

#### International Building Regulatory Stocktake:

Comparing Building Regulatory Systems in Australia, New Zealand and the United States

Presented by ICC Oceania

11/12 July 2023

#### Welcome & Housekeeping

- This webinar will be recorded
- We will have time at the end for questions and discussion
- Audience members are muted with videos off by default
- If you have a question, please use the Q&A function at any time to submit the question or indicate your interest in being recognized
  - We will unmute you or ask your question during the Q&A period at the end of the webinar session



### ICC Oceania

www.iccsafe.org/oceania

- The International Code Council (ICC) is the leading global source of building safety solutions that include model building codes and standards, product evaluation, testing, inspection, certification, accreditation and technology.
- ICC's solutions are used to ensure safe, affordable and sustainable communities and buildings worldwide.
- ICC opened its Oceania regional office in Canberra in 2022 to broaden the awareness, understanding of and access to the ICC Family of Solutions, which are valuable tools for use by designers, building officials, manufacturers, and regulators.

## Moderator

Neil Savery

Managing Director,

ICC Oceania



# Speakers



Peter Laurenson
General Manager, Scope Resources
BOINZ President



Stephen Natilli
National Director, McKenzie Group
AAC Board Member



Beth Tubbs

ICC Chief Fire Protection Engineer

# International Building Regulatory Stocktake

# Comparing Building Regulatory Systems in AUS / NZ / USA



Peter Laurenson – 12 July 2023





# AGENDA



NZ Regulatory System
Participants
Building Act & Building Code
Current Planned Regulation Changes
Challenges – Emerging Trends
Improvement Opportunities

#### **NZ Building Regulatory System**

One National System - Building Act & regulations
 Building Code - Performance Based
 Schedules - Building Types / Exempt work

#### Related Legislation

Residential Tenancies Act

**Home Improvement Regulations** 

Resource Management Act

Product regulations BPIR, Codemark, Modular

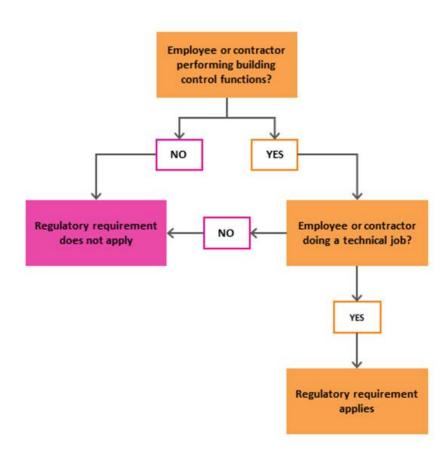
Change of use & Earthquake Prone Buildings



#### **Participants**

- Ministry of Building Innovation & Employment (MBIE)
   Central Regulator (Building Advisory Panel)
- Building Consent Authorities (BCAs)
   Councils, Territorial Authorities, Individuals
   Accreditation requirements
- Building Research Assn NZ (BRANZ)
- Standards NZ
- Peak Bodies BOINZ / NZIA / ENZ / FENZ
- Licenced Building Practitioners (LBPs)

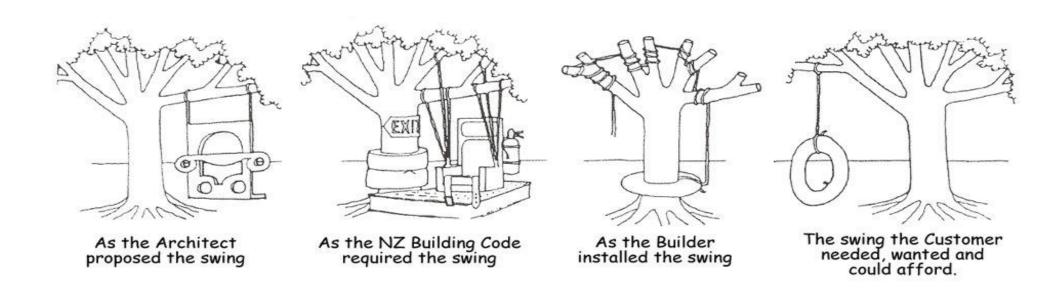
#### **Requirement for Qualifications**



#### 2.1 NEW ZEALAND HAS A PERFORMANCE-BASED BUILDING REGULATORY SYSTEM

The Building Act has two primary purposes:

- The Building Act regulates building work, establishes the licensed building practitioner regime and enables performance standards to be set so that:
  - people who use buildings can do so safely and without endangering their health
  - buildings have attributes that contribute appropriately to the health, physical independence, and wellbeing of the people who use them
  - people who use a building can escape from the building if it is on fire
  - buildings are designed, constructed, and able to be used in ways that promote sustainable development.
- The Building Act promotes the accountability of owners, designers, builders, and BCAs all of whom have responsibilities to ensure that building work complies with the Building Code.



#### **BUILDING ACT 2004**

#### **BUILDING REGULATIONS**

THE NEW ZEALAND BUILDING CODE

**OBJECTIVE** 

**FUNCTIONAL** REQUIREMENT

**PERFORMANCE** 

Comparison to compliance document

#### **NON-MANDATORY**

#### **COMPLIANCE DOCUMENTS**

Verification Methods

Acceptable Solutions

Determination

NZS 4121

**Product Certification** 

**Energy Work Certificate** 

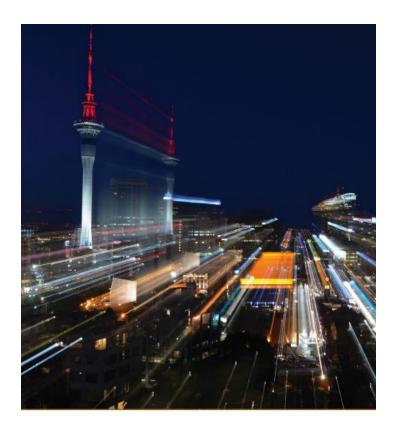
#### **ALTERNATIVE SOLUTIONS**

Publications
• Standard
• Technical informa
• Tests/research

In-Service History

These paths are deemed to meet the performance requirements of the Building Code that they cover.

Proposed work in this category must demonstrate compliance with the performance requirements of the Building Code to the satisfaction of a Building Consent Authority.



#### **Regulatory Charter**

**BUILDING REGULATORY SYSTEM 2022** 

https://www.mbie.govt.nz/dmsdocume nt/3083-regulatory-c<u>harter-building-</u> regulatory-system-2022-pdf

#### Review of the Building Consent System

The Ministry of Business, Innovation and Employment (MBIE) is undertaking a review of the building consent system.

The aim of the review is to modernise the building consent system to provide assurance to building owners and users that building work will be done right the first time and that buildings are healthy, safe and durable.

In order to ensure buildings are healthy, safe and durable, the building consent system should primarily seek to achieve the four following outcomes.

#### Buildings are healthy, safe and durable

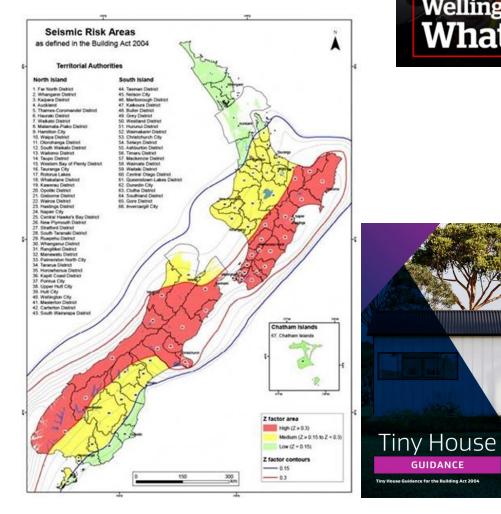
Roles and responsibilities are clear, appropriate and understood

System is efficient System is responsive to change and continuously improves Regulatory requirements and decisions are robust, predictable, transparent and understood

https://www.mbie.govt.nz/have-yoursay/building-consent-system-reviewoptions-paper-consultation/

#### **Challenges**

#### **Promoting International** collaboration



GUIDANCE

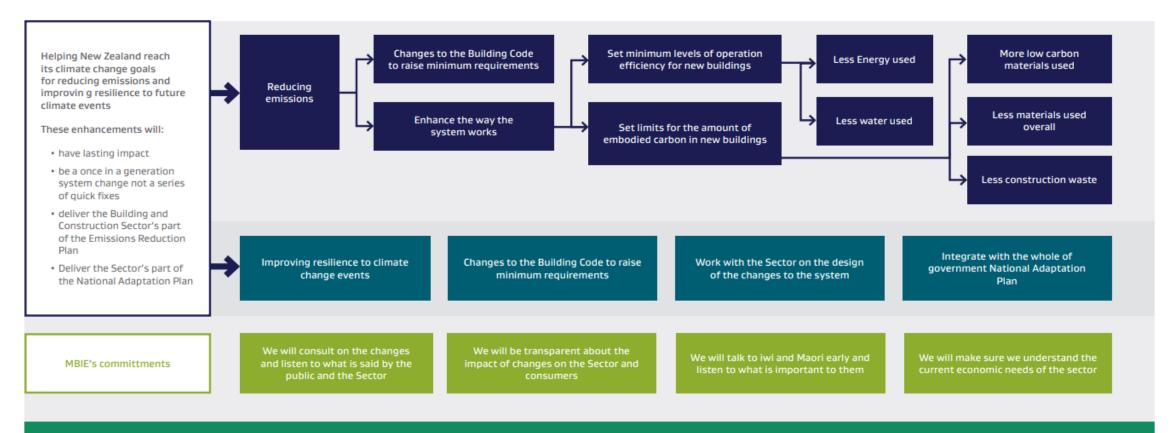




Non-conforming building products - everyone's responsible



#### Building for climate change goals - Programme overview



#### **Future state:**

What will it look like in 2050

New Zealand's buildings are using as little energy and water as possible. They are warmer, drier and better ventilated, and provide a healthier place for us all to work and live.

The wellbeing of New Zealanders has improved, they're leading healthier lives, and respiratory illnesses from cold and damp houses is uncommon. People also have more money in their pockets due to lower energy bills.

Our infrastructure finds it easier to respond to demand for water, due to our lower use. This means we cope better with water shortages than we ever have before. The efficiencies from the Sector have made it easier for the grid to become more renewable meaning less emissions for the energy we do use.

Energy Efficiency and carbon cost are core considerations for the Sector and designs now meet an emissions budget as well as other regulatory requirements.

Reusing buildings and recycling materials is an established part of a Sector that is well on the way to having a fully-fledged circular economy well supported by local supply chains.

Improvement Opportunities to Regulatory Settings (NZ)

#### **Performance Based System**

- Quantification Metrics & where they are best located (standards / compliance docs etc)
- Clarity about regulation for "New Building Work" and what it means for existing buildings
- Education deal with lowest level of understanding  $(80/20 \, \text{rule})$



• <u>Improvement Opportunities to Regulatory Settings (NZ)</u>

#### Responsibility & Liability

- Recognise importance of verified documentation in the system (producer statements, letters of assurance, warranties, product conformity, records of work)
- Roles Clarification & Enforcement

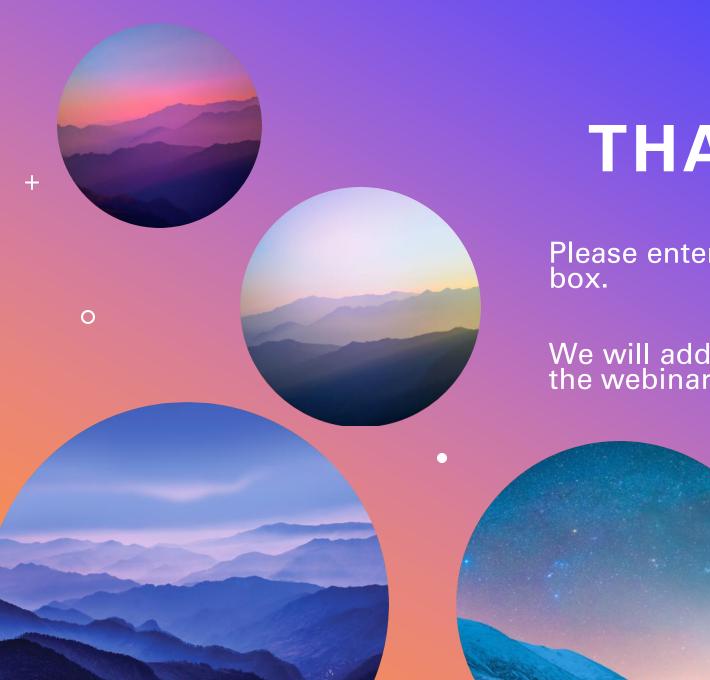


Improvement Opportunities to Regulatory Settings (NZ)

- Recognising Construction Needs
  - Flexibility in well documented substitution and variations
- Maintenance
  - Introduce requirements for maintenance to enhance durability of building elements
- Protect Quality







## THANK YOU

Please enter questions into the Q&A box.

We will address them at the end of the webinar.







# **Australian Building Regulations**

ICC Global Services Webinar – 12 July 2023

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### Agenda

- Overview of the Australian National Building Code (NCC)
- Compliance with the Building Code of Australia (NCC)
- ► Approval Processes Australian States and how they vary in each region

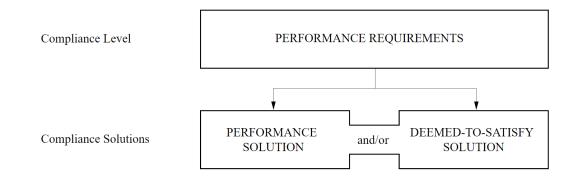


**Australian Markets** 

# National Building Code (NCC)

- ► National Construction Code (NCC) includes the Building Code of Australia in Volumes 1 and 2.
- Performance Based with prescriptive option available for compliance.
- Updated every 3 years (unless amended out of cycle).
- Australian Building Codes Board (ABCB), (which is under the federal government) draft, issue and maintain the code.

Figure A2G1 NCC compliance structure



#### **NCC Revisions:**

- Previously the NCC was updated every year, then was revised to every 3 years to simplify.
- However last 2 versions have had out of cycle amendments.



# National Building Code (NCC) State & Territory Variations

- The BCA does contain some state and territory variations.
- States and Territories also can choose whether or not to adopt certain portions of the Code.

#### **State & Territory Regulations:**

- Building and Construction Regulation and Legislation falls within the jurisdiction of the State and Territory Governments.
- Regulated by a government body within each state e.g.
  - Queensland Building and Construction Commission
  - the Department of Fair Trading,
  - Victorian Building Authority,
  - ACT Planning & Land Authority
- There are different processes in South Australia, Northern Territory, Western Australia and Tasmania, however this presentation will mostly cover the 4 main systems in NSW, QLD, VIC & ACT.



# Compliance with the Building Code of Australia (NCC)

- The requirement to comply with the BCA is included in the building and construction legislation of each state.
- ► The legislation around the version that applies to a development varies across the states e.g.:
  - ► NSW time of application for construction approval or in a large development, the entrance floor application
  - ► VIC substantial design
  - QLD -

#### **State & Territory Regulations:**

Legislation in each jurisdiction address the following, noting that each item is different in each state:

- Accreditation and licensing of practitioners including building surveyors/certifiers, designers, contractors
- Approvals processes and pathways for different types of development
- Requirements to obtain those approvals, generally prior to construction and prior to occupation
- Addressing unauthorised building work (this is done to varying degrees and levels of completeness in different jurisdictions)



# Compliance with the Building Code of Australia (NCC)

- Review of regulations and legislation across all jurisdictions in Australia highlighted the complexities in having different systems, and recommended that consistency be aimed for across the jurisdictions.
- In some jurisdictions this is covered in one piece of legislation, in others it is covered by multiple e.g. shown of the right hand side:
- In addition to legislation, there are other documents that are required to complied with such as:
  - Queensland Development Code (QLD)
  - Certifier practice standard (NSW)

Australian State	Legislation
Victoria	Building Act & Regulation
Australian Capital Territory	Building Act & Regulation
Queensland	Building Act & Regulation
New South Wales	Building & Development Certifiers Act & Regulation
	Environmental Planning & Assessment Act
	Environmental Planning & Assessment Regulation
	Environmental Planning & Assessment (Development Certification & Fire Safety) Regulation
	Design & Building Practitioners Act & Regulation
	Residential Apartment Buildings Act & Regulation



### Building Ministers Forum

As the building and construction industries in each state are run separately, the Building Ministers Forum was developed to bring together the relevant ministers from each state, along with the federal minister for the building industry to discuss and address national items, and to endeavour to provide national consistency.









### Australian Capital Territory Approval Processes

All approvals issued by ACT Planning & Land Authority (ACTPLA).

#### **Construction:**

- Certifier authorises commencement after Building Approval issued by ACTPLA. Certifier to verify that builder is licensed for the work prior to authorisation of commencement
- Inspections undertaken by certifier throughout construction.
- Minimum stages for inspection nominated by legislation, but inconsistent with other states

#### **Prior to Construction:**

- Assessment as to whether work is exempt
- Planning approval obtained, unless the work is considered 'exempt'
- Application for Building Approval and all required accompanying documents submitted to and reviewed by certifier
- Documentation provided is to demonstrate that the building work will comply with the requirements of the BCA and that any planning consent conditions have been addressed.
- Any referrals required by legislation are to be undertaken, including referral of performance solutions relating to fire safety to the fire brigade.
- Certifier submits application for Building Approval to ACTPLA.
- ACTPLA review documentation and issue Building Approval once satisfied requirements are met.



## Australian Capital Territory Approval Processes (continued)

#### **Occupation:**

- Electrical, gas and plumbing reviewed and inspected by ACTPLA authorised representatives.
- Where required, fire brigade will attend site to confirm compliance.
- Certifier required to confirm completion of building work and compliance. To assist in verifying compliance, installation certification is required by contractors.
- ► ACTPLA review all documentation and once satisfied, issue the Certificate of Occupancy & Use.



## Australian Capital Territory Approval Processes (continued)

#### What do the regulations cover?:

- Erection, alteration or demolition of a building
- ► All building classifications in the BCA (Class 1 10)
- Excludes temporary structures, transportable buildings, infrastructure such as dams

# Which entities are responsible for the regulations?

ACTPLA responsible for statutory planning framework

# How are the regulations implemented and enforced?

- Access Canberra is responsible for addressing complaints
- For enforcement of licenses, disciplinary action by ACTPLA for minor matters, ACT Civil and Administrative Tribunal for more serious breaches
- Certifiers are a regulated role
- All approvals are issued by ACTPLA after reviewing documentation from certifiers









### New South Wales Approval Processes

Several pieces of legislation with some crossover, but very complex.

#### **Construction:**

- Construction is authorised by the Construction Certificate.
- Inspections undertaken by certifier throughout construction.
- Minimum stages for inspection nominated by legislation, but inconsistent with other states.
- For residential apartment buildings, notification to building commissioner to be provided before occupation is 6 months away. The commissioner may do an audit of the project.

#### **Prior to Construction:**

- Assessment to determine whether the work requires approval or is exempt. If approval is required, does it require a development consent or is it complying development.
- Planning approval obtained from consent authority unless the development is exempt or complying development
- Application for Construction Certificate submitted on the Planning Portal and all required accompanying documents submitted to and reviewed by certifier
- Documentation provided is to demonstrate that the building work will comply with the requirements of the BCA and that any planning consent conditions have been addressed.
- For residential building work, design compliance declarations are required to be provided prior to issuance of Construction Certificate.
- Any referrals required by legislation are to be undertaken, including referral of performance solutions relating to fire safety to the fire brigade. Referral to brigade done by certifier.
- Certifier to issue Construction Certificate once certifier is satisfied the legislative requirements are met.



# New South Wales Approval Processes Continued

#### **Occupation:**

- ► Where required, fire brigade are notified and will advise if they will attend site to confirm compliance.
- To assist in verifying compliance, installation certification is required by contractors.
- For residential building work, building compliance declarations are required.
- Certifier to issue the Occupation Certificate (for whole or part).



# New South Wales Approval Processes Continued

#### What do the regulations cover?

- ► Covers building work including work by the Crown, Class 1 10
- Includes structures
- Does not include public roads, mining, infrastructure that is not a building, moveable dwellings
- Pools covered by separate legislation

# How are the regulations implemented and enforced?

- Department of fair trading licensing and accreditations,
   legislation, disciplinary action
- Office of building commissioner auditing and addressing defective building work
- Certifier is a regulated role

# Which entities are responsible for the regulations?

- Department of Fair Trading,
- Minister for Building in NSW Parliament





# Approval Processes – QLD ICC Global Services Webinar

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# Queensland Approval Processes

#### **Construction:**

- Construction is authorised by the Building Development Approval.
- Final inspection undertaken by certifier on completion.
- Legislation does not contain a requirement for Class 2-9 projects to be inspected throughout construction, however the certifier will generally undertake additional inspections to assist in verifying compliance with the BCA, QDC and legislative requirements.

#### **Prior to Construction:**

- Assessment to determine whether the work is assessable or accepted development.
- Planning approval obtained for assessable development against the planning scheme and building application required for assessable building work against the Building Act
- Building development application submitted to the certifier and all required accompanying documents submitted to and reviewed by the certifier.
- Documentation (including standardised Form 12's) provided to demonstrate that the building work will comply with the requirements of the BCA, the Queensland Development Code and that any planning conditions have been addressed.
- Any referrals required by legislation are to be undertaken, including referral of performance solutions relating to fire safety to the fire brigade. Referral to brigade done by the certifier.
- Certifier to issue Building Development Approval once certifier is satisfied legislative requirements are met. Approvals can be staged.



# Queensland Approval Processes (continued)

#### Occupation:

- Where required, fire brigade are notified and will attend site to confirm compliance.
- ► To assist in verifying compliance, Form 12s (which are installation certification) is required by licensed contractors.
- Certifier to issue the Certificate of Occupancy once legislative requirements are satisfied. Occupation can be staged.



# Queensland Approval Processes (continued)

#### What do the regulations cover?

- Covers building work, Class 1 10 that relate to a building, including temporary buildings.
- ► Does not include public roads, mining, infrastructure that is not a building.

## How are the regulations implemented and enforced?

- Queensland Building & Construction Commission -a statutory body developed to regulate the building and construction industry.
- QBCC address licensing, education, disciplinary action, enforcement actions.
- Certifier is a regulated role.

## Which entities are responsible for the regulations?

- Queensland Building & Construction Commission.
- Minister for Public Works in QLD Parliament.









## Victoria Approval Processes

Legislation currently being reviewed and revised by the Victorian Government.

#### **Construction:**

- Construction is authorised by the Building Permit.
- Inspections undertaken by certifier throughout construction.
- Minimum stages for inspection nominated by legislation, but inconsistent with other states and significantly more than most states.

#### **Prior to Construction:**

- Assessment to determine whether the work requires approval or is exempt.
- Planning approval obtained from consent authority unless the development is exempt.
- Application for Building Permit submitted and all required accompanying documents submitted to and reviewed by the Relevant Building Surveyor.
- Documentation provided is to demonstrate that the building work will comply with the requirements of the BCA and that any planning consent conditions have been addressed.
- Any reports and consents required by legislation are to be obtained, including referral of performance solutions relating to fire brigade operations to the fire brigade. report and consents can not be applied for by the RBS due to the Code of Conduct.
- Relevant Building Surveyor to issue Building Permit once RBS is satisfied the legislative requirements are met.



# Victoria Approval Processes (continued)

#### **Occupation:**

- Where required, fire brigade report and consent required.
- To assist in verifying compliance, installation certification is required by contractors.
- Relevant Building Surveyor to issue the Occupation Permit (for whole or part).



## Victorian Approval Processes (continued)

#### What do the regulations cover?

- Covers building work, Class 1 10 that relate to a building or structure, including temporary buildings and structures.
- ► Does not include public roads, mining, infrastructure that is not a building.
- Does not bind the Crown or a public authority.

## How are the regulations implemented and enforced?

- Victorian Building Authority address licensing, education, disciplinary action, enforcement actions.
- Relevant Building Surveyor is a regulated role.

## Which entities are responsible for the regulations?

- Victorian Building Authority.
- Minister for Planning in Victorian Parliament.



## Thank you!

# Please enter questions into the Q&A box. We will address them at the end of the webinar.

#### Melbourne

Level 11, 99 William Street Melbourne, 3000 (03) 9247 0400

#### **Sydney**

Level 6, 189 Kent Street Sydney, 2000 (02) 8298 6800

#### **Brisbane**

Level 7, 340 Adelaide Street Brisbane, 4000 (07) 3834 9800

#### **Gold Coast**

Number 12 West Street Gold Coast, 4220 (07) 3152 5200



## US Building Regulatory System

Overview and Current Challenges

Overview of Building Code Development in the United States

No national building code or national ministry responsible for building safety

Public-private partnership to develop model codes

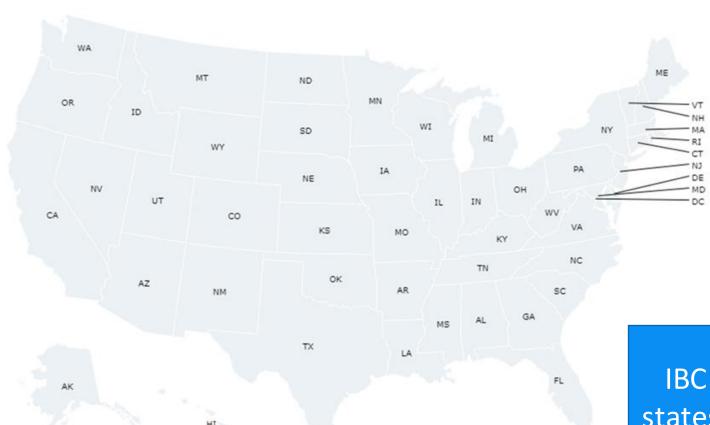
Decentralized

States/counties/cities adopt model code or develop own code

Enforcement at the local level

## US Building Regulatory System

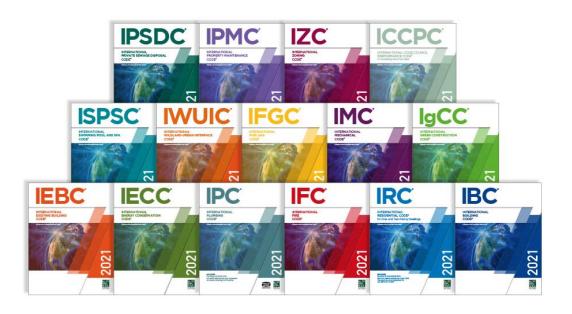
#### States have Police Power



IBC adopted in all states and territories



- NGO Not for profit public benefit organization
- 64,000 members
- Publish 15 model codes (3-year cycle), 18
   standards and 7 Guidelines





Hear on the order of 3000 proposals every three years

**Code Consulting** 

Product Testing, Evaluation & Certification

Accreditation

Training & Education

Content
Management &
Digitization

Personnel Certification

#### Building Safety Regulatory Ecosystem



Primarily
Prescriptive code ~
Alternatives
permitted

International Building Code (IBC)

- 2000 first edition
- 2024 next edition (8<sup>th</sup>)

Varies State to State

ASTM FM
ASCE NFPA
ASME ISO
CSA UL
CEN

Many supporting standards

Implementation/Regulation

- ICC ES ~ESR
  - IAS

Accreditation

Enforcement/Compliance

## **REGULATORY SPECTRUM**

Newconstruction

point in time

Retroactive

Operational

Maintenance









## Key Issues Affecting US Building Regulations





TIMELY ADOPTION OF REGULATIONS

SAFE AND AFFORDABLE HOUSING

## Timely Adoption of Regulations

- Many jurisdictions are years behind
- Some portions of US do not adopt codes

Wind and flood hazards have changed/vulnerable from natural

disasters

Hazards in Wildland/Urban Interface largely unregulated

• Undermines energy, resilience and sustainability goals

• Inconsistent from one state/jurisdiction to another

New technologies mc

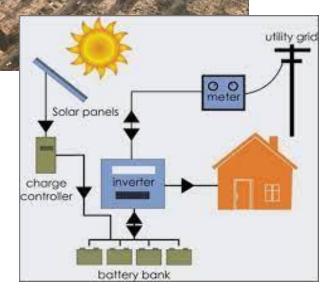




Tampa Bay Times – Fort Myers Florida



Wikipedia – Tubbs Fire



**Energy Infrastructure** 

## Safe and affordable housing

- Unsafe living conditions
- Proliferation of accessible dwelling units
- Complexity of existing building enforcement
- Technologies threatening those higher at risk
- Increased construction in urban/wildland interface



**UL Fire Research Institute** 













▲ Accessory dwelling units (or ADUs) come in many shapes and styles

Accessory Dwelling Units (city of Redlands)





Philadelphia Inquirer



**Associated Press** 



## Thank you!

### Please enter questions into the Q&A box.

#### **Beth Tubbs**

Chief Fire Protection Engineer, ICC Technical Services

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DURING THE WEBINAR: please utilize Q&A function to be recognized or ask a question to be read aloud to the panel

AFTER THE WEBINAR: We will email responses to the anyone who has entered a question into the chat box but did not receive a response during the webinar. Email new or follow-up questions to <a href="mailto:nsavery@iccsafe.org">nsavery@iccsafe.org</a>.