; and
- PEO has made great strides at Engineers Canada with Catherine Karakatsanis as the president and Kim Allen the CEO, plus PEO directors Dave Euler, Phil Maka, Chris Roney and Diane Freeman. Freeman has been involved in the Canadian Framework for Licensure, which is helping all provinces understand each other's problems.

President Dixon referred to the tragic mall collapse in Elliot Lake, noting that charges have been laid by the Ministry of Labour and PEO has open files relating to individuals involved. PEO may be required to testify at the inquiry into the collapse and is extremely fortunate to have competent staff with a total grasp of the procedures to state PEO's position. He said that while the total outcome of the inquiry cannot be predicted, it may highlight there are things in the engineering business that are beyond PEO's control. He advised he has suggested to government that a provincial engineer with a direct link to the legislature could do things that PEO may be unable to do. All three political parties seem to be in general agreement but they, as well as PEO, are awaiting the inquiry findings.

Another issue that required council's attention was the relationship of technologists with engineers. President Dixon reported that B.C. and Alberta have reached different accommodations with their technologists and PEO has gone down yet another path in its dealings with OACETT. He acknowledged the contribution of its president, Rod MacLeod, and appointee to PEO council, Sharon Reid, for their assistance with the wording of changes to the *Professional Engineers Act*, which are currently going through the government's process.

With respect to the repeal of section 12(3)(a), incorrectly known as the industrial exception, President Dixon reported that a delay had occurred one day before proclamation of the changes to the act to remove the section. He said the government is in favour of reducing the substantial cost to the province of industrial accidents and has tasked PEO with bringing the rest of industry onside. He noted that several major players are in agreement with PEO that competent engineers can help improve safety with a minimal cost outlay. In the immediate future, PEO will be pursuing this initiative, stressing that the measure is to address public safety concerns.

President Dixon referred to suggestions that council needs "new blood" to regenerate it and, while not disagreeing, asked nominators in the 2014 elections to remember that PEO is a \$25-million business and that technical experience is not always enough to run a corporation. He said council is concerned about the poor turnout in the 2013 elections and will be working to determine the reasons for this.

In closing, President Dixon thanked committees and councillors for their co-operation during his term. He also thanked staff on behalf of the profession for their assistance, noting that they make an enormous contribution to PEO. In particular, he thanked Acting CEO/Registrar Michael Price, who stepped up at a time when he was needed and who has been invaluable in the recent dealings with government. He also expressed his appreciation to the members who elected him and said he hopes he has helped to move PEO in the direction they expected.

INSTALLATION OF NEW PRESIDENT

Past President Dixon administered the oath of office to Annette Bergeron as president for the 2013-2014 term and presented her with the gavel of office. President Bergeron then thanked Dixon on PEO's behalf for his service to the association.

INTRODUCTION OF INCOMING MEMBERS OF COUNCIL

President Bergeron then introduced the newly elected members of the 2013-2014 council: Past President Denis Dixon, President-elect David Adams, Vice President Thomas Chong, Councillor-at-Large Roger Jones, P.Eng., Eastern Region Councillor Dave Brown, P.Eng., East Central Region Councillor Changiz Sadr, P.Eng., FEC, and Western Region Councillor Ewald Kuczera, P.Eng.

CLOSING REMARKS BY PRESIDENT BERGERON

President Bergeron expressed her appreciation for the support from her professional colleagues to lead the association as the 94th president. In the next 12 months, she stated, there will be a renewed focus on PEO's regula-

tory functions and a plan to prioritize where the association should maximize its resources. She said it is her opinion that resources should be allocated to licensing and discipline activities, first and foremost. Only then can regulatory effectiveness be measured by identifying outcomes, such as licence application rate vs. successful outcomes, the number of disciplinary cases vs. the number of complaints, and changes to the *Professional Engineers Act*, such as the repeal of section 12(3)(a).

President Bergeron stated that, as the 2013-2014 council begins its work, she will aim to continue a cohesive, collaborative and accountable council and regulatory body. Council will decide on its plan, focus and desired outcomes for the year at its workshop in June. She also commented that council must be prepared to be proactive to any threats to PEO as a self-governing body. In the coming months, PEO will receive the recommendations of the Elliot Lake Inquiry and must be prepared to address identified issues.

President Bergeron stated her work has always been guided by the philosophy of consensus-building negotiations and that she will continue to stress this around the

council table. She said she is anxious to continue her work with her council colleagues, PEO staff and PEO's dedicated contingent of volunteers to advance the association's regulatory mandate. She congratulated the newly elected council members and thanked those whose term had concluded. She also expressed her appreciation to Past President Dixon for his valued mentorship during her time as president-elect.

In closing, President Bergeron noted that engineering is a wonderful profession and that PEO must commit to serving and protecting the public interest through licensure. She welcomed members' participation and support.

CONCLUSION

President Bergeron then declared the 91st Annual General Meeting of the Association of Professional Engineers of Ontario concluded. Σ

Michael Price, P.Eng.
Acting CEO/Registrar



The 2014 PEO Council Elections are coming up!

Once again, voting in PEO's council elections will be **by telephone and Internet only.**

A list of candidates, their statements and detailed electronic voting instructions will be mailed to all professional engineers **no later than January 24, 2014. You'll have until 4:00 p.m. ET on February 28, 2014 to vote.**

Candidates' statements will also appear in the January/February 2014 issue of *Engineering Dimensions*, and on PEO's website.

See page 43 for the Call for Candidates and approved voting and publicity procedures.

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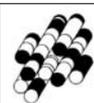
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[LETTERS]

AN UNDERPAID PROFESSION

This is my personal perspective on the general apathy displayed by members towards PEO.

I have worked as an engineer for 32 years and have held my P.Eng. for 29 years and a Certificate of Authorization (C of A) for five years. I am very pleased with my decision to enter and remain in the profession, mostly because the work is very enjoyable. However, I quickly learned that engineering in Canada has a significant downside. As honourable as the profession is supposed to be, most P.Engs feel they are underpaid. I know a number of P.Engs who are now lawyers, financial planners, doctors and teachers.

To me, none of the issues that PEO has worked on carry any weight compared to member compensation. This was before the foundation of the Ontario Society of Professional Engineers (OSPE). After its foundation, I was hoping OSPE would take up the fight for membership, but after a few years I found the subject was not even on its radar.

Apparently, in the 1950s or 1960s, engineering salaries were high relative to other professions. Why the decline? I was told PEO leadership had personal business interests in keeping engineering salaries down.

So, if PEO and now OSPE are powerless to address my number one concern, I can only invest the bare minimum in PEO and nothing in OSPE.

Paul Sedran, P.Eng., Mississauga, ON



FINDING A NEW REGISTRAR

In the current issue of *Engineering Dimensions* (September/October 2013), the president mentions that the search for a PEO registrar is well underway. It reminded me that I had yet to write the letter that I should have done about 60 years ago.

You see, in 1952 I had recently arrived from the UK, assuming the British engineering credentials I had worked so hard for would stand me in good stead in Canada. They didn't. My first job application earned a polite but firm refusal on the grounds that, unless I was a member of Professional Engineers Ontario, I was not considered to be an engineer.

This information was hard to take, so I arranged to call the then APEO's office on Avenue Road and had a meeting with the registrar of that time, Mr. J.M. Muir. I explained my position to him and he, in turn, explained APEO's position.

But what I remember most was encouragement. He didn't write me off as just another young, unqualified Brit, but took pains instead to show me where my strengths were and where I needed to satisfy the association by passing its relevant exams.

It was a long process but I did indeed manage to pass the required exams, as indicated by my title below.

The point of this letter, though, is that I have never forgotten Mr. Muir, and I hope all registrars exhibit the same courtesy and understanding I received all those years ago.

James A. Rogers, P.Eng., Victoria, BC

PROBLEMS WITH PEO

I have been a C of A holder since 2009 and it renews annually on August 1. This year, on July 10, I mailed (courier is the other option) the application with the same information I have presented since 2009. It took until September 6 to get the mailed confirmation of renewal—not that it really matters because I haven't dealt with anyone who knows what a C of A is. I go through the same annual process with my professional insurance provider and it takes about a week. You would think that, as the regulating body, PEO would want to do a stellar job of one of its few core responsibilities.

Now that the Algo Centre Mall inquiry has fingered an engineer as one of the culprits, I think PEO should expect the inquiry to dwell on their effectiveness at fulfilling that responsibility. PEO has stated that the engineer's licence had been under suspension and that it was revoked after the roof collapse. Still, the only significant information reported so far is that an engineer had declared the building sound.

PEO's castigation of the government for their reversal of the "industrial exemption" issue may well come back to haunt it. After all, PEO is an instrument of government, not the opposite. For PEO to lecture the government on how to protect people, while appearing to fail at its mandate of protecting the public, seems quite hypocritical.

I have been licensed for 28 years and am proud of my P.Eng. designation and appreciate the career opportunities it has allowed. But that's as far as it goes. Does it need to be more than that? The answer seems evident with the dismal participation in the last election. And, the significant decline in OSPE's already low membership demonstrates the same sentiment. Despite the tremendous, quality-of-life improvements that engineering provides and OSPE's *raison d'être*, the public profile of the profession remains unchanged. But, really, it takes a reality TV show to do that. And, I think we are still more highly regarded than lawyers!

David Gelder, P.Eng., Mississauga, ON

UNCONVINCING REASONS

Wow! Three letters championing the “consensus” of catastrophic anthropogenic global change in one issue of *Engineering Dimensions* (September/October 2013). Is somebody rallying the consensus troops to overwhelm the miscreants with their unassailable dogma? The authors clearly fall for the fallacy of argument from authority. One could fritter one’s time in refuting or equivocating at length some of their statements but it is easier to wait and let nature show us her intentions. North American land falling hurricanes are at a low ebb;



Arctic ice is increasing in extent from a 33-year low last year; global temperatures are diverging dramatically lower than the projections of the vaunted climate models; and global temperatures have been flat for 12 to 16 years, depending on the

authority. There is no solid evidence that our present climate is exceptional in the Holocene interglacial. Indeed, satellite data shows a net greening of the Earth, which some would attribute to CO₂ fertilization. But lecturing CAGW skeptics like wayward children is insufficient for Mr. Trottier (“Taking the lead on climate change,” p. 55). Trottier would see the climate heretics brought before the Star Chamber of PEO’s Discipline Committee for their heresies. All in all, the trio of letters are so unconvincing as to be amusing as to mankind’s CO₂ emissions being a problem that requires draconian solutions.

Robert J Austin, P.Eng., London, ON

A SKEPTIC’S RESPONSE

I am writing in response to the letters from engineers Trottier, Nichilo and Muir in the September/October issue (pp. 55-57). Of the three, I find Trottier’s letter the most upsetting (“Taking the lead on climate change,” p. 55).

I am a skeptic, not a denier, of anthropogenic climate change. Muir, at least, recognizes the difference. I also acknowledge that the science of climate change is outside my competency, so I took the advice of Trottier et al. to read some

articles in peer-reviewed journals. I may not understand the science, but I do recognize confusion when I see it. The following references note there has been a significant, unpredicted slowdown in Earth and ocean warming over the last 20 or so years: 1. “Overestimated global warming over the past 20 years” (www.nature.com/nclimate/journal/v3/n9/full/nclimate1972.html?WT.ec_id=NCLIMATE-201309), 2. “Retrospective prediction of the global warming slowdown in the past decade” (www.nature.com/nclimate/journal/v3/n7/full/nclimate1863.html), and 3. “Peer-reviewed papers which supports the Lyman et al ocean cooling diagnosis” (pielkeclimatesci.wordpress.com/2006/09/01/peer-reviewed-paper-which-supports-the-lyman-et-al-ocean-cooling-diagnosis/).

The first reference opens with: “Global mean surface temperature over the past 20 years (1993-2012) rose at a rate of 0.14 +/- 0.06 deg. C per decade (95% confidence interval). This rate of warming is significantly slower than that simulated by the climate models participating in Phase 5 of the Coupled Model Intercomparison Project (CMIP5).”

It is also statistically insignificant. References 1 and 2 hypothesize on this failure of predictability, as any group of good scientists would and should. But the hypotheses are just that—hypotheses that remain to be proven. The science is not settled—far from it. Yet there are those who would commit us to lifestyle changes costing billions, perhaps trillions, of dollars worldwide on the basis of such inadequate “science.” Such men are dangerous.

The references above are peer-reviewed papers or about peer-reviewed papers. I did not delve into the background of all the authors, but none of them appear to be, as Trottier puts it, “obscure scientists who have been unable to gather any peer support for their fringe views.”

I believe the scientists are, by and large, conscientious, ethical people doing their best in struggling to understand what may, in the end, defy understanding because of the immense number of variables, some of which may not even be known yet, or even capable of being adequately modelled. I also believe, as Muir obviously does, that it is not realistic that “a large number of scientists, representing many subdisciplines and across many organizations/countries/cultures, have colluded to lie to the public and political leaders about our changing climate.” But I strongly suspect the scientists are not driving the agenda anymore. I think the entire argument has become politicized, polarized, and thus poisoned, making clear, detached thinking and discussion extremely difficult.

And then, finally, we have Trottier, P.Eng., who would turn PEO’s Discipline Committee into an inquisition demanding correct belief. This merits no further comment.

Robert Norminton, P.Eng., Niagara Falls, ON



COMMENTS FOR MUIR

Mr. Muir listed 13 items he is comfortable accepting about the current global warming (“Why the fuss?” September/October 2013, p. 57). Eight of these are so obviously wrong that I feel it is necessary to comment on them.

3. Certainly, carbon dioxide is indeed a greenhouse gas as identified by Arrhenius and can cause the atmosphere to warm. The problem is, warming by how much? One can find peer-reviewed papers that give the radiative forcing of CO₂ at current levels from 22 to 218 watts per square metre (“Attribution of the present-day total greenhouse effect,” <ftp://soest.hawaii.edu/coastal/Climate%20Articles/CO2%20role%20modern%20warming%202010.pdf>; “Atmospheric carbon dioxide concentrations over the past 60 million years,” <http://lrg.elte.hu/oktatas/Elemek%20korforgasa%20PhD/N-C/Pearson%20Palmer%202000%20Nature.pdf>). This variation is so wide the results are useless. This is recognized by the IPCC because there is no value for the radiative forcing of CO₂ at current levels in AR4, the report by the IPCC in 2007, which is the latest to date. So far, there is only speculation and no scientific evidence.
5. One has only to examine the absorption spectra of both CO₂ and water vapour to know that both gases operate in the same way. Ahilleas Maurellis and Jonathon Tennyson (“The climate effects of water vapour,” <http://physicsworld.com/cws/article/print/17402>) indicate that because of its shape, a water vapour molecule absorbs more infrared radiation than a CO₂ molecule.
6. Carbon dioxide is simply not a pollutant. It is as essential to life on this planet as is sunlight, air and water. Without CO₂, plants would not exist. As plants are at the bottom of the food chain, we would starve to death.
7. The atmospheric temperature is not going to “run away” or get out of control because of feedbacks. The laws of physics will not let this happen. Atmospheric temperature changes linearly but heat radiation from the Earth varies as the fourth power of the temperature in degrees Kelvin (*Climate and Earth’s Energy Budget*, <http://earthobservatory.nasa.gov/Features/EnergyBalance/printall.php>).
9. The oceans are not acid, they are alkaline. According to Wikipedia (<http://ocean.nationalgeographic.com/ocean/critical-issues-ocean-acidification/>), ocean pH is approximately 8.1, well above pH 7 where acidity can begin. About 600 million years ago, CO₂ concentration was 10 times that of today and corals and molluscs did not disappear.
10. and 11. are contradictory about Arctic sea ice. For reference, there was an increase in Arctic sea ice this year as shown by satellite photos.
12. Consensus is useful and powerful in social situations. Consensus is nonsense in science because science is based on verifiable and repeatable information.

I hope this helps to bring some useful direction to the current debate about the role of CO₂ in warming of the atmosphere.

H. Douglas Lightfoot, P.Eng., Baie D’Urfe, QC

SOLUTIONS TO SAVE LIVES

Much has been written about the collapse of the mall in Elliot Lake. In a letter to the editor (“Systematic inspection or robust design,” July/August 2013, p. 61), Gary Dallin reminds us that prolonged exposure of carbon steel supports to moisture will corrode and weaken them. If a little bit of road salt is added to the environment, the corrosion process will greatly accelerate. We have known these facts for generations. We also know that concrete is porous and is likely to develop cracks. Moisture and salt really don’t care if they have to migrate to the steel via pores or cracks. The results will be the same: corrosion of the steel.

Corrosion products forming on steel occupy a greater volume than the original steel component. For steel embedded in concrete, this leads to cracking of the surrounding concrete, which then allows greater ingress of moisture and salt.

Mr. Dallin mentioned galvanized steel as a possible solution. A thick, sacrificial layer of zinc can certainly prolong the life of steel components. However, studies have shown that galvanized steel provides only marginally better corrosion resistance for steel embedded in concrete. In some environments, the corrosion products formed from the zinc layer can be quite voluminous and are thought to contribute to cracking of the surrounding concrete.

Construction components made of corrosion-resistant stainless steel have been available for several years (e.g. stainless steel rebars, dowel bars, welded wire mesh and anchor bolts).

Why then do architects and civil engineers continue to select bare carbon steel for structural components and anchors that are very likely to encounter moisture and salt during service? The principal answer is, of course, cost: carbon steel components are the cheapest. But what about the costs involved in premature structural failures and, more importantly, what about injuries and loss of life? Is it not time to change our building codes and practices to ensure the use of effective corrosion mitigation measures and better materials?

Frank N. Smith, P.Eng., Kingston, ON



LETTERS



A ONE-SIDED VIEW OF FLUORIDATION

In the September/October 2013 edition of *Engineering Dimensions*, in the Ontario Centre for Engineering and Public Policy pages, you published an article on fluoridation of public water systems entitled, “The role of professional engineers in maintaining the policy of public water fluoridation in Ontario” (p. 48). I read it at the time of publication and was very troubled by this article, which seemed to be an ill-conceived, thinly veiled threat that engineers who aid in any way with fluoridation systems could be subject to criminal prosecution. It was not fair nor balanced, and not up to the standards of your publication. I can say this with certainty because reading the article drove me to Health Canada, where I read the entirety of their advice and position on fluoridation. The article was very

selectively using the information presented to support its position, and I would go so far as to say in an intentionally misleading fashion, which leads me to believe the same of all the rest of the information in this article. I don't even know that this article rises to the level of being a valid opinion piece.

At the time, I very nearly wrote to PEO to complain about the article and, by extension, the editorial process that led to its publication, but I thought that at least my fellow engineers were astute and well-educated enough to do what I had done—do further research and reach my own conclusions.

After that, I pretty much forgot about it until today. Today, October 12, *The London Free Press* published a letter to the editor from a Chris Gupta. Presumably, this is the same Chris Gupta, P.Eng., of London, who is one of the authors of the *Engineering Dimensions* article in the first place. In the letter to the editor, he cites his own article as being a reflection of the concerns of PEO and professional engineers on this issue:

“The *Professional Engineering* journal [sic] has expressed its constituents’ concerns very clearly and should provide a better understanding for future deliberations on this issue.”

I was appalled that Mr. Gupta’s opinion, expressed in a one-sided article that should not have been published, has by the very fact of its publication in *Engineering Dimensions* become the opinion of the engineering community. I regret having not written sooner. I would urge that *Engineering Dimensions* and PEO contact *The London Free Press* and make it clear that Mr. Gupta’s position on fluoridation of public water systems does not represent the opinion or policy of *Engineering Dimensions* or PEO.

Susan Shaw, P.Eng., London, ON

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Address letters to jcoombes@peo.on.ca.

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THE SMART TOOL THAT COULD HELP YOU **SAVE UP TO 25%** ON YOUR AUTO INSURANCE AT RENEWAL, IN ADDITION TO YOUR EXCLUSIVE GROUP RATES

Our **free** device is plugged into your vehicle to collect data that is used to help you save on your auto insurance at renewal. Savings are based on three criteria:

- Kilometres driven annually – **Up to 10%**
- Acceleration and braking – **Up to 10%**
- Driving schedule – **Up to 5%**

Intelauto™ is a usage based insurance program. It's easy, smart and free!

Official Partner of:



thePersonal
Home and Auto Group Insurer

Get started!
Visit intelauto.ca

1-855-801-8830

The right fit.

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