

Applied Science  
Technologists & Technicians  
of British Columbia



*Technology Professionals: Value to the Public Interest*

**Annual Report of the Public Representatives 2012**  
**May 24, 2013**

Serving as Public Representatives on the Council of the Applied Science Technologists and Technicians of BC:

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## **BC's Technology Professionals**

Technologists, technicians and technical specialists work in applied science fields such as architecture, bio-medical engineering, construction, civil, electrical, electronics, environmental, fire protection, house inspection, information, mechanical, onsite wastewater and other related disciplines connected to human-influenced and natural environments.

These Technology Professionals design, construct, inspect, test, maintain, protect, stabilize and/or manage: buildings, computers, electrical power, equipment, roads, environmental conditions, and water and wastewater systems. They work in private enterprise, for consulting engineering and technology companies, in all levels of government, and as private consultants.

British Columbia's technologists, technicians and technical specialists achieve professional certification and recognition through ASTTBC. Professional designations granted under the *ASTT Act* are **Applied Science Technologist** (AScT) and **Certified Technician** (CTech). ASTTBC also certifies qualified individuals as a **Technical Specialist** in Building Design, Construction Safety, Fire Protection, House & Property Inspection, Onsite Wastewater, Public Works Inspection, Site Improvements Surveys, and Steel Detailing.

The *ASTT Act* provides for the professional certification of technologists and technicians, and requires that they adhere to a Code of Ethics. It also provides a disciplinary mechanism to deal with breaches of the Code, and protects the titles *Applied Science Technologist* and *Certified Technician* and the designations *AScT* and *CTech*.

The Engineers and Geoscientists Act and the Foresters Act provide a Limited Licence and Special Permit respectively for AScTs and others to practise within the scope of the licence in the fields of professional engineering and professional forestry.

The Canadian Technology Accreditation Board (CTAB) accredits technology programs offered at BC's technical institutes and community colleges with the support of ASTTBC. National accreditation helps ensure that BC's certified technicians and technologists have employment mobility nationally and internationally.

## **Role of Public Representatives on the ASTTBC Council**

Public Representatives provide professional regulatory bodies with input on decision-making and ensure a third party oversight over the work of a self-governing body such as ASTTBC.

The following framework outlines general guidelines for the Public Representatives:

- To provide a tangible link between the expectations of the public, society and provincial government and a professional regulatory body
- To serve as an independent voice
- To contribute opinions and recommendations to Council governance and decision-making related to issues of public interest
- To monitor the governance of the association with a view to ensuring the association serves the public interest
- To focus in areas affecting public health & safety and a sustainable environment

- To assure a high level of public trust in the association’s professional standards, certification, and the accountability and compliance of the members of the association as they provide quality and value-added services to the public
- To assist with continuous improvement initiatives that promote the legislated ‘Objects’ and Council’s Vision, Mission and Goals
- To refrain from engaging in ASTTBC Council decisions related to business operations

Public Representatives are expected to:

- Represent the interests of the ‘general public’ by raising issues related to decisions being prepared for implementation by Council that have the potential to impact the general public
- Solicit appropriate stakeholders to assure adequate consultation and guidance to inform opinions and recommendations to Council
- Provide a Public Representatives Report to the Provincial Government, the general public and ASTTBC members.

### **Council Governance**

ASTTBC Council meetings run openly, transparently, professionally and efficiently, with clear policy recommendations and decisions relative to ASTTBC’s legislated mandate and the Council’s Vision, Mission and Goals. At all times, we, the Public Representatives, are afforded the opportunity to fully engage and participate in providing contributions, opinions and recommendations to Council governance, and decision-making relative to issues of public interest.

To enhance linkages, ASTTBC and the Association of Professional Engineers and Geoscientists of BC (APEGBC) share agendas and invite reciprocal representation for their respective Council meetings.

*Commendation: ASTTBC Council and the ASTTBC Executive Director are to be commended for their respectful openness and treatment of the Public Representatives on the ASTTBC Council. They are also to be commended for their tireless efforts to attain and maintain a cooperative working relationship, to the benefit of public safety and the scope of professional practice for its ASTTBC membership, with APEGBC and other professional associations that have overlapping interests and practice.*

### **Purpose and Scope of the 2012 Annual Report of the Public Representatives**

The 2012 Annual Report focuses on ASTTBC initiatives that serve the public interest by enhancing the professional recognition and rights of practice for the technologists, technicians and technical specialists registered and regulated through ASTTBC. The Report is an independent statement, and is presented to the ASTTBC Council without need of their approval. Should any individual Public Representative not be in accord with statements in the Report, that variance is noted in the Report.

The Annual Report of the Public Representatives for 2012 will be presented at the ASTTBC Annual General Meeting on May 24, 2013, and will be subsequently forwarded to the BC Premier, to the BC Minister responsible for the *ASTT Act*, to BC Members of the Legislative Assembly, to BC Members of Parliament, and made available to other interested stakeholders. The Report will be posted to the ASTTBC web site for public access, along with previous Annual Reports of the Public Representatives. A summary of the Report will be included in ASTT e-NEWS and ASTT NEWS.

## **Public Representative Perspective of Key Advancements and Challenges**

There have been numerous items of routine and developmental business at ASTTBC Council over the past year. This report will focus solely on those items that are deemed by the Public Representatives to be of key interest to the public.

### **1. Scope of Practice for Certified Technologists**

Collaborative dialogue between ASTTBC and APEGBC continued throughout 2012 to address common interests and to define practice rights for BC technologists within the framework of a cooperatively working team composed of engineers/geoscientists and technologists. The creation of an accepted *PTech* credential, as presently utilized in three other provinces, was shelved for the time being due to insufficient progress in the discussions, and replaced by an ASTTBC/APEGBC Joint Board to define AScT practice as a *Qualified Person* (QP). The work of this Joint Board is ongoing and has continued into 2013.

Meanwhile, APEGBC did enact amendments to its *Engineers and Geoscientists Act* to allow Limited Licensees to run for (and vote for) positions of president, vice-president and councillors, to call for and vote at APEGBC meetings, and to vote on petitions and bylaws.

The Public Representatives believe that there remain ‘gray’ boundaries and overlapping practice rights to be explored between technologists and engineers that, in the interest of public trust and security, require clarification and agreement through joint dialogue between ASTTBC and APEGBC.

*Commendation: ASTTBC Council and ASTTBC members of the joint ASTTBC/APEGBC Committee are to be applauded for seeking agreement in defining the rights of practice for Qualified Person Technologists in relationship to that of engineers and geoscientists.*

*Recommendation: The Public Representatives encourage that dialogue continue between ASTTBC and APEGBC, until such time that all avenues have been thoroughly explored and discussed, on the matter of scope of practice recognition for a qualified Technologist and ultimately a PTech designation.*

### **2. ASTTBC Withdrawal from Canadian Council of Technician and Technologists (CCTT)**

In 2010, ASTTBC and sister associations in Alberta, Saskatchewan and Ontario officially withdrew from the national federation, the Canadian Council of Technicians and Technologists (CCTT). Quebec has not been a member of CCTT for some time. ASTTBC and the three other provinces that withdrew in 2010 have established *Technology Professionals Canada* (TPC) as a new entity to manage common issues and national interests as professional regulatory bodies. Since its formation, TPC initiated a major project to review national accreditation and invest in a potential new model for the accreditation of technologist and technician education programs.

Progress on the Technology Accreditation Canada initiative has been much slower than hoped amongst the four provinces, but nevertheless continues positively. Informal dialogue with CCTT continues in a somewhat strained but cordial manner. Collective meetings with the five provinces still affiliated with CCTT have been infrequent.

While professional certification of technologists and technicians is conducted independently by each province’s regulatory associations, it is critical that all graduates across Canada are measured for professional certification using common expectations and standards of practice. To do so effectively, it is essential that all provinces are “on the same page” and sit at the same table when discussing nation-wide issues.

Despite the departure from CCTT, ASTTBC members continue to carry portability of membership as a Certified Technician (CTech) or Technologist (AScT) to all provinces in Canada, with eligibility to work in all provinces and in many other countries.

Nevertheless, there is lack of a common nation-wide credential designation for certified technologists nationally. Designations currently in use across the country are **Applied Science Technologist (AScT)** in British Columbia, Saskatchewan, Manitoba, New Brunswick, Nova Scotia and Prince Edward Island, **Certified Engineering Technologist (CET)** in Alberta, Manitoba, Ontario, New Brunswick, Nova Scotia and Prince Edward Island, and **Professional Technologist (PTech)** in Alberta, New Brunswick, and Newfoundland. Quebec uses either **Technologue Professionnel** or **Technologue des Sciences Appliquées**. Bilingual designations aside, public understanding of what a technologist is, does, or is capable of doing, and employer acceptance and recognition of the qualifications and skills a technologist possesses, is hampered by inconsistent labeling – and the lack of a common table for the professional associations to discuss such matters does injustice to its membership, employers (particularly international employers) and the public.

The Public Representatives believe that the present lack of a formal ‘common table’ for dialogue of nation-wide interests and concerns is not a tenable situation, and one that does not best serve ASTTBC membership or the public. The rift between the four aforementioned provincial technician/technology associations and CCTT runs deep, is as much due to personalities as it is to differences in ideologies, and has existed for far too long. While current discussions on formation of a renewed national forum could be seen as a step in the right direction, five provinces that retain membership with CCTT are not present at, nor invited to, such discussions. Whatever the final outcome in this matter, it is essential that ‘at the end of the day’ the provincial associations and national forum need to be ‘on the same page’ at the same table, and this ‘end of the day’ needs to be achieved sooner than later.

**Recommendation:** *The Public Representatives encourage ASTTBC Council’s appointed designates to work diligently and cooperatively to establish common ground for a single national forum as quickly as feasible;*

- *one that provides the best possible outcome for public safety, for post-secondary program accreditation and for all present and future certified technicians and technologists in British Columbia and the other provinces, and*
- *one that has all provinces and northern territories aligned with, and members of, a single national forum - whether it be a reconstructed CCTT, a newly formed TPC, or a national body under a different name.*

**Recommendation:** *The fluidity of transfer of credentials across Canada and internationally is a fundamental principle that must be kept and expanded in all discussions and outcomes arising from the creation of a new national forum or redesign of CCTT, and similarly for any revision to the current national program accreditation process.*

**Recommendation:** *That at an appropriate time, ASTTBC explores with the other nine provinces the creation of a single credential designation for certified technologists.*

### **3. National Accreditation for BC Technology Programs**

Accreditation of the technology and technician programs offered in BC exists to assure ASTTBC, employers, and the public that graduates of such programs meet the education standard required under the **ASTT Act** for professional certification and registration as an Applied Science Technologist or Certified Technician.

ASTTBC has determined that accreditation through the Canadian Technology Accreditation Board (CTAB), the program accreditation branch of CCTT, currently meets the minimum standards required by ASTTBC for professional registration. ASTTBC Council has made a commitment to BC's institutes, colleges and universities, as well as to CTAB, that ASTTBC will continue, during the transition period of national forum dialog, to provide CTAB support with the staff, volunteers and resources for all national accreditation activities required by CTAB. This commitment includes the ongoing review of the **National Technology Benchmarks** (NTB), the minimum standards required for technologist and technician designations, during the transitional debate.

ASTTBC has expressed commitment to ensuring that no BC program or student is harmed by the effects of transition.

The Public Representatives applaud ASTTBC for continuing to support CTAB during this period of dialogue to re-establish a new or renewed national technician/technology body that is satisfactory to all provinces.

***Recommendation:*** *It is recommended that ASTTBC continues to support CTAB for national program accreditation during, and perhaps following, current discussion on a renewed national accreditation model.*

***Recommendation:*** *It is recommended that ASTTBC acknowledges that the BC Deans of Technology have spent considerable hours working with CTAB and the technology deans in all other provinces improving the national accreditation process, that they presently support continuation of working with CTAB, and that if there is sufficient justification to generate a new national program accreditation body then creation of that new body be achieved with the technology deans involvement.*

***Recommendation:*** *It is recommended that any revisions to the NTBs used to accredit Canada's post-secondary programs be carried out with full cooperation and involvement of the BC Deans of Technology and the National Council of the Deans of Technology (NCDoT).*

***Recommendation:*** *It is recommended that ASTTBC continues addressing the matter of ownership of the NTBs until it better meets the needs of ASTTBC. It is also recommended that ASTTBC support the BC Deans of Technology appeal that access to the NTBs be at no cost to the post-secondary institutions offering the program(s) seeking accreditation.*

#### **4. Certification and Registration of Technical Specialists**

ASTTBC currently certifies and registers in eight fields, including Building Design, Construction Safety, Fire Protection, House & Property Inspection, Onsite Wastewater, Public Works Inspection, Site Improvements Surveying and Steel Detailing. Three of these Technical Specialist programs are required by law:

- Fire Protection where there are municipal Bylaws requiring certification
- House Inspection which is governed under the Consumer Protection Act
- Onsite Wastewater governed under the Sewerage System Regulation

The current Technical Specialist fields and the titles and designations are:

- Building Design: Certified Residential Designer - CRD
- Building Design: Registered Building Designer - RBD

- Construction Safety: Construction Safety Officer - CSO
- Fire Protection: Registered Fire Protection Technician - RFPT
- House & Property Inspection: Certified House Inspector - CHI
- House & Property Inspection: Certified Property Inspector - CPI
- Onsite Wastewater: Registered Onsite Wastewater Practitioner - ROWP
- Public Works Inspection: Certified Public Works Inspector (I - III) - CPWI
- Site Improvements Surveying: Registered in Site Improvements Surveying - RSIS
- Steel Detailing: Certified Steel Detailer - CSD
- Steel Detailing: Registered Steel Detailer - RSD
- Depreciation Reports: Registered Reserve Fund Analyst - RRFA – designed and developed in 2012 with anticipated approval in January 2013.

The Public Representatives applaud ASTTBC for its work in certifying technical specialists in the interest of public safety.

***Recommendation:** ASTTBC is encouraged to consider adding new technical specialist programs based on the needs of business, industry, regulatory bodies, and the public interest. Such programs should be fully sustainable.*

## **5. Technology and Technician Career Promotion to the Public and Public Schools**

One of the most critical issues facing the BC and Canadian economies is an increasing shortage of skilled workers. This includes a growing concern about shortages of technology workers – technologists, technicians and technical specialists – in BC’s technology, resources and other goods-producing sectors. To quote ASTTBC’s Executive Director, John Leech, “*ASTTBC is concerned about the need to take pre-emptive action on addressing a technology skills gap in partnership with educators, business and industry, associations, government and others.*”

Technology careers, like all other fields in the applied sciences, require a foundation in high school science and mathematics – generally at least two or more of Biology 12, Chemistry 11 or 12, Physics 11 or 12, and Pre-Calculus 12 (or Principles of Math 12). Yet roughly only 35%, 28%, and 15% take Biology 12, Chemistry 12 and Physics 12, respectively, and the vast percentage of high school leavers seeking post-graduate educational pathways with these science and math requirements plan to enter either medicine, science or engineering. Refocusing their minds towards a technical or technology schooling and career requires considerable information and persuasion intervention long before they graduate from high school. Unfortunately, parents and school counselors have not provided this intervention, and cannot be relied upon to do it. Also unfortunately, well intended government initiatives to promote careers in the ‘applied sciences’ often focus exclusively on science, engineering and medicine; and similar initiatives to promote ‘technology’ often focus on the skilled trades, technical careers or on information technology. Technologist and Technician careers reside in the centre of this applied science career continuum and too frequently get lost in the message. While there may be greater clarity on, and interest in, the range of medical technology career opportunities, such is not generally the case for the engineering technologies. In any case, the promotion of technology careers is an uphill battle with a steep slope, and ASTTBC has taken on a leadership role to do so.

ASTTBC has routinely initiated and supported numerous means of promoting technology and technician careers to high school counselors, parents, high school graduates and adults seeking a career change. These include involvement or leadership with public seminars, TechWorks, TechACTION, TECC, ITP, financial support for science and technology events across BC, FNCC, Women in Technology, active involvement in National Technology Week and National Engineering Month, and through countless

dialogues with Ministry people regarding the critical shortage of technology workers and the impact of this on the British Columbia economy.

In 2012, ASTTBC released a music video titled *Everyday Science*, featuring multi-award winning children's entertainers, The Kerplunks. This music video shows the FUN in science. It targets the age range of pre- and early-schooling and can be found in the category of "Science and Technology" on YouTube. It is hoped that this early approach of introducing science and technology to kids will help retain such interest as they grow older and develop career interests.

*Commendation: ASTTBC is congratulated for their tireless effort in supporting avenues of technology awareness.*

## **6. Aboriginal Incentives**

In concert with provincial and federal initiatives to increase Aboriginal participation in all career areas, ASTTBC has initiated a dialogue with aboriginal communities and post-secondary institutions with the goal of promoting and increasing participation of First Nations people in technician and technology careers. A key component of this effort is a Memorandum of Agreement to be signed in early 2013 between ASTTBC and the First Nations Employment Society (FNES). A year ago, ASTTBC signed an Agreement with the First Nations Technology Council (FNTEC).

In comparison to BC's general participation rates in Grade 12 science and mathematics provided earlier in the Report, a study of BC's aboriginal participation rate taken over the period of 1991 to 2006, showed that approximately 15%, 8%, 2% and 10% took Biology 12, Chemistry 12, Physics 12 and Math 12, respectively. This has not likely changed significantly since then. Clearly, any increase of First Nations representation in the fields of technology must begin in the K-12 school system.

*Commendation: ASTTBC is commended for its initiatives to increase First Nations representation in technician and technologist careers and in ASTTBC membership, and encourages ASTTBC to continue to take leadership in this direction.*

## **7. Foreign Credential Recognition**

With one-third of new jobs forecast to be filled by internationally trained workers over the next 10 years, the BC Ministry of Jobs, Tourism and Innovation commissioned a review to examine foreign qualification assessment processes managed by regulatory and certifying bodies. The goals for the review were to:

- Identify barriers faced by Internationally Trained Workers (ITWs) seeking certification, and
- Work with regulatory and certifying bodies to propose actions that reduce or remove these barriers to foreign qualification recognition in BC.

While the BC Government acknowledged that Provincial regulatory and certifying bodies have undertaken considerable work in recent years to improve foreign qualification recognition processes for internationally trained workers, it felt that increasing global competition for talent and scarce skills created an imperative for continuous improvement in how BC attracted internationally-trained applied science professionals to BC and support their integration into BC's labour market.

APEGBC, ASTTBC and the Industry Training Authority (ITA) for Trades professions participated in the study, resulting in the release of the *British Columbia Foreign Qualifications Recognition Review Project* report on August 31, 2012.

The report identifies a number of recommendations to facilitate and reduce the time to review foreign credentials for certification purposes by ASTTBC and the other two bodies.

*Commendation: ASTTBC is to be commended for the time and effort taken in the study and release of the report on foreign credential recognition, and encourages ASTTBC to implement report recommendations that aid in equating foreign credentials while at the same time maintaining appropriate regulatory standards for certification that ensure public safety.*

## **8. Association Recognition by Industry, Business Associations, Regulatory Authorities**

ASTTBC has earnestly endeavoured to earn the interest and respect of many organizations with regard to its role as a professional regulatory body as well as an organization promoting technology education and careers. While doing so, it has consistently tried to impress on employers, business associations and other related regulatory bodies the importance of ASTTBC certification, and for them to support and employ applicants with ASTTBC certification. The lack of required certification in many job settings where an applied science technician or technologist is required serves to undermine the added value, employability skills and safe practice that an ASTTBC certified technical or technology applicant can bring to the employer – a challenge not found in career areas where legal requirements demand certification.

*Commendation: ASTTBC is to be commended for establishing a positive working relationship with numerous organizations, and is encouraged to build upon the strengths of existing relationships for the purpose of serving the public interest through professional certification and regulation of technologists, technicians and technical specialists, and in promoting technology education and careers.*

The **Annual Report of the Public Representatives 2012** is respectfully submitted by,

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May 24, 2013