SMOOTHING THE WAY: INTEGRATING INTERNATIONAL ENGINEERING GRADUATES

Five years after its first recommendations were drawn up, the From Consideration to Integration project is showing encouraging results. *By Robyn Osgood*

Armed with a bachelor of science in mechanical engineering and experience in the Japanese auto industry, Anis Muhammad, P.Eng., was optimistic about finding engineering work when he arrived in Canada from Pakistan in September 1996.

He was looking for a challenge and a chance to improve his already considerable skills. He knew about the climate, could speak English and was ready for hard work; what he wasn't ready for was the culture shock.

"I thought that my experience would mean no problem finding a job," he remembers, "but the companies that interviewed me didn't accept me because I didn't have Canadian experience."

It was a frustrating time but one that ultimately led to his engineering licence, a successful automotive engineering career and a pivotal role as a volunteer at PEO. It's a story of flexibility and perseverance–one that is repeated thousands of times every year.

Canada is a nation of immigrants and perhaps no

profession illustrates this better than engineering. On average, one-third of all those who apply for an engineering licence in Canada received their engineering educations abroad. In some provinces, the percentage of internationally trained applicants is even higher.

In British Columbia, for instance, almost half of all applicants in 2008 were educated outside of Canada. In Alberta, the regulatory body received 3825 applications from international engineering graduates (IEGs) in 2007 and 2008. In Ontario, roughly half of those applying for licensure received their educations outside Canada. In 2008, for example, PEO received 4449 applications, of which 2211 were from applicants who received their educations outside Canada. In 2007/2008, approximately 10,000 IEGs across the country applied for engineering licences, and many licensing bodies expect this number to rise.

Gaining a year of Canadian experience–the requirement that Muhammad found so challenging–is a key aspect of the engineering licensing system. All who apply for licensure, whether educated in Canada or another country, must follow the same process: meet education and experience requirements, pass a law and ethics exam (called the professional practice exam), demonstrate that they are of good character, provide engineering references and show that they have appropriate language skills.

LICENCE AND IRON RING

With minor variations, this is the process followed in every province and territory. While students who graduate from accredited engineering programs receive their iron ring, it is actually the P.Eng. that signifies the recipient is licensed and can call himself or herself an engineer. (It should be noted that in Canada, unlicensed engineering graduates–those without the P.Eng.–can work under the supervision of licensed engineers.)

Being able to call yourself an engineer has a value that is recognized around the world. Canadian engineers have long enjoyed an excellent international reputation, based in part on the rigorous licensing system. That rigour is designed to ensure public safety, but has also made the licensing process difficult for some to understand.

It was because of this potential difficulty that the profession created From Consideration to Integration (FC2I), a three-phase initiative to integrate IEGs into the Canadian profession and workforce without compromising public safety or lowering professional standards.

Launched in 2003, FC2I looked at every aspect of how IEGs experience their Canadian journey, from taking the first steps to immigrate, to licensing, to finding a job and all the elements of culture and language that accompany that process. Based on that information, the FC2I Steering Committee issued 17 recommendations that included creating a "working in Canada" seminar, building a database of recognized engineering degrees, determining which elements of the engineering licensing process can be done overseas and, key to people like Muhammad, providing IEGs a provisional licence once they have met all the requirements for licensure except the one year of Canadian experience.

The year 2009 marks the fifth anniversary of the FC2I recommendations.

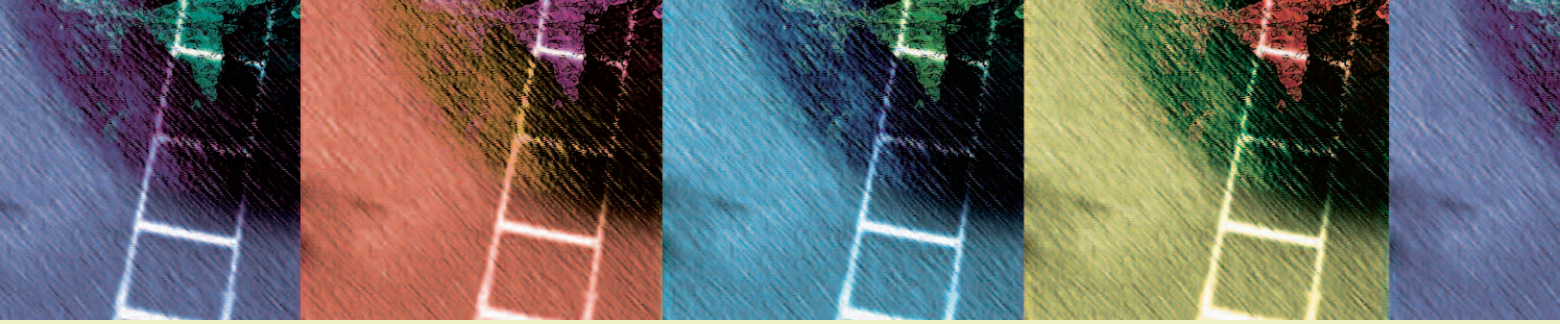
RECOMMENDATIONS PUT INTO PRACTICE

"The profession has truly embraced what resulted from the FC2I initiative," says Chantal Guay, P.Eng., CEO of Engineers Canada, the national organization of the 12 provincial and territorial associations and ordre that regulate the practice of engineering in Canada and license the country's more than 160,000 professional engineers.

"The changes that have been put in place by the licensing bodies have had a direct and positive impact on the system and on those who want to be licensed and work as professional engineers in Canada."

The results have been impressive; here are just a few examples:

- As of December 2006, approximately one-third of the nearly 70,000 professional engineers licensed by PEO were educated outside of Canada;
- PEO issued more licences to IEGs in 2006 than to graduates of accredited Canadian engineering programs;
- 92 per cent of IEGs who applied to the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA) between 1997 and 2006 became licensed;



- The Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS) has cut in half the number of applicants who need to write academic qualifications exams; and

- Engineers Nova Scotia received an award from MISA, the agency serving immigrants in Nova Scotia, for its leadership and work with IEGs.

The work being done by the licensing bodies aimed to address the needs of engineers like Nadia Popovici, who left a successful career as an electrical engineer in Romania to start again in Canada. The year was 1987 and the political situation in her home country made it impossible to stay.

"My first job in Canada was as a technician," she remembers. "It wasn't about ego…it was about working."

After a year, she applied to PEO for her engineering licence. With more than 15 years' experience and strong references, she was exempted from the interview and exam processes. After passing the professional practice exam, she received her P.Eng. and went on to a successful career at Toronto Hydro, from which she has now retired.

"I worked on upgrading and maintaining the existing distribution substations, and installing new ones when needed," she recalls. "It was very complex. You used what you knew and then more. In my job, every day was a good day for an engineer; there was a lot of satisfaction."

One of the many benefits of integrating IEGs into the profession is the positive return to the Canadian economy when those with the education and experience to be working as engineers are doing so to their full capacity.

EVERYDAY BUSINESS

Now that the FC2I recommendations have been in place for five years, helping IEGs reach their full potential is part of the everyday business done by the engineering licensing bodies.

That "everyday" aspect is fully evident on the websites of Canada's engineering regulators. The licensing body in British Columbia created an online self-assessment tool for IEGs, established registration information sessions and redesigned its website to make it easier to navigate. APEGGA has created an IEG-specific section on its website.

The licensing bodies are also offering increased flexibility. Almost all allow applicants to write the professional practice exam at any time in the licensing process, and PEO permits applicants to work through the whole licensing process while still overseas. This commitment to IEGs is appreciated, even as some are still learning about their options.

PEO has also adjusted the process for assessing academic credentials. Approximately two-thirds of IEGs are exempted from having to write technical exams thanks largely to a significant increase in Confirmatory Exam Program interviews conducted by PEO's Experience Requirements Committee (ERC). The committee treats the interview as a prior-learning assessment tool, benefiting many IEGs.

"The licensing process is very good," says Bhawandeep Bindra, P.Eng., a civil engineer from India who received his licence from PEO in 2006. "But I admit I didn't know that much about the engineering licence when I first arrived."

As a young engineer excited about his prospects, he landed in Canada on a sunny day in May 2001. He had received his civil engineering degree in India and felt that Canada offered more opportunities to "grow" his career.

"When I started applying for jobs, I didn't get any response the first three months," he recalls, "so I talked to people and found out that employers are looking for Canadian experience and the licence."

He's now licensed in both Ontario and Alberta, and is working in Alberta as an estimator on both upstream and downstream projects with Fluor Canada.

The Canadian engineering profession recognized that there were challenges facing IEGs and it has made–and will continue to make–real and substantive changes to address those challenges. Five years on, supporting the integration of IEGs is part of the regular work of the licensing bodies, and will continue to be a focus.

Muhammad worked hard to overcome his lack of Canadian experience. He received his equivalency assessment from the University of Toronto and, using that, continued with his job search. "I was looking for an opportunity to prove myself. ABC Group hired me and then I moved into the Dana Corporation to work on thermal product (cooling) systems in the automotive sector." In 2004, he received the first of two US patents for his work on thermal products and, in 2005, he became a volunteer on PEO's ERC, completing a circle that had begun so many years earlier. Σ