



National Research
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CANADA'S NATIONAL ENERGY CODES

October 25, 2019
**Green Development Standards
Workshop**

Andrew Pride

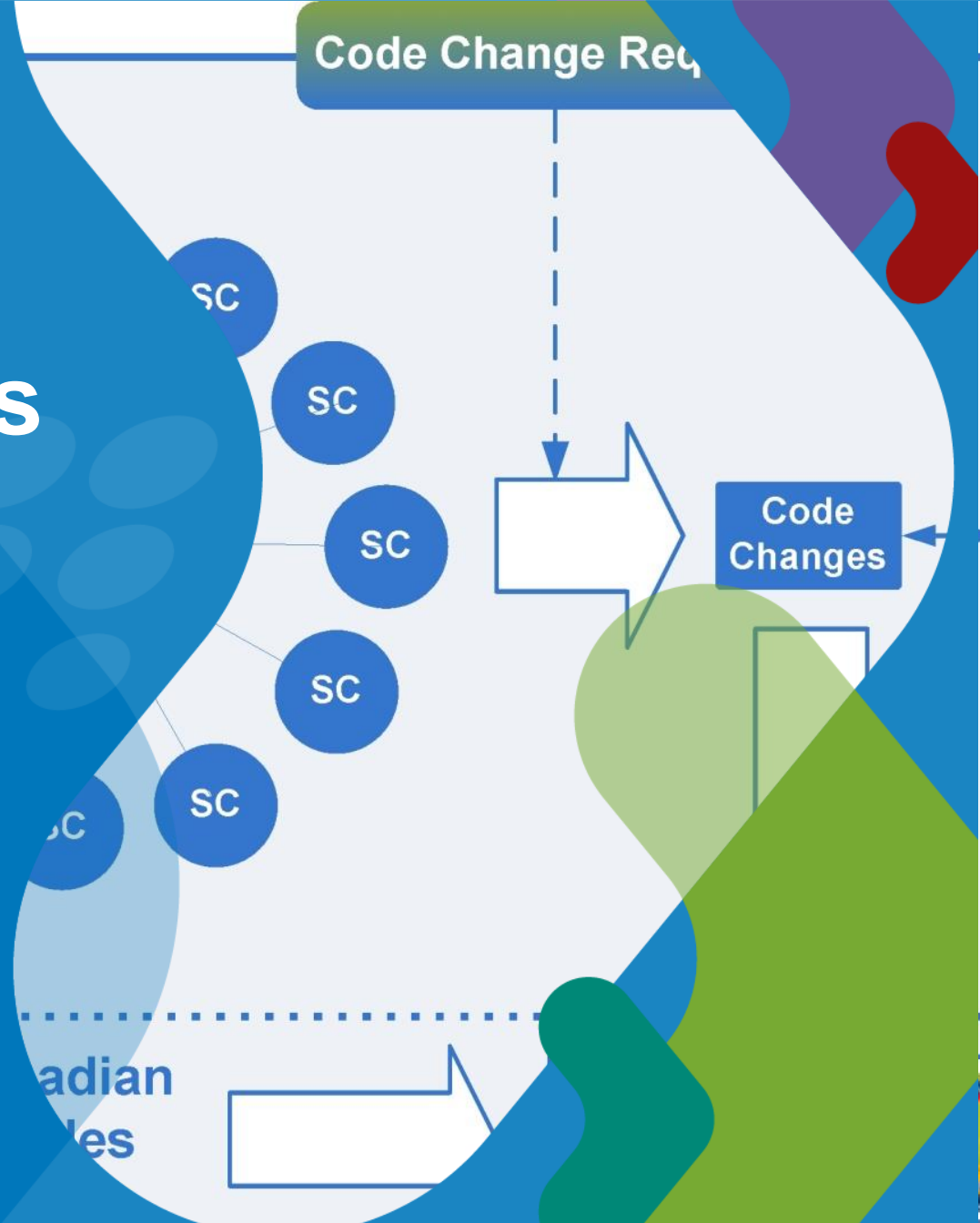
Andrew Pride Consulting
Chair, Standing Committee
on Energy Efficiency



Outline

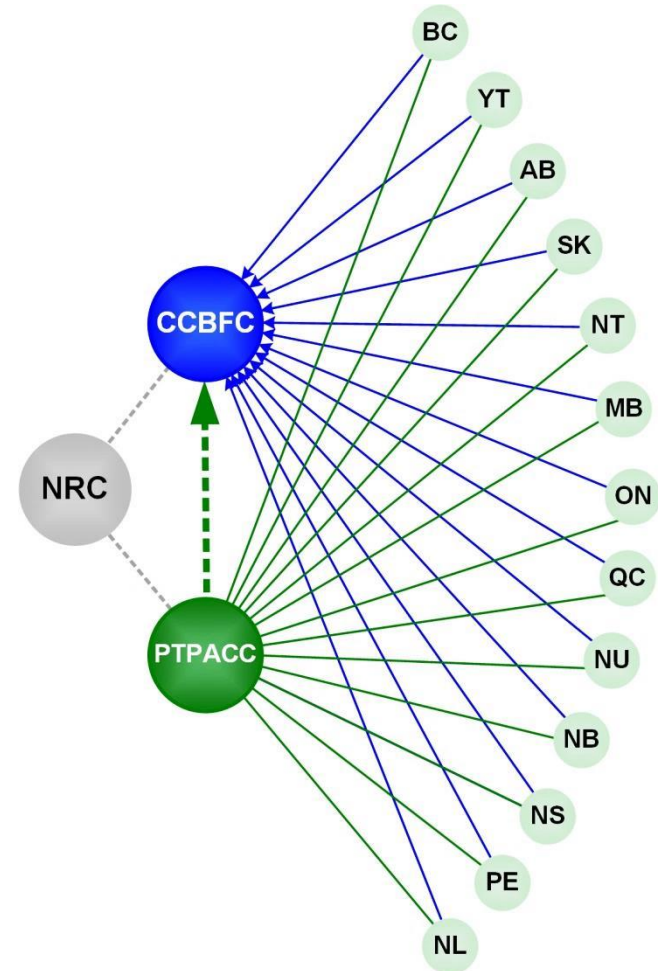
1. National Code Process
2. Energy Codes Proposed Changes
3. Alterations to Existing Buildings

Codes Process

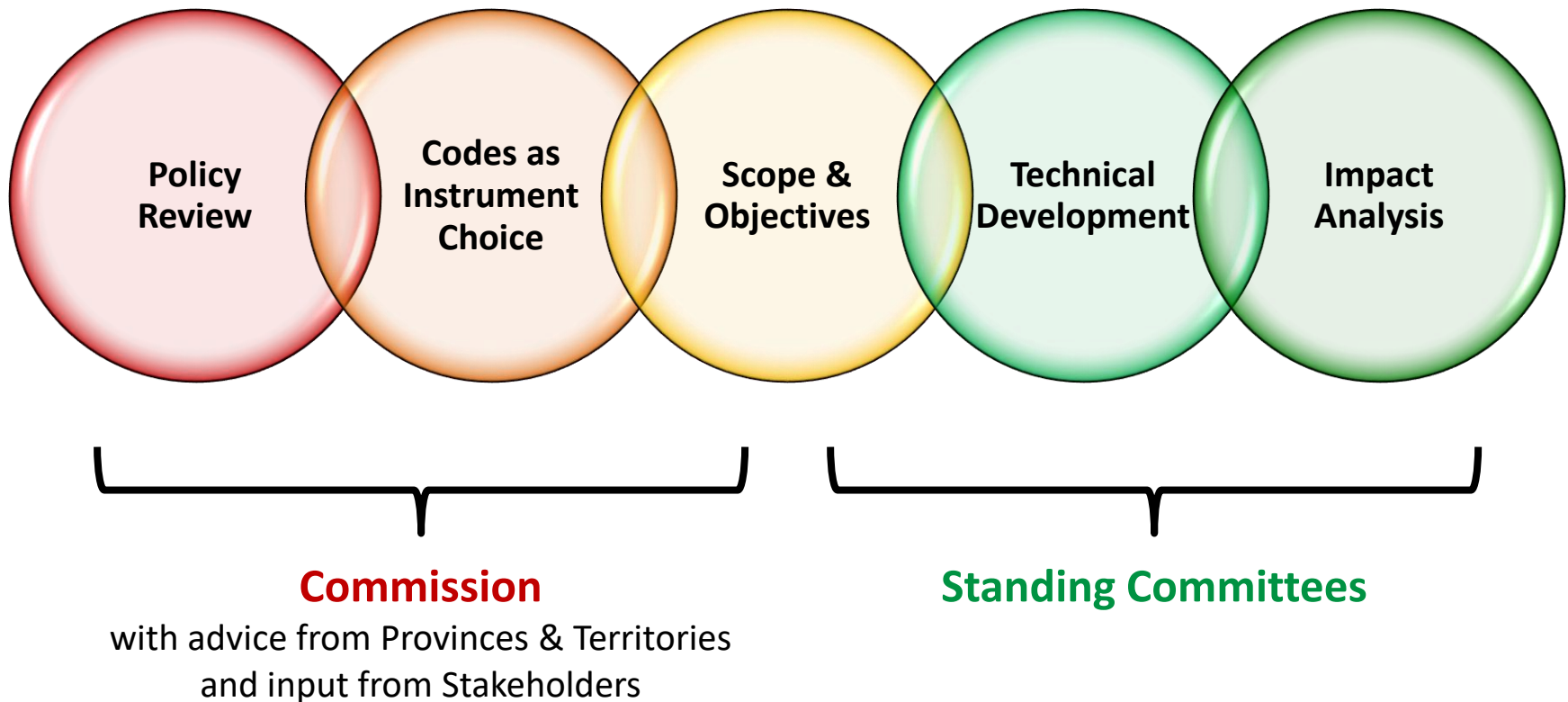


Codes & Guides Development System

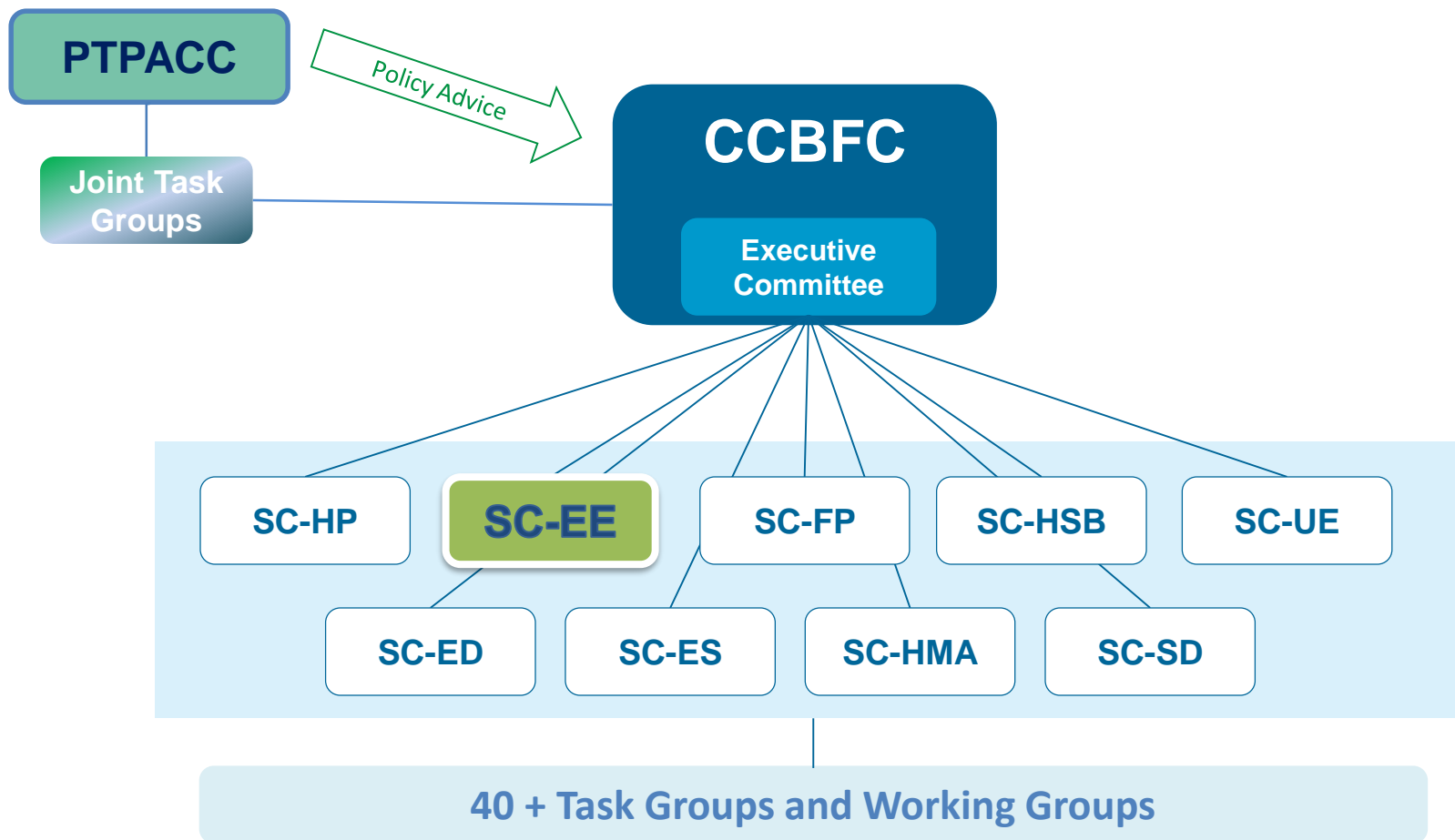
- › Independence
- › Balance
- › Consensus
- › Expertise
- › Evidence
- › Neutrality
- › Legislative Authority
- › Policy Goals



Expanding the Scope / Policy Review

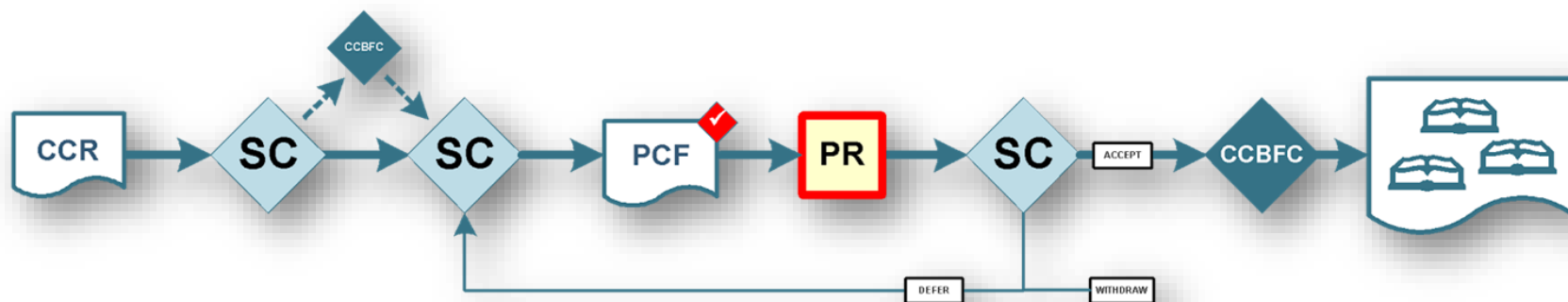


CCBFC Committees & Interactions



Codes Development Process

- Process is open, transparent, accessible and continuous and consensus-based.
- Key Features
 - One common process for all codes
 - Balanced by region and interest categories
 - Substantial public involvement



CODES PROCESS

What's going on right now?



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CODES CANADA



Energy Efficiency

NECB and NBC 2020
Proposed Changes



Outline

1. Airtightness testing
2. Fenestration and door areas
3. Thermal transmittance of opaque assemblies and fenestration
4. Lighting
5. HVAC and service water heating
6. Alignment with EnerGuide system
7. Tiered performance requirements

Building envelope & Air Tightness

Fenestration and door area ratios (FDWR)

Thermal transmittance (opaque & fenestration)

Air Tightness & Thermal Bridging



Lighting

NECB Lighting Requirements

Interior

Exterior



HVAC and SWH Equipment performance



Alignment with EnerGuide system



NBC Subsection 9.36.5.

EnerGuide Rating System as an acceptable compliance path

Alignment with EnerGuide Rating System



Tiered performance requirements

NECB Part 9

- **Four Tiers**
- **Only energy use is targeted**

NBC Subsection 9.36.6.

- **Five Tiers requiring:**
 - **Overall energy**
 - **Building envelope**
 - **Airtightness**

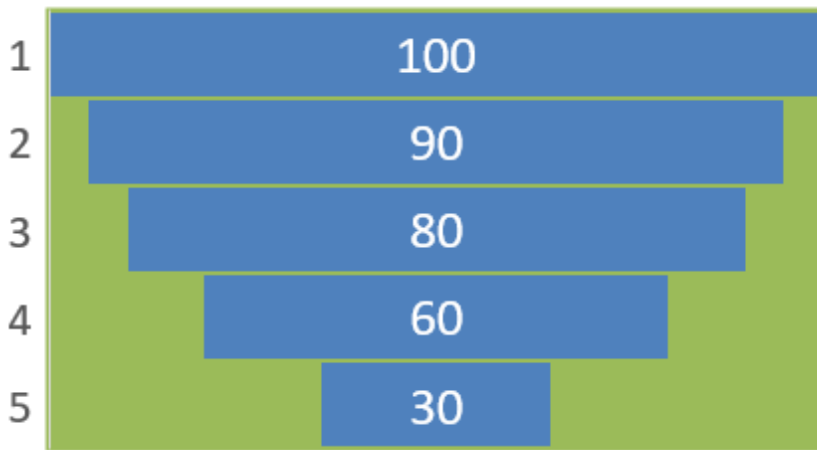
NBC Subsection 9.36.7.

NBC Subsection 9.36.8.

- **Prescriptive list of measures to achieve Tiers (only 1 & 2 for now)**
 - **only Tier 1 & 2 for now**

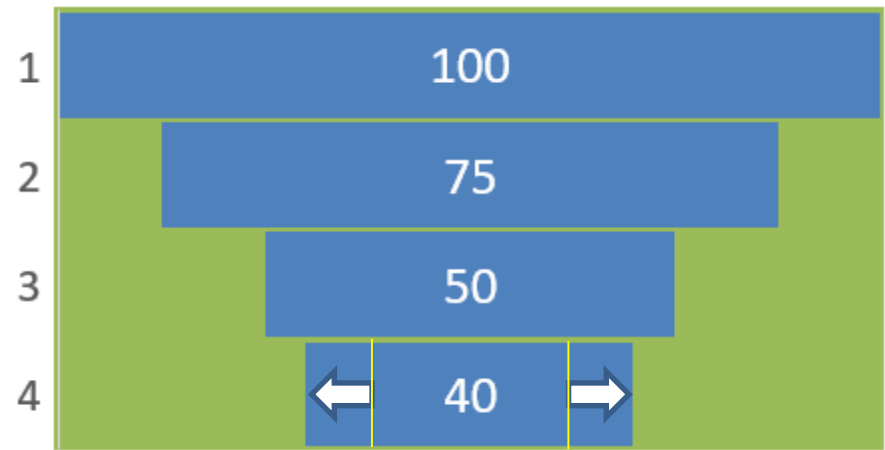
ENERGY USE TIERS

› NBC Part 9 Housing Tiers



Small Homes receive automatic 10% energy credit

› NECB Tiers



Tier 4 shifted from 25% to 40% For 2020 Code Cycle



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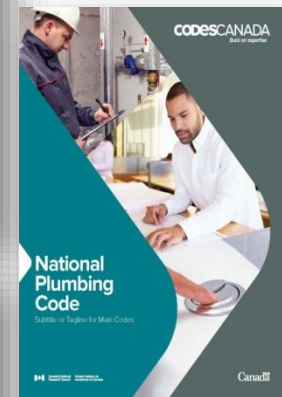
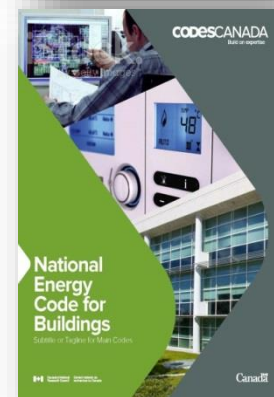
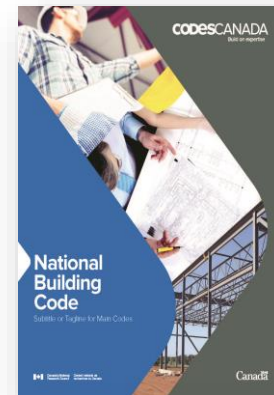
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Alterations to Existing Buildings



Location of requirements

- AEB measures are proposed to be **in Codes** not in guidelines
- Proposed **new parts** in
 - NBC, NECB and NPC
- Need for changes in NFC
 - to be reviewed



Scope & Application

➤ Application

- Buildings
- Houses



➤ Scope

- Energy efficiency is a priority,

but ...

- All subjects need to be addressed to avoid unintended consequences



Goal



Improve
performance
of existing
stock



Create undue
burden and
unintended
consequences

Requirements: Concept

Minor Alteration

- Code applies to
 - project area only
 - element(s) being altered

Major Alteration

- Code applies to
 - project area
 - all directly impacted systems
 - some indirectly impacted systems

Relaxations and Exemptions apply where current code requirements are not feasible or very costly



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