

## Canadian Technology Standards (CTS) Development and Revision Policy

**Document No.** TACDEV-1

**Revised:** October 21, 2021

### **Scope**

This policy shall be used for the development of new and the revision of existing Canadian Technology Standards (CTS).

This policy is supported by a procedural review and the documents provided in the attached appendices.

### **Definition**

CTS are a collection of learning outcomes for the engineering technology and applied science profession. The CTS consists of General Learning Outcomes (GLO), which are common to all disciplines, and Discipline Learning Outcomes (DLO) which are specific to each engineering technology and applied science discipline. Every GLO and DLO has a number of Learning Outcome Indicators (LOI) are measurable actions which illustrate, define and clarify the level of performance expected by a student to achieve a learning outcome.

CTS are used in the auditing of educational institution programs for the purpose of accreditation, may also be used for certification purposes by provincial certifying bodies and program development by educational institutions.

### **Principles**

The development and revision of CTS is an inclusive, open process involving stakeholders including, but not limited to, educational institutions, industry, certified members and representatives from the Provincial Professional Associations (PPAs).

The steps within the policy include an announcement regarding the intent to develop a new or revise existing CTS, the recruitment and creation of a committee to develop a new or revise existing CTS, a process to reach agreement or consensus on the new or revised CTS and a method by which any interested stakeholder may comment upon the new or revised CTS, prior to its final approval.

In lieu of a committee to review or develop a new CTS, the Standards Council (SC), at its discretion, may assign the development or revision of a CTS to a third party, provided all aspects of this process are followed by the third party.

It is the intent that this policy is aligned with the procedures used by a national standards body accredited by the Standards Council of Canada.

## Responsibilities

**Standards Council** – In its role of providing oversight and leadership related to the national standards, the Council is responsible for approving clear policies and procedures for new standards development and the maintenance of existing standards, establishing Standards Development Committees, reviewing and approving new and revised national standards and validating requests for proposed alternative standards.

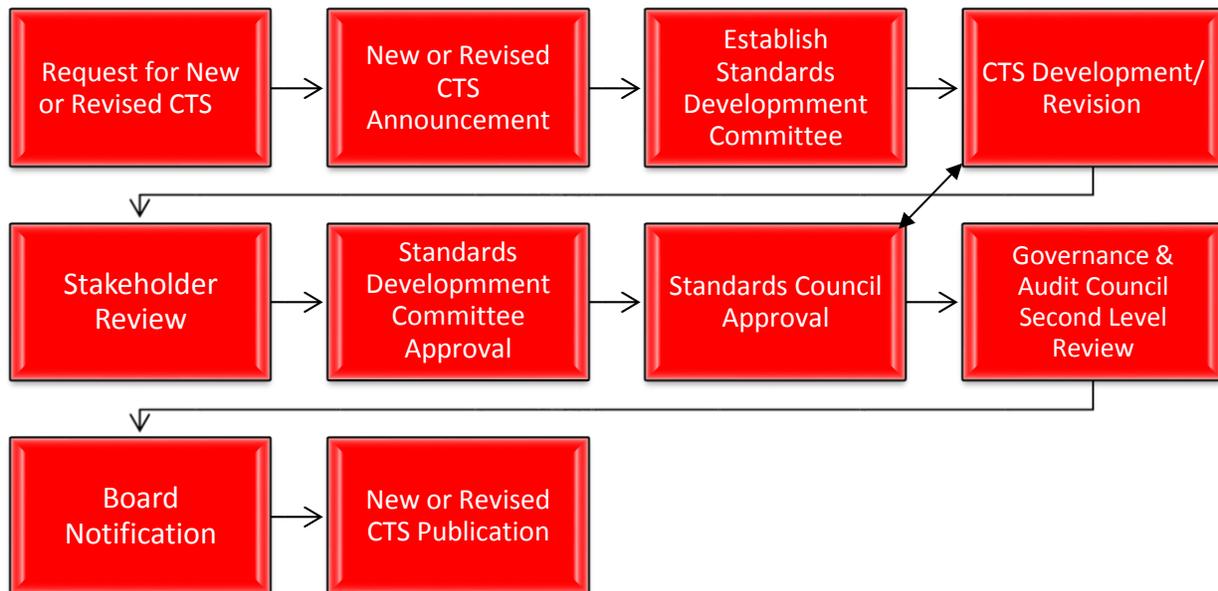
**Standards Development Committee** – Created at the request of the Standards Council, the Standards Development Committee is responsible for developing and approving CTS for technicians and technologists in accordance with defined policies and procedures and validating alternative standards as directed.

**Governance & Audit Council** – The Governance & Audit Council is responsible for the implementation of a second level review to validate that the policies and procedures for standards development are followed and ensuring the development and implementation of an annual review process for standards development.

**Board** – The Board is responsible for approving the policies and procedures relating to the development and maintenance of national standards, including new or alternative standards.

## Process

The following diagram outlines the steps involved in the development of a new or revised CTS.



## **Request for Development of New or Revised CTS**

Any party may request the development of a new or a revised CTS by submitting TACDEV-1A (attached) to the Standards Council through the Executive Director.

The Standards Council reviews the request, soliciting feedback from others where appropriate and approves or denies the request. In the event that the Standards Council finds there is no need for a new or revised CTS, the individual or group who made the request is contacted with a rationale as to why the request was declined.

## **Development of New CTS**

A new CTS will be developed for technicians and/or technologists in an engineering technology or applied science discipline or sub-discipline should it be broad in scope and sufficiently distinct from existing CTS.

## **Announcement**

When a decision has been confirmed that a CTS will be developed or revised, an announcement will be posted on the TAC website, indicating that a CTS will be developed or revised. The announcement will describe the technical program area and call for any interested stakeholders to contact TAC for consideration as Standards Development Committee (SDC) members. In addition, TAC will notify the National Council of Deans of Trades and Technology (NCDATT), all PPAs, all provincial applied science and engineering technology association registrars and educational institutions of such posting.

The announcement will remain on the TAC website for a period of at least 21 days, during which time a committee may be populated. At the end of the period, TAC will notify NCDATT, educational institutions, all provincial applied science and engineering technology association registrars and PPAs that a committee is now populated.

Should an application for participation on the Standards Development Committee be considered and declined, the Executive Director will inform the applicant in writing with rationale. The applicant will also be informed that a stakeholder review period will be available following the development process, at which time they will be contacted for comment.

## **Establishment of Committee**

A Standards Development Committee will be established by the Standards Council as per the Standards Development Committee Terms of Reference, with consideration for representation in the following areas;

- industry,
- educational institutions,
- PPA members and
- regulators (if appropriate).

Where it is not possible to solicit participation from one of the stakeholder groups, the Executive Director will make every effort to gain feedback from that group during the stakeholder review process.

A member of the Standards Council or designate will Chair the meetings. The Chair is responsible for communicating with the Executive Director, ensuring proper documentation on Committee activities is maintained, and providing the final CTS to the Standards Council for approval upon approval by the Committee.

### **CTS Development or Revision**

The SDC is responsible for the development or revision of the DLO, GLO and LOI of a CTAC. In some cases, a preliminary draft may be written by a subject matter expert and the SDC will convene to revise and approve the draft.

Regardless of whether the document is created fully by the SDC or a preliminary draft is revised by the SDC, minutes will be created and retained for the SDC activity.

Minutes will clearly identify the following;

- date, time and participants of each meeting,
- technical items – key decisions for inclusion in the CTS,
- technical items – key decisions not included in the CTS (where appropriate),
- the date when the decision for stakeholder review was reached,
- any key issues discussed during stakeholder review updates,
- the date of final approval and
- any negatives and the dispersal of those negatives.

The SDC will ensure that new requirements do not conflict with other CTS or regulatory documents.

### **Agreement or Consensus**

Once the CTS has reached the final draft stage, the Chair will request each committee member's agreement that the document be posted for stakeholder review.

If all members agree, the draft document will be posted for stakeholder review in electronic format. In the case of dissenting votes, the SDC will discuss with the intent of resolving the issue prior to stakeholder review. If the issue cannot be agreed upon or deferred, the minutes will reflect the position of the dissenting member and the document will be posted for stakeholder review providing all other members of the SDC are in agreement. (Note: If the SDC feels it is appropriate, the dissenting position can also be posted for comment).

### **Stakeholder Review**

The draft CTS will be posted on the TAC website or other agreed upon online sites for a period of not less than 60 days.

An electronic form, TACDEV-1B (attached), or other approved electronic format, will be provided to facilitate a consistent format and structure for comments to be collated and reviewed. All comments are to be submitted electronically using an approved format.

The Committee Chair (or representative from the Standards Council) will notify the Executive Director that a CTAC document is open for stakeholder review. TAC will notify all stakeholders (NCDATT, educational institutions, all provincial applied science and engineering technology association registrars and PPAs) to encourage maximum feedback.

In an attempt to ensure transparency and inclusivity in the development process, the Executive Director on behalf of the Standards Council, will directly notify any individuals whose request for participation on the SDC was declined. In addition, where a stakeholder category was not represented on the Standards Development Committee, information will be disseminated directly to those stakeholder groups for review.

### **Provision of Comments**

Stakeholders will agree to provide comments and review in a purposeful and professional manner.

All comments must be submitted in accordance with the requirements of form TACDEV-1B and will provide both a technical or procedural rationale and a proposed solution to the issue(s).

### **Consideration and Processing of Comments**

Following the public review period, the SDC will reconvene to consider comments received during the stakeholder review period.

Where considered appropriate by the SDC, the draft will be amended to reflect the comments.

Where the suggestions or comments are not incorporated into the document, or where the SDC feels that the issue is already addressed in another manner, the stakeholder will be informed by the Chair of the Committee's decision with rationale by email.

In the rare circumstance where the amended draft differs significantly from the draft initially offered for stakeholder review, the document will be offered for an additional review period of at least 14 days.

### **SDC Approval**

Following stakeholder review and incorporation of any required amendments, the SDC will approve the document by consensus.

Where consensus is not reached, the Chair will hold discussions with the Committee member(s) in an attempt to resolve the issue. If any of the following items apply, it shall be interpreted that consensus has been reached;

- the issue has been previously discussed by the Committee and rejected during meetings or
- the issue is in conflict with existing requirements or
- the issue is un-auditable or
- the issue is so specific that technological advances will make it obsolete within a short period or
- the issue appears to give market advantage to one particular educational institution.

The rationale will be documented in the SDC minutes.

### **Standards Council Approval**

Once the CTS is approved by the SDC, the Chair of the Standards Development Committee will forward the document to the Standards Council for approval. The Standards Council will have 10 business days to approve the CTS or request clarification by the Standards Development Committee. Clarification by the Standards Council may be requested one time only.

The new or revised CTS and any supporting documentation provided by the Standards Development Committee must be kept confidential by Council members.

Once the Standards Development Committee has provided clarification, the Standards Council will have 10 business days to approve the CTS.

### **Second Level Review**

The Governance and Audit Council (GAC) will conduct a Second Level Review to confirm the CTS development or revision was completed in compliance with the approved policy and procedures.

This second level review shall be used upon the submission of a new or revised CTS. This document is supported by a checklist, TACDEV-2A (attached).

### **Board Notification**

The Standards Council will notify the Board of the new or revised CTS.

### **Publication**

In the interest of transparency, TAC will publish the new or revised CTS on the TAC website. TAC will announce the new or revised CTS to all PPAs, NCDATT, educational institutions, all provincial applied science and engineering technology association registrars and other stakeholders.

All approved CTS will be available to stakeholders through the TAC website or upon request by email to the Executive Director.

Each CTS will be formatted as approved by the Standards Council and the Executive Director.

### **Re-evaluation**

It is a requirement all CTS be re-evaluated a minimum of once every five years. The Standards Council will maintain a schedule to ensure that each CTS is reviewed in a timely manner and posted for stakeholder comment.