

BC legislature approves new registration bylaw

By MICHAEL MASTROMATTEO

BC's engineering regulator is back in business in terms of granting new engineering licences.

The provincial legislature February 13 confirmed that a new Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) registration bylaw more clearly outlining requirements for licensing and registration is now law in that province.

In a letter to APEGBC, BC Advanced Education Minister Murray Coell cited the regulator's efforts to address deficiencies in the previous bylaw, adding that "ministry staff have reviewed these newly ratified bylaws and I do not intend to

recommend disallowance to the Lieutenant Governor in Council."

The bylaw change came as a result of an October 10, 2007 court decision striking down APEGBC's former registration bylaw.

At the time, Justice R.T. Johnson ruled that experience requirements for licensure were not properly specified by the BC registration bylaw.

The ruling came in response to a court challenge by an international engineering graduate whose application for a P.Eng. licence was rejected three times on grounds he lacked Canadian experience.

In response to the court ruling, APEGBC decided to suspend all new

licence and registration work until a new bylaw better outlining experience requirements could be passed by APEGBC council and approved by members in a referendum.

The new bylaw was overwhelmingly approved by BC engineers in December, and then submitted to the provincial government for inclusion in the engineering act.

Officials with the BC regulator are relieved the ordeal is behind them for now.

The BC case is useful for PEO and other Canadian engineering regulators in clarifying the level of specificity that is required in documentation relating to their licensing requirements.

Past President honoured in Ireland

By NICOLE AXWORTHY

This past November, PEO Past President Patrick J. Quinn, PhD (Hon.), P.Eng., was conferred with the Dublin Institute of Technology's (DIT) honorary Award of Doctorate of Philosophy at the annual graduation ceremony of the faculty of engineering in Dublin, Ireland.

The self-admitted "activist advocate of our profession" was cited for his outstanding personal achievements as an engineer. He has lobbied on behalf of his profession and its students and for a more effective public response to violence against women—in response to the December 1989 murders of 14 women, most of them engineering students, at École Polytechnique in Montreal.

Quinn has more than 40 years' experience in structural engineering and was involved in such engineering innovations as the development of high-performance concrete in Canada and the design of load-testing methods for cladding. A native Dubliner and graduate of DIT, he came to Canada in 1956 and later founded Quinn Dressel Associates, one of Canada's foremost structural engineering consulting firms, responsible for many

award-winning landmark buildings throughout the world, including the Princess Margaret Cancer Hospital and CBC Broadcast Centre in Toronto, the Elf Aquitaine headquarters in Paris, and the Shanghai Stock Exchange building.

First elected to PEO Council in 1996, he served as President in 1999-2000 and again in 2005-2006. During his second term, he led a precedent-setting court case victory against the Ontario government concerning amendments to the *Ontario Building Code* and PEO's jurisdiction under the *Professional Engineers Act*.

Following his award reception, Quinn delivered the inaugural lecture at the November 26 dedication of DIT's new Michael O'Donnell Theatre—named to honour one of Quinn's former instructors.

His lecture, entitled *Shaping Public Policy: The Engineer in Public Planning and Decision Making*, challenged engineers to become more vocal in public life. Emphasizing the importance of the role of the engineer in every aspect of our society's infrastructure, industry and communications, he said engineers must build the engineering brand and "take on the responsibility of clarifying what engi-



PEO Past President Patrick J. Quinn, PhD (Hon.), P.Eng., (left) stands with the President of the Dublin Institute of Technology, Brian Norton, after the graduation ceremony at St. Patrick's Cathedral in Dublin, Ireland.

neers do... At career days, in local meetings, on local issues, we need to be seen as participants and as engineer contributors. On an individual basis, we have to be less backward about putting ourselves forward."

He went on to say: "We need to change some perceptions of us as anti-intellectual tunnel-visioned number crunchers... For our profession to be fully developed, we must expand our horizons, participate fully in society, and have programs that ensure that a stream of our members will enter public life at all levels of government."

Kudos to 13 new Order of Honour inductees

By NICOLE AXWORTHY

On May 9, PEO will put the spotlight on 13 professional engineers who have proved their commitment to the profession through support, guidance and volunteer service. These individuals will be inducted into PEO's Order of Honour at a special ceremony, which will be held during PEO's Annual General Meeting at St. Clair Centre for the Arts in Windsor.

Nancy E. Hill, P.Eng., LLB, partner, Hill & Schumacher Patent and Trademark Agents, will be invested as a Companion of the Order. She has served the engineering profession in many ways, beginning as a member of PEO's Editorial Board and Women in Engineering Advisory Committee (WEAC). As chair of WEAC from 1995 to 1997, she led numerous initiatives to improve inclusiveness and fairness in the profession and increase the percentage of women who are licensed professional engineers. She extended her involvement as part of a committee on women in engineering at the Canadian Council of Professional Engineers (now Engineers Canada) and on the board of the Canadian Coalition of Women in Engineering, Science, Trades and Technology.

Hill used her engineering experience coupled with her legal education as a Lieutenant Governor-in-Council Appointee to PEO Council for six years beginning in 2001, which included two terms as a Council-appointed member of the Executive Committee. Today, she continues to provide sage advice to PEO through service on the Advisory Committee on Volunteers, the Audit Committee and the Complaints Committee.

She has also contributed to the engineering profession through her service to research in Canada as a member of the research management committee of the AUTO21 Network of Centres of Excellence—a national research network that brings together researchers, students, and industry and public sector partners to develop new knowledge in the automotive sector.

Retired consulting engineer **Denis Dixon, P.Eng.**, will be invested as an Officer of the Order. He is an active member of PEO's Brampton Chapter and served as chapter chair several times. His unwavering commitment to self-regulation of his profession is demonstrated by his four terms as a PEO Councillor-at-Large and service on key committees, including as a Council-appointed member of the Executive Committee.

Dixon's knowledge of financial matters and governance allowed him to make solid contributions to many other PEO committees, including the Audit, Discipline and Professional Practice committees, the Advisory Committee on Volunteers, the Consulting Engineer Designation Committee, and the Joint Management Board with the Ontario Association of Certified Engineering Technicians and Technologists.

A strong supporter of a separate advocacy body for professional engineers, he founded the advocacy movement in the Brampton Chapter and later served as a member of the first Election and Search Committee of the Ontario Society of Professional Engineers (OSPE).

Peter R. Frise, PhD, P.Eng., FCAE, will also be invested as an Officer of the Order. He served on PEO Council as Lieutenant Governor Appointee for two three-year terms beginning in 1997. Since that time, he has played a strong role on the Complaints Committee and also chaired PEO's Fundamental Review Implementation Task Group. At the national level, Frise chaired the Canadian Council of Professional Engineers' Vision Task Force Working Group's Environmental Scan on the Engineering Profession in Canada. He also served on the Founding Council of the Association of Professional Geoscientists of Ontario.

A devoted and respected professor at the University of Windsor, Frise established Canada's first university-level program in automotive engineering in 1998, working with Chrysler Canada as

NSERC senior industrial research chair to successfully develop engineers for the University of Windsor/Chrysler Canada Automotive R&D Centre. As a result of his knowledge and connections related to the automotive industry, he was elected by nearly 30 universities to lead the AUTO21 Network of Centres of Excellence in 2000.

John Lipsett, P.Eng., will be invested as an Officer of the Order. An active member of PEO's Algonquin Chapter, he served on the chapter executive in numerous roles from 1974 to 1979 and from 1992 to 1994, including chairing it twice. While chair in 1978, he initiated a close and ongoing relationship between the chapter and the military professional engineers of Camp Petawawa.

As a member of a local committee commemorating the 100th anniversary of engineering as an organized profession in Canada, he helped with the design and installation of two structures recognizing the CANDU nuclear reactor as one of the 10 most significant engineering achievements.

His volunteer service to PEO's Professional Engineers Awards Committee for 17 years has had a lasting impact on the integrity and effectiveness of the profession's awards program. His article, "Celebrating Engineering Achievement," is showcased on PEO's website as a reminder of the importance of recognizing engineering excellence.

Kenneth (Ken) G. Lopez, MASc, P.Eng., retired manager of design and construction, Public Works Canada, will be invested as an Officer of the Order. He has been active in PEO's Toronto Humber Chapter since 1974 and has been on its executive for the past eight years. During the two years he chaired the chapter, he encouraged joint events with neighbouring chapters on significant engineering issues that would enhance public awareness of the profession in his community.

Lopez served as a Lieutenant Governor Appointee to PEO Council from 1999 to 2002 and was subsequently elected

Vice President in 2004 and 2006. On April 16, 1993, he was awarded Canada's Commemorative Medal for the 125th anniversary of Confederation (1992) for his outstanding contributions to the community and for devoting his time and effort in making Canada a better place to live. He was also elected a public school trustee to the Etobicoke School Board of Education from 1970 to 1972 to oversee the delivery and management of quality educational programs.

Aziz Akhtar, P.Eng., retired senior design specialist, Ontario Hydro, will be invested as a Member of the Order after working for more than 20 years to improve the institutions and services for the engineering profession in Canada.

It was under Akhtar's steady hand as a member of the Canadian Society for Professional Engineers (CSPE) board of directors from 1979 to 1999—including several terms as its president—that CSPE grew in stature and became known as a voice for engineers. Always an active speaker on topics of concern and interest to engineers, the profession and the public, he made many submissions and presentations to government and external organizations. In the late 1990s, with the movement growing in Ontario to separate advocacy and member services from the regulatory functions at PEO, Akhtar became a member of the Joint PEO/CSPE Advocacy Implementation Committee, contributing greatly to the formation in 2000 of OSPE as the advocacy and services body for engineering in the province—and in good measure a credit to Akhtar's vision.

Physical Plant Improvements Inc. President **Geoff Clarkson, P.Eng.**, will be invested as a Member of the Order. During his 18 years of service with PEO, he has been an enthusiastic supporter of the engineering profession and its outreach in the community. Since 1998, he has been a member of the Education Committee, and has led it in making decisions and developing policy statements related to the Ministry of Education mathematics and sciences curriculum. He has arranged

many outreach activities for students to help them understand what engineers do.

Clarkson has also been a leading supporter of and chaired the subcommittee responsible for the Engineer-in-Residence program—a partnership of engineers, educators, industry and government to bring real-world experience to the teaching of science, technology and mathematics. His dedication to the profession's next generation is also evident in his work as a member of PEO's Seamless Transition Task Force, which aims to facilitate effective transition from engineering student to licensed professional engineer. Equally involved in PEO's chapter system, he has served on the executives of three PEO chapters—Kapuskasing, North Superior and Hamilton—and has chaired several Chapter Leaders Conferences.

Jeremy P. Cook, P.Eng., general manager, Terra Discovery Ltd., will be invested as a Member of the Order. A guiding force in the movement for an advocacy body for the profession, he was an active member of CSPE, which he represented on the Joint PEO/CSPE Advocacy Implementation Committee. During this time, he played a crucial role in forming OSPE, serving as its first chair in 2000 and leading it through its inaugural year of growth and development.

A member of the Brampton Chapter executive since 1995, Cook has been instrumental in organizing successful discussion panels, symposia, colloquia, annual general meetings and licence certificate presentations to new members, with the template he designed for such events still used today.

A respected engineer and well-connected to local politicians and prominent figures within the business community, he has used his connections to assist PEO's Government Liaison Program. With his assistance, program representatives have been able to provide community leaders an engineering perspective on various issues and promote the value of a self-regulated engineering profession.

Robert Gravelle, P.Eng., vice president, Lowe, Gravelle & Associates Inc.,

will be invested as a Member of the Order. He has been involved on the executive of PEO's Eastern (now Upper Canada) Chapter since joining in 1989. He can always be counted on to volunteer, organize and lead activities to promote the engineering profession, and has represented the chapter at many Eastern Region Congresses, which he has helped to host several times.

Gravelle has tirelessly championed his chapter's model bridge-building competition since the event's inception in 2000 as part of Ontario's National Engineering Week activities. His participation as a judge at the United County Science Fair and recently at Iona Academy (where his children attend) further underscores his commitment to and interest in the profession and its future.

A strong supporter of the Martintown community, he is an active member of the Knights of Columbus service organization and has been a member of the St. William's Parish Leadership Team for the past four years. An entrepreneur, he has also helped build a successful engineering firm that has been recognized by the local chamber of commerce as a business of the year.

C.K. (Ches) Jonys, PhD, P.Eng., will be invested as a Member of the Order. For the last 12 years, he has been involved in PEO's Etobicoke Chapter, serving twice as chair and working diligently to maintain a strong chapter executive. As part of succession planning efforts, he recruited new licensees to the executive and established templates for their expected duties, making the workload considerably less for those who followed him.

Jonys was instrumental in increasing the number and effectiveness of multi-chapter events in the West Central Region. As a result, several chapters have benefited from richer programs at lower costs. In 2005-2006, he chaired the chapter's bylaw subcommittee, which drafted and presented a revised chapter bylaw subsequently approved at the chapter's 2007 annual general meeting.

continued on p. 16

continued from p. 14

He has also exemplified the virtues of a professional engineer through volunteer work in his community. He served three years as president of the board of directors of a credit union. He continues to serve on the board of directors and is also the treasurer and computer guru for the community's non-profit weekly newspaper.

PEO Manager of Chapters **Matthew Ng, MEng, P.Eng., MBA, PMP**, will be invested as a Member of the Order. As a result of 15 years of dedicated work and valued leadership, he helped PEO's London Chapter flourish into one of the association's most active and recognized chapters. Stepping in as chair three separate times, his efforts to build a strong core team, increase the chapter's visibility and promote a culture of volunteerism led to a five-fold increase in chapter activities. He also led a team of chapter volunteers to

bring PEO's 2005 annual general meeting to London and raised \$15,000 in contributions from local industries.

An enthusiastic promoter of education outreach programs, Ng has been a valuable mentor to numerous engineers in the London area. In 2006, he started the Engineering Career Navigator Program at the University of Western Ontario, which helps first-year engineering students choose a discipline through a network of professional engineers who provide support.

Ng was also a member of PEO's Finance Committee for six years and an active volunteer for TV Ontario's on-air fundraising campaign.

Barna Szabados, PhD, P.Eng., vice president and chief technical officer, Fifth-Light Technology, will be invested as a Member of the Order. An internationally trained engineer and professor emeritus of electrical and computer engineering,

McMaster University, he has a long and outstanding record of contribution in the area of admission to the profession. He has been a respected member of PEO's Academic Requirements Committee since 2000. In addition, he has been a valuable liaison between the committee and the Licensing Process Task Force, on which he has served for the past three years.

At the national level, he was a member of the Canadian Engineering Accreditation Board, participating in 13 accreditation visits from 1986 to 2000, eight of which he chaired. His understanding of the accreditation process also proved invaluable to PEO's Ontario Software Engineering Task Force.

Until retiring recently from McMaster University, Szabados was also an important mentor and role model to many undergraduate and graduate students, always encouraging them to seek licensure following completion of their studies.

Michael C. Wesa, P.Eng., senior remote communities engineer, Hydro One Remote Communities Inc., will be invested as a Member of the Order. For over 25 years, he has been a devoted PEO grassroots volunteer and an ardent supporter of the chapter system and its activities. Notwithstanding a short hiatus, he has served the Lakehead Chapter since 1981, including positions as chair, vice chair and secretary-treasurer.

Wesa participated actively in the governance of his profession as a PEO Northern Region Councillor for four years, including one year as Vice President (appointed). He has lent his expertise to numerous committees, including the Professional Development, Regional Councillors and Regional Nominating committees, which he chaired twice. He continues to serve on the Discipline Committee, having volunteered for more than 15 years.

An energetic community volunteer, he has generously supported several organizations, including the board of directors of the Thunder Bay Symphony Orchestra. For eight years he was treasurer for his church, and has championed minor hockey, including writing a weekly column in the local newspaper.

Limited licence holders likely to gain QP status

By MICHAEL MASTROMATTEO

PEO appears to have won another victory in a longstanding struggle with Ontario's environment ministry to have its limited licence holders recognized as practitioners qualified to take responsibility for Brownfields-related work.

In late January, the environment ministry posted proposed revisions to Ontario Regulation 153/04, which include the list of persons qualified to file Records of Site Condition (RSCs) as part of Brownfields remediation work.

Throughout the development of Regulation 153/04, and ever since, the environment ministry had refused to recognize PEO limited licence holders as persons qualified to file RSCs.

PEO believes the ministry's previous refusal to add limited licensees to its qualified persons (QP) list was based on a misunderstanding of the nature and responsibilities of the limited licence itself, which now appears to have been corrected.

As PEO explained to the ministry, a limited licence is granted to individuals with specialized experience and competence in a specific area of professional engineering and restricts their practice to those areas specified in their licences. For their practice in those areas, however, they are subject to the same public accountability measures, including the complaints and discipline provisions of the *Professional Engineers Act* (PEA), as professional engineers.

Subject to any feedback received on the proposed revisions, on April 1, 2008, the ministry will amend the list of qualified persons to include those holding a limited licence under the PEA, and those holding a certificate of registration under the *Professional Geoscientists Act, 2000*, who are limited members of the Association of Professional Geoscientists of Ontario (APGO).

The amended QP list, which includes unlicensed individuals currently classified as QPs, will be effective only until March 31, 2009. After that date, only those

licensed by PEO or APGO will be considered qualified persons to conduct or supervise environmental assessments and file RSCs.

The draft regulation as posted does not restrict which limited licence holders would be qualified persons, leaving this up to PEO. The Ministry of the Environment will work with PEO and APGO to ensure limited licence holders undertaking QP responsibilities have an appropriate scope of practice.

On February 22, PEO responded to the posted draft regulation. In his letter, PEO Registrar and CEO Kim Allen, P.Eng., noted PEO's pleasure with the proposal to permanently recognize the holders of a PEO limited licence as qualified persons "for the purposes of conducting and supervising environmental site assessments and making certifications in records of site condition filed to the Brownfields Environmental Site Registry."

He also commended the ministry "for recognizing that public protection in the area of Brownfields remediation begins by working within the existing statutory frameworks in Ontario and not by set-

ting up a duplicative regulatory regime under the *Environmental Protection Act*.

On the transition provisions of the regulation amendments, he said that while PEO understands "the necessity to have transition provisions in order to allow any Brownfields remediation work currently being conducted to be completed, we question whether it is appropriate that those transition provisions should permit new work to be started during the transition period and conducted by individuals who will be removed as qualified persons after March 31, 2009."

On its Environmental Bill of Rights Registry website (www.ebr.gov.on.ca), the environment ministry describes qualified persons for RSC purposes as team leaders accountable for the work undertaken by an assessment and remediation team. "In the period between October 1, 2004, when the [Brownfields Environmental Site] Registry began, and October 1, 2007, 866 RSCs were acknowledged and posted on the Registry," the ministry says. "In just over 98 per cent of RSCs, the required certification statements were made by professional engineers or professional geoscientists."

Enforcement settlement stands test of time

By JENNIFER COOMBES

PEO has been successful in enforcing an agreement it made in 1981 with the Canadian Council of Professional Certification (CCPC) regarding the latter's use of engineering designations.

In 1981, PEO and CCPC, an organization that now grants certifications to addiction and gambling counsellors, community service workers, and those working in the wind and renewable energy fields, reached a settlement to cease the use of two designations. In particular, the settlement stated that CCPC was to discontinue granting and using the designations "Registered in Professional Engineering" and "Certified in Manufacturing Engineering" and their respective abbreviations, "R.P.E."

and "C. Mfg. E.," and was not to grant or use any designation containing the words engineering, engineer, or any abbreviations of these words.

Late last year, however, Engineers Canada received complaints that CCPC was granting the designations "Certified Wind Engineer" and "Certified Renewable Energy Engineer," and canvassed its constituent members for their views and any further information they might have on the matter.

In January, Roger Barker, P.Eng., PEO deputy registrar, regulatory compliance, Eric Newton, manager, enforcement and prosecutions, and Gordon Griffith, P.Eng., Engineers Canada, met with Russ Pickering, president of CCPC, to present PEO's earlier settlement with CCPC, of

which Pickering was not aware. Pickering agreed to withdraw the designations in question and discontinue the use of any designations containing the words engineering or engineer, including related abbreviations, and signed an undertaking to that effect.

"At the very least, PEO felt this matter could have been misleading to the recipients of these designations and also to members of the public," said Newton. "At the worst, it could be seen as an attempt to usurp PEO's regulatory role. But timely intervention by the association using the previous agreement, in conjunction with Engineers Canada, resulted in a settlement of the matter that was satisfactory to all parties."

Engineering labour market survey moves to next round

By MICHAEL MASTROMATTEO

Professional engineers across Canada are being invited to participate in the latest labour market survey aimed at shedding light on employment patterns and career trends for engineers and technologists.

The 2008 National Survey of Engineers and Engineering Technicians and

regardless of whether they are licensed or certified. Survey sponsors anticipate that information supplied by non-licensed or non-certified practitioners could shed light on factors that affect the propensity to take up licensure or certification.

The survey is now posted at www.engineeringemployeesurvey.com.

a fifth section for international engineering graduates (IEGs).

The online survey, which takes about 15 minutes to complete, comprises 33 questions for engineers and 42 questions for IEGs.

Additional information on both the overall Engineering and Technology Labour Market Study and the 2008 National Survey of Engineers and Engineering Technicians and Technologists is available through Engineers Canada at www.engineerscanada.ca/etlms/index.cfm. A final report on the labour market study is expected in October. It is likely to include a literature review, interviews with key employers and the development of "competitiveness indicators" in engineering and technology.

The survey is open to all engineers and engineering technicians and technologists.

Technologists is part of a larger project to gather information on employment trends, supply and demand patterns, employer attitudes toward licensing and certification, trends in the hiring of international engineering graduates, and the importance of continuing professional development for engineers.

The survey follows up data from a 2007 engineering employer study and from a 2002 national survey, which attracted input from more than 20,000 engineers and technologists/technicians.

The latest survey is sponsored jointly by Engineers Canada and the Canadian Council of Technicians and Technologists (CCTT). It is being conducted by Prism Economics, a Toronto-based consulting firm.

Kim Allen, P.Eng., PEO CEO and registrar, was a member of the subcommittee overseeing the design of the survey.

Results of the survey will be linked to the 2007 Survey of Engineering and Technology Employers and to the short- and medium-term supply/demand forecast that is being developed. Part of the preparation for the final report includes discussion from a series of focus groups of engineers and technicians. On February 21, PEO hosted the first focus group for southern Ontario participants, and similar meetings are scheduled for New Brunswick, British Columbia and Alberta.

The survey is open to all engineers and engineering technicians and technologists,

The survey is divided into five main sections: educational background, employment status, licensure and certification, continuing professional development, and

Nova Scotia adopts mandatory professional development

By MICHAEL MASTROMATTEO

Nova Scotia engineers have voted to support a new mandatory professional development program.

In a December 2007 ballot, 70 per cent of Engineers Nova Scotia members who voted, approved a plan that will see members confirm they have undertaken professional upgrading on an annual basis.

The number of returned ballots represents 20 per cent of the total Engineers Nova Scotia membership.

"The mandatory professional development program is essentially a certification process where members each year certify in writing that they are in compliance with the requirement of 80 professional development hours per year," said Dermot Mulrooney, P.Eng., director of professional practice, Engineers Nova Scotia.

He said the regulator now has legislation before the Nova Scotia legislature to make the required act and bylaw changes to facilitate the program.

Most Canadian engineering regulators, including PEO, do not have

compulsory professional development programs, although Ontario's Regulation 941 makes undertaking work the practitioner is not competent to perform a cause for a finding of professional misconduct. However, the Association of Professional Engineers, Geologists and Geophysicists of Alberta instituted a similar program in 1997, and the Association of Professional Engineers and Geoscientists of British Columbia strongly urges its members to pursue continuing education activities on their own. The Association of Professional Engineers and Geoscientists of New Brunswick has had a mandatory continued competency assurance program in bylaw since 2002.

The mandatory professional development program was part of recently approved changes to the Engineers Nova Scotia complaints and discipline process, including an update to the code of ethics, which members also supported. The Nova Scotia regulator officially changed its name last September to Engineers Nova Scotia from the Association of Professional Engineers of Nova Scotia.

Campaign highlights contributions of skilled immigrants

By MICHAEL MASTROMATTEO

A new advertising campaign encouraging small- and medium-sized companies to hire skilled immigrants could once again draw attention to the challenges facing international engineering graduates (IEGs) in Ontario.

The campaign, called Do Yourself a Favour: Hire a Skilled Immigrant, launched in mid-February and includes TV, print and online advertising. The TV ads will run from February to April, while the print and online advertising are scheduled to run until February 2009.

The initial TV spot features two Indian executives discussing the merits of a Canadian applicant for a senior position in Asia. It's a reversal of the usual scenario whereby immigrants to Canada face difficulties in having their skills, training and accomplishments evaluated against the "Canadian experience" requirement.

The advertising campaign and its accompanying website (www.hireimmigrants.ca) are sponsored by the Toronto Region Immigrant Employment Council (TRIEC), an organization of employers, educators, government groups, regulators and others working to integrate immigrants into the Ontario labour force.

PEO CEO and Registrar Kim Allen, P.Eng., has been working with TRIEC's committees aimed at overcoming perceived barriers to licensing and registration for internationally educated professionals. Allen also had input on an advertising campaign in the spring of 2007, which highlighted the plight of highly educated immigrant professionals working in low-end menial positions.

Officials with the Hire an Immigrant campaign believe small- and mid-sized companies can especially benefit by hiring internationally educated professionals for their first career-related work experience in Canada.

"Increased competition and changing demographics, coupled with often limited human resources capacity, make it much harder for small- and medium-sized companies to fill positions that require significant skills and expertise," said TRIEC Executive Director Elizabeth McIsaac in a prepared statement. "What many employers don't realize is that we have a pool of highly qualified candidates that is being overlooked—skilled immigrants."

TRIEC and other immigrant advocacy organizations point to recent statistics showing immigrants as a key

contributor to Ontario's current and future labour force. With predictions of a deficit in skilled labour in Canada by 2025, immigrants are expected to take on ever-increasing roles.

Statistics Canada data indicates that some two-thirds of Canada's population growth is now based on net international migration. Projections show that immigration may become the only source of population growth by 2030, and could account for all net labour force growth as early as 2011.

Immigrant advocacy organizations also suggest that immigrants with international experience can help small- to mid-sized companies succeed in an increasingly competitive, internationally focused economy.

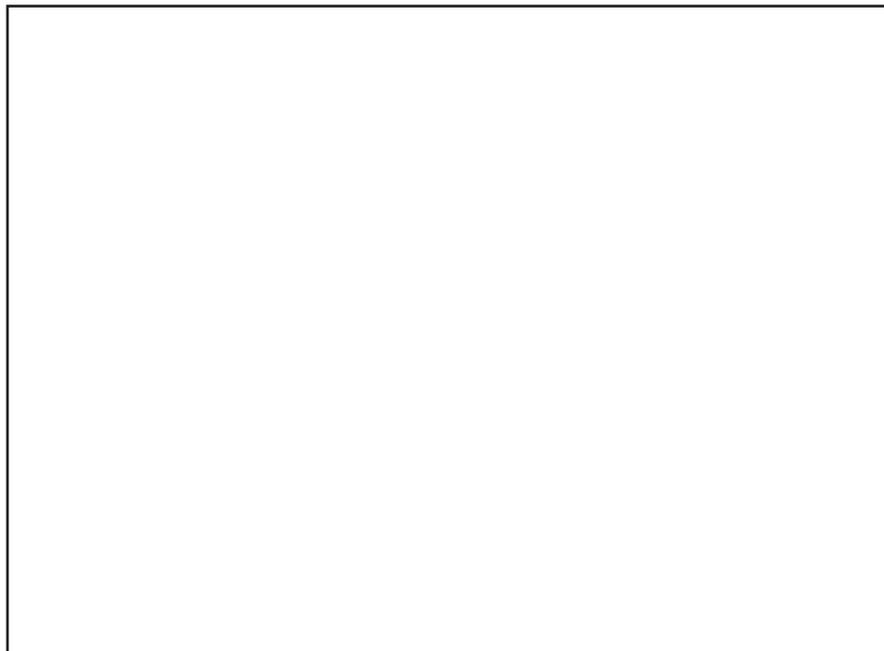
PEO has recognized the benefits that IEGs can bring to the Ontario labour force and has been working with TRIEC and others in educating new Canadians about the requirements for licensing as a professional engineer.

PEO's chapters, particularly in southern Ontario, have also taken up mentoring programs as one more way of helping IEGs network with Ontario P.Engs and gain much-needed local work experience.

PEO has already won praise for taking a leading role among regulated professions in overcoming perceived barriers to licensing and registration.

Information from PEO's licensing and registration department, for example, shows the regulator has taken measures to accommodate applicants from engineering programs not certified by the Canadian Engineering Accreditation Board (CEAB), most of whom are IEGs. In 2005, PEO for the first time licensed more (non-CEAB) applicants than those from CEAB-accredited engineering programs. A similar situation held for 2006, while data for 2007 are forthcoming.

To better serve potential immigrants with an engineering background, PEO makes available on its website complete information about its licensing process, and enables potential immigrants to apply for licensing from outside Canada.



IEG integration project moves into fifth year

By MICHAEL MASTROMATTEO

Engineers Canada's ambitious From Consideration to Integration (FC2I) project, designed to integrate international engineering graduates into the Canadian workforce, marked its fifth anniversary in January.

Now in its third and final phase, FC2I was launched in January 2003 in response to the recognition that many international engineering graduates were struggling with finding suitable employment and with becoming licensed in Canada.

Working with the 12 provincial/territorial engineering regulators, and with representatives of government, industry, employers and immigrant advocacy groups, Engineers Canada recorded the various problems international engineer-

ing graduates in Canada say they face, and to develop possible solutions.

PEO has been an active participant throughout FC2I, offering its resources in support of a number of project components—most recently the creation of a database of international institutions and degrees, and a second database of all engineers licensed in Canada.

Phase 3 of FC2I comprises 10 specific projects, most of which are scheduled to run into official completion at the end of 2009.

Among the most extensive of the remaining projects are ongoing support for mentoring and cross-cultural training exercises, the development of a single-source website for licensing and registration data for would-be immigrants to Canada, a study of

best practices in engineering employment, and an examination of engineering-related licensing activities on the part of immigrant engineers prior to their arriving in Canada.

As project coordinator, Engineers Canada provides regular updates regarding progress and project status.

Doris Yee, EIT, manager of Engineers Canada's Foreign Credential Recognition Program, said communication is a key part of all phase 3 efforts. In mid-February, Engineers Canada unveiled a new website, www.engineerscanada.ca/fc2i/e/fact_sheets.cfm, containing a series of fact sheets about various aspects of the IEG accommodation work.

Additional information about FC2I is available from Engineers Canada at www.engineerscanada.ca/fc2i/.

New markets emerge for industrial engineers

By MICHAEL MASTROMATTEO

While Canadian manufacturing faces tough times, industrial engineers appear to be finding a new demand for their expertise in such fields as health care, financial services, commerce and large institutions generally, according to speakers at the Canada Student Conference 2008, organized by the Canadian branch of the Institute of Industrial Engineering (IIE).

Hosted by Ryerson University in Toronto, the January 10-12 conference was dedicated to highlighting industrial engineering and to exposing industrial engineering students to the latest career options available. It drew nearly 300 students from universities in Ontario, Nova Scotia and Quebec.

Industrial engineering centres on the development, improvement and evaluation of integrated systems of people, knowledge, information, equipment, energy, material and process, and is sometimes referred to as process or operations engineering. It can involve designing prototypes and models for more efficient operations, particularly in a commercial and manufacturing setting. It is most often associated with mechanical and manufacturing processes and has some overlap with human factors and ergonomic considerations.

Yet despite industrial engineering's traditional home on the shop floor, speakers at the student conference said it's now being applied in a wide variety of settings, and its graduates are put to use in addressing problems in health care, financial services and other corporate and institutional operations.

Michael Carter, PhD, professor of health care resource modeling at the University of Toronto's (U of T) faculty of engineering, has supervised more than 160 industrial engineering students in health care projects over the last 18 years.

His address, *Who Let the Industrial Engineer into the Hospital?*, outlined the contributions industrial engineers make in such vital areas as reducing surgical wait

times and making better use of scarce health care resources.

He said that as the biggest industry in Canada, the health care field suffers from a systems management, rather than a capacity, problem. "We've found that health care in Canada in many respects has taken on a culture that's counter-intuitive to normal company operations," he said. As such, Carter's focus in operations research helps direct an industrial engineer's problem solving apparatus into more streamlined operations of health care resources.

Many students attending the conference found the information presented affirmed their decision to specialize in industrial engineering. Ines Fernandez, a third-year industrial engineering student at U of T, said industrial engineering appears a viable alternative to her original interest in manufacturing. And while she is gravitating towards a career in the financial services sector, she believes exposure to industrial engineering provides graduates some more flexibility in pursuing a future career.

It's a view supported by Terry Lung, an industrial engineering graduate now

working as a supply chain analyst with Canadian Tire Corporation.

"I decided to specialize in industrial engineering because I felt that this discipline would give me a broad range of skills and perspective," Lung said. "Industrial engineers are often known as generalists and, to an extent, I find that that is true. This is also part of the reason why I chose this discipline. I enjoy knowing the fact that one can find industrial engineers anywhere from a manufacturing plant to financial institutions, to corporations like Canadian Tire. We are definitely a diverse group with a diverse set of options."

Daniel Frances, PhD, P.Eng., senior lecturer at U of T's department of mechanical and industrial engineering, says one virtue of contemporary industrial engineering study is its emphasis on operations research and on building mathematical models to help solve elusive problems. "It's like an elaborate examination of the entire system or process to try to come up with what might be called the 'a-ha' factor," he said.

Dan Chan, P.Eng., director of forecasting and replenishment for Canadian

IEs good fit for public policy role, say grads

Recent graduates contacted by *Engineering Dimensions* didn't need much coaxing to recognize the potential for industrial engineers (IEs) in the development of public policy.

Jennifer Hartnel, EIT, a supply chain process analyst at Canadian Tire and a 2003 industrial engineering graduate from U of T, suggested that principles learned as an industrial engineer would readily translate in a public policy direction.

"While industrial engineering is concerned with commercial and corporate business interests such as consulting, organizational design, process optimization, and performance improvement, it can also be applied to other areas such as health care and the environment," Hartnel said. "One of the main concepts is optimization, which is applicable to a number of areas—manufacturing, transportation and even health care—and could also be considered as inherently environmental. With environmental concerns becoming more widespread, there are definitely a number of opportunities for IEs to ensure new environmentally focused initiatives are properly created, managed and implemented."

Similarly, Jeffrey Nephew, EIT, another supply chain analyst at Canadian Tire, argued that industrial engineering is a discipline naturally sympathetic to public policy concerns. "IEs tend to have a more big-picture view of things and, as a result, are accustomed to be able to measure the impact of a large number of elements involved in any decision-making process," Nephew said.

Tire, attended the conference as part of that company's recruitment efforts. He said industrial engineers often bring benefits more commonly associated with MBA graduates, but with a more developed technical dimension.

"Industrial engineering graduates have the skills to assess an existing situation and apply various techniques to get to the root cause of problems and find better ways of working, leveraging changes in people, process and technology," he said. "Their technical backgrounds in applied math and science allow them to use various tools to help them improve processes. Nowadays, there are many software tools used in business to improve performance and to help us make better decisions. We have found that engineers are comfortable understanding how these systems work and are able to find the best application for them. We have also used our engineers in the design of our supply chain networks as well as in the design of our distribution centres."

Other speakers at the IIE student conference included Alourdes Sully, P.Eng., director of the Ontario Society of Professional Engineers, who familiarized students with the engineering advocacy body; Deborah Fels, PhD, P.Eng., associate professor at Ryerson University, who outlined the link between industrial and human factors engineering; and John Salt of Canadian Tire, who discussed logistics and supply chain issues.

The conference also included presentations of awards for engineering design and technical papers. This year's winners for the engineering design were Dalhousie University (students Scott Wetton, Jorge Aguirre, Kendall Murphy, Johanna Campbell) in first place; Ryerson University (students Wajeh Rehman, Aileen Lim, Adeel Ahmad, Richard Fong) in second place; and École Polytechnique (students Valerie Jean-Louis, Marc-Alexandre Laroche, Christine Dupuis, Celian Lefevre) in third place.

The technical paper competition winners were Guillaume Projean of Université du Québec (Trois Rivières) in first place; James Friars of Dalhousie University in second place; and Brendan Eagan of University of Windsor in third place.

Key role seen for P.Engs in global warming debate

By MICHAEL MASTROMATTEO

The engineering profession faces an additional responsibility in urging policy makers to develop climate change abatement strategies, says an Ottawa engineer committed to bringing the environmental sustainability message to new audiences.

Michael Gerbis, P.Eng., president of Ottawa-based Delphi Group, an environmental consultant, was guest speaker at a February 5 *An Inconvenient Truth* workshop organized by PEO's Kingsway Chapter.

A long-time environmental engineer, Gerbis was one of only 20 Canadians to receive special training on climate change from former US Vice President Al Gore, the Nobel Prize-winning producer and host of *An Inconvenient Truth*.

His Kingsway presentation focused on the causes and effects of climate change from an engineer's perspective. His message was that it's important for engineers to show leadership in promulgating the conservation message.

"The incredible influence that engineers have on solutions that impact our environment is tremendous," Gerbis said,



Steve Favell, P.Eng., (right) of PEO's Kingsway Chapter presents Michael Gerbis, P.Eng., with a token of appreciation following his February 5 talk on global warming.

"and that's where leadership is needed by engineers to start thinking differently to have a positive impact."

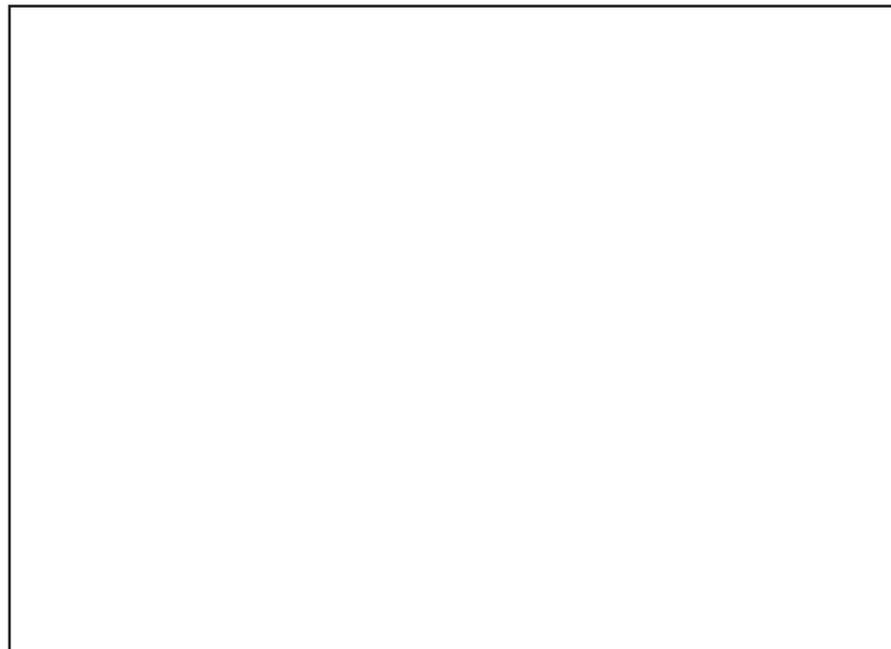
Gerbis said engineers—and everybody concerned with climate change—can show by example by making simple lifestyle

choices that encourage conservation and reduce fossil fuel consumption. Actions as simple as using compact fluorescent light bulbs, avoiding unnecessary trips and keeping car tires inflated to proper levels all can make a positive impact, he said.

Gerbis also encouraged engineers to examine critically the arguments of climate change skeptics, who he said tend to focus on isolated or extraneous data to undermine climate change science.

"People and the media have to understand that the debate is over," Gerbis said. "The Intergovernmental Panel on Climate Change is the paramount scientific group on this issue and they are saying that it is an issue and it is human-caused."

Gerbis, who makes presentations to schools, community groups and engineering students, challenged engineers to look beyond isolated criticisms by taking advantage of the wealth of information and research supporting the global warming model. He especially encourages them to visit the Climate Project website at



www.theclimateproject.org for a full perspective on climate change science and its detractors.

He also warned his audience not to fall into a polarized or adversarial position when it comes to climate change.

"It shouldn't be seen as business and government are bad and that we [environmentalists] are good. It's everybody's challenge," Gerbis said. "There are lots of things that the government and industry can do from a leadership perspective, but we, as individuals, need to be held accountable and take part of the ownership of this challenge and do things that are more responsible. And that's tough."

At the same time, Gerbis said appropriate responses to global warming and climate change have to accept certain practicalities. For example, he said he reluctantly supports the use of nuclear energy as an interim measure to fulfill the growing demand for electricity, as the development of alternative energy sources goes forward.

The *An Inconvenient Truth* advocate added that it's important to keep the global warming debate going, even if one doesn't fully accept its premise. "For those who don't believe Al Gore, it's not Al Gore I want them to believe," he said. "I want them to believe the 2000-plus leading scientists who are putting all these pieces together, and for them to start to analytically look at the facts, not read the one or two articles and jump to a conclusion. If you believe in climate change, it means you have to do something. If you say it doesn't exist, it's easier to avoid things and not change the way you behave."

Steve Favell, P.Eng., executive member of Kingsway Chapter, invited Gerbis to address the chapter, because he is one of the few professional engineers listed on the Canadian roster of the Climate Project.

"Mr. Gerbis's recommendation was to make overall lifestyle changes to mitigate greenhouse gas emissions," Favell told *Engineering Dimensions*. "There were actually quite a few attendees who were

from consulting engineering companies [and] from the fields of the environment, civil engineering and building design. These engineers can have a more significant effect on the environment than personal efforts alone by making consci-

entious efforts to consider energy conservation and green energy sources in designs that impact large populations across the country. That is the leadership role an engineer can take to make a meaningful difference."

New fairness commissioner website launches

BY JENNIFER COOMBES

The office of the fairness commissioner, the agency that ensures Ontario's regulated professions have transparent, objective, impartial and fair registration practices, has just launched a new website, www.fairnesscommissioner.ca. The website offers pages devoted to internationally educated professionals, the activities of the office, FAQs and links to other helpful websites.

Established in April 2007 under the *Fair Access to Regulated Professions*

Act, 2006, the office is independent of the government and the regulated professions it oversees, and it doesn't advocate or intervene on behalf of individuals.

Writes Hon. Jean Augustine, the fairness commissioner, on the website: "My role is straightforward. My staff and I work with the self-regulated professions to make sure there are fair ways of registering or licensing people who want to practise their professions here."



86th Annual General Meeting Engineering and Public Policy Conference Order of Honour Awards Gala

Friday, May 9 to Saturday, May 10, 2008

Hilton Windsor Hotel, 277 Riverside Drive West, Windsor, ON

FRIDAY PROGRAM

Engineering and Public Policy Conference Theme: Border Crossings

Learn from experts from both sides of the Canada/US border about the role of the engineering profession in developing public policy, and the effects of public policy on engineering. Admission for this day-long conference, including lunch, is free. Registration is required as space is limited.

7:30 a.m. Breakfast
8:00 a.m. Registration
9:30 a.m.-4:00 p.m. Conference

- Session 1—Overview of US regulatory model vs. Canadian model
- Session 2—Challenges to cross border licensing
- Session 3—Impact on business/economic impact
- Session 4—The role of the profession in policy making

Order of Honour Awards Gala

(St. Clair Centre for the Arts)

Celebrate with us as 13 engineers are recognized for significant contributions to the profession. To purchase tickets to this black-tie event, visit PEO's AGM registration page at https://forum.peo.on.ca/AGM_2008/2008AGM.html.

6:15 p.m. Reception
7:00 p.m. Dinner
9:00 p.m. Awards Ceremony

2008 Inductees to the Order
See page 13 for the list of recipients and to read their stories

SATURDAY PROGRAM

Annual Business Meeting, AGM Luncheon, and PEO Council Meeting

Participate in your profession's governance by attending PEO's Annual Business Meeting and AGM Luncheon, followed by PEO Council's 448th meeting. There is no charge to attend the business or Council meetings.

8:30 a.m. **PEO Annual Business Meeting**
12:30 p.m. **AGM Luncheon**
Keynote Speaker: Ray Mantha, P.Eng., Assistant Deputy Minister, Provincial Highways Management, Ministry of Transportation
3:30 p.m. **448th Meeting of PEO Council**

Registration

Register and purchase tickets online at https://forum.peo.on.ca/AGM_2008/2008AGM.html to confirm your attendance.

For more information

For more information or registration help, contact Sharon Gillam at 416-840-1064 or 800-339-3716, extension 1064, or by email at sgillam@peo.on.ca.