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**CSA
Group**

CSA – Code Development Process

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**CSA
Group**

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

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

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



- 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

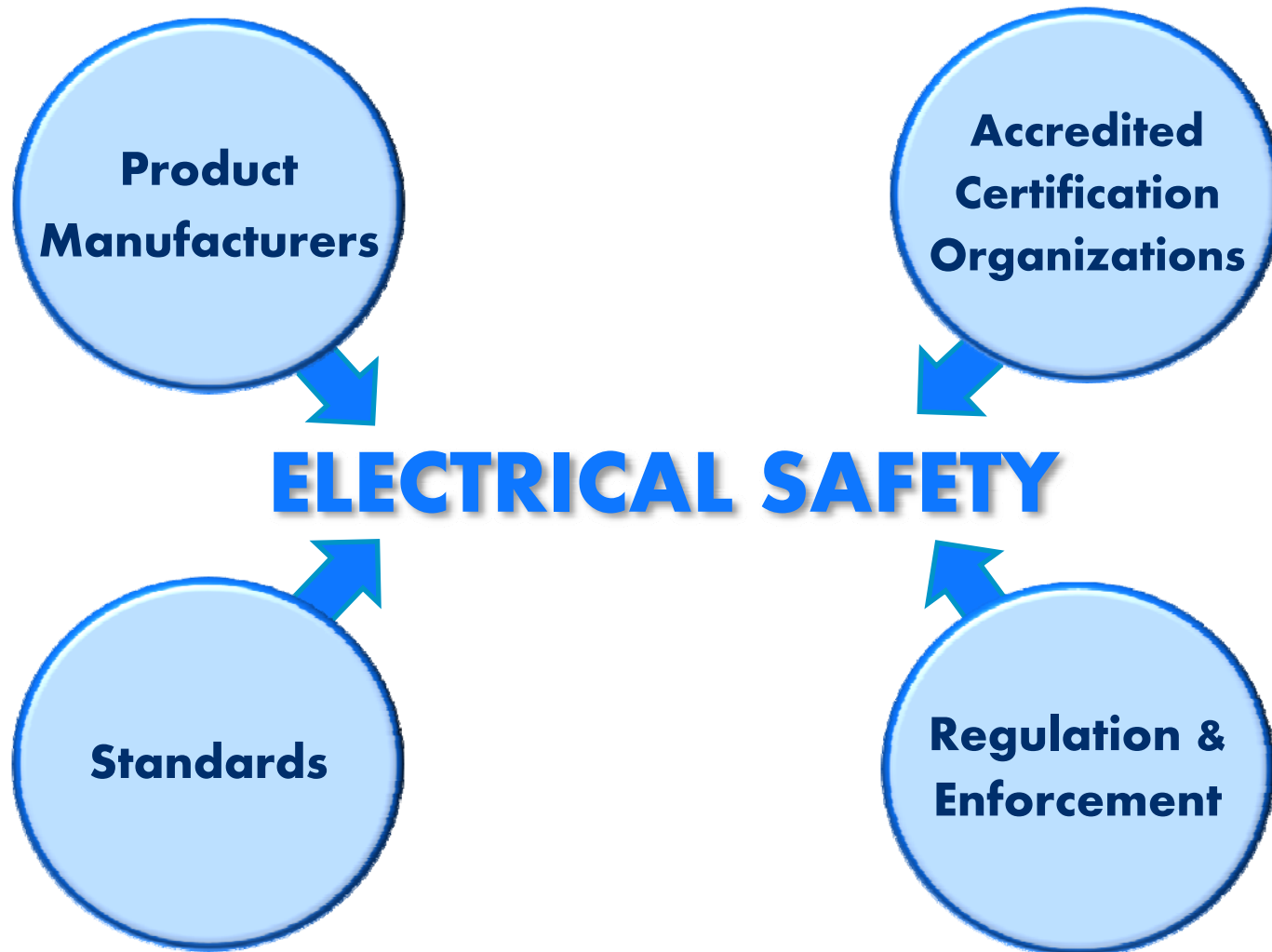


CSA marks appear on billions of products worldwide



1. The Canadian Electrical Safety System

Canadian Electrical Code, Part I



Connecting the dots

CSA CEC Part I

CSA CEC Part II
Standards

**Electrical
Safety**

Certification
organizations

Regulatory
authorities

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

- *“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*

Code Statistics:

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

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.

Other countries represented:

- 4 – associate from USA (NEMA, UL, IAEE, 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

Examples of committee member affiliation:

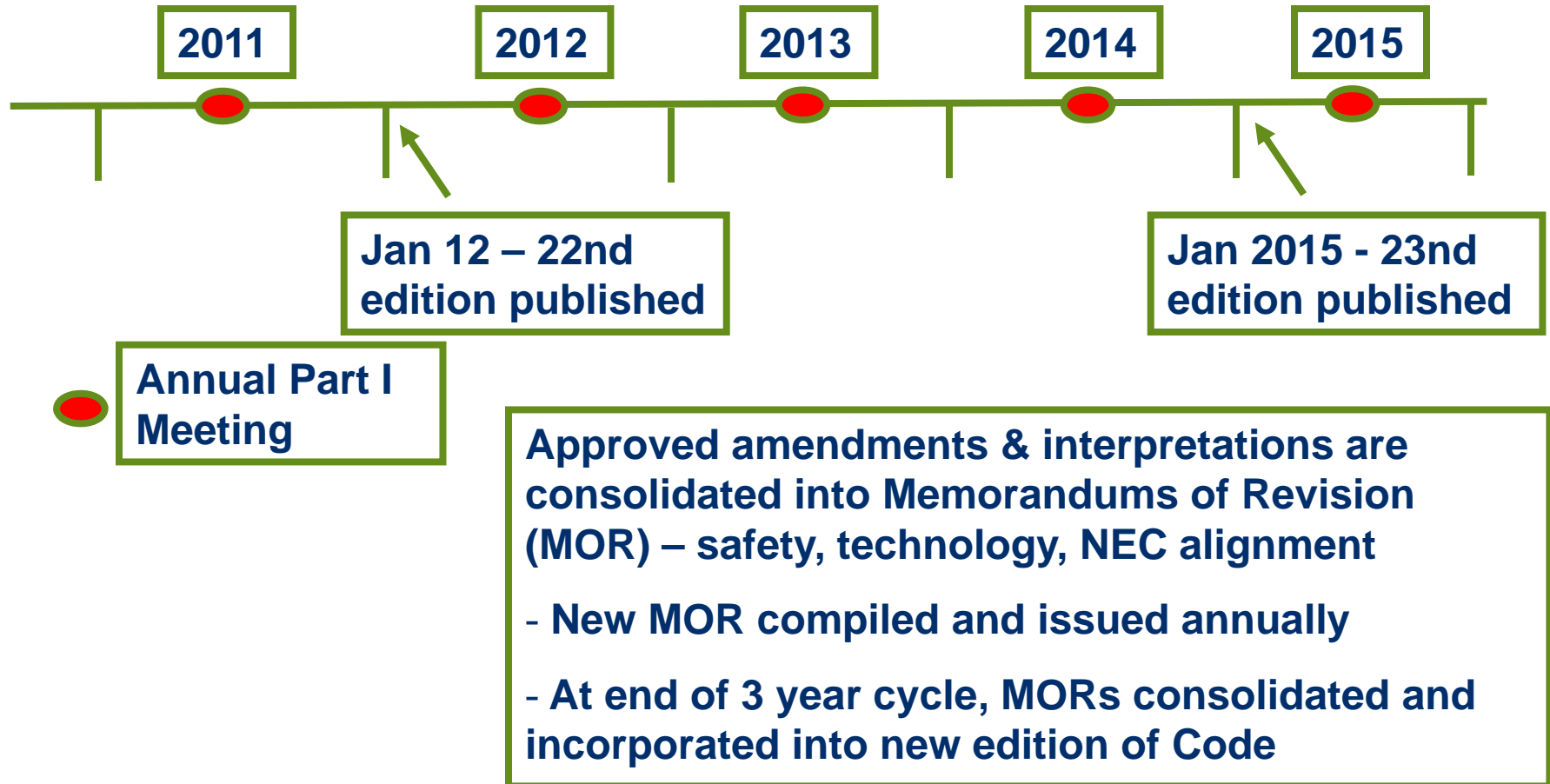
All Provincial Regulatory Authorities ▪ Federal Government (Public Works Canada) ▪ Railways ▪ **Accredited Inspection Agencies** ▪ Committee on Use of Electricity in Mines ▪ All Territorial Regulatory Authorities ▪ Consultants ▪ **NAIT** ▪ **Association of Petroleum Producers** ▪ Consumers ▪ Communication 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...

What is the CEC Code Cycle?

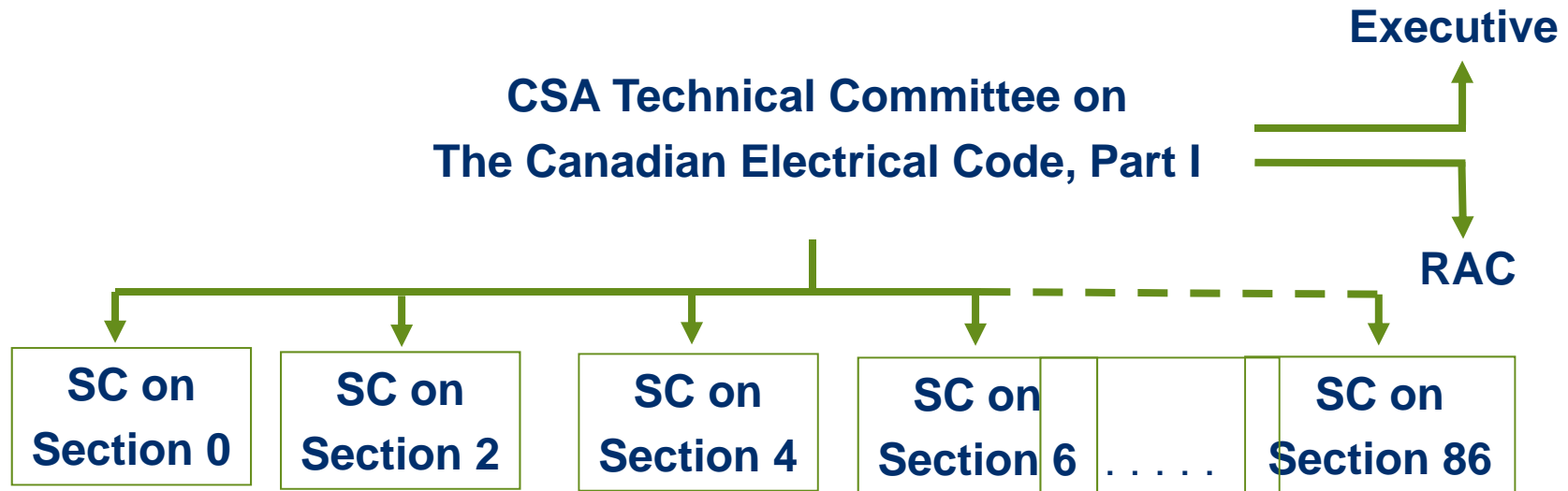
- The CEC is published every three years.
- Latest edition published January 2012
- Next edition publishes in January 2015
- Open Process - proposals can be submitted anytime and by any person.
 - A proposal should include:
 - Proposed Change,
 - Supporting rationale
 - Impact analysis

...continued

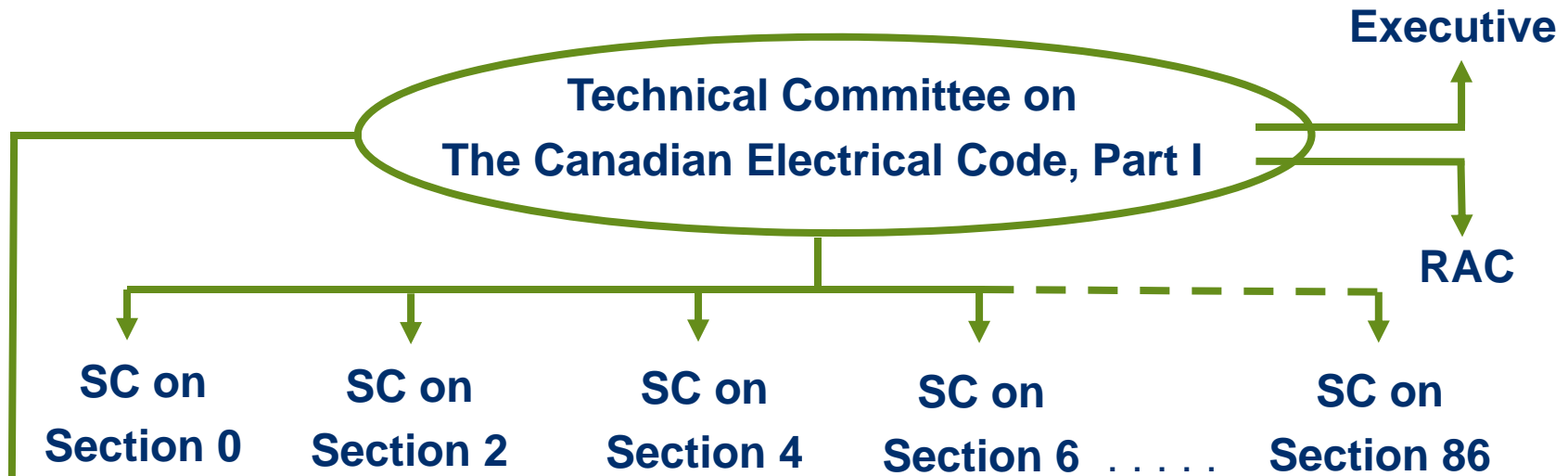
CEC Code Cycle (continued)



3. Committee Structure



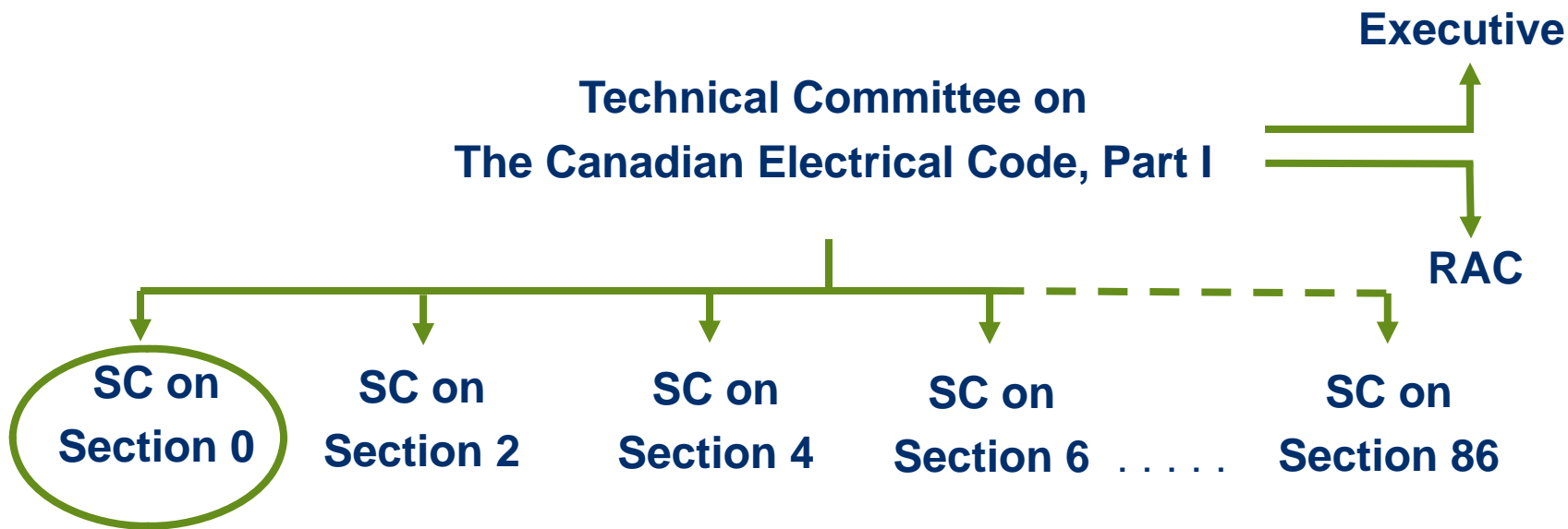
- There are 43 Code Sections
- Each Section maintained by a CSA Subcommittee
- All Subcommittees report to the CEC, Part I Technical Committee
- Regulatory Authority Committee
- Executive Committee
- CSA is accredited by the Standards Council of Canada



- Voting Committee: 41 members + 23 Associates
- All geographical areas of Canada are represented
- All 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

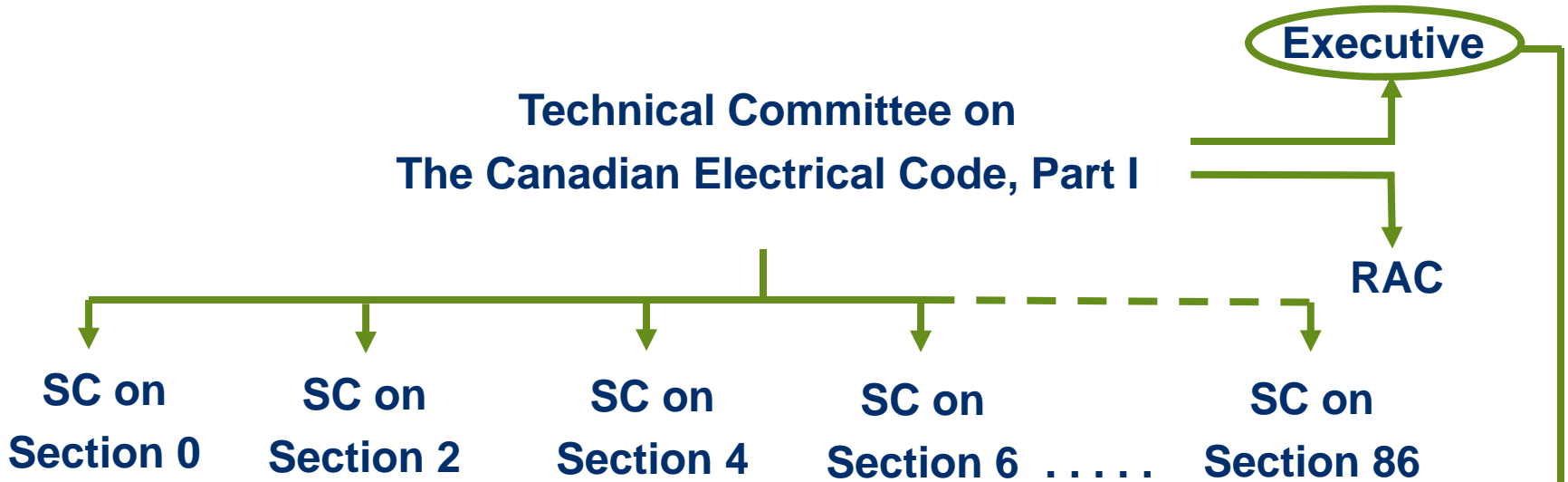


Each Section covers specific topic and each Section has a Subcommittee. Examples:

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

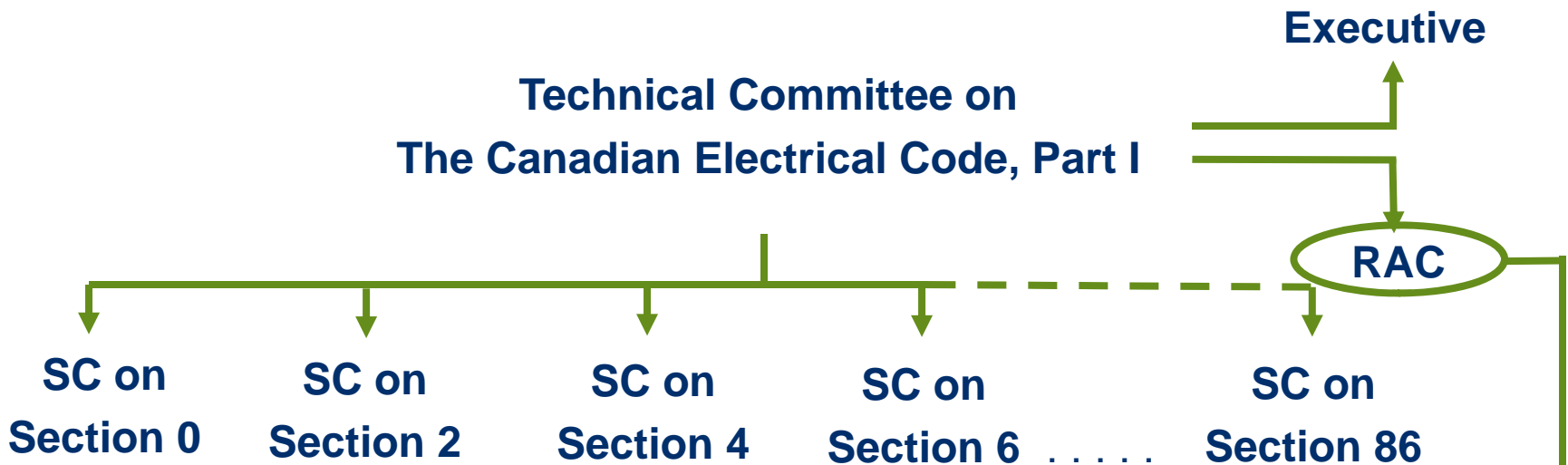
Typical Subcommittee consists of Chair and 8 or more Subject Matter Experts





Executive Committee

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



RAC – Regulatory Authority Committee

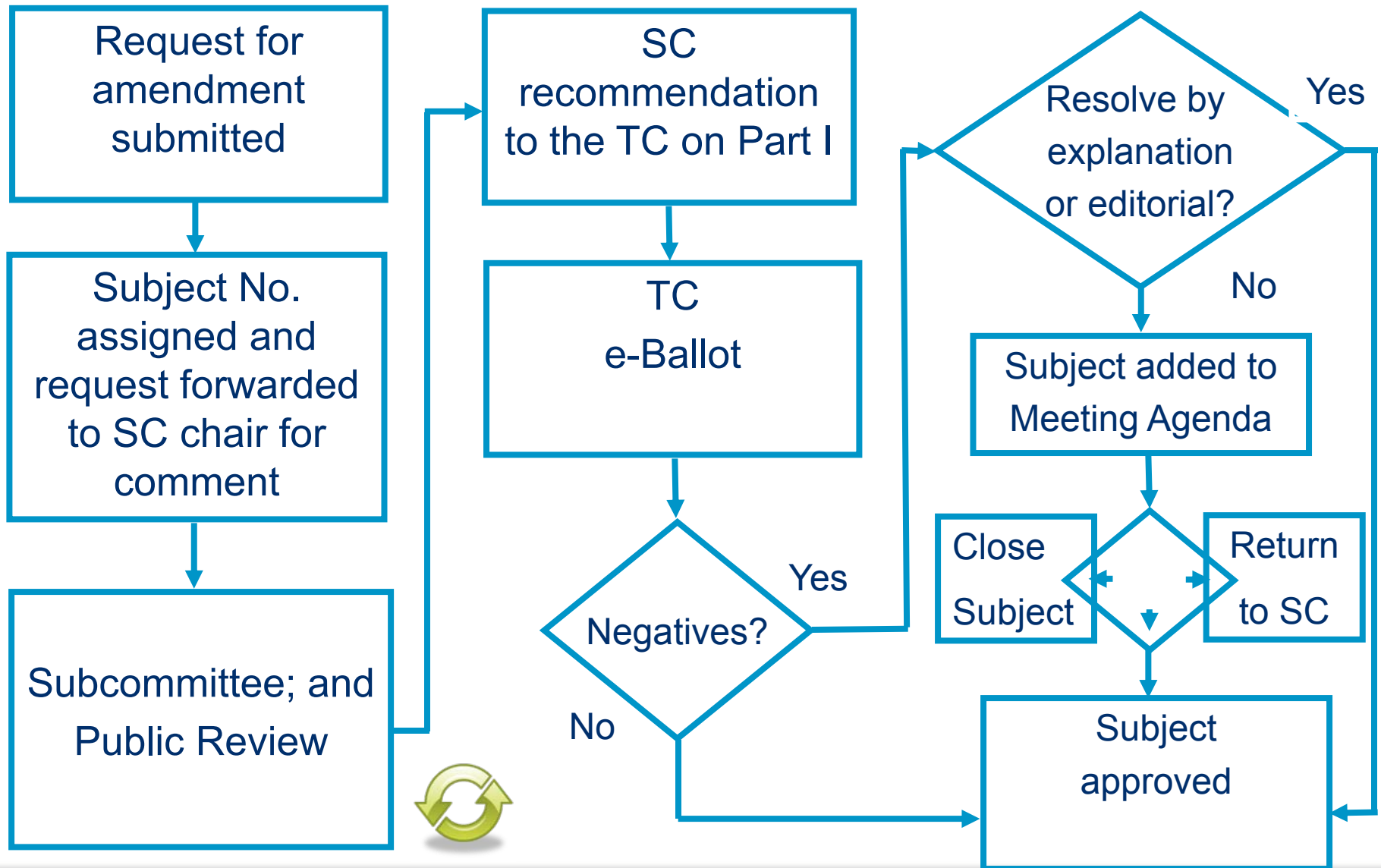
- 16 Regulatory Authority Members of the TC: 10 Provinces, 3 Territories and 3 Municipalities
- Narrow and non-technical focus: Review language of new amendment from enforcement / legal standpoint – Not a veto.
- Regulatory TC member also votes as RAC member

4. CSA Code Development Process

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



Requirements for approval:

- Based on CSA's accreditation requirement
 - Greater than 50% of voting membership vote affirmative
AND
 - At least 2/3 of the votes cast are affirmative
AND
 - All negative ballots must be “dispositioned”

6. Adoption of the CEC

- Process varies between jurisdictions
 - Adopt automatically on publication
 - Conduct a Public Consultative process prior to adoption
 - The downside of amendments is that you lose 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



**CSA
Group**

Thank You

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