



# Ontario Professional Engineers Awards celebrate achievement

by Dwight Hamilton

In his Gold Medal acceptance speech at the Ontario Professional Engineers Awards, Arthur Johns, P.Eng., was fond of quoting baseball great Yogi Berra, who once said: "When you reach a fork in the road, take it." Johns, chairman of Morrison Hershfield Group Inc. of Toronto, was pointing out the critical juncture the engineering community in Ontario faces with the formation of the Ontario Society of Professional Engineers (see Johns' speech, pp. 40-42).

Held on November 15, 2002 at the Delta Meadowvale Resort and Conference Centre in Mississauga, the event was jointly hosted for the first time by both the Society and PEO. In attendance were 1997 Gold Medal recipient Dr. Robert Thirsk, P.Eng., an astronaut for the Canadian Space Agency, and Mississauga Mayor Hazel McCallion, who remarked that she felt "right at home," having worked at an engineering firm for 19 years.

While there may be a fork in the road, the profession remains on the same path, Johns said, calling for cooperation. "Without integration," he said, "it can lead to power trips and result in self-serving agendas, not in the greatest collective success." For such success, professional engineers need not share a common vision, Johns feels, but they must have a shared core value: "Our duty is to the public, made through the code of ethics, but it's not expressed as a core value."

Keynote speaker Claude Lajeunesse, PhD, P.Eng., president of Ryerson University, spoke of the challenge of educating engineers for a future in which they will need an ever-increasing level of sophistication. Lajeunesse explained that engineering now encompasses such a diverse range of activities, schools are facing pressure

to broaden engineering education beyond what can reasonably be covered in a four-year program. "Engineering has become the liberal arts education of yesteryear," he said. "Students must be well prepared for the exercise of their profession, must be able to explore new horizons and meet unforeseen challenges—achieving this delicate balance is not easy."

Seven other professional engineers were honoured that evening:

- ◆ Charles Olmstead, P.Eng., for citizenship, for involvement in his community of North Bay that has enriched the city's health, education and recreational institutions;
- ◆ Ian Armitage, P.Eng., a gear train engineer in the aerospace industry, for engineering excellence, for leading the design of Canadarm mechanisms and other devices for NASA;
- ◆ Keith Marchildon, PhD, P.Eng., for engineering excellence, for expertise in nylon polymerization research;

- ◆ Adel Sedra, PhD, P.Eng., for engineering excellence, as a researcher in microelectronics as well as gifted teacher and executive for one of the top universities in Canada;
- ◆ Frank Dottori, P.Eng., for entrepreneurship, for working with other employees and citizens to transform a single pulp and paper mill into a \$4-billion multinational corporation;
- ◆ Peter Chadwick, P.Eng., for management, for innovative direction that helped establish Canada as the world leader in robotics engineering for space applications; and
- ◆ Douglas Reeve, PhD, P.Eng., for research and development, for expertise in chemical engineering that has helped minimize negative environmental consequences in the pulp and paper industry.

Benefactors of the 2002 Ontario Professional Engineers Awards were Canada Life and Ian Martin Limited.



Ontario engineers were honoured for their work at a ceremony held this past November. Shown here are (back row, from left to right): PEO President Richard Braddock, P.Eng., Keith Marchildon, P.Eng., Charles Olmsted, P.Eng., Douglas Reeve, PhD, P.Eng., Arthur Johns, P.Eng., Ian Armitage, M.Eng., P.Eng., Peter Chadwick, P.Eng. Front row, from left to right: Society Chair and President Catherine Karakatsanis, P.Eng., Adel Sedra, PhD, P.Eng., Marta Ecsedi, P.Eng., (master of ceremonies, chair, Awards Committee), and Frank Dottori, P.Eng.

# Housing ministry test drives building code exams, delays implementation

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by Dwight Hamilton

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Ontario's Ministry of Municipal Affairs and Housing (MMAH) is piloting examinations across the province covering knowledge of the *Building Code Act* and specific aspects of the *Ontario Building Code* (OBC). Once the necessary regulations are in place, the act, as amended by Bill 124, will require that building practitioners, including chief building officials, inspectors, registered code agencies (RCAs) and designers, be qualified through examinations before engaging in duties specified in the act and the OBC.

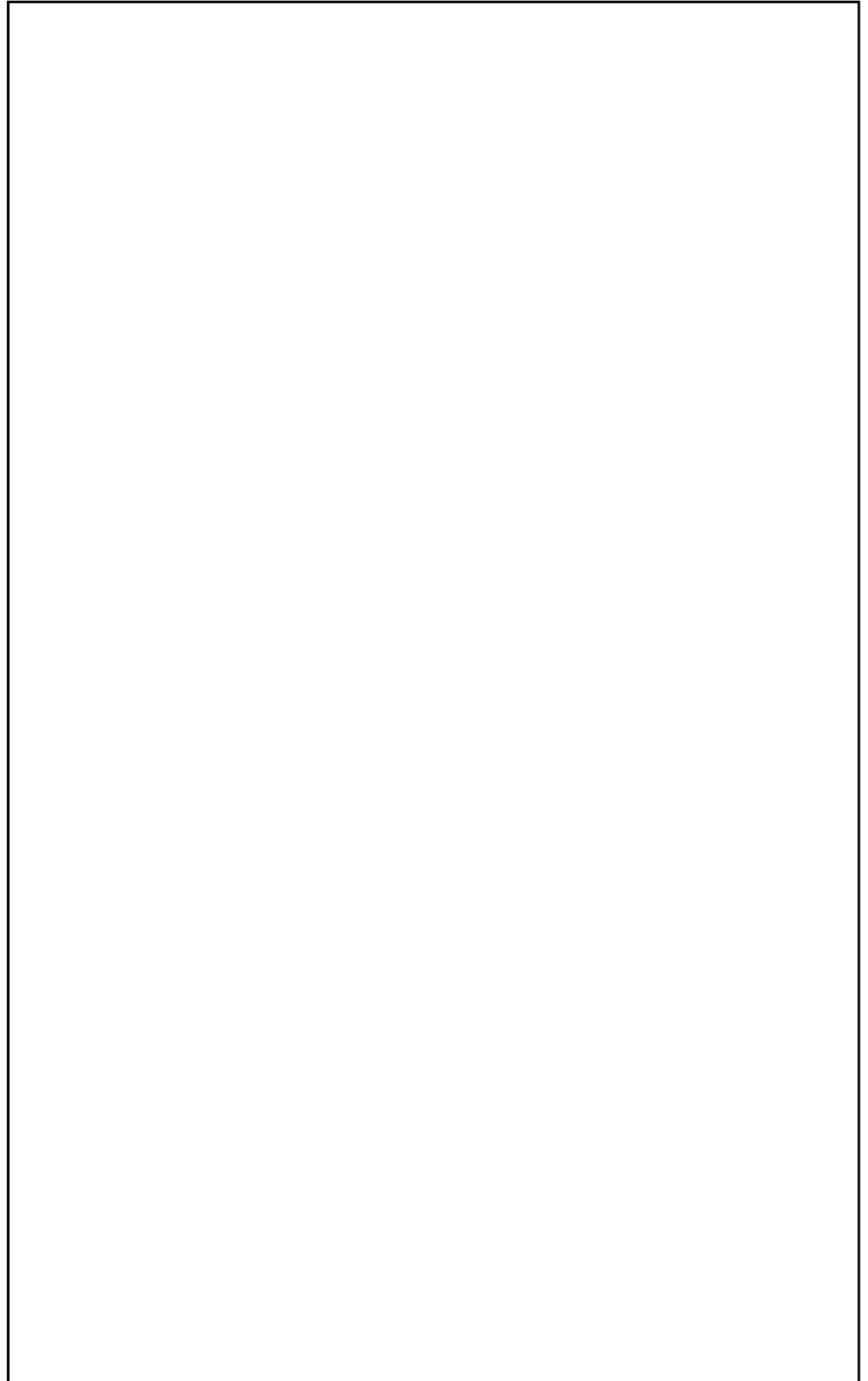
Because part of PEO's legislated mandate is to govern its members and licensees in the public interest, the ministry early on offered it the opportunity to administer the exams for professional engineers for all classifications except chief building official, inspector, or a designated person working for an RCA. These classes will be tested and certified by MMAH. In November 2001, PEO Council approved PEO involvement in certifying professional engineers, and maintaining the register of those qualified under the act. Since then, MMAH has made PEO's participation contingent on PEO establishing a framework within Regulation 941 under the *Professional Engineers Act* that parallels the framework MMAH is establishing in the regulations to Bill 124, which have yet to be released.

In keeping with its role as a facilitator for the ministry's requirements relating to professional engineers, PEO made available via the PEO website ([www.peo.on.ca](http://www.peo.on.ca)) information about the pilots and MMAH's request for volunteers to participate in them, including a paper outlining the qualification classes and proposed exam syllabi. When finalized, the open-book exams are anticipated to include 80 to 100 multiple-choice questions and take up to two-and-a-half hours to complete.

PEO has also requested an opportunity to review the draft exams to ensure they

are not testing engineering competence, which would be outside of MMAH's mandate in administering the *Building Code Act*. In discussions during develop-

ment of Bill 124 and consistently since then, MMAH has stressed that its testing of code knowledge will not involve the testing of engineering competence. PEO



has just as consistently maintained that, in practice, it might be difficult to separate code knowledge and engineering competence. A PEO letter in October 2001 to MMAH stated that "sections of the OBC that require the seal of a professional engineer are not always prescriptive steps that lend themselves to memorization. Many elements of the OBC pertaining to professional engineering require interpretation and call for the application of engineering principles." As an alternative to the exam regime, PEO offered to work with the ministry to ensure that the objective of improved code compliance by professional engineers was addressed through the *Professional Engineers Act*, through performance standards for example, an offer that was not taken up by MMAH.

### Insurance delays

In addition to requiring certification exams, Bill 124 requires practitioners (including professional engineers) involved in building construction or design to carry Major Structural Defect (MSD) insurance for seven years after substantial completion of a project valued at more than \$50,000. The policy must cover half the value of each job up to \$10 million. Because this coverage is different in intent and execution from the insurance requirement for Certificate of Authorization holders under the *Professional Engineers Act*, PEO has indicated that it will not couple the requirements under its legislation.

In late November, PEO was informed that defining the insurance requirement in a way acceptable to Ontario's insurance

industry would delay the introduction of the regulations to Bill 124. The ministry had hoped to introduce the regulations before the end of 2002, so that the Bill 124 amendments could be effective by mid-2004 after an 18-month phase-in. In a memo informing stakeholders of the delay, MMAH says the change in schedule is "in order to accommodate requests from the insurance industry for further input."

MSD insurance for construction projects is available in Australia and France but not in North America, making it difficult for Ontario insurers to estimate the associated costs of the regime, which is required to determine premiums. It's reported that in Australia and France, MSD insurance adds about 3-4 per cent to a construction project's cost.

## Bill establishes limitation periods, opens public auditing to non-CAs

by Dwight Hamilton

Legislation has been passed that introduces the new *Limitations Act, 2002*, which pulls together a plethora of limitation periods

formerly found in different laws. Bill 213 (the *Justice Statute Law Amendment Act, 2002*, of which the *Limitations Act* is a part) establishes a basic two-year time frame to launch a civil suit after injury,

loss or damage has been discovered, or should have been discovered, by a plaintiff. Also established is an ultimate limitation period of 15 years, starting the time the act or omission on which the claim is based takes place, regardless of the plaintiff's knowledge. Some exceptions are permitted. For example, there is no limitation period for undiscovered environmental claims or situations where the government is involved in social, health or economic programs. Other exceptions include:

- ◆ real property claims, in respect of which existing limitation periods will continue in force under the new *Real Property Limitations Act*;
- ◆ claims discovered prior to the date of proclamation of the new act;
- ◆ claims subject to a "standstill agreement" or another agreement limiting or extending an otherwise applicable limitation period that was entered into before the proclamation date of the new act; and
- ◆ claims where the potential litigants have entered into an agreement to resort to alternative dispute resolution before commencing an action.

The new bill has particular relevance for the construction industry. Previously, there was no time limit governing when building-related lawsuits could be launched, and building practitioners could be forced to defend against suits from projects finished decades earlier.

“Establishing an ultimate limitation period provides practitioners with the certainty they need to make decisions about many issues,” says Bernard Ennis, P.Eng., PEO’s manager, professional practice. “These range from winding down practices so they can retire, to getting rid of the mountains of documents from old projects that are kept in storage just in case.”

The new law may create some uncertainty, however, according to law firm Osler, Hoskin & Harcourt LLP. While the bill may ultimately simplify determinations as to when claims arise and when action must be launched, parties looking to contract out of the new statutory limitation periods may be precluded from doing so, it says in a brief.

Ennis says that all PEO professional practice guidelines that reference the limitation issue will be revised. For further detail on how the new legislation affects contract law for professional engineers, Ennis advises that practitioners consult with their lawyer.

### Opening the books

Bill 213 also amended the *Public Accountancy Act* to enable certified general accountants (CGAs) and certified management accountants (CMAs) to audit publicly held corporations, previously the exclusive domain of chartered accountants. Qualifications for public accounting licences would include passing technical exams, which have yet to be set. The new rules would grandparent current public auditors. In a substantial governance change, all members of the Public Accountants Council (the licensing body) will now be appointed by regulations prescribed by the Lieutenant Governor-in-Council (the Ontario government). These regulations have yet to be developed. Previously, the Institute of Chartered Accountants of Ontario (ICAO) appointed the lion’s share of councillors, with the remainder elected by certain classes of licensed public accountants.

Passage of the bill was preceded by an intense effort by the ICAO to have the legislation scrapped. In full-page newspaper ads, the ICAO said it felt the bill would lower public accounting standards, and that U.S. regulators were concerned that it might imperil implementation of a mutual recognition agreement signed with Canadian

counterparts. Ontario NDP leader Howard Hampton, whose motion ultimately ensured Bill 213’s surprise and speedy passage on a day it was not scheduled for debate in the legislature, said his party feared the government was “ready to cave in to the high-priced lobbying efforts of the chartered accountants.”

## Government passes water acts, P.Engs named

by Dwight Hamilton

Professional engineers will be required to certify inventories of, and management plans for, the infrastructure needed to provide water services and waste water services, under the provisions of Bill 175, the *Sustainable Water and Sewage Systems Act, 2002*, which received Royal Assent on December 13, along with Bill 195, the *Safe Drinking Water Act, 2002* (SDWA). Both acts passed second reading in the legislature on November 7 and third reading on December 10, following the conclusion of the 30-day comment period for the SDWA. The SDWA was posted to the Environmental Bill of Rights Register on October 29, following its first reading (see *Engineering Dimensions*, Nov./Dec. 2002, pp. 10-11).

During the comment period, PEO staff and members of the Environment Committee reviewed the draft SDWA in detail. PEO’s comments on the draft were submitted to the government on November 28. Comments on Bill 175 (which was previously Bill 155, *Sustainable Water and Waste Water Services Act, 2001*) were submitted on April 3, 2002.

In its brief on Bill 175, PEO commented that if done as the legislation intended “the required infrastructure reports will be highly technical and will require significant engineering analysis and judgment. They would therefore require the sign-off of a professional engineer (P.Eng.), because they would constitute the practice of professional engineering as it is defined in the *Professional Engineers Act*.” The PEO submission appears to have laid the ground-

work for lobbying efforts at subsequent meetings on the legislation between environment ministry staff and Bob Goodings, P.Eng., and Jim Merritt, P.Eng., of the Ontario Society of Professional Engineers’ Safe Drinking Water Task Force.

Besides incorporating the requirement for certification of infrastructure reports by professional engineers, as suggested by PEO and the Society, Bill 175 also includes a definition of “professional engineer” that ties to the yet-to-be developed regulations to the new act. In a follow-up submission, PEO has suggested that the regulations state simply: “‘professional engineer’ means a holder of a licence or a temporary licence as defined in the *Professional Engineers Act*.”



A result of the Walkerton tainted water tragedy of May 2000, Ontario’s new drinking water legislation was approved in December 2002.

### SDWA comments

Regarding administration of the SDWA, PEO's November brief highlights the need for MOE to clarify the nature of the "technical assistance" it plans to provide to owners and operators of drinking water systems, as outlined in section 3 of the act. If this assistance includes the practice of professional engineering, PEO suggests that MOE obtain a Certificate of Authorization from PEO; if the assistance is not professional engineering, it should be clearly defined to indicate this.

PEO recommends that current provisions that allow P.Engs to be licensed as drinking water system operators be maintained in the new regulations to the SDWA covering operator certification. As well, PEO recommends that where MOE demands public accountability for operating drinking water systems, the person responsible for overseeing that operation should be a P.Eng.

As stated in its September submission, PEO reiterates the position that certified operators of drinking water systems may

not have the required knowledge to make non-routine decisions on complex engineering works, and as a result a P.Eng. should sign off on the operating and maintenance manuals for drinking water systems. In addition, PEO recommends that P.Engs should be required to sign-off on any changes to the operating tolerances included in the manuals. PEO is prepared to develop practice standards for design of drinking water systems, including the preparation of operating and maintenance manuals, in regulation under the *Professional Engineers Act*.

PEO also recommends that the as-yet-to-be-established directions governing the preparation and content of operational plans for drinking water systems require that the plans be signed-off by a professional engineer. Regarding the ownership of the operational plans, PEO points out that it is customary for professional engineers to retain ownership of the documents for which they take responsibility unless provisions to the contrary have been explicitly negotiated with the client. PEO is seeking a legal opinion on the provision of the SDWA that

would see operational plans become the property of the water system owner.

The breadth of the application, and the lack of definition of the act's Quality Management Standard (QMS) for drinking water systems, causes concerns for PEO, as does a provision that enables the exclusion of a specified member of a class of person to which the QMS would apply. In the situation where an excluded member is a professional engineer (if professional engineers are a mentioned class of person) and the activity for which the single member is to be excluded is professional engineering, PEO believes that it is the only body having authority to exclude that individual, which would be through revocation or suspension of the person's licence to practise. PEO suggests that the QMS adopt by reference the standards of practice for the design of water treatment and distribution systems, including the preparation of operating and maintenance manuals, that PEO has offered to develop.

PEO's submission continues to recommend that financial plans for drink-

ing water systems include a stipulation for a P.Eng. sign-off, as preparing these plans will require engineering judgment as well as technical expertise, and that the required documentation to support applications for drinking water permits and licences include plans, specifications and engineers' reports. PEO feels such documentation cannot be considered optional, if accountability and public confidence in the province's drinking water systems is to be bolstered.

PEO believes that the act's required assessments to demonstrate that fragmenting a system will not cause health risks or environmental damage constitute the practice of professional engineering, so will require professional engineers to take responsibility for preparing them. Assessments showing variances from water treatment or monitoring requirements fall in the same category, PEO states.

If an MOE director takes responsibility for, or gives opinions on, any matter under the SDWA that involves professional engineering, PEO states that under the *Professional Engineers Act* the individual must be a P.Eng.

PEO recommends that the required signatories on the act's Certificates of Compliance be P.Engs, since they are bound to hold the public interest paramount via the profession's code of ethics. Such a requirement would parallel existing requirements for professional engineers to sign Pre-Start Health and Safety Reviews under the *Occupational Health and Safety Act*.

Because professional engineers rely on the results from accredited testing labs, the standards to which the labs will be accredited under the new act, should be developed by an arm's-length body, PEO recommends, and be referenced in the act. Where those supporting inspections of facilities under the SDWA are expected to give professional opinions, PEO feels they should be licensed professionals, to enhance public accountability and help restore and maintain public confidence in the drinking water system.

Finally, the permitted use of electronic signatures on the documents required

by the act concerns PEO: "PEO does not recommend that professional engineers affix electronic copies of their seals to electronic documents, unless procedures are in a place to prevent unlawful use of the seal or alteration of the document. Proper protection of the documentation to which a professional affixes a seal is an important component of the public accountability afforded by the professional licence." PEO's submission states it is expecting to have a standard in place

for electronically encrypted seals in the near future.

Because many of PEO's comments concern requirements to be defined in the regulations to the SDWA, PEO expects to continue to monitor development of the regulations and provide input to the ministry.

For a complete history of PEO's involvement with the Walkerton Inquiry, visit "Government Briefs" under "Publications" on PEO's website ([www.peo.on.ca](http://www.peo.on.ca)).

## CCPE launches foreign education assessments, studies credential recognition

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by Dwight Hamilton

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The Canadian Council of Professional Engineers (CCPE) is launching an Engineering International-Education Assessment Program (EIEAP) to replace its long-standing Initial Assessment (IA) program. CCPE will continue to offer IAs as long as the current immigration system for skilled workers is in effect, which is until March 31, 2003.

CCPE is no longer in the business of "predicting the likelihood of licensure of prospective immigrants," which was the main function of its IA program, according to Deborah Wolfe, P.Eng., CCPE's director for education, outreach and research. Instead, the new program "deals exclusively with education credentials. Materials included with each assessment refer applicants directly to the provincial/territorial licensing bodies on all matters of licensure."

The new program provides an assessment of the engineering education credentials of people trained outside Canada; verification of educational documents; a statement comparing the applicant's education to Canadian engineering education; information about the engineering profession in Canada, how to get an engineering licence and tips on getting work

in Canada; and toll-free access to an EIEAP "Help Desk" where applicants can request more information and referrals upon arrival in Canada.

When the new *Immigration and Refugee Protection Act* was passed by the federal government in late 2001, it changed the basis of Citizenship and Immigration Canada's evaluation of prospective immigrants from an occupation-based model to a skills-based one, emphasizing education. It also stated that prospective immigrants' education would be assessed in an immigrant's country of origin. CCPE expressed serious concerns to the government about this approach and lobbied, with the support of its constituent members, to be designated as the body to assess prospective applicants' engineering education credentials for immigration purposes (see *Engineering Dimensions*, May/June 2002, p. 15). However, a provision for the assessment of foreign credentials was not included in the regulations to the act, which went into effect last June, and CCPE is not planning to continue to press for their inclusion, Wolfe says.

CCPE's new EIEAP is being marketed as providing prospective immigrants with "valuable information on how foreign education compares to a Canadian engineering education" and "useful information for employers, universities and other officials," so that they can make an informed

## The buck stops here!

Although PEO supports working with HRDC to facilitate the integration of foreign-trained engineering practitioners into the profession, it notes that a professional engineer (P.Eng.) licence is not required to work in engineering in Ontario, provided a P.Eng. takes responsibility for the work. Integration of foreign-trained engineering practitioners into the workforce is not part of PEO's mandate.

PEO has sole responsibility for assessing qualifications for licensing in Ontario, which is achieved through a combination of traditional credential review and assessment of experientially gained knowledge. Using this approach, PEO assessed the qualifications of more than 700 foreign-educated applicants last year, resulting in 70 per cent of them being exempted from technical examinations; 525 were assessed in 2001.

Other facts on accessibility in Ontario:

- ◆ Almost one-third of Ontario's 65,000 licensed professional engineers were educated outside Canada.
- ◆ About one-half of applicants for licensing were educated outside Canada.
- ◆ There is no quota on the number of licences PEO issues.

- ◆ Regulations to enable PEO to grant a "provisional licence" to applicants who have met all admission requirements except the requirement for Canadian experience will soon be approved, as recommended by the Admissions, Complaints, Discipline and Enforcement Task Force. The task force had also recommended that CCPE discontinue its IA program.

- ◆ PEO allows prospective immigrants to begin the Ontario P.Eng. licensing process from outside Canada and to continue it when they arrive in Ontario. More than 200 prospective immigrants have taken advantage of this facility in the past year.

- ◆ PEO collaborated with the Access to Professions and Trades Unit, Ontario Ministry of Training, Colleges and Universities, on a fact sheet called *Access to the Engineering Profession for Internationally Trained Workers*. Canada's immigration officers overseas have been provided information on PEO's out-of-country application procedure and the new fact sheet, which is available on both the PEO and MTCU websites. Further information and licence application forms are accessible from the PEO website.

choice about immigrating to Canada. CCPE also says the program will provide prospective immigrants "practical information about working as an engineer in Canada."

PEO agrees that prospective immigrants should understand their options before making the decision to immigrate and, for this reason, began in 2001 to allow them to apply for licensing in Ontario before they decide to leave their countries of origin and to continue the process once they arrive in Ontario. This provides them a clear understanding of the requirements for licensing and a firm assessment of their qualifications against these requirements.

Because PEO is concerned that, no matter how clear the explanation, newcomers who have had their education assessed through CCPE will arrive with expectations that it is tied to licensing, it recommends that those intending to immigrate to Ontario and become licensed as professional engineers avail themselves of its out-of-country licence application process.

### Integrating the foreign-trained

Meanwhile, Human Resources Development Canada (HRDC) has announced \$200,000 funding for the first phase of a

CCPE proposal to work with its member provincial and territorial regulatory bodies to develop foreign credential recognition (FCR) models for the engineering profession. Called "From Consideration to Integration," the project was first proposed by CCPE last October at the federal government's pre-Budget consultations by the House of Commons Standing Committee for Finance.

The project is "designed to look at the processes and regulatory models [used by the provinces/territories] from when someone considers immigrating to Canada until their licensure as a P.Eng.," Wolfe says.

Phase one, which is scheduled for completion in April 2003, involves an "environmental scan" to identify challenges faced by foreign-trained engineers and summarize the policies and procedures for foreign credential recognition. Phase two, the funding for which has not yet been approved, would see provincial associations review the findings of the environmental scan to identify needs and gaps and best practices and to develop and recommend models. Phase three, scheduled for 2004, would involve progress toward implementation of the recommended models.

CCPE states that the project will require "validation from the licensing bodies at every stage, " with the anticipated steering committee comprising representatives from the provincial regulators, the federal government, immigration service providers, employers, provincial governments and experts in FCR.



# Pathways program officially launched

by Sharon Van Ihinger

The Honourable Dianne Cunningham, Minister of Training, Colleges and Universities (MTCU) and the Ontario Society of Professional Engineers officially launched a new pilot program, called Pathways, on November 21, 2002. Cunningham said she believes the program will help to strengthen Ontario and build a bright future. The program aims to help bridge the employment gap for internationally educated engineering graduates now living in Ontario. MTCU is financially supporting the program during its first two years.



The Honourable Dianne Cunningham officially launches the Ontario Society of Professional Engineers' Pathways program on November 21, 2002, surrounded by the first crop of program registrants.

## Eligibility criteria

To be eligible for Pathways, applicants must be permanent residents of Ontario, registered in PEO's Engineering Internship Training program, have had their education and experience assessed by PEO and be exempt from writing technical examinations, and require only the 12 months of Canadian engineering work experience to obtain their P.Eng. In addition, they must have had hands-on international engineering experience within the last three to four years and be able to communicate well in English.

Accepted applicants pay a tuition fee of \$3,350 (plus GST) and receive six weeks of in-class training, focusing on teamwork and how the Canadian workplace functions, as well as communication skills. Once the in-class training is completed, applicants participate in a 52-week paid internship with an engineering employer, in an effort to provide them with the necessary work experience to qualify for licensing as a professional engineer in Ontario. Ongoing online advanced communication skills training and work placement support is also provided.

More details are available at [www.pathways.ospe.on.ca](http://www.pathways.ospe.on.ca) or call 416-223-9951, ext. 500.

