



# THE LINK

Membership News, Programs and Activities

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## Legislate authority of P.Engs in water resources management, PEO tells Walkerton Inquiry

by Dwight Hamilton

Professional Engineers Ontario has submitted to the Walkerton Inquiry its in-depth examination of a professional engineer's role in providing safe water in Ontario. PEO has official standing for Part II of the Inquiry, which is dealing with public policy issues surrounding water treatment, distribution and management.

Forwarded last month, PEO's submission identifies gaps in the current framework of accountability for safe drinking water and recommends ways to clarify and enhance accountability. The report also commits PEO to undertaking actions aimed at increasing the effectiveness of its recommendations.

In the submission, PEO offers to work with the province and stakeholders to examine means of increasing professional accountability and expertise in the provision of safe drinking water, through the *Professional Engineers Act*. The submission highlights the need to refine the definition of professional engineering with respect to safe drinking water, stating "the authority and mandate of professional engineers in water resources management and in water supply systems need to be made clear in provincial legislation so that PEO can more effectively regulate the practice of professional engineering."

Demand-side legislation that increases the participation of engineers in waterworks operations and management would provide greater accountability because of professional engineers' duty to public safety, the submission states.

"Professional engineers are bound by a statutory accountability to the public, which includes a code of ethics and requires that they place public welfare above all other interests," said PEO President Gordon Sterling, P.Eng., in a

media release announcing PEO's submission. "Our submission discusses the *Professional Engineers Act* and the role professional engineers have in the provision of safe drinking water. PEO is committed to working cooperatively with the government of Ontario and other stakeholders to prevent another tragedy like Walkerton."

PEO's submission also recommends strengthening provincial regulation of water systems by having the Minister of the Environment use the *Ontario Water Resources Act* to appoint P.Engs as the directors who issue directors' orders, directors' reports, certificates of approval and other instruments prescribed by the act. PEO's submission anticipates that the directors would support municipal engineers or consultants who exercise their duty to report public health risks under section 62 of the act.

PEO also recommends that the Attorney General amend the *Professional Engineers Act* to make clear a professional engineer's obligation to report public health risks and to protect the engineer in such instances of "whistleblowing."

PEO's commitments to the Inquiry include:

- ◆ promoting greater emphasis on public health training for engineers;
- ◆ consulting with stakeholders on what waterworks activities require a professional engineer and developing clear scopes of practice and responsibilities for engineers in these areas;
- ◆ promoting continuing excellence by incorporating information on stakeholder expectations and membership practice and professional development

### PEO's commitment to safe drinking water in Ontario

#### 1. Increase public health training.

PEO will promote greater emphasis on public health training, through consultation and discussion with individual Ontario universities, the Council of Ontario Deans of Engineering and the Canadian Engineering Accreditation Board.

#### 2. Raise awareness of the role of PEO through outreach.

PEO will consult with stakeholders to:

- ◆ Identify and reach consensus on what activities require a professional engineer within both the meaning and spirit of the *Professional Engineers Act*. This will include developing clear scopes of practice and responsibilities for professional engineers in these areas.
- ◆ Identify the needs and expectations of the public that PEO serves, the users of engineering services, the broader regulatory community, and licensed practitioners with respect to what activities related to providing safe drinking water should be regulated.

During the 2001-2002 Council term, PEO will undertake a communications program on the *Professional Engineers Act*, especially as it pertains to the responsibility of professional engineers to protect life, health, property and the public welfare.

#### 3. Partner with regulatory and non-governmental organizations.

PEO will work with the provincial government and non-governmental organizations to develop appropriate demand-side legislation to give force of law to the defined scopes of practice and responsibilities for professional engineers involved with the provision of safe drinking water.

#### 4. Promote continuing excellence.

PEO will incorporate feedback from its outreach activities and membership profiling, the users of engineering services, the broader regulatory community and licensed practitioners into its Professional Excellence Program (PEP).

#### 5. Provide guidance and advice to practising engineers.

PEO will produce Professional Practice Guidelines relevant to the provision of safe drinking water, such as guidelines on design approaches and quality assurance methods.

profiles into the Professional Excellence Program; and

- ◆ producing Professional Practice Guidelines on topics like design approaches and quality assurance methods.

The PEO submission was developed by the Environment Committee, which

includes professional engineers with extensive experience in water treatment and distribution. The committee also consulted with other expert practitioners. Council received a draft of the submission at its March 26 meeting, after which the document was published on PEO's website for comment. The full text of PEO's submission is available at [www.peo.on.ca](http://www.peo.on.ca).

## THE LINK

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### PEO's recommendations to the Walkerton Commission

#### 1. Refine the definition of engineering in regards to safe drinking water in provincial legislation.

The provincial government and affected stakeholders should work with PEO to define specific activities and areas of practice that constitute the practice of professional engineering within the meaning and spirit of the *Professional Engineers Act*. This should include considering whether current activities and regulations are consistent with PEO's statutory mandate, specifically with respect to the evaluation of water supplies and the design of treatment and distribution systems.

#### 2. Increase professional engineers' participation in waterworks operations and management.

PEO recommends that participation of professional engineers in the operation and management of water treatment works be defined in demand-side legislation, where appropriate, in order to provide greater accountability based on engineers' duty to the public welfare.

#### 3. Specify roles of engineers through demand-side legislation.

To ensure a higher level of accountability in the quality of Ontario's drinking water, the provincial government should use regulations to clearly define roles and responsibilities for professional engineers in aspects of drinking water supply, including design and construction, operation and water resource management. Such demand-side legislation should reflect the outcome of Recommendations number 1 and 2.

#### 4. Strengthen provincial regulation of water systems.

The Minister of the Environment should use section 5 under the *Ontario Water Resources Act* (OWRA) to appoint qualified professional engineers as directors for the purposes of issuing director's orders, director's reports, certificates of approval and other instruments prescribed under the OWRA.

Directors should support municipal engineers and/or their engineering consultants that exercise their duty to report risks to public health and safety related to drinking water using section 62 of the OWRA.

#### 5. Clarify and enhance duty to report.

The Attorney General should amend the *Professional Engineers Act* to clarify engineers' obligations to report and provide a measure of protection for those who exercise them.

PEO believes that for this concept to be effective the engineer must be indemnified and protected from reprisal as a result of public notification of such conditions. In this way, the engineer would be provided with protection similar to that clearly defined in the *Occupational Health and Safety Act*, under which an individual has the right to refuse work without fear of reprisal by the employer.

WEAC NEWS

by Daniela Iliescu, P.Eng., WEAC member

# 2001 Future Engineers Initiative Program— Grant Recipients

Young women are discovering the wonders and merits of engineering, science and technology, thanks in part to a program administered by PEO's Women in Engineering Advisory Committee. Under the Future Engineers Initiative (FEI) program, now in its third year, PEO provides financial support to projects that encourage girls and women to consider careers in engineering through a variety of initiatives.

The value of each grant depends on the type and scope of the project. This year, 13 projects will receive financial support, for a total of \$20,000. Future Engineers Initiative projects will run in the spring and summer of 2001.

The following recipients are approved to receive financial support for their FEI projects:

- ◆ *University of Ottawa, Faculty of Engineering—Adventures in Engineering and Science.* Funding has been approved

for three planned projects in which girls will have the opportunity to interact with dynamic female role models, gaining a greater appreciation of engineering and science.

- ◆ *University of Guelph, Promoting Awareness—Girls in Engineering & Science (PAGES)—Creative Encounters with Science.* This initiative comprises an all-female learning environment that explores robotics, electrical design, chemistry and even nutrition, while incorporating fun, originality and innovation.

- ◆ *Carleton University, Faculty of Engineering, Ottawa—Virtual Ventures—Girls Outreach (GO) Project.* Girls in grades 7 to 10 will participate in hands-on workshops covering computer programming, animation and design, electronics and mechanics during summer sessions.

- ◆ *Ryerson Polytechnic University, Faculty of Engineering, Toronto—Discover Engineering Summer Camp.* Now in its 11th year of operation, the camp provides education to girls going into grades 11 and 12. Applications are sent to guidance, math and science departments in more than 500 high schools in the GTA and surrounding area.

- ◆ *University of Toronto, Faculty of Applied Science & Engineering—Science Outreach.* This program consists of "in-class" workshops presented at schools in both northern and southern Ontario, and a week-long day camp for girls in grades 4 to 9 in the GTA.

- ◆ *Queen's University, Clark Hall, Kingston—Science Quest.* This program offers hands-on engineering and science workshops in elementary schools in eastern Ontario, as well as an on-campus summer day camp for children entering grades 4 through 8. Both programs aim to get children to have fun with learning and learn by having fun.

- ◆ *University of Western Ontario, London—Discovery Western.* Through the creation of Girls

Club and Girls Recognizing Engineering and Technology (GREAT), and through work with local Girl Guides and Brownies, this program's objective is to increase female participation and confidence in the areas of science and engineering.

- ◆ *McMaster University, Faculty of Engineering, Hamilton—Venture Engineering & Science/Adventures in Engineering Computer Programs.* Travelling workshops, guest lectures and summer camps teach chemistry, biology, physics, geology, computers and the Internet to children in the Hamilton area.

- ◆ *Scientists in School, Pickering.* Now in its 13th year of operation, this program brings enthusiastic scientists into elementary classrooms to facilitate hands-on science and engineering workshops.

- ◆ *York Region District School Board, Aurora—Spotlight on Women in Science and Technology.* Day-long events held at Seneca College and King Campus encourage girls in grades 7 and 8 to take

mathematics, science and technology courses in high school.

- ◆ *University of Windsor, Faculty of Education & College of Engineering & Science—Engineering T.A.P. Initiative.* Professors from the faculty of engineering present information about engineering careers to grade 9 and 10 students, and encourage female students to participate in the university's new engineering mentorship program.

- ◆ *University of Waterloo—Engineering Science Quest.* "Saturday Engineering Club for Young Women" (a three-day conference) promotes engineering and science careers to high school girls, and an "all girls" week of camp in August introduces young women to the many aspects of science, engineering and technology.

- ◆ *Deep River Science Academy, National Office, Deep River.* This six-week summer program offers high school students the chance to work on research projects, enjoy recreational activities and earn two high school credits while they do it.

## Canadian engineers and Microsoft Corp. agree on use of "engineer" title

by Sharon Van Ihinger

Microsoft Corp. has advised Canadian holders of its MCSE designation not to call themselves engineers or to use the full Microsoft Certified System Engineer title. The move early in May came after several months of discussions between the engineering profession and Microsoft.

"We are very pleased by Microsoft's decision," said Marie Lemay, P.Eng., CEO, Canadian Council of Professional Engineers. Lemay; Neil Windsor, P.Eng., executive director and registrar, Association of Professional Engineers, Geologists and Geophysicists of Alberta; Claude Lizotte, ing., director of professional affairs, Order of Engineers of Quebec; and PEO Registrar Roger Barker, P.Eng. met with Microsoft in Seattle late last year to explain the issues surrounding the use of the title in Canada, and to ask the corporation to stop referring to holders of the MCSE credential as engineers.

Provincial and territorial laws protect the public by restricting the use of the engineering title and the practice of engineering in Canada to licensed professional engineers. In Ontario, the *Professional Engineers Act* prohibits use of the title "professional engineer" or an abbreviation or variation as an occupational or business title by anyone who doesn't hold a PEO-issued licence. Unlicensed people also cannot use "a term, title or description that

will lead to the belief that [they] may engage in the practice of professional engineering," or a seal that would give the same impression. Fines for breaching these sections of the Act can be up to \$10,000 for a first offense and up to \$25,000 for each subsequent offense.

Engineering titles are protected in the Act so the public can be assured that those calling themselves "engineers" have met defined academic and experience requirements that qualify them to take responsibility for engineering work affecting public welfare.

MCSE certification holders were inadvertently breaking the provincial and territorial licensing laws by using the title "engineer," and could have been subject to enforcement action by the engineering licensing bodies.

"We are very pleased to have reached an agreement with the engineering profession and to support it," said Anne Marie McSweeney, acting director of Microsoft Certification and Skills Assessment. "It opens the door for closer cooperation among all organizations in the information technology industry and the engineering profession in Canada. As the Microsoft credentials continue to evolve, it is our goal to ensure they maintain the highest level of relevance to the industry and represent leaders in cutting-edge technology."

Microsoft is currently researching alternatives to the MCSE.

## INCOUNCIL

# Environment Committee to consider needed qualifications for site clean-up engineers

APRIL 21, 2001 MEETING

by Connie Mucklestone

The Ontario government is prepared to consider use of the *Professional Engineers Act* and the *Professional Geoscientists Act* to identify "qualified persons" to be responsible for contaminated site assessment and remediation, Council learned at its first meeting of the 2001-2002 term.

MOE officials have challenged PEO and the Association of Professional Geoscientists of Ontario (APGO) to propose a means to identify "qualified persons" and to ensure that they are accountable to the public. In response to this challenge and to proposed amendments to the *Environmental Protection Act*, Council directed the

Environment Committee "to define, in consultation with relevant stakeholders, a scope of practice and the requisite qualifications for professional engineers practising environmental site remediation work," for Council's approval. Council also asked the committee to consult with stakeholders on an appropriate certification protocol for determining the qualifications of professional engineers in this area. The APGO has undertaken a similar approach and has expressed its willingness to work with PEO to ensure that the two professions can effectively protect the public interest.

As background to his motion tasking the Environment Committee, Councillor Max Perera, P.Eng., said that in a recent meeting the Ministry of the Environment had expressed

an interest in having PEO and APGO use their regulatory powers to create a specialized scope of practice in contaminated site cleanup with defined qualifications for practitioners (i.e. a specialization). This would allow PEO to designate professional engineers who are appropriately qualified to perform this work. The Environment Committee supports this approach, he added. If PEO is not prepared to create a specialization and set qualifications, he said, MOE has indicated that it is prepared to use an external third party to establish and assess the qualifications required beyond being a licensed professional engineer.

According to John Gamble, P.Eng., PEO government relations manager, the MOE "recognizes the public accountability of

qualified professionals licensed under provincial legislation" as a means of providing public assurance in this area. "The resulting regime would potentially be similar to that in British Columbia," he added. Explaining his support of the motion, Councillor Tony Cecutti, P.Eng., said: "In the past, PEO has taken the position that it must decide what is engineering. Now, the government is prepared to ask us what engineering is, and to put this in legislation, instead of telling us. PEO must take advantage of this opportunity by jumping in quickly and doing what the government has asked."

### 2001-2002 Executive Committee

In a secret ballot conducted as part of the Council meeting,

Councillors elected Eastern Region Councillor Colin Cantlie, P.Eng., as the Vice President elected from among Council for the 2001-2002 term. Councillors chose West Central Region Councillor George Comrie, P.Eng., as a Member of the Executive Committee. Council agreed to defer to an upcoming meeting the appointment of one other Member to the Executive Committee, chosen from among the Lieutenant Governor-in-Council appointed Councillors. Council approved extending the term on the Executive Committee of LGA Laurier Proulx, CET, until this appointment is made.

In a final bit of business concerning the 2001-2002 Council elections, Council also ordered the destruction of the ballots.

## Consider environment in development, York Chapter forum told

by Dwight Hamilton

Drawn from the engineering, political, municipal operations, and conservation sectors, speakers at a public forum held by PEO's York Chapter on May 10 unanimously endorsed a development strategy for the Oak Ridges Moraine that takes the area's natural characteristics into account.

The Moraine is known as southern Ontario's rain barrel, absorbing precipitation through its permeable sand and gravel to its deep aquifers. Groundwater from the 160-km-long ridge that runs along the northern part of the Greater Toronto Area (GTA) feeds the headwaters of more than 15 major watersheds. Since the 1980s, Toronto's population has advanced northward at an increasing rate and the Moraine has become a "line in the sand" between property developers and concerned local citizens.

"Get interested in your neighborhood," said Mike Colle, MPP for Eglinton-Lawence, in the opening address. Colle has seen three of his private member's bills to stop development on the Moraine defeated.

Speakers agreed that land development proposals should take into account local environmental characteristics. Sustainable and economically successful developments incorporate preservation of the environment, they said. "Basic scientific principles should underline all activities and they should revolve around one major principle: that 'all flows in the earth must balance for survival—thou shalt not breach the sacred balance.' The pre-development balance in a watershed should be conserved in the post-development conditions," said Mori Mortazavi, P.Eng., manager and chief engineer, geo-environmental and hydrological services, Peto MacCullum Ltd.

Forum speakers also highlighted what they see as a growing public demand for improved biological diversity in urban settings. Brian Denny, P.Eng., director, watershed management division, Toronto Region Conservation Authority (TRCA), presented an overview of community-driven regeneration projects like the Don Valley Brickworks. The TRCA's Living City Campaign was also highlighted as a new partnership with the corporate sector that aims to put sustainability in the GTA on the political agenda.

Similarly, Leonard Munt, regional forester, Municipality of York, outlined his municipality's "Greening Strategy" for increasing the level of green space in York. Munt told the audience he's "the man who fines property owners if they cut their trees without permission."

Exactly a week after the York Chapter forum, Queen's Park imposed a six-month development freeze on the Oak Ridges Moraine and halted an Ontario Municipal Board hearing on the region. This was reportedly to give the government time to consult with environmentalists, the development industry, politicians and the local community to draft a moraine protection policy. Some environmentalists called the government's actions "unprecedented."

## Certificate presentation features business guru



Radio and television commentator Fred Ketchen, chair of the Investor Learning Centre and managing director of ScotiaMcLeod Inc., shares his thoughts on the future of the Canadian economy at a recent Penta Chapter certificate presentation held at the Islington Golf Club in Etobicoke. Notwithstanding the high-tech meltdown in the stock market, Ketchen feels fundamentals are fine and growth should pick up later in the year.



The beginning of a new journey: former PEO Vice President, West Central Region Councillor and current Etobicoke Chapter Executive member Ted Wisz, P.Eng., congratulates a newly minted P.Eng., one of the many who received their licence certificates on May 17.

# Introducing PEO Council, 2001-2002

## Executive Committee

**G. Gordon M. Sterling, P.Eng.**  
President



Gordon Sterling earned a bachelor's degree in mechanical engineering from the University of Toronto. He is chairman of The Office Planners and Users Group, which conducts international conferences on office building design. Prior to that, he had a long career with Bell Canada, holding positions in project management, building design and facility management. Sterling served as an East Central Region Councillor for four consecutive terms, was a member of the Willowdale-Thornhill Chapter executive for 25 years, and served as chapter chair. He participates in numerous PEO committees, and was inducted as a member of the Order of the Sons of Martha (now the PEO Order of Honour) in 1983. He was made an Officer of the Order of Honour in 1994. He also serves on the board of directors of the Canadian National Exhibition.

**Peter DeVita, MASC, MBA, P.Eng.**  
Past President



Peter DeVita has enjoyed a successful and varied career in the sales and marketing of high technology electronic products. He is president of DeVita Associates, specializing in custom-made computers for high-availability, high performance or industrial systems with harsh environments. He has both BAsC and master's degrees in engineering from the University of Toronto, specializing in computer and environmental studies, and an MBA from York University, specializing in energy economics and marketing. DeVita was on the board of the Canadian Society for Professional Engineers, and served as its president from 1984-86. He has been a PEO member since 1975 and was a Lieutenant Governor-in-Council appointee on PEO Council from 1991-97. He was elected Vice President in 1998 and President-elect in 1999.

**Richard W. Braddock, P.Eng.**  
President-elect



Richard Braddock received a bachelor's degree in engineering from the University of London in 1952. He has a wide range of civil engineering experience, and has spent the last 35 years working on municipal engineering and land development projects. Braddock joined PEO in 1955, serving on the Willowdale-Thornhill Chapter executive for several years, including a year as chapter chair in 1971. He served as PEO Vice-President (appointed) from 1999-2001 and East Central Region Councillor before being elected PEO's President-elect.

**Kenneth C. McMartin, P.Eng.**  
Vice President (Elected)



Kenneth McMartin is a graduate of Carleton University, where he received a bachelor's degree in engineering in 1976, and went on to earn a master's degree in engineering in 1982. He has held the position of manager, civil and environmental engineering laboratories with Carleton University's Department of Civil and Environmental Engineering since 1982. Prior to that he was with Morrison Hershfield Burgess and Huggins Ltd., Consulting Engineers. McMartin has been a member of the Ottawa Chapter executive since 1988, and served as chapter chair during the 1991-92 term. His other PEO activities include membership on the Advisory Committee on Committees, Professional Engineers Awards, Finance and Enforcement committees.

**Colin Cantlie, P.Eng.**  
Vice President (Appointed)  
Eastern Region Councillor



Colin Cantlie received a BSc degree in engineering physics in 1979 and an MSc degree in electrical engineering in 1983 from Queen's University. He works for Nortel Networks, in Ottawa. His expertise includes system engineering, software design, technical management, software operations, development process definition (ISO 9000) and technical project management for product development in voice telephony, intelligent networks and carrier networks. Cantlie has been a member of PEO since 1983, and is affiliated with other organizations, including the Institute of Electrical and Electronics Engineers. Cantlie is involved with many community activities, as well as PEO's Ottawa Chapter.

**George R. Comrie, P.Eng., CDP, CMC**  
Member, Executive Committee  
West Central Region Councillor



George Comrie received a BASc degree in 1970 and an MEng degree in 1973 from the University of Toronto. He has held a variety of senior positions prior to becoming president of Data Design Systems Inc. in Mississauga. Comrie joined PEO in 1973 and has been an executive member of the Etobicoke Chapter since 1990, as well as participating on many committees. He is also a member of the Canadian Society for Professional Engineers, and a certificant of both the Institute for Certification for Computer Professionals (CDP) and the Canadian Association of Management Consultants.

**W. Laurier Proulx, CET**  
Member, Executive Committee  
Lieutenant Governor-in-Council Appointee



After graduating from the Northern College of Applied Arts and Technology, Kirkland Lake, with an honours civil technology diploma in 1974, Laurier Proulx gained valuable experience in Iroquois Falls and Kirkland Lake before moving to Kitchener to work for Lingwood Robertson, Architects and Engineers. In 1976 he joined the City of Kitchener, working on the construction of the Kitchener City Hall from 1990-93. Today, he is director of the facilities management division and project manager for the Municipality of Kitchener.

## Councillors

### Councillors-at-Large

**Dennis Dixon, BEng, P.Eng.**



After receiving his engineering degree from Liverpool University in 1961, Dixon spent four years with Rolls Royce Ltd. He has been a PEO member since 1966. He is an associate with Jag Mohan & Associates, Consulting Engineers. From 1976-88, Dixon was a consulting engineer in the United Arab Emirates, and he completed projects in Saudi Arabia, Oman, Pakistan and several Gulf Islands. He is a member of the Canadian Society for Professional Engineers, and is also active in PEO's Brampton Chapter. He was an executive member in 1989, vice-chair from 1989-90, and chair in 1990-91, 1996-97 and 1999-2000.

**Daniela E. Iliescu, P.Eng.**



Daniela Iliescu received her Diploma of Engineering from the University of Bucharest, Romania, Faculty of Electrical Engineering and Energetics. The diploma is equivalent to a Canadian master's degree. She is head of the electrical department, Colt Engineering (Ontario) Corporation. Iliescu joined PEO in 1977, is a member of several provincial engineering associations, and the Toronto Conference Committee for the 2001 IEEE Petroleum and Chemical Industry Conference. She was a Lieutenant Governor-in-Council Appointed Councillor from 1992 to 1998 and has participated on the Discipline and Women in Engineering Advisory committees since 1992.

**Danny C. Marmora, B.Eng, P.Eng., CET**



Danny Marmora has served on the executive of the Toronto-Humber Chapter and on PEO's Professional Practice Committee. In 2000, he became the chapter's first Vice-Chair of Advocacy. Marmora received an honours diploma in engineering technology, majoring in machine design from George Brown College in 1991, and went on to receive his engineering degree in 1995 from Ryerson Polytechnic University. He is working part-time on his Masters of Applied Science in mechanical engineering at the University of Toronto.

**Michael A. Butt, P.Eng.**



Michael Butt, P.Eng., is the president of Buttcon Limited, a general contractor, construction manager and design build contractor located in Toronto. He joined PEO in 1965 and is a member of the Canadian Society for Civil Engineers, chairman of the Greater Toronto Airports Authority, and is affiliated with several other organizations. Butt graduated with a BASc in civil engineering from the University of Toronto in 1963. His many years of experience have involved the construction of numerous office, commercial, hotel and government projects.

**Nick Monsour, P.Eng.**



After receiving an Honours BASc in mechanical engineering from the University of Toronto in 1951, Nick Monsour spent his early career working for Babcock-Wilcox & Goldie McCulloch. In 1954, he went to work for Polysar Ltd. (later Novacor Ltd.) where he stayed until retirement in 1991. He worked as project manager for numerous plant additions in Sarnia and Belgium, and was promoted to principal engineer. He was a director of the Materials Technology Institute of the Chemical Industry. Monsour has also had a long history with PEO Council, serving as President in 1985-86 and Vice President in 1994-95. He has worked on several committees and was invested as a Companion of the Order of the Sons of Martha (now Order of Honour) in 1988.

**Peter R. Frise, PhD, P.Eng., FCAE**



Peter Frise holds bachelor's and master's degrees in mechanical engineering from Queen's University, and a PhD in mechanical engineering from Carleton University. In 1993, he received the Society of Automotive Engineers' award for contributions in research, teaching and student development. Frise is currently Professor and Daimler-Chrysler Canada/NSERC Industrial Research Chair in Mechanical Design at the University of Windsor. He has been a member of PEO since 1984 and a Certificate of Authorization holder since 1992. He has volunteered on a number of CCPE and PEO committees and is currently a member of the Complaints Committee and the Ontario Hydro Nuclear Task Group. In 2000 he was elected a fellow of the Canadian Academy of Engineering.

**Nancy E. Hill, P.Eng., LLB**



After receiving her engineering degree from the University of Toronto in 1981, Nancy Hill worked as a structural engineer, then went on to obtain her law degree from the University of Ottawa in 1986. Since then she has worked extensively, advising and managing all aspects of patent, trade mark, industrial design and copyright law, including the securing, maintaining and enforcing of intellectual property rights. Hill has served on PEO committees, including as chair of the Women in Engineering Advisory Committee, and is a long-time member of the board of directors of the Canadian Coalition of Women in Engineering, Science and Technology, and president of the board of directors of the Women Inventors Project. She is a partner with Hill & Schumacher.

**Kenneth G. Lopez, P.Eng., MASC**



Ken Lopez graduated from the University of Toronto with a BASc in 1955 and an MASC in 1959 in civil engineering, and has been a member of PEO since 1956, serving on several committees. He retired in 1988 after 30 years with Transport Canada managing the design and construction of multi-million dollar airport projects. Lopez is active in many community activities and committees, and was a past school trustee; president of the ratepayer's association; and member of advisory committees for Pearson International Airport. In 1992, he was awarded the Governor General's Commemorative Medal for the 125th Anniversary of Canadian Confederation, for his outstanding contribution to the Etobicoke community.

### Appointed Councillors

### Regional Councillors

**Northern Region Councillors**

**Tony Cecutti, P.Eng.**



Tony Cecutti graduated from the University of Waterloo in 1986 with a BASc in civil engineering. He is employed by Earth Tech in Sudbury as a project manager and designer. He is experienced in planning, designing and implementing municipal infrastructure projects. Cecutti is active in many community activities and committees. He has participated in PEO activities, including several student outreach campaigns, and was responsible for starting the local PEO charity golf tournament, as well as advancing a successful student job shadowing event. Cecutti was a past chair of the Sudbury Chapter, chair of the START Committee for revitalization of the chapter system, and vice-chair of the Regional Councillors Committee (RCC) in 2000. He currently chairs the RCC.

**Bruce E. Clarida, B.Eng, P.Eng.**



After receiving his degree in civil engineering from Lakehead University in 1980, Bruce Clarida worked for the National Energy Board of Canada in Ottawa, as senior project engineer with a firm in Sault Ste. Marie, and is currently senior civil engineer with Great Lakes Power Limited. He has participated on several PEO committees and has served on the Algoma Chapter since 1991. Clarida is also a member of the Canadian Dam Association and the Canadian Electrical Association. He has worked tirelessly in his community, advising on college curriculum and environmental issues.

**Eastern Region Councillors**

**Colin Cantlie, P.Eng.**

(See Executive Committee)

**Allen K. Lucas, P.Eng.**



Since receiving his degree in civil engineering from the University of Waterloo in 1989, Allen Lucas has worked in the public utilities sector. His experience includes water and sewer infrastructure design and management. He has worked on projects in the Northwest Territories, managed the Catarqui

**East Central Region Councillors**

**R. Anthony Warner, P.Eng.**



Anthony Warner received a BSc degree from the University of West Indies in 1980 and a MSc degree in 1985 from the joint MSc/MBA program, Columbia University, New York, and also holds a PEO Certificate of Authorization. He practises as a consulting engineer for the Virtual Engineers Collective.

Warner joined PEO in 1992, and has been active with the York Chapter since 1997, serving as awards coordinator and as treasurer. He founded e-Engineer.com, a business-to-business company for engineers, and has given presentations on virtual engineering and engineering on the Internet. Warner won the Quebec Ministry of Industry and Commerce award for his work on economic development in that province.

**John D. Reid, BASc, P. Eng.**



John Reid graduated with a degree in mechanical engineering from the Royal Military College of Canada in 1953, followed by the University of Toronto in 1954, and went on to complete studies in international management at the Centre d'Etudes Industrielles in Geneva, Switzerland. Since becoming a member of PEO in 1957,

Reid has worked on projects in Ontario, British Columbia, Labrador, Indonesia, Egypt and the Caribbean Islands. Following 30 years as president and co-owner of Napier-Reid Ltd., a water and wastewater treatment and pumping systems and equipment company in Markham, he sold his interest and is now a manager at VE. Collective Inc. in Markham, continuing his work in this field. He won the Arthur Sidney Bedell Award in 1980 for his contribution to the Pollution Control Association of Ontario.

**West Central Region Councillors**

**George R. Comrie, P.Eng.**

(See Executive Committee)

**Richard H. Weldon, BASc, P.Eng.**



Richard Weldon received his engineering degree from the University of Toronto in 1987. He is vice president at Carson Dunlop Weldon & Associates Ltd., specializing in consulting engineering and building inspections. He joined PEO in 1987 as an engineer-in-training, becoming a licensed P.Eng. in 1989. For the past four years, he has been active in the Etobicoke Chapter, holding a variety of positions including chapter chair. Weldon is a member of the Ontario Society of Professional Engineers (OSPE); the Ontario Building Envelope Council; the Ontario Plumbing Inspectors Association; and the Heating, Refrigeration and Air Conditioning Institute of Canada.

**Western Region Councillors**

**J. David Adams, P.Eng.**



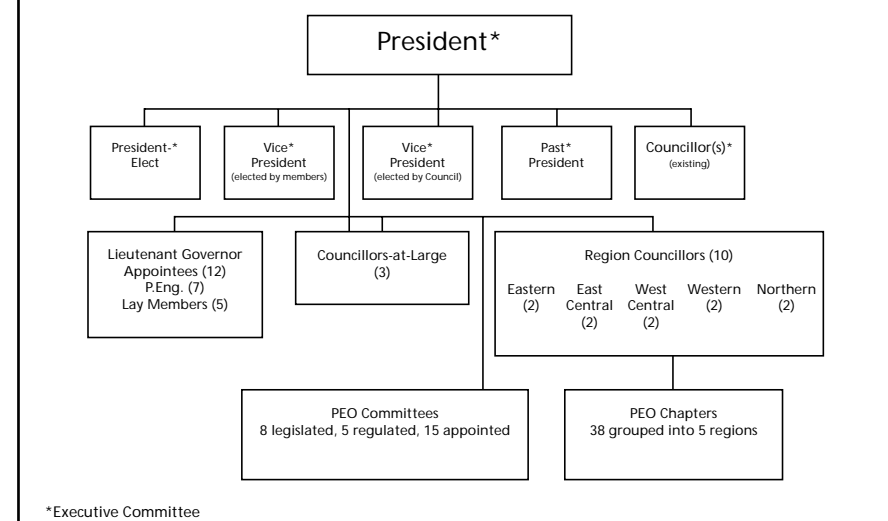
David Adams received a BEng degree from McGill University in 1955 and an MBA degree from the University of Western Ontario in 1958. Since that time, he has worked as project engineer, financial planner and analyst and manager for several large Canadian firms, eventually becoming president of Quality Performance Engineering Inc. Adams joined PEO in 1960 and served on the executives of two chapters. He is past president of the Rotary Club, and has been a member of Who's Who in Canada and USA since 1983, and International Men of Achievement since 1986.

**Roydon A. Fraser, PhD, P.Eng.**



After graduating with a bachelor's degree in engineering, Roydon Fraser went on to obtain his master's degree and doctorate in mechanical and aerospace engineering from Princeton University. He is an associate professor in the mechanical engineering department at the University of Waterloo. Roydon joined PEO in 1991, serving on the executive of the Kitchener-Waterloo Chapter since 1993, and as chapter chair in 1996. He is the director and co-founder of the Waterloo Region Engineering Design Competition; director of the Sanford Fleming Foundation; member of the Society of Automotive Engineers, the American Society of Mechanical Engineers, and the Ontario Society of Professional Engineers.

### Governance Structure





## YOURSAY

### Energy for all

In his letter "A world without oil?" (October/November 2000 issue, p. 5), J.G. Carkner points out the very real problems caused by the eventual exhaustion of oil reserves, and says "engineers must lead the way." He mentions hybrid gas/electric cars, which will help to reduce the consumption of oil, as will fuel cells.

Conversion to natural gas does require considerable capital investment, though pipelines can be converted to carry natural gas with very little change except to pumping equipment. However, sources of natural gas will also reach exhaustion. There are enormous coal reserves that could be used for feedstock for plastics. Coal consists mostly of carbon. The objection to the use of coal, oil or gas for energy is the release of carbon dioxide, a major greenhouse gas.

Sources of energy other than hydrocarbons that come to mind are wind, solar, tidal, geothermal and the remaining untapped waterfalls. So far, they have not taken over a substantial share of the energy market, and may not be able to.

Nuclear fission plants using uranium, such as the CANDU reactor, are very capital-intensive, and produce highly radioactive byproducts whose disposal is difficult. If the latter problem and the "bad press" can be overcome, they could substitute for substantial amounts of oil or gas used for electricity generation.

Nuclear fusion plants, which convert hydrogen to helium,

would have much less environmental impact. Fusion has been demonstrated on a small scale in plasmas in equipment called Tokamak, including one at Hydro Quebec. It will require a massive development for it to become a practical major source of energy. The International Thermonuclear Experimental Reactor (ITER) is a joint proposal to develop a full scale Tokamak by Europe, Japan, the US and the USSR. The USSR effort has vanished, and the US pulled out to concentrate on implosion equipment using massive lasers. Canada is part of the European consortium. ITER is in the planning stage so far. When built, it would be the prototype for practical sources of electrical energy.

One other solution that would also be pollution free is the Solar

Power Satellite. This proposal consists of a satellite that collects sunlight on large solar panels. The resulting electricity would be converted to microwave power and beamed down to collector antennas on the ground. This was studied by NASA a number of years ago and found not to be economically feasible. However, recent improvements in solar cell efficiency and expected reductions in the cost of launching equipment into space may make the solar power satellite a practical source of power.\*

These last two proposals do not involve continuous consumption of oil or gas, nor generation of greenhouse gases, and deserve the support of engineers.

T.W.R. East, P.Eng.  
Waterloo, ON

\*Reference: *IEEE Aerospace and*

*Electronic Systems* magazine, Feb. 2000, "Space Solar Power Development" by Henry Oman.

### Seeing the forest for the trees

In the letter "Final Straw" (February/March 2001 issue p. 10), Robyn Toffolo said she will not renew her membership in response to a PEO fee increase. She should bear in mind that similar professional associations have much higher annual dues than (the old) \$130 plus GST; some are over \$1,000. \$139.10 is \$12/month. Surely the many roles and activities of the association can be justified against that low rate! If anyone isn't sure how much PEO does for us, just take a look at the website. How much do you value the role of defending the public from some of the

unscrupulous activities passed off as engineering work by people who aren't qualified? I, for one, am happy to pay the membership fee even if I do it, as Ms. Toffolo puts it, for the "sole privilege of belonging to the profession."

Apparently, the last straw for Ms. Toffolo was the announced fee increase to form an advocacy group. If she doesn't want to help fund the activities of an organization whose goal is to increase the image, and therefore potentially the fees commanded by its members, then perhaps she can volunteer her time to the group. If not, then she is right to leave. But she should try to see the forest for the trees.

Gerard Gransaul, P.Eng.  
Toronto, ON

Letters to the editor are welcomed, but should be kept brief and are subject to editing. Publication of any letter is at the editor's discretion: unsigned letters will not be published. The ideas expressed do not necessarily reflect the opinions and policies of the association, nor does the association assume responsibility for the opinions expressed. All letters pertaining to a current PEO issue are also forwarded to the appropriate committee for information.

## THE LINK

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