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CSA Group

CSA – Code Development Process

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Electrical

Overview

1. CSA Group
2. Canadian Electrical Safety System
3. Background - Canadian Electrical Code, Part I (CEC)
4. Committee Structure
5. Canadian Electrical Code Development Process
6. Code Adoption

Vision

'Creating a Better, Safer, More Sustainable World Where Standards Work for People and Business'

CSA GROUP – Key Facts

- Established in 1919
- Independent, not-for-profit
- Leader in standards development, product testing and certification, consumer product testing

A Trusted Advisor

- 93 years old
- 1650 Employees
- 8,500 Engaged and Committed Members
- 1300 Standards Technical Committees
- 88000 customers globally use CSA products and services
- 35 offices in 14 countries
- 3000 + standards in 54 technologies
- CSA marks appear on billions of qualified products worldwide

Purpose

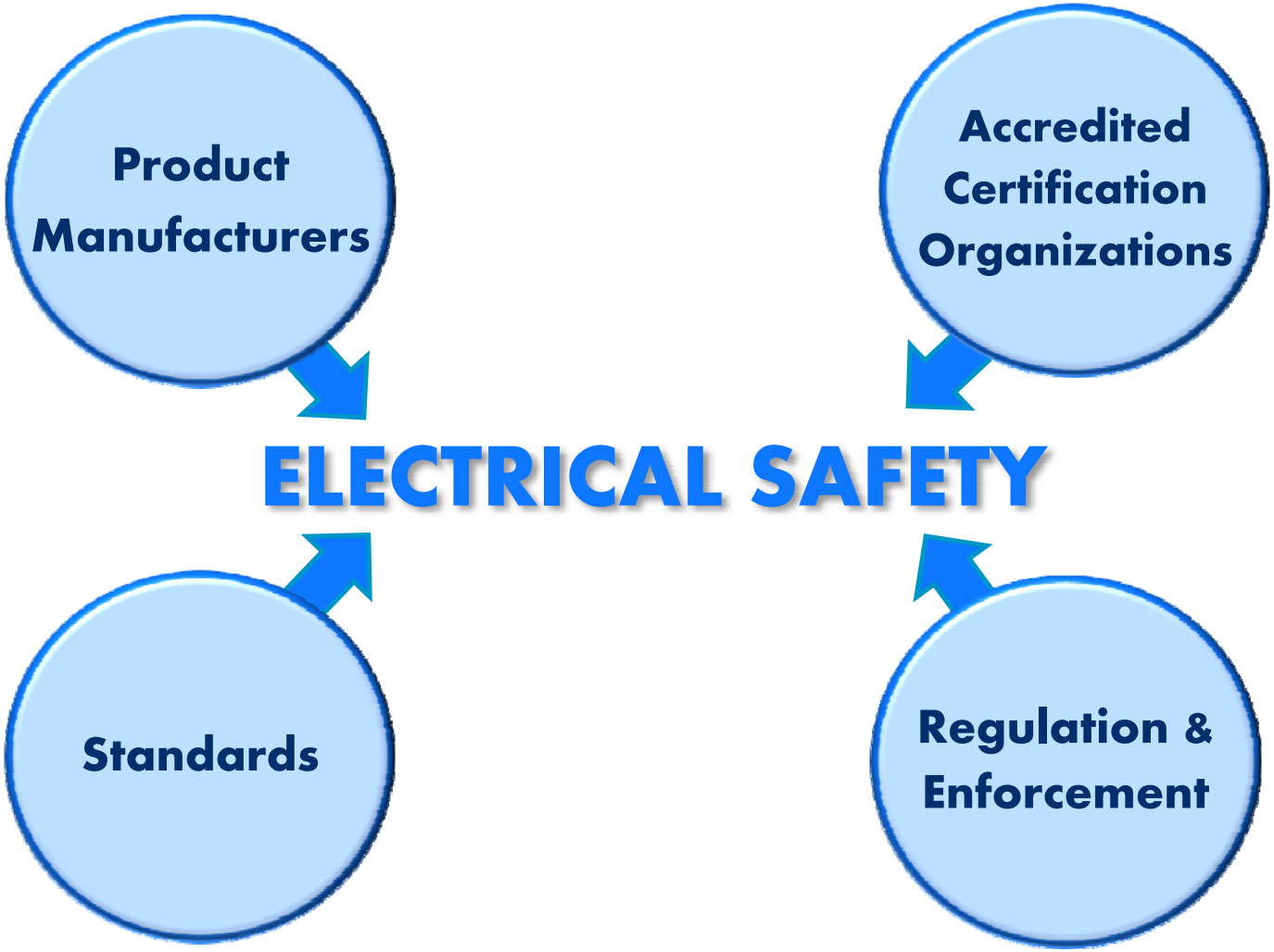

•To prevent
•Injuries
•and fatalities
•Concern and care
•for people
•CSA
•Group
•Drive Sustainability
•Protect Environment
•Social Good
•Financially Responsible
•Personal and corporate integrity

CSA Marks

CSA marks appear on billions of products worldwide

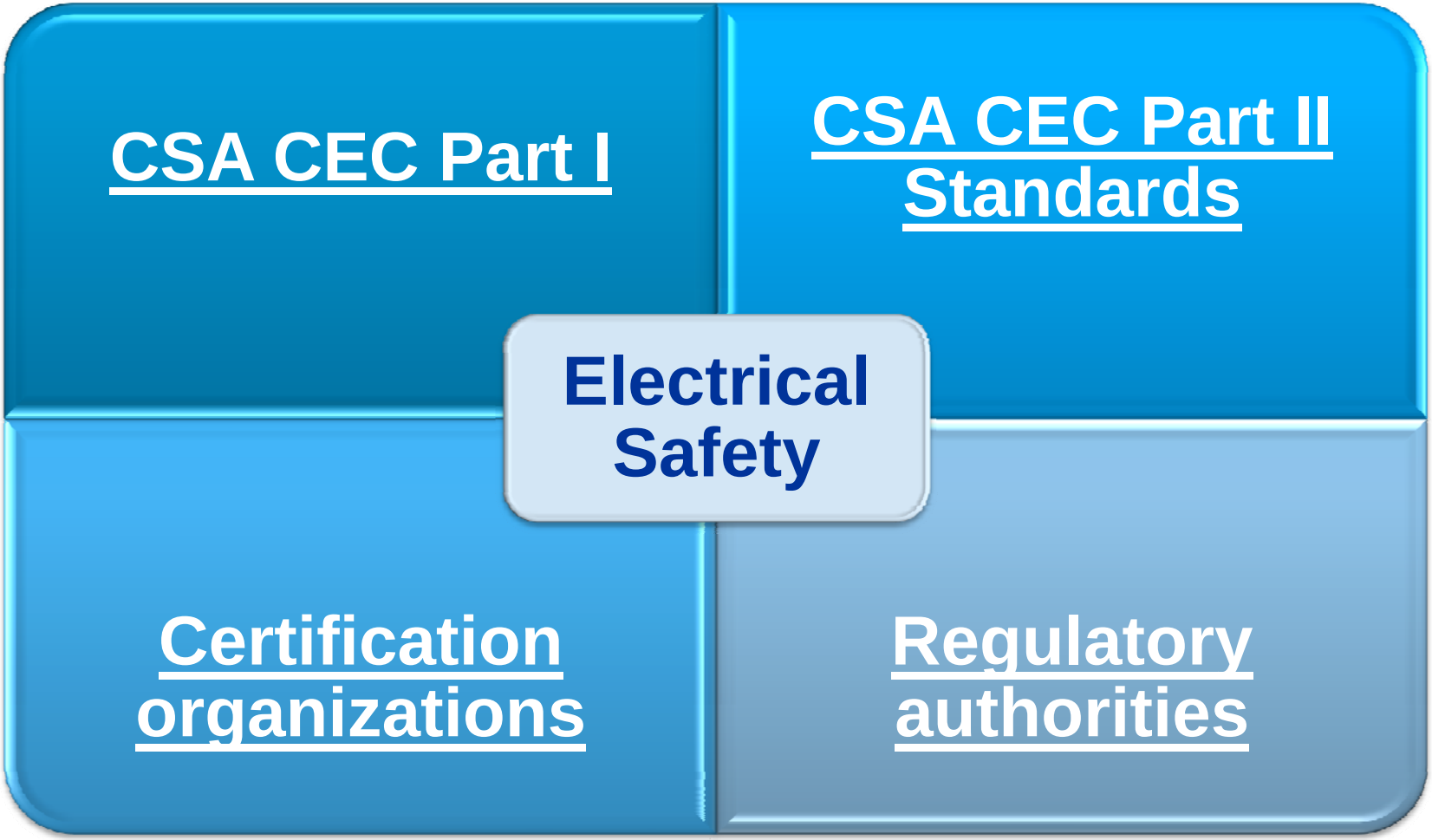
1. The Canadian Electrical Safety System

Canadian Electrical Code, Part I



Canadian Electrical Code, Part I

Connecting the dots



2. Background - Canadian Electrical Code, Part I (CEC)

Canadian Electrical Code, Part I

- "*The object of this code is to establish safety standards for the installation and maintenance of electrical equipment.*"
- First Code published 1927
- 22st edition published January 2012
  - Living document
- Adopted as electrical safety regulation by all Provinces and Territories and by the Federal Government*

**Electrical safety is a Provincial / Territorial responsibility*

Canadian Electrical Code, Part I

Code Statistics:

- 260 committee members
- 700 committee positions
- 41 voting TC members representing one of three balanced matrix categories:
  - **Regulatory (Alberta Municipal Affairs, BCSA, ESA,, SaskPower, etc.)**
  - **General Interest (Consumers, Colleges, Universities, Labour, National Research Council, etc.)**
  - **Operator / Producer (Manufacturers, Contractors, Utilities, Telecommunications, etc.)**
- 23 Associate TC members

Canadian Electrical Code, Part I

Code Statistics:

- 272 proposals processed during CEC Part I Code cycle
- 10 interpretations approved
- 175 revisions approved
- 53 submitted by Alberta residents
  - 12 – Regulatory Authorities
  - 7 – Educators / Trainers
  - 20 – Engineering Consultants / Designers
  - 14– Industry associations, manufacturers, etc.

Canadian Electrical Code, Part I

Other countries represented:

- 4 – associate from USA (NEMA, UL, IAEI, NFPA)
- 2 – associate from Bahamas (adopt the CEC)
- 2 – associate from Mexico
- 15 – subcommittee members from USA

CEC Part I representatives to other countries

- 5 – Part I TC members on NEC TCCs and CMPs
- 8 – Part I TC members on CSC/IEC TC64

CEC / NEC Ampacity Correlation Task Force

- 7 – members representing USA
- 11 – members representing Canada

Canadian Electrical Code, Part I

Examples of committee member affiliation:

All Provincial Regulatory Authorities ▪ Federal Government (Public Works Canada) ▪ Railways ▪ **Accredited Inspection Agencies** ▪ Committee on Use of Electricity in Mines ▪ All Territorial Regulatory Authorities ▪ Consultants ▪ **NAIT** ▪ **Association of Petroleum Producers** ▪ Consumers ▪ Communication Industry ▪ EFC (Electrical Equipment Manufacturers) ▪ Conformity Assessment Organizations ▪ **IBEW (Labour)** ▪ Marina Operators ▪ CECA (Contractors) ▪ Municipal Regulatory Authorities ▪ NECA (Contractors) ▪ **Alberta Safety Codes Council** ▪ NEC (National Electrical Code) ▪ **Accredited Municipal Inspection Agencies** ▪ NRC (National Research Council) ▪ CEA (Canadian Electricity Association) ▪ **Canada West Ski Areas Association** ▪ Elevator and Escalator Association ▪ Fire Insurers ▪ Bahamas ▪ Fire Protection ▪ Fire Marshals ▪ **Workers Safety Boards** ▪ Natural Resources Canada ▪ **Telus** ▪ NEMA (National Electrical Manufacturers Association) ▪ BCIT ▪ Departments of Labour ▪ Forest Products Association of Canada ▪ CHBA (Canadian Homebuilders Association) ▪ Pool and Hot Tub Council of Canada ▪ **IAEI (Int'l Association of Electrical Inspectors)** ▪ Sign Manufacturers and Erectors ▪ IEEE (Institute of Electrical and Electronic Engineers) ▪ Theatres' and Arts Centers ▪ **Healthcare** ▪ Broadcasters ▪ **Solar Power Installers** ▪ Mexico (ANCE) ▪ and many others...

Canadian Electrical Code, Part I

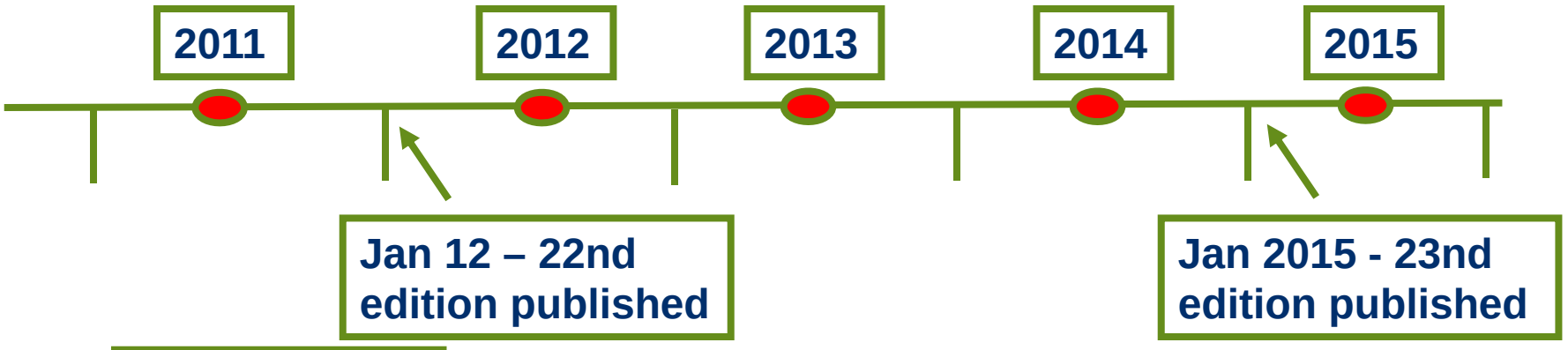
What is the CEC Code Cycle?

- The CEC is published every three years.
- Latest edition published January 2012
- Next edition publishes in January 2015
- Open Process - proposals can be submitted anytime and by any person.
  - A proposal should include:
    - Proposed Change,
    - Supporting rationale
    - Impact analysis

...continued

Canadian Electrical Code, Part I

CEC Code Cycle (continued)



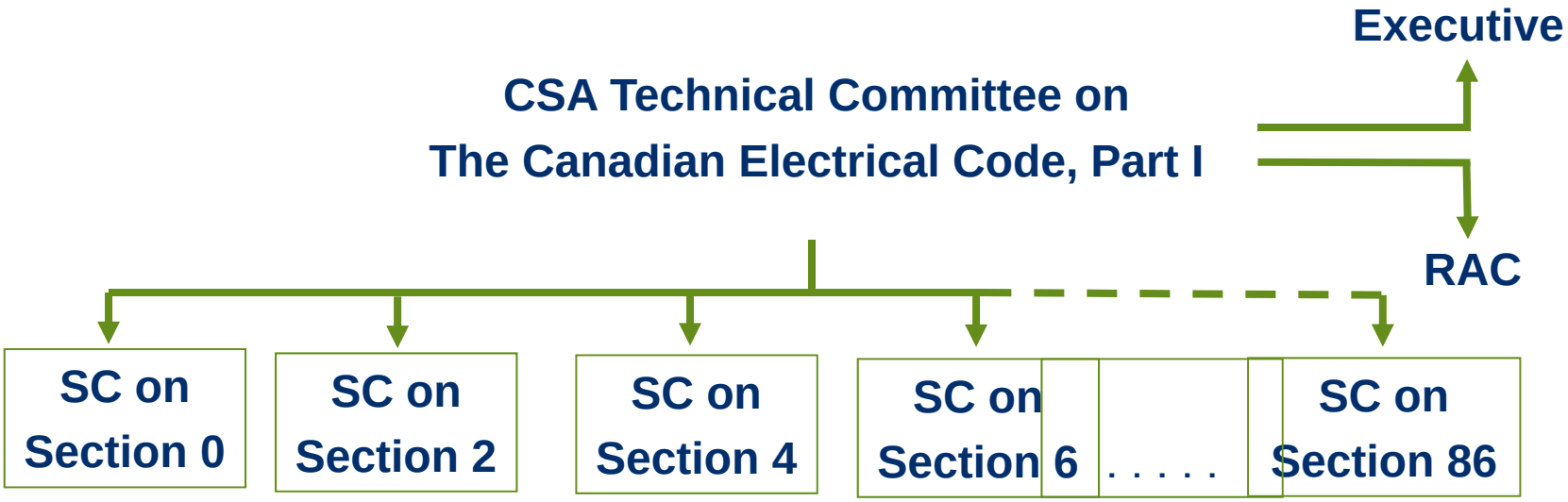
Approved amendments & interpretations are consolidated into Memorandums of Revision (MOR) – safety, technology, NEC alignment

- **New MOR compiled and issued annually**

- **At end of 3 year cycle, MORs consolidated and incorporated into new edition of Code**

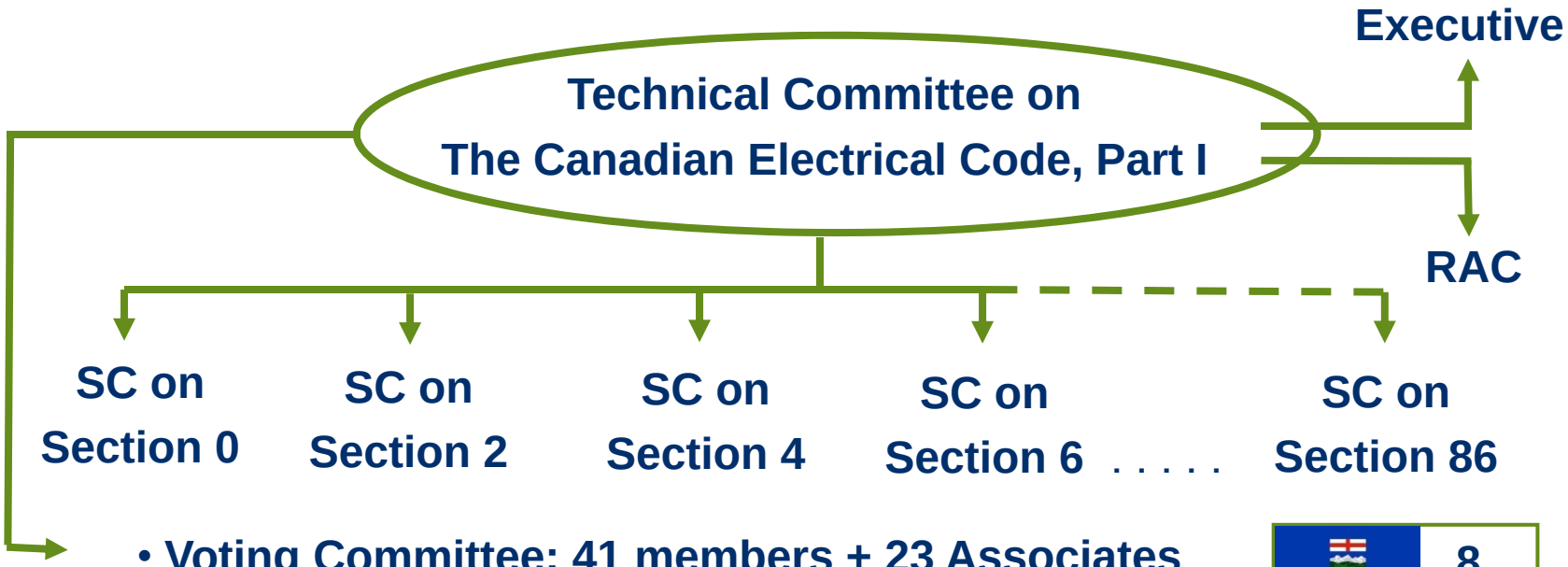
3. Committee Structure

Canadian Electrical Code, Part I



- There are 43 Code Sections
- Each Section maintained by a CSA Subcommittee
- All Subcommittees report to the CEC, Part I Technical Committee
- Regulatory Authority Committee
- Executive Committee
- CSA is accredited by the Standards Council of Canada

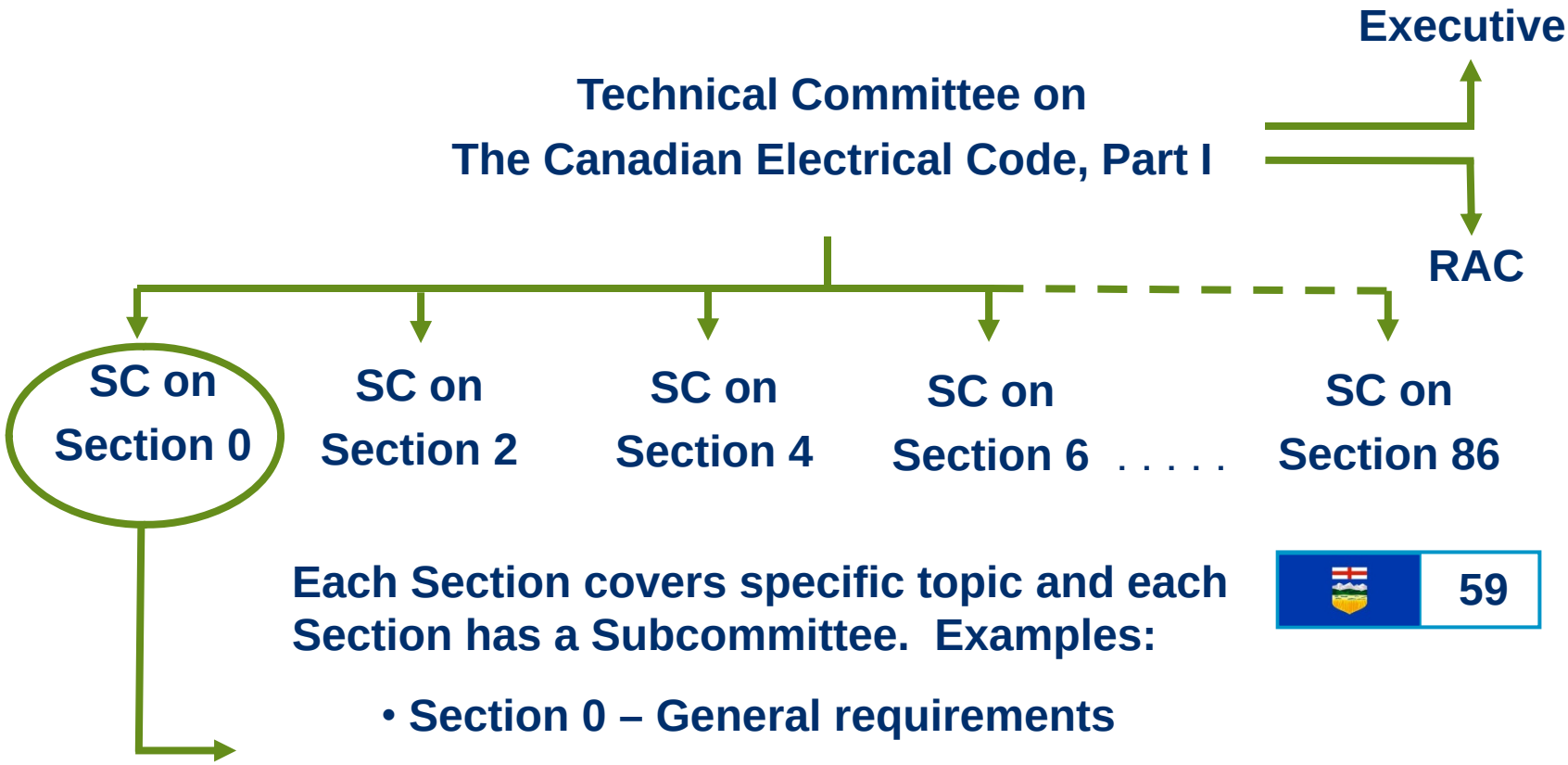
Canadian Electrical Code, Part I



- Voting Committee: 41 members + 23 Associates
- <u>All</u> geographical areas of Canada are represented
- <u>All</u> stakeholder groups are represented
- Balanced Matrix (no single group can out-vote the other two)

Regulators	Min 11	Max 16
Manufacturers	Min 9	Max 14
General Interest	Min 9	Max 14

Canadian Electrical Code, Part I



Each Section covers specific topic and each Section has a Subcommittee. Examples:

- Section 0 – General requirements
- Section 32 – Fire Alarm & Fire Pumps

Typical Subcommittee consists of Chair and 8 or more Subject Matter Experts

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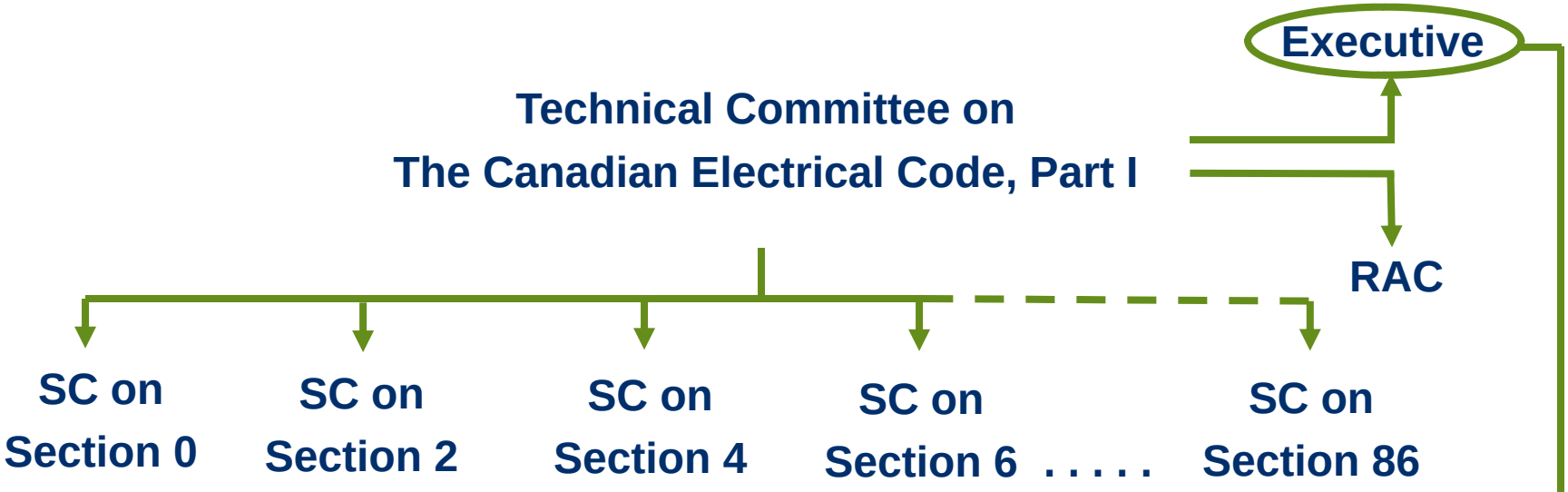
Canadian Electrical Code, Part I



Executive Committee

- Representatives from each Matrix Category
- Direction / Management / SC workload

Canadian Electrical Code, Part I

RAC – Regulatory Authority Committee

- **16 Regulatory Authority Members of the TC: 10 Provinces, 3 Territories and 3 Municipalities**
- **Narrow and non-technical focus: Review language of new amendment from enforcement / legal standpoint – Not a veto.**
- **Regulatory TC member also votes as RAC member**

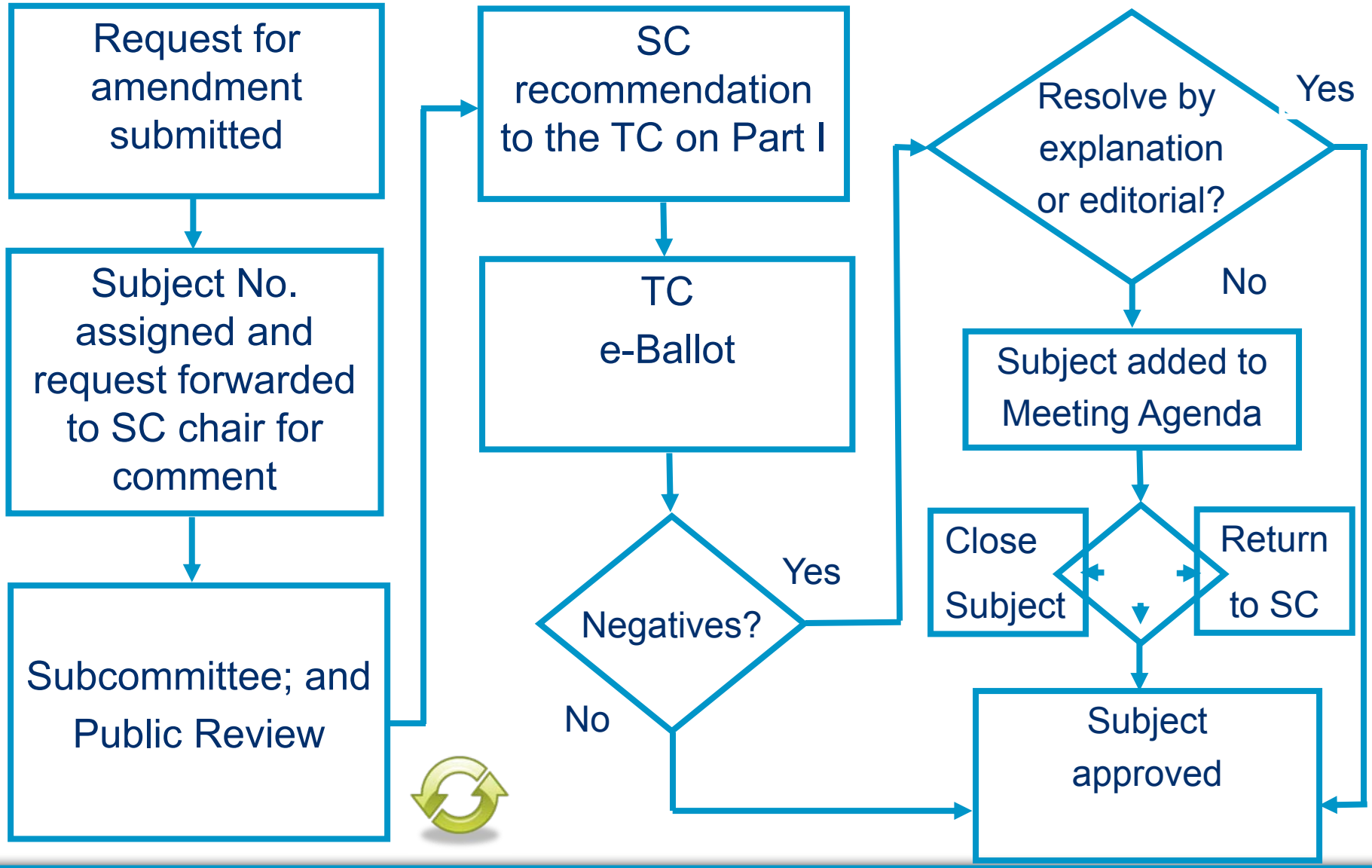
4. CSA Code Development Process

Canadian Electrical Code, Part I

Developed using CSA Consensus Process

- Open process
- Proposals reviewed by Subcommittee
- Every proposal undergoes public review
- Subcommittee recommendation sent to Technical Committee for ballot approval
- Any negative ballots resolved
- Every 3 years – approved amendments incorporated and new edition of Code published
- Code is dynamic - 100 to 200 proposals being processed at any one time

Canadian Electrical Code, Part I



Canadian Electrical Code, Part I

Requirements for approval:

- Based on CSA's accreditation requirement

  - **<u>Greater than</u> 50% of voting membership vote affirmative**

    AND

  - **<u>At least</u> 2/3 of the votes cast are affirmative**

    AND

  - **<u>All</u> negative ballots must be "dispositioned"**

6. Adoption of the CEC

P&T Adoption

- Process varies between jurisdictions
  - Adopt automatically on publication
  - Conduct a Public Consultative process prior to adoption
    - The downside of amendments is that you loose harmonization i.e. uniformity across Canada

CSA Goals

- Common code utilized across all jurisdictions
- Adopted throughout Canada within 6 months of publication (as published - no technical deviations)
- Common effective date across the country

Addressing the Challenges

- Comprehensive Impact Analysis
- Expanded Public Review
- Enhanced Education and Training Methods
  - Working with Safety Codes Council , Safety Code Officer Update training.
  - Meet regularly with Safety Codes Council to assess training and other needs

Questions

Thank You

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