



eQRm
ENGINEERING QUALIFICATION
RECOGNITION MODEL



engineerscanada



Final Report on:
**engineering Qualification
Recognition model (eQRm)**

HRSDC Contribution Agreement 3132651





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Prepared for:

Human Resources and
Social Development Canada
Foreign Credentials Recognition Program



Government
of Canada

Gouvernement
du Canada

Prepared by:

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on behalf of the eQRm Project Team

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01.

INTRODUCTION

Our economy, society and profession: all of these are strengthened when international engineering graduates become licensed and work as professional engineers. However, many international engineering graduates find it challenging to obtain recognition of their credentials. The *engineering Qualifications Recognition model* funded by Human Resources and Social Development Canada and initiated by Engineers Canada¹, presents an alternative approach to qualifications recognition. It is based on a successful program created at the University of Manitoba called the Internationally-Educated Engineers Qualification program. The Internationally-Educated Engineers Qualification program is a collaborative effort on the part of the Association of Professional Engineers and Geoscientists of Manitoba (APEGM) and the University of Manitoba. Taken together, the engineering Qualification Recognition model and the Internationally-Educated Engineers Qualification program are helping international engineering graduates obtain the academic recognition, and some of the 12 months of Canadian work experience, they need to achieve licensure as professional engineers in Canada.

¹ Engineers Canada is the business name of the Canadian Council of Professional Engineers.



PROJECT OBJECTIVES

The overall goal of the program was to “move the Manitoba Internationally-Educated Engineers Qualification pilot (program) to a long-term, sustainable program. Following sufficient progress towards this objective, Engineers Canada, APEGM and University of Manitoba will collaborate to promote the program to universities and regulators in other jurisdictions. For those interested in starting a similar program, the partners will assist them to implement the processes, policies and protocols through the provision of templates, etc. and training.”²

The program’s objectives, to achieve this overall goal, were to:

- Develop the Manitoba Internationally-Educated Engineers Qualification pilot project into a long-term, sustainable program that will facilitate the professional registration of international engineering graduates in Manitoba.
- Provide international engineering graduates with technical and cultural training, mentoring and a four-month work term that will assist them in satisfying the academic requirements for licensure while obtaining a portion of the one year of Canadian/North American work experience.
- Enable international engineering graduates who have successfully completed the program to become engineers-in-training with APEGM which will assist them to obtain licensure as a professional engineer and employment in the engineering field.
- Promote the Internationally-Educated Engineers Qualification program to other universities interested in starting a similar program and to regulatory bodies in other jurisdictions. This project would then be used as the model for the successful integration of international engineering graduates into the Canadian labour market.

² Application for funding, 11 October 2005, from Engineers Canada (Canadian Council of Professional Engineers) to HRSDC.



03.

PROJECT OVERVIEW

From Consideration to Integration is a three-phase initiative of Engineers Canada, designed to facilitate the timely licensure and employment of international engineering graduates without compromising public safety or lowering licensure standards. Engineers Canada leads *From Consideration to Integration* on behalf of its constituent members, the provincial and territorial licensing bodies. The goal of Phase II of *From Consideration to Integration* was to develop recommendations addressing the issues of employment, licensing, language, culture and information. A diverse and widely-representative steering committee, after consulting with more than 200 people and dozens of different stakeholders, presented 17 recommendations to the Engineers Canada Board of Directors at their annual general meeting in May 2004. All 17 were unanimously passed.

It was determined that the Internationally-Educated Engineers Qualification pilot program in Manitoba addressed five of the recommendations related to licensing and employment.³ The Internationally-Educated Engineers Qualification program provides international engineering graduates with an alternative path to licensure through eight months of classes at the University of Manitoba and a four-month paid work term. Participants take core courses in engineering economics and Practicing Professional engineering in Manitoba, and between one and six technical courses (depending on an academic assessment by APEGM) over two academic terms or approximately eight months. The Internationally-Educated Engineers Qualification pilot program also includes an emphasis on cultural orientation, language development, and professional networking.

Because Internationally-Educated Engineers Qualification was a pilot project, it was decided that resources should be put in place to help move it to a permanent and sustainable program and thus an agreement was struck between Engineers Canada and the University of Manitoba to implement the engineering Qualification Recognition model project (a national version of Internationally-Educated Engineers Qualification adaptable to different jurisdictional requirements), and a project coordinator and administrative assistant were hired by the University of Manitoba. engineering Qualification Recognition model received strong support from the Dean of Engineering, the Associate Dean of Design Education and the Internationally-Educated Engineers Qualification Program Director at the University of Manitoba, as well as from representatives of APEGM; all contributed considerable in-kind time.

³ Those five were: Study the feasibility of alternative systems of evaluating an applicant's professional competency for licensure in comparison with the current Canadian system; Create a "Working in Canada" seminar for International engineering graduates; Promote the concept that cross-cultural training be taken by licensing body volunteers and staff, Engineers Canada, International engineering graduates, and employers; Undertake a study to determine best practices in the employment area for integrating International engineering graduates into the workplace (e.g. internship, job matching, job fairs, job boards.); Develop a mentoring program for International engineering graduates.

A significant aspect of the engineering Qualification Recognition model initiative involved preparing “Implementation Framework” documents — a set of four resources on how to create an advanced qualification recognition program for engineers in any province in Canada. These documents have been completed, compiled on a CD, and are also available through the project website at www.eQRm.ca

Over the three years of funding, Internationally-Educated Engineers Qualification became a permanent program at the University of Manitoba, and an engineering Qualification Recognition model implementation framework was created. A university-level course designed to facilitate professional integration of international engineering graduates, a core aspect of Internationally-Educated Engineers Qualification, was turned into a designed and printed package by engineering Qualification Recognition model, titled “Working in Canada” seminar. These activities were complemented by an engineering Qualification Recognition model website and promotional material, which together with in-person workshops, have helped raise awareness and contributed to the creation of similar programs in jurisdictions outside of Manitoba. Although federal funding is concluding, the engineering Qualification Recognition model website will remain active. It contains a wealth of information that can be accessed by universities, governments, immigrant serving agencies and engineering bodies to help ensure that the value of the project will extend well beyond the funding end date.



04.

SUMMARY OF PROJECT ACTIVITIES

The engineering Qualification Recognition model Project Team (see **Appendix A** for a list of members) undertook the following activities to meet the project's goal and objectives:

- Hired a project coordinator.
- Established a steering committee.
- Translated a proposal into a set of deliverables.
- Established core principles of operation for the project.
- Commissioned a cross-Canada situation analysis.
- Managed a competitive process to source design and communications firms.
- Commissioned a communications plan.
- Designed, wrote and produced a 216-page, bilingual "implementation framework" document that provides background information, checklists of required tasks, as well as example forms required for the delivery of a program at a university.
- Designed, wrote and produced a bilingual decision-maker's brochure.
- Designed, wrote and produced a resource-based website: www.eQRm.ca and www.mrqg.ca
- Developed a 137-page bilingual Working in Canada Seminar (curriculum).
- Developed a complementary PowerPoint presentation.
- Wrote the Distance Education Delivery Alternatives report.
- Developed a presentation to encourage stakeholders to create Internationally-Educated Engineers Qualification-style programs.
- Created a contact list of people and organizations including representatives from universities, the Steering Committee, engineering regulators, immigrant serving agencies, consulting engineers, and government and industry representatives.
- Delivered cross-Canada information sessions (see more information, next page).
- Provided project budget oversight.
- Worked towards making Internationally-Educated Engineers Qualification a permanent program at the University of Manitoba.

CROSS-CANADA INFORMATION SESSIONS

In keeping with the delivery plan, and timed to ensure that both the written materials and website were available, a series of information sessions were arranged and delivered across Canada. While attendance numbers varied, all presentations were successful in raising awareness of the engineering Qualification Recognition model project tools, and a majority led to the first steps in creating new qualifications recognition model programs.

For each meeting the format was similar: a two-hour introductory PowerPoint presentation on the engineering Qualification Recognition model project, continuous questions and answers throughout, and a next steps round table discussion to seek out potential champions and develop local momentum for a program. Each attendee received a hard copy of the *Framework for Implementation and the Working in Canada Seminar* course documents, plus a CD and memory stick containing both documents (in both languages where applicable). All participants were encouraged to complete an on-line survey to provide feedback on the presentation.

The presentations were held at the following locations:

- National Council of Deans of Engineering and Applied Science meeting, Quebec City.
- Université de Moncton, participation from across Atlantic Canada.
- École Polytechnique, Montreal.
- University of Ottawa and Carleton University, Ottawa.
- Regina, Saskatchewan: stakeholder representatives from across the province.
- Simon Fraser University, Surrey Campus.



05.

BUDGET AND SPENDING

The initial budget estimate, developed in December 2005 by Engineers Canada and the University of Manitoba, is summarized below:

HRSDC Contribution	\$966,578
Recipient and In-Kind Contribution	\$446,000
Total three-year Project Budget (2005\$)	\$1,412,578

At the time of the initial budget, the direction and final format of the deliverables were not known. As noted, the initial objective was to provide new or to improve the processes for credential recognition and improve the integration of international engineering graduates into the Canadian workforce.

Given that there is only one dedicated staff to cover the country, it was determined that the development of a “how-to” guide, a comprehensive website and regional information sessions would be the best way to proceed. While in-person meetings were kept to a minimum, it was necessary for the Project Team and Steering Committee to meet approximately twice a year, and, therefore travel costs were a factor.

A request for proposals for editing and printing of the formal documents described previously, as well as the development of a website, was sent out to four publishing firms for fixed price proposals. Three members of the project team provided independent assessments of the top two proposals submitted and were unanimous in selecting one firm to engage for all aspects of the project output. The documents and website also required French translation.

All of these factors contributed to a request, in October 2007 of an additional \$117,900 to complete the project. This represented an increase of 12.2 percent of the HRSDC contribution or 8.3 percent of the total budget—which was accepted.

Therefore, the total HRSDC contribution for the three-year project stands at \$1,084,478.

EVALUATION AND FEEDBACK

It was decided that feedback would be obtained anonymously by using a web-based survey, and all seminar participants and Steering Committee members would be asked to contribute their feedback. The survey was sent to 103 people and 23 responded (a response rate of just over 22 percent.) The results, in summary, are:

- 87%** Felt that their attendance at the engineering Qualification Recognition model Information Session (or their involvement with the engineering Qualification Recognition model Steering Committee) increased their understanding of the licensing and regulatory process of professional engineering in Canada somewhat or a lot.
- 95.6%** Said that they had somewhat or significantly more knowledge about the ways and means of integrating of international engineering graduates after having attended the information session or reading through the materials or being involved in the Steering Committee.
- 78.3%** Felt that the engineering Qualification Recognition model documents provide sufficient information for further consideration of such a program in their province or territory.
- 90.9%** Said that the engineering Qualification Recognition model project has been successful in presenting an alternative approach to engineering qualifications recognition in their province or territory.
- 95.5%** Felt that their involvement in the engineering Qualification Recognition model project has given them additional knowledge or tools to help international engineering graduates pursuing a professional engineering career in Canada.

Overall, the biggest barrier to considering an engineering Qualification Recognition model-style program is funding.



07.

CONCLUSION

The engineering Qualifications Recognition model team feels that the project has been a success, though there is some indication that additional resources for continued networking among local engineering Qualification Recognition model projects in the different jurisdictions across Canada would enhance the investment to date. Also, funding will be required to set up programs at locations across Canada; the project did not recommend or research such funding sources as they may be different in different jurisdictions. Engineers Canada will maintain the English and French engineering Qualification Recognition model websites.

The following measures of success are suggested:

1. The Internationally-Educated Engineers Qualification program has achieved permanent program status at the University of Manitoba.
2. The Internationally-Educated Engineers Qualification Bridging program, at Ryerson University, is entering its second year and has benefited from dialogue and the raising of awareness resulting from this project.
3. The formation of a local steering committee to develop an engineering Qualification Recognition model project has occurred in British Columbia.
4. The Saskatchewan government has encouraged the university and the regulator to set up a steering committee and prepare a proposal for pilot-project funding; this challenge appears to have been accepted.
5. The University of Ottawa and Carleton University have initiated a proposal writing process to obtain funding for a joint engineering Qualification Recognition model project.
6. École Polytechnique has moved to adopt some of the engineering Qualification Recognition model processes, and sought funding from the province of Quebec.
7. The University of New Brunswick and the Multicultural Association of Fredericton have agreed to pursue the next steps in developing a program.
8. Two additional programs have been created at the University of Manitoba, one for internationally-educated teachers, and the other for internationally-educated agrologists. Both facilitate professional licensure and were modelled (context-specific) on the Internationally-Educated Engineers Qualification program (in particular, the agrology program).

APPENDIX A

LIST OF CONTRIBUTORS TO THE PROJECT

In December of 2005, an initial project team meeting was held at the University of Manitoba, to formulate an implementation plan for the project. This was followed by six additional meetings during the project. These were, in general, scheduled ahead of the twice-yearly Steering Committee meetings in order to discuss progress and create an agenda for the Steering Committee's feedback. In addition, several teleconferences were held.

The makeup of the Project Team reflected the sincere commitment of the engineering community and the University engineering faculty to the creation of a sustainable process whereby internationally-educated engineers can achieve both professional status and find suitable employment in Canada.

The inclusion of members of Engineers Canada's staff on the Project Team ensured a cross-Canada perspective, as well as greatly expanding opportunities to share the project with many more people than the project budget would normally allow. Engineers Canada's initiation of this project, expanding a well developed and functioning program from one jurisdiction to other jurisdictions is both cost effective and demonstrates an underlying belief of the members of the profession in the mobility of engineers across provincial, territorial, and international borders.

Lastly, it is notable that the Project Team is made up predominantly of professional engineers (six out of nine). While it is clear from the interest in the program from other professions and foreign credential recognition stakeholders that it has applicability elsewhere, the programs (both engineering Qualification Recognition model and Internationally-Educated Engineers Qualification) were developed by and delivered by professional engineers—which greatly improved its acceptance in the profession; engineers are proud of being a self-regulating profession, and eager to accept processes that have a proven record.

A.



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**ENGINEERING QUALIFICATION
RECOGNITION MODEL PROJECT TEAM**

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The makeup of the Steering Committee reflected the range of organizations that work with new Canadians, and International engineering graduates in particular. This was important because the successful integration of a new Canadian depends on providing support in the areas of language, information and culture, and not just in the areas of credential recognition. The Steering Committee members also reinforce the engineering profession's commitment to working with other professionals to the benefit of International engineering graduates.

STEERING COMMITTEE MEMBERS

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