

## Entry to Practice Review

Ontario Association of Certified  
Engineering Technicians and Technologists



**SUBMITTED TO THE ONTARIO OFFICE OF THE FAIRNESS COMMISSIONER**

**FEBRUARY 2011**

## **1. EXECUTIVE SUMMARY**

The Ontario Association of Certified Engineering Technicians and Technologists (OACETT) completed its first Entry to Practice (ETP) review between December 2010 and February 2011. This review was undertaken in recognition of the unique context of OACETT as a professional association that provides a voluntary certification.

This review was comprised of an in-depth review of OACETT's work experience requirement and a summary review of the analysis of the efficiency and timeliness of decision-making and an analysis of the reasonableness of fees charged for Certification processes.

The review of the work experience requirement included conducting on-line surveys of OACETT Associate and Certified Members (all internationally-educated) and key Ontario employers and conducting a telephone interview with the Head of Construction, Construction Contracts Section, Ontario Ministry of Transportation.

One of the key findings of the review was that the majority of internationally-educated OACETT members and Ontario employers agreed that the work experience requirement is: relevant to the work OACETT members undertake in their career; necessary; transparent; objective; impartial; and fair. Members and employers also indicated that internationally educated engineering technicians and technologists and Ontario employers benefit from the Canadian work experience requirement. They further agreed that OACETT certification would be de-valued and seen as less professional if there were no work experience requirement.

Fully three-quarters of internationally educated applicants reported that, as their international work experience was recognized, they only had to complete the Canadian (one year) part of the work experience requirement. This appears to be the only challenging aspect of the requirement, as many members indicated that finding employment in Canada was difficult for newcomers.

However, very few members (14%) indicated that OACETT certification was required for their jobs, and employers reported those jobs that required certification were often at the supervisory or management level. Therefore, while gaining a first job in engineering technology in Canada may be challenging for newcomers, the OACETT work experience requirement itself is not the source of this challenge.

Summary reviews of the efficiency and timeliness of decision-making and reasonableness of fees charged were undertaken through a review of documents and discussions with OACETT staff.

OACETT's conclusions regarding the Entry to Practice Review are:

1. OACETT is satisfied that the work experience requirement is necessary and relevant for OACETT certification.
2. OACETT is satisfied that its certification decision-making processes are undertaken in a timely and efficient way.
3. OACETT is satisfied that its fees are reasonable, especially considering that the staff and committee time required to process internationally educated applicant files often results in costs to the association that exceed the fees collected for these activities.

OACETT has developed one recommendation from this review, as follows:

**In order to assist OACETT Associate Members in their efforts to find employment in Canada to meet the work experience requirement, OACETT should develop an Employment Resources Fact Sheet that further promotes the Canadian Technical Employment Network (CTEN) job board and outlines opportunities to network through chapter meetings, and provides information and links to the wide variety of available skills development and job search resources across Ontario. This Fact Sheet will be posted on the OACETT web site and made available in hard copy as appropriate for public events.**

OACETT commits to developing the Employment Resources Fact Sheet by June 1, 2011 and posting it on its web page by July 1, 2011. After that time, the Fact Sheet will be reviewed on an annual basis to ensure that information and links are up-to-date.

## **2. OBJECTIVES, SCOPE AND CONTEXT**

In June 2010, the Ontario Office of the Fairness Commissioner (OFC) communicated to regulatory bodies<sup>1</sup> across Ontario that in future, the OFC would be requesting organizations to complete Entry-to-Practice (ETP) Reviews. These reviews are mandatory and the objective of these reviews is to provide regulatory bodies an opportunity “to probe the relevance and necessity of their registration requirements”.

In terms of these first ETP reviews, to be submitted by March 1, 2011, the OFC has limited the scope to the following three items:

- a) if applicable, an analysis of the necessity and relevance of the requirements for practical training and/or work experience, including any practicum, mentorship, internship or residency;
- b) an analysis of the efficiency and timeliness of decision-making, including decisions related to assessment, registration and appeals; and
- c) an analysis of the reasonableness of fees charged by the regulated profession in respect of registrations. In the analysis it is advisable to include fees charged by third-party assessment agencies as they also impact on the profession.

The type of analysis included in this report was determined in consultation between OACETT and the OFC. OACETT has included in this report an in-depth analysis of a) the work experience requirement and a summary analysis of the subsequent items b) and c).

### **About OACETT**

The Ontario Association of Certified Engineering Technicians and Technologists is a non-profit, self-governing, professional association of approximately 23,000 members and a long history of certification in Ontario. OACETT promotes the interests of engineering and applied science technicians and technologists in industry, educational institutions, the public and government.

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<sup>1</sup> OACETT certification is voluntary in Ontario. However OACETT is named in Schedule 1 of the *Fair Access to Regulated Professions Act*, 2006 and OACETT has been required to fulfill the same reporting requirements as regulated professions in Ontario.

OACETT was incorporated in 1962 and was legislated under the Statutes of Ontario in 1984: *An Act respecting the Ontario Association of Certified Engineering Technicians and Technologists*. The Act was revised in 1998, and recognizes OACETT as a professional body whose main objective is to establish and maintain high standards for the profession of Engineering and Applied Science Technology.

OACETT is Ontario's independent certifying body for engineering/applied science technicians and technologists. The certifying arm of OACETT is the Institute of Engineering Technology of Ontario (IETO). IETO's panel of expert members evaluates applications and registers engineering/applied science technicians and technologists who meet recognized national standards in education and experience.

The Act provides title protection for the four official designations of Certified OACETT Members, which are:

- Certified Technician (C.Tech.)
- Certified Engineering Technologist (C.E.T.)
- Applied Science Technologist (A.Sc.T.)
- Certified Engineering Technician (C.E.T.)

However, the legislation also stipulates that:

#### GENERAL

13. (1) This Act does not affect the right of a person to describe himself or herself as a technician, an engineering technician, a technologist or an engineering technologist.
- (2) This Act does not affect the right of a person to perform the work described in subsection 12 (1).<sup>2</sup>

When considering these elements, it is important to distinguish that engineering technology certification is voluntary in Ontario, as it is across Canada. In general, internationally educated engineers or engineering technologists who want to work in engineering technology jobs in Ontario are not required to be OACETT members. They may describe themselves by the general titles indicated in s. 13.1 above and may undertake work described in the *OACETT Act* without being OACETT members.

OACETT certification is meant to ensure that those who hold certification are qualified to work safely and competently as Certified Engineering/Applied Science Technicians or Technologists. OACETT certification is highly valued in many workplaces and is a significant mark of professionalism. OACETT provides members with a number of benefits, including: authorization to use protected titles; continuing professional, career development and networking opportunities; labour mobility between Canadian provinces; and preferred insurance rates for members.

However, OACETT membership is dissimilar to membership in a regulated profession in which Canadian- or internationally-educated applicants would be unable to practise in their chosen profession without being registered and/or licensed.

The only minor exception to this is related to the OACETT Road Construction Contract Administration Certification and Designation Program. This agreement was signed with the Ministry of Transportation of Ontario in 2001 and stipulates that, for Road Construction Contract Administration assignments,

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<sup>2</sup> The OACETT Act can be found at: [http://www.oacett.org/downloads/about\\_oacett/OACETTACT/act98.pdf](http://www.oacett.org/downloads/about_oacett/OACETTACT/act98.pdf).

three categories of personnel must be Certified OACETT members, and have completed specific courses and met specific experience requirements:

1. Road construction contract administrator (rcca)
2. Road construction senior inspector (rcsi); and
3. Road construction junior inspector (rcji).

At the time this program was implemented, there was a phase-in implementation period, including “grand-parenting” provisions and a prior learning assessment review process to ensure fairness to individuals who had been working in these positions without OACETT Certification.

This program was developed to enhance public safety in provincial road construction and to facilitate and speed up the process for MTO to identify individuals qualified to undertake construction work on Ontario roads and highways. Ministry correspondence announcing the launch indicated that “the Ministry believes that this PROGRAM will streamline the consultant acquisition process, and at the same time ensure qualified staff are employed for Road Construction Contract Administration assignments.”<sup>3</sup>

Of the almost 24,000 total OACETT members [Associate (7,948) and Certified (16,025)] as of the end of 2010, only 1,126 held road construction designations. To put this in perspective, only 7% of Certified members or 4.7% of the total OACETT membership held these designations. The vast majority of jobs in which OACETT workers are employed do not require it.

### **3. METHODOLOGY**

This Entry to Practice Review was undertaken by a consultant, in consultation with the Registrar and under the direct supervision of the Deputy Registrar of OACETT. A number of OACETT staff also actively participated in the review by providing data, background documents and developing e-mail distribution lists of Associate and Certified Members and employers.

Documents used in the preparation of this review included:

- *An Act Respecting the Ontario Association of Certified Engineering Technicians and Technologists, 1998;*
- OACETT by-laws, policies and public documents;
- OACETT’s Fairness Reports;
- OACETT Audit;
- Institute of Engineering Technology of Ontario (IETO) Rules;
- *Agreement on Transferability of Applied Science & Engineering Technicians and Technologists of Canada* (June 7, 2001);
- Professional Engineers of Ontario, *Guide to the Required Experience for Licensing as a Professional Engineer in Ontario* (2009);
- Ontario Ministry of Transportation correspondence; and
- Road Construction Contract Administration Certification and Designation Program agreement between OACETT and the Ministry of Transportation of Ontario.

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<sup>3</sup> MTO letter dated August 8, 2001 to the Consulting Engineers of Ontario.

In addition, in order to further explore the necessity and relevance of the work experience requirement of OACETT certification, OACETT conducted two surveys. One was distributed to 2,200 OACETT Associate<sup>4</sup> and Certified Members who had applied for certification and/or gained certification within the past five years and one was directed to employers (25 – 30) who employ OACETT members. Both surveys asked questions about the OACETT work experience requirement as a whole (2 years) and included specific questions related to the requirement for work experience in Canada. The surveys were on-line and distributed by e-mail across Ontario; the employer survey included a number of municipal as well as private-sector employers.

In addition, an interview was held with the Head of Construction, Construction Contracts Section, Ontario Ministry of Transportation, who is responsible for administering the Road Construction Contract Administration Certification and Designation Program, to gain his views of the necessity and relevancy of the OACETT work experience requirement in the context of that program.

This review was undertaken from December 2010 to February 2011.

#### **4. ANALYSIS AND FINDINGS**

##### **Necessity and relevance of practical training and/or work experience requirements**

###### **Background**

Work experience is a common requirement for certification/licensure in both engineering technology and professional engineering in all jurisdictions in Canada.

In order to become a Certified Engineering/Applied Science Technician or Technologist, OACETT requires that all applicants (both Canadian- and internationally-educated) must have two years of work experience in their chosen discipline. One of those years must be in Canada to ensure that the applicant is familiar with local codes, practices and standards. The work experience requirement of engineering technology certification is the same across all Canadian provinces, for both Canadian- and internationally-educated applicants.

Under the OACETT Act and By-Law 19, the Institute of Engineering Technology of Ontario (IETO) is delegated the responsibility to review applications and make decisions regarding OACETT membership. IETO's Admissions Committee is the panel of expert members that reviews and evaluates an applicant's postsecondary education and experience to determine if the applicant's level of training and experience is equivalent to OACETT's standards.

The applicant's work experience is evaluated against the Profiles of a Technician or Technologist. Activities during this experience should involve the application of engineering principles to solve equipment, process or system problems, and should foster the development of technical competence, business judgement, communication ability, responsibility and self-confidence. Using detailed job descriptions, verified by the candidate's immediate supervisor, resumes and professional references, IETO evaluates acceptable and progressive experience. Initiative and Complexity-Judgement level

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<sup>4</sup> As soon as an applicant's education is assessed as meeting the education requirement, he/she becomes eligible to become an Associate Member. As the vast majority of applicants to OACETT meet the education requirement, most become Associate Members within a month or two of applying for certification.

definitions are used to appropriately identify whether experience is at the trade, technician or technologist level.

It is important to underline that as an applied science, engineering technology is a discipline that focuses on the application of scientific knowledge to solve practical problems.

Similarly, the Professional Engineers of Ontario, in the same manner as all engineering regulators in Canada, requires that applicants have four years of engineering work experience before they can obtain their professional engineering licence, including at least one year of experience obtained in a Canadian jurisdiction<sup>5</sup>. As with the OACETT requirement, this is to ensure that applicants have sufficient exposure to Canadian engineering codes, legislation, technical standards and regulations.

### **The OACETT Work Experience Requirement**

OACETT offers flexibility in how applicants may meet the requirement. Applicants may take code courses concerning the Ontario Building Code or Ontario Electrical Code in order to have their experience requirement reduced. Voluntary work may also be recognized. Co-op experience may be credited at 50% of the time worked up to a maximum of six months. For example, if an applicant has one year of acceptable co-op experience, it would count as six months toward the two-year requirement. Therefore, if an applicant had acceptable previous work experience outside of Canada<sup>6</sup> and completed courses and volunteer or coop placements in Canada, he/she would only be required to complete a minimum of six months appropriate engineering technology employment in Canada to meet the requirement. If the applicant attended a nationally accredited program or was supervised by a recognized professional such as a C.E.T., P.Eng., P.Geo. or Architect during the co-op placement, the applicant could be credited up to a full year toward the two-year requirement and if the applicant had acceptable previous work experience outside of Canada, no further Canadian experience would be required.

Alternatively, experience need not have been obtained in Canada providing that an applicant has worked for a Canadian company abroad or has worked on projects, while in another country, that were destined for Canada and which had to be consistent with Canadian codes, standards and practices prevalent in Ontario.

The work experience requirement is outlined in the IETO Rules – Section 2 Membership, Certification and Registration and the relevant excerpt has been included as Appendix 1 of this report. As mentioned previously, if an applicant does not have Canadian experience, but meets the academic requirements, he/she may be registered as an Associate Member until he/she has attained the requisite work experience.

In order to assist internationally educated members, OACETT will issue a letter to an employer on behalf of an Associate Member who only has the one year Canadian experience requirement outstanding, indicating that he or she meets all other requirements for certification.

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<sup>5</sup> Professional Engineers of Ontario, *Guide to the Required Experience for Licensing as a Professional Engineer in Ontario*, revised April 17, 2009. This document can be downloaded from:  
<http://www.peo.on.ca/registration/RequiredExpForLicensing.pdf>.

<sup>6</sup> Not with a Canadian company.

## **OACETT Members' Views of the Work Experience Requirement**

In order to have a better idea of what OACETT members think about the necessity and relevance of the work experience requirement, an on-line survey was distributed to approximately 2,200 internationally-educated OACETT Associate and Certified members in early January 2011.

### **Demographics of Respondents**

222 responses were received and over 82% of respondents answered all questions. Of the respondents just over 53% (116) were Associate Members (meaning that they had applied and were working toward certification); almost 47% of respondents (102) were Certified Members. The majority of respondents (almost 95%) had applied for OACETT certification within the past five years. Over 57% of respondents (124) indicated that they had been Professional Engineers before immigrating to Canada. The rest indicated having been employed in engineering technologist or technician jobs. The majority (over 73%) reported applying for certification as Certified Engineering Technologists (C.E.T.s).

In terms of the work experience requirement, the majority reported that their previous work experience outside of Canada was recognized. Almost 76% of respondents reported that OACETT required them to complete only one year of additional experience in Canada to meet the work experience requirement. Of those members who had already met the experience requirement very few (between 1.5% – 8.8%) reported completing code courses, co-op placements, volunteer work or employment in a Canadian company overseas, while virtually all reported completing employment in Canada to meet the requirement.

About a third of respondents (33%) reported that it was very or somewhat easy to find work to meet the Canadian experience requirement. About two-thirds reported that it was somewhat or very difficult to find work to meet the requirement. Most respondents indicated that they had held one engineering technology – related job before meeting the requirement and over 80% indicated that they continued with or could have continued to work with the same employer once they had become certified OACETT members.

Only 14% of OACETT Associate and Certified members indicated that OACETT certification was required for their job; fully 76% responded that it was not required and 10% did not know.

In terms of the two-year work experience as a whole, 72% (139) of respondents indicated that they felt that it was necessary for an applied science profession like engineering and agreed that “it means that applicants must show that they can apply and demonstrate their knowledge and skills before they can become a certified OACETT member”. Over 91% (176) of respondents agreed that the work experience requirement was necessary to ensure that certified OACETT members can practice safely and ensure public safety. Over 80% of respondents indicated that “the experience requirement is important to show that certified OACETT members have proven that they can apply specific knowledge, skills and competencies in the workplace”. 52% (100) of respondents indicated that if there was no work experience requirement employers would see OACETT certification as less valuable/professional. Almost 83% of respondents felt that the Canadian work experience requirement was somewhat or very important. Over 85% indicated that internationally educated applicants benefit from completing the work experience requirement. The benefits indicated by the respondents to this question (n = 130) included:

- Improved English language skills (69%)
- Better understanding of Canadian workplace communications/social interaction (83%)

- Making connections to find employment (60%)
- Having the opportunity to provide knowledge and skills to a Canadian employer (72%)
- Learning about the profession as it is practiced in Canada (69%)
- Learning about the Canadian codes, standards and practices (82%)
- Learning about building materials used in Canada (56%)
- Learning about construction techniques in Canada (53%)
- Learning about safety procedures in Canada (e.g. health and safety, hazardous materials, traffic control for road construction) (76%)

Respondents to a subsequent question (n = 190) also agreed that the OACETT work experience requirement is:

- Relevant to the work I will/do perform in my career (81%)
- Necessary to validate that OACETT members meet the professional standard of certification (75%)
- Transparent (it is clear what needs to be done to meet the requirement) (71%)
- Objective (68%)
- Fair (65%)

While these responses indicate that the majority of respondents agreed that the work experience requirement is relevant, necessary, transparent, objective and fair, due to the difficulty of finding employment in Canada, almost 56% of respondents indicated that it may present a barrier to OACETT certification for internationally educated applicants.

While many internationally educated members cited difficulties in finding work in Canada, the majority reported using internet job boards (60%) and friends (48%) to find employment rather than more formal supports such as the Canada Employment Centre (23%), employment resources at colleges and universities (12%) or immigrant settlement agencies (10%). Very few reported taking advantage of OACETT supports such as the opportunity to network at chapter meetings (3%) or using the Canadian Technical Employment Network (CTEN) (9%). All Associate Members have access to these networking activities and the CTEN job board.

### **Employers' Views of the Work Experience Requirement**

In order to have a better understanding of the employers' views of the necessity and relevance of the OACETT work for administering the experience requirement, a survey was sent out to a number of employers of OACETT members and a telephone interview was conducted with the Ontario Ministry of Transportation Head of Construction responsible for administering the Road Construction Contract Administration Certification and Designation Program.

### **Overview of Survey Respondents**

OACETT also distributed surveys to a number of employers who employ OACETT members. E-mails were sent out to approximately 25 employers<sup>7</sup>. In all, 16 respondents completed the survey, including those representing four cities in southern Ontario and a number of private companies. Half of the respondents reported employing 1 – 100 employees and half reported employing 101 - over 500 employees.

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<sup>7</sup> More than one response may have been received from a single employer. This is because in a large municipality several departments may be responsible for hiring and employing OACETT members in different jobs.

Respondents included those responding on behalf of Manufacturing (13%); Non-manufacturing (25%); Municipal (44%) and Other (19%) employers.

All respondents reported employing Certified Engineering Technologists (C.E.T.s); 69% reported employing Certified Technicians (C.Tech.s); and 56% reported employing Applied Science Technologists (A.Sc.T.s).

Only two employers reported requiring OACETT certification for all jobs; another eight respondents reported requiring OACETT certification for some jobs. Another five reported that they did not require OACETT certification but preferred it. The types of jobs requiring OACETT certification varied widely and included:

- All technical positions;
- Operations Maintenance Inspector;
- Supervisor, Operations Planning;
- Manager, Operations Planning;
- Engineering Design;
- Engineering Administration;
- (Road construction) contract administrator (rcca);
- (Road construction) senior inspector (rcsi);
- (Road construction) junior inspector (rcji);
- Building inspectors;
- Mechanical Inspectors;
- Supervisors;
- Manager;
- Civil, structural and environmental design;
- CAD (computer assisted drafting) staff;
- Project Managers;
- Inspectors; Field survey staff;
- Sales representatives;
- Inside sales;
- Engineering Technologist II; and
- Senior Engineering Technologist.

It should be noted that many of the jobs requiring OACETT certification are higher-level jobs such as inspectors, managers and supervisors that require the employee to inspect, manage and/or supervise and verify the work of others; these are not entry-level jobs.

A majority of respondents (79%) reported employing or providing other work experience opportunities for OACETT Associate members. Most reported doing this through employment within Canada (73%) or within a Canadian company overseas (9%) but some also offered co-op placements (64%) or volunteer placements (18%). Over 90% of respondents indicated that members usually did continue or had the opportunity to continue in their employment after completing the OACETT work experience requirement with their organization.

100% of employer representatives who responded to the question (13 in all) agreed that the work experience requirement is necessary as “it means that applicants must show that they can apply and

demonstrate their knowledge and skills before they can become a certified OACETT member”. Similarly 77% of those respondents indicated that the work experience is “Very necessary” and 23% indicated that it was “Somewhat necessary” to ensure that certified OACETT members can practice safely. None indicated that it was unnecessary. 100% of employer representatives also agreed that “the experience requirement is important to show that certified OACETT members have proven that they can apply specific knowledge, skills and competencies in the workplace”. None disagreed with this statement.

A majority of employer respondents (62%) indicated that their organization would value OACETT certification less if there was no work experience requirement. Only 30% indicated that it wouldn’t make a difference. Employer respondents overwhelmingly expressed that the one-year Canadian work experience requirement was “Very Important” (85%) with a smaller percentage (15%) indicating that it was “Somewhat important”. None felt that it was unimportant.

All employer respondents also felt that internationally educated applicants benefited from the Canadian experience requirements: the responses included “benefit a lot” (85%) and “benefit somewhat” (15%). They also felt that employers “benefited a lot” (92%) or “benefited somewhat” (8%) from OACETT members having to meet the Canadian work experience requirement.

The benefits indicated by the employer respondents to this question (n = 13) included:

- Improved English language skills (100%)
- Better understanding of Canadian workplace communications/social interaction (100%)
- Making connections to find employment (62%)
- Having the opportunity to provide knowledge and skills to a Canadian employer (77%)
- Learning about the profession as it is practiced in Canada (85%)
- Learning about the Canadian codes, standards and practices (100%)
- Learning about building materials used in Canada (85%)
- Learning about construction techniques in Canada (85%)
- Learning about safety procedures in Canada (e.g. health and safety, hazardous materials, traffic control for road construction) (100%)

Respondents to a subsequent question (n = 13) also agreed that the OACETT work experience requirement is:

- Relevant to the work OACETT members will undertake in their career (92%);
- Necessary (100%);
- Transparent (it is clear what needs to be done to meet the requirement) (100%);
- Objective (91%);
- Impartial (64%);
- Fair (92%); and
- A barrier for internationally educated applicants (25%).

As employers, respondents also indicated that they see the Canadian work experience requirement as

- An opportunity to provide orientation to an employee who is new to Canada (92%); and
- A way to recruit and “try out” a new employee (39%).

### **Interview with MTO Head of Construction**

A telephone interview was held in mid-January 2011 with the Head of Construction, Construction Contracts Section, Ontario Ministry of Transportation, who is responsible for administering the Road Construction Contract Administration Certification and Designation Program to gain his views of the OACETT work experience requirement in the context of that program. It should be noted that while MTO does not require OACETT certification for staff positions, OACETT certification is required as part of the road construction designations.

As mentioned previously, the development of this program was a joint initiative of MTO and OACETT. An agreement was signed, an implementation plan was developed and successfully completed, and this program has been working well for a number of years.

The MTO Head of Construction has stated that the MTO strongly supports the program and the assurance OACETT certification provides that members have met the work experience, including the requirement for work experience in Canada. He provided many examples of the importance of hands-on experience with locally used road construction materials, machinery and techniques. He strongly emphasized that learning codes and standards in a classroom setting, whether in Canada or in another country, is insufficient to know how to apply these in order to ensure safety in road construction in Ontario.

He pointed out that road construction materials, techniques and structures are significantly different than they would be, for example, in a climate that did not experience freeze/thaw cycles. He also pointed out the importance of inspectors being familiar with correct, acceptable structural techniques for road-building in Canada.

One very specific example he provided of the importance of Canadian experience to road construction public safety is the application of Book 7 of the Ontario Traffic Manual concerning Temporary Conditions<sup>8</sup>. As this is a lengthy manual, knowing how to use this information to ensure the safety of the road crew, drivers and pedestrians is absolutely essential – this cannot be readily learned and applied in a classroom.

He strongly emphasized that the Road Construction Contract Administration Certification and Designation Program ensures and streamlines the process for MTO to contract qualified construction contract administrators and road construction junior and senior inspectors. He additionally stated that if OACETT did not have a work experience requirement that MTO would have to consider creating its own work experience requirement in order ensure that only qualified, experienced individuals would be eligible to be contracted to perform this road construction work. A letter from MTO is attached as Appendix 2.

### **Conclusions**

The surveys and interview strongly support OACETT's conclusion that the work experience requirement is both relevant and necessary. The majority of OACETT members and employers agreed that the work experience requirement is: relevant to the work OACETT members undertake in their career; necessary; transparent; objective; impartial; and fair. Members and employers both indicate that internationally educated engineering technicians and technologists and employers benefit from the Canadian work

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<sup>8</sup> [http://www.otc.org/PDF/OTM\\_Book\\_7.pdf](http://www.otc.org/PDF/OTM_Book_7.pdf)

experience requirement and that OACETT certification would be de-valued and seen as less professional if there were no work experience requirement.

OACETT is satisfied that the work experience requirement is essential to ensuring professional competence and public protection but also to maintain the value and significance of OACETT certification.

Fully three-quarters of internationally educated applicants reported that, as their international work experience was recognized, they only had to complete the Canadian (one year) part of the work experience requirement. OACETT provides flexibility in how applicants may meet the requirement, allowing applicants to complete code courses, co-op and volunteer placements to partially/fully meet this requirement and will also accept work experience with a Canadian company abroad.

The requirement for Canadian employment appears to be the only challenging aspect of the work experience requirement, and is related to the general difficulties of labour market integration of newcomers. Engineering is also a field in which the availability of employment opportunities, particularly in manufacturing and construction/building are greatly affected by the economic climate, and the recent recession may have reduced available employment opportunities.

As only 14% of Associate and Certified Members indicated that OACETT certification was required for their job, having to complete the Canadian work experience requirement in order to gain certification cannot be considered a barrier to employment. Furthermore, while there is title protection for Certified OACETT Members, and this has significant professional recognition and is required for specific types of jobs, there is nothing in legislation to prevent internationally educated engineering technology professionals from undertaking other types of engineering technology employment and describing themselves as technicians, engineering technicians, technologists or engineering technologists.

There are dozens of community and government agencies across Ontario providing employment assistance to new immigrants, including resume preparation and job search workshops, interview practice, language training, mentorship, speed networking and other supports. However, internationally educated OACETT members did not report using these services to a great extent.

Programs specifically geared to assisting immigrants find employment in engineering-related jobs include Engineering Connections<sup>9</sup> and Engineering Your Future<sup>10</sup>. Algonquin College has offered the Internationally Trained Civil Engineering Technologist (ITCET)<sup>11</sup> mentorship program and Humber College offers Engineering Software Skills Enhancement Project<sup>12</sup>, which assists internationally trained civil and electrical engineers to prepare for employment in their professions with a part-time program including

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<sup>9</sup> Information regarding this program can be found at:

<http://www.acestrain.com/myimages/File/EngineeringConnection.pdf>.

<sup>10</sup> Information regarding this program can be found at: <http://www.skillsforchange.org/eyf/>.

<sup>11</sup> Information regarding this program can be found at:

[https://www.nchca.ca/resources/content/ITCET\\_Mentorship\\_Structure\\_2010.pdf](https://www.nchca.ca/resources/content/ITCET_Mentorship_Structure_2010.pdf).

<sup>12</sup> Information regarding this program can be found at:

[http://www.newtocanada.humber.ca/engineering\\_connections.htm](http://www.newtocanada.humber.ca/engineering_connections.htm).

AutoCAD, Engineering Codes & Standards and Workplace Safety. Centennial and Sheridan Colleges also offer a bridging program for internationally educated technologists called the Fast Track to Technology Occupations<sup>13</sup>.

Completion of work experience in Canada *enables* internationally educated members to meet a requirement to gain OACETT certification and be recognized as engineering technology professionals in Canada. From the point of Associate Membership on, internationally educated engineering technicians and technologists can gain professional inclusion by becoming members of a dynamic professional association aimed at promoting the interests of engineering and applied science technicians and technologists in industry, educational institutions, the public and government. They have access to member benefits, including access to the Canadian Technical Employment Network job board and the opportunity to attend chapter meetings to meet others in the profession.

Due to the work experience and other requirements, OACETT Certification as a professional standard is understood, recognized and valued by Canadian employers. It provides newcomers an opportunity to gain a Canadian certification that is familiar and perhaps more readily recognized by employers than international education and experience. Therefore, obtaining this Certification may facilitate their career progress in Canada.

#### **Efficiency and Timeliness of Decision-making (decisions related to assessments, registration and appeals)**

OACETT has set service standards that are consistent with good business practices but also recognize that particular activities can only be accomplished within the timeframes afforded by Admissions Committee meeting schedules. Some particular timelines, such as applications for Certification Appeal, are also outlined in OACETT by-laws.

The Institute for Engineering Technology of Ontario (IETO) is OACETT's certification division. In order to foster efficiency and effectiveness of decision-making, OACETT ensures that Admissions Committee members are well-qualified and trained to make these important certification decisions.

Members of the committee are normally certified members of OACETT at the appropriate level or licensed professionals from sister organizations such as Professional Engineers of Ontario (PEO) or the Ontario Association of Architects (OAA). Committee members normally have at least five years of work experience in their discipline area. Individuals may be selected on the basis of having specific experience or knowledge in an area where technology professionals are employed, such as the military. They may have knowledge of education systems in other countries or other specialized knowledge required by the committee.

New committee members are trained to familiarize them with the operation of the admissions process. An experienced member of the committee is assigned to train each new member. On satisfactory completion of training, the candidate may be recommended to the IETO Board for appointment as a regular member of the Admissions Committee, or as a resource for the committee to call on as required. The training includes attendance at six scheduled admissions committee meetings along with other training as appropriate. This period may be extended at the candidate's request or if the committee

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<sup>13</sup> Information regarding this program can be found at: <http://www.settlement.org/ftto/index.asp>.

chair deems further training is required. Candidate evaluation will include: candidate trainer's assessment, and consistency, completeness and correctness of reviews.

For Internal Reviews, OACETT also relies on seasoned reviewers with staff overlap. Registrar and Deputy Registrar are also available for consultation.

### **Customer Service Requests**

The OACETT service standard for responding to customer service requests or certification inquiries is three – five business days, although many inquiries are responded to within 24 hours. Registration staff usually respond to applicants and members by telephone or e-mail.

### **Assessment and Certification**

The Admissions Committee is composed of OACETT members who are volunteers. Applicant files are sent to the Committee when all the required documents for a review have been received. The Committee usually meets twice per month to review files, proposals, Technology Reports and academic course outlines.

IETO's Admissions Committee determines if an applicant is ready for certification or if there are any outstanding or additional requirements that the applicant must complete before certification. For example, if the applicant's academic training does not meet the requirements for certification, he/she will be advised of what further training is needed. The applicant may be asked to complete technical competencies relevant to his/her discipline for registration, or to write technical exams set by OACETT.

It takes approximately three to four months from the time OACETT receives an application and the necessary accompanying documents for the applicant to be notified of the Admissions Committee's decision. Each applicant/member is also able to see the results of their file review on the OACETT website by logging onto their own profile through "Track PPE, TR, Courses and Experience" from the home page. This has been cited as a best practice by the Office of the Fairness Commissioner.

The following section outlines OACETT's timelines for decision-making.

### **Initial Assessment of Completed Application**

The Admissions Committee works to the following deadlines when making decisions:

- New applicants are admitted to membership and members certified: once per month;
- File reviews completed : three to four months;
- Course approvals: two to four weeks.

These are average times and some variation does occur based on availability of an expert in the applicant's discipline or volume of files received.

### **Assessment of Technology Reports**

Members pursuing Certified Engineering Technologist (C.E.T.) are required to complete the Technology Report. Members must submit a proposal to the Admissions Committee to review for suitability and relevance prior to the report itself being submitted. Comments are issued, if required, to assist the member in preparing a passing report. Once the proposal has been accepted, the member has one year to complete the report. This process promotes efficiency as it helps guide applicants for C.E.T.

certification in developing acceptable Technology Reports and increasing their chance for success in meeting this requirement.

If a submitted Technology Report achieves a failing mark, it will be reviewed by a second reviewer. If this second reviewer also gives it a failing mark, the member will be given the opportunity to address the shortcomings and re-submit the report once within three months of the notification of the results. If the newly updated report also receives a failing mark, the member will need to submit a new proposal for a new report.

Reviews of Proposals for Technology Reports are usually completed within one month. The marking of Technology Reports is usually completed within two months.

### **Professional Practice Exam (PPE)**

Professional Practice Examination Results are provided: two - four weeks after the date of exam completion.

### **Internal reviews and Appeals**

Internal reviews of Admissions Committee decisions: are often able to be completed in as little as two weeks but may take up to 8 – 10 weeks.

This depends on the timing of the next scheduled meeting of the Admissions Committee and the volume of files waiting to be processed.

### **Certification Appeal Process**

A member may undertake a certification appeal within 30 days of the notice of the decision by the Registrar. This timeline is outlined in the IETO Terms of Reference, section 3.3.

The appeal will then be heard within 90 days by the Certification Appeals Committee. This Committee is composed of IETO Board members who did not make the original decision. The candidate will be notified thereafter of the decision in writing within 10 business days of the Committee rendering its decision and no later than 30 days after the date of the hearing.

### **Conclusions**

Given OACETT's operational capacity and commitment of time and effort by volunteer members of the Admissions Committee, OACETT has no concerns regarding the efficiency and timeliness of OACETT certification processes. It should be noted that in OACETT's Audit the timeliness of OACETT decisions, responses and reasons were all assessed as Good or Satisfactory.

### **Reasonableness of Registration Fees**

As OACETT is a non-profit organization, fees are roughly based on cost-recovery. All of OACETT's fees, including those related to Membership Annual Dues, Application Fees, seminars, and Professional Practice Examination and other miscellaneous fees are the same for Canadian- and internationally-educated applicants and members. Please see Appendix 3 for a schedule of 2011 Fees.

Annual membership dues are increased annually based on cost-of-living increases. Membership dues are based on anniversary billing, meaning that no matter on which date an individual becomes a member, his/her membership dues cover the full 12 months until the next renewal.

The fees most commonly paid by applicants and members include:

<b>Most common OACETT Fees</b>	<b>2011 Fee Schedule, * indicates HST included</b>
Membership Annual Dues (Certified & Associate Members)	\$224.51 *
Application for Membership	\$175.15*
Road construction Application Fee	\$101.70*
Certification Fee	\$45.56*
Certification Appeal	\$113.* <sup>14</sup>
Professional Practice Seminar	\$295.* (classroom), \$169.50* (on-line)
Professional Practice Exam and Study Materials	\$274.64*
Technical Exam	\$406.85 (exempt from HST)

OACETT's fees are comparable to those of similar professional associations for engineering technicians and technologists. For example, the Association of Technology Professionals in British Columbia's (ASTTBC's) application fee is \$225 and full Annual Fee is \$236<sup>15</sup>. The Association of Science and Engineering Technology Professionals of Alberta's (ASET) C.E.T. application fee is \$160 and Annual Membership Fee is \$250<sup>16</sup>.

As mentioned, OACETT fees are roughly based on cost-recovery. While many application processes are quite simple and take a minimum of time for staff to complete, the processing of internationally educated applicants, for the most part, is considerably more time-consuming than that of Canadian-educated engineering technicians and technologists. Therefore staff usually provide more customer service (and therefore staff time) than could reasonably be "cost-recovered" by these fees.

Staff often have many more telephone, electronic and in-person communications with internationally- than Canadian-educated applicants. This is to be expected, given that they are going through the certification process in a new country. Staff also provide assistance to internationally educated applicants if, for example, they are having difficulty accessing documents from overseas, need advice on how to fill out forms or develop Technology Report Proposals, or have questions regarding the work experience requirement or exam processes. As mentioned in an earlier section, OACETT staff will also provide a letter that Associate Members may give to an employer, indicating that they have met all requirements but the one-year Canadian experience.

In the case of internationally educated applicants, assessment processes may be more complex and may involve more Admissions Committee time to review documents and make decisions. This may also be complicated by the fact that the majority of internationally educated applicants seeking OACETT certification were educated as Engineers, not engineering technologists or technicians, so the Committee has to carefully consider university educational preparation completed in another country that may be quite different from engineering technology education in Ontario, which is delivered through Colleges of Applied Arts and Technology.

<sup>14</sup> This fee is refunded if the appeal is successful.

<sup>15</sup> A listing of ASTTBC fees can be found at: <http://www.astbc.com/registration/technologists/dues.php>.

<sup>16</sup> A listing of ASET's fees can be found at: [www.aset.ab.ca/pages/Membership/MemberFees.aspx](http://www.aset.ab.ca/pages/Membership/MemberFees.aspx).

A recent example – OACETT reviewed the educational requirements of applicants coming from Sri Lanka. The cost of this review was borne by OACETT and not passed on to the applicants.

In these respects, on average, the fees charged are overall lower than the cost of providing services for internationally educated applicants and Associate Members (those in the process of completing the requirements of certification).

### **Conclusions**

Given these considerations, OACETT has no concerns regarding the reasonableness of its fees as far as applicants are concerned. In many cases, the certification applications of internationally educated applicants may be more costly for OACETT to process (in terms of the amount of staff and Admissions Committee time required) than the fees charged. However, OACETT has no intention of charging different (i.e. higher) fees to internationally educated applicants at this time.

## **5. RECOMMENDATIONS**

OACETT has no recommendations regarding changing the work experience requirement, the timing or efficiency of assessment and certification decisions or fees.

However, in response to the challenges identified by internationally educated applicants in finding employment to meet the work experience requirement, OACETT recommends that:

**In order to assist OACETT Associate Members in their efforts to find employment in Canada to meet the work experience requirement, OACETT should develop an Employment Resources Fact Sheet that further promotes the Canadian Technical Employment Network (CTEN) job board and outlines opportunities to network through chapter meetings, and provides information and links to the wide variety of available skills development and job search resources across Ontario. This Fact Sheet will be posted on the OACETT web site and made available in hard copy as appropriate for public events.**

## **6. IMPLEMENTATION PLAN**

OACETT commits to developing the Employment Resources Fact Sheet by June 1, 2011 and posting it on its web page by July 1, 2011. After that time, the Fact Sheet will be reviewed on an annual basis to ensure that information and links are up-to-date. There are no implementation challenges associated with this action. IETO will be responsible to ensure that the Fact Sheet is developed and updated as required. The Fact Sheet can be developed with minimal resources and OACETT commits, through the Statement of Approval below, to allocate the required resources for this work.

## **7. STATEMENT OF APPROVAL**

I hereby certify that:

I have reviewed the information submitted in this Entry to Practice Report (the "Report"). To the best of my knowledge, all information required to be provided in the Report is included and accurate.



Sam DiGiandomenico, Registrar/Director IETO

## **Appendix 1 – Excerpt from IETO RULES**

Section 2: Membership, Certification and Registration, Updated August 11, 2009

### **2.5.5 Experience**

Each applicant shall be required to demonstrate a minimum of two (2) years of appropriate experience as defined in IETO's Rules for certification as a Technician, Applied Science/Engineering Technologist, and registration as a Certified Member.

The experience requirement is to ensure that the applicant has a facility with the working language and can apply the principles of engineering/applied science technology to those practical applications and procedures required in the discipline field in a manner consistent with the codes, standards and practices prevalent in Ontario. Activities during this experience time, should involve the application of engineering principles to solve equipment, processes or systems problems, and should foster the development of technical competence, business judgement, communications ability, responsibility and self confidence. Detailed experience requirements are considered in the Profiles of a Technician or Technologist and are as follows.

**Minimum Experience.** A minimum of two (2) years experience is required. Experience must directly relate to the core discipline area (Disciplines Table, Column I), in which academic training was received and must be consistent with the discipline in which certification is sought. Experience must be appropriate for the level of applicable certification. Achievement of this experience must be attested to in a verified detailed description of job experiences and in professional references. Certification in other disciplines, for those qualified in more than one area, will be considered only after an initial certification is achieved.

**Experience at the Certification Level.** A minimum of six (6) months of the required two (2) years must clearly be in the discipline field of practice in which certification is sought and it must be consistent with the desired certification level (i.e. technician, applied science technologist or engineering technologist). The remaining one and a half (1.5) years of the minimum two (2) years, may be progressive learning experience. It must be in the discipline for which certification is sought but might not be at the appropriate level. It will be credited, providing it can be demonstrated that it ultimately led to achievement of the six months or more of acceptable experience at the appropriate level.

**Validation of Experience.** Experience must be detailed and include a day/month/year, start and finish date for each position. The name of the supervisor must be provided for each position held and may be verified by IETO. A current job description must be verified by having the candidate's immediate supervisor attest to its authenticity by signing the document and initialling each page. Three professional references must be provided. Two (2) of the three references must be received and clearly support the nature and level of the experience as appropriate for the certification sought. Referees should be certified OACETT members, professional engineer members of PEO or similar professionals. Other qualified individuals may be acceptable.

In practice, the file reviewer can use their discretion to decide if the information submitted is sufficient to make a decision on work experience. For example, a job description is not signed by the member's supervisor but the supervisor has completed a professional reference questionnaire. Another example would be a job description from a previous employer with a letter verifying employment and the position held.

**Experience with the working language codes standards and practices.** The applicant must be able to demonstrate a facility with the working language and a facility with the standards, codes, and practices of the discipline in which certification is sought. This may require the applicant to work for a time with the Canadian and or Ontario codes standards and practices in the working language. It might require that the candidate be examined for language skills and for knowledge of the Canadian/Ontario codes, standards and legislation commonly required in the workplace. Not only is this to ensure that the applicant has the technical expertise, but also to ensure safety on the job.

Capability may be demonstrated through the following.

- Validation of one year's work experience in Canada with support from professional references.
- Credit may be given for courses taken in applicable codes, regulations, etc. towards Canadian work experience.

**Canadian Experience.** Experience need not have been obtained in Canada providing the criteria noted above is achieved. (E.g. an applicant may have worked for a Canadian company abroad or may have worked on projects, while in another country, that were destined for Canada and, which had to be consistent with Canadian codes, standards and practices prevalent in Ontario. The Candidate may be applying from a country or have come from a country where the working language is the same as it is in Ontario. The candidate may have met the requirements in some other fashion).

## Appendix 2 – Letter from Ministry of Transportation

### Ministry of Transportation

Provincial Highways Management Division  
Contract Management and Operations  
Branch

301 St. Paul Street, 2<sup>nd</sup> Floor  
St. Catharines ON L2R 7R4  
Tel.: 905-704-2197  
Fax: 905-704-2040

### Ministère des Transports

Division de la gestion des routes provinciales  
Direction de la gestion des contrats et des  
opérations

301, rue St. Paul, 2<sup>e</sup> étage  
St. Catharines ON L2R 7R4  
Tél. : 905 704-2197  
Télééc. : 905 704-2040



February 11, 2011

Barbara J. Chappell, M.A.  
Deputy Registrar, OACETT  
10 Four Seasons Place, Suite 404  
Toronto ON  
M9B 6H7

Email: [bchappell@oacett.org](mailto:bchappell@oacett.org)

Dear Barbara:

### **Re: Experience requirements for OACETT registration**

It is my understanding that the Office of the Fairness Commissioner has initiated a review of the registration requirements of various professional regulators, including requirements for Canadian experience. As you know, the ministry requires that OACETT members be further certified under the Road Construction Contract Administration Certification and Designation Program that OACETT administers on our behalf.

The Ministry relies on certified contract administrators and inspectors to ensure that our construction projects are completed safely, efficiently and with proper regard for quality for the benefit of the public. As you know, the more senior certification designations (Road Construction Contract Administrator and Road Construction Senior Inspector) under the road construction program include requirements for experience specifically on ministry contracts; this experience would normally be gained as a Road Construction Junior Inspector.

I would like to remind you of the importance of adequate experience for monitoring the construction of vital infrastructure. We rely on knowledgeable contract administrators and inspectors to ensure that work is completed safely according to our codes, regulations and quality standards. As you know, significant portions of our infrastructure is not visible; bridge footings, buried utility ducts, sewers and water mains are examples of important infrastructure components that need to be constructed correctly to ensure safety and lasting benefit. To that end, we have stringent requirements for materials and construction methods that have been developed and refined over the years to meet local conditions and needs. It is very important that field administrators and inspectors be aware of not only our codes, regulations and specifications, but also be familiar with

.../2

B. Chappell  
Page 2

local conditions and construction best practices. This knowledge becomes more important as the ministry moves toward less prescriptive contracting methods where we will rely on your members, along with other professionals, to determine the safest, most efficient materials and methods to be used to complete highway projects.

We rely on the confirmed work experience requirement for engineering technicians and technologists to ensure that our construction projects are properly monitored. When the Road Construction Contract Administration Certification and Designation Program was created in 2002, the ministry relied in part on OACETT's existing experience requirements to set the requirements for the road construction designations. If OACETT did not ensure that candidates have familiarity with local codes, regulations, conditions and construction methods through its experience requirements, the ministry would review the experience and training requirements for Road Construction Junior Inspectors to ensure that our site representatives are adequately familiar with local codes, regulations, conditions and construction methods.

I'll take this opportunity to inform you that the ministry remains supportive of the existing program and its current requirements. We are encouraged with the work that has been done over the past few years to ensure succession planning is occurring in the industry. If you have any questions or would like to discuss this further, please feel free to call me at 905-704-2197.

Sincerely,



Alain Beaulieu  
Head, Construction Contracts Section

c. Phil Hutton  
Manager, Contract Management Office - MTO

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## Appendix 3

## 2011 Fee Schedule

OACETT Membership Annual Dues	Amount	HST (13%)	Total
Certified	198.68	25.83	224.51
Associate	198.68	25.83	224.51
Full-time Post Secondary Student (See Note)	50.00	6.50	56.50
Retired	66.23	8.61	74.84
Road Construction	72.10	9.37	81.47
Non Resident	66.23	8.61	74.84
P.Eng./Architect/OLS/P.Geo.	66.23	8.61	74.84

Application Fees	Amount	HST (13%)	Total
Membership	155.00	20.15	175.15
Road Construction	90.00	11.70	101.70
Full-time Post Secondary Student (See Note)	50.00	6.50	56.50
Reclassification	51.50	6.70	58.20
Prior Learning Assessment Recognition (PLAR)	406.85	52.89	459.74
Reinstatement	103.00	13.39	116.39
Interprovincial Transfer	50.00	6.50	56.50
Dual Registration	51.50	6.70	58.20

Other Fees	Amount	HST (13%)	Total
Certification Fee	41.20	5.36	46.56
Professional Practice Seminar - Classroom	261.06	33.94	295.00
Professional Practice Seminar - Online	150.00	19.50	169.50
Technology Report Writing Seminar	358.57	46.61	405.18
Replacement Certificate	51.50	6.70	58.20
Access to File (Appointment Required)	30.00	3.90	33.90
Photocopies from File (up to 6 pp - postage extra)	30.00	3.90	33.90
Certification Appeal	100.00	13.00	113.00

Examinations	Amount	HST (13%)	Total
Professional Practice Exam & Study Materials	250.00	15.60	265.60
Shipping	8.00		
Total	258.00	16.64	274.64
Professional Practice Exam Rewrite	150.00	Exempt	150.00
Professional Practice Exam Postponement	50.00	6.50	56.50
Technical Exam	406.85	Exempt	406.85

**Note:** If you are a full-time post secondary student your application fee to join OACETT is reduced from \$155 to \$50 plus HST and your first year membership dues are waived. Student membership dues of \$50 plus HST are payable in your 2nd year of membership and thereafter, while you remain a full-time student. Regular associate dues are payable only after graduation at your next regularly scheduled invoice date.

HST # 107796658