



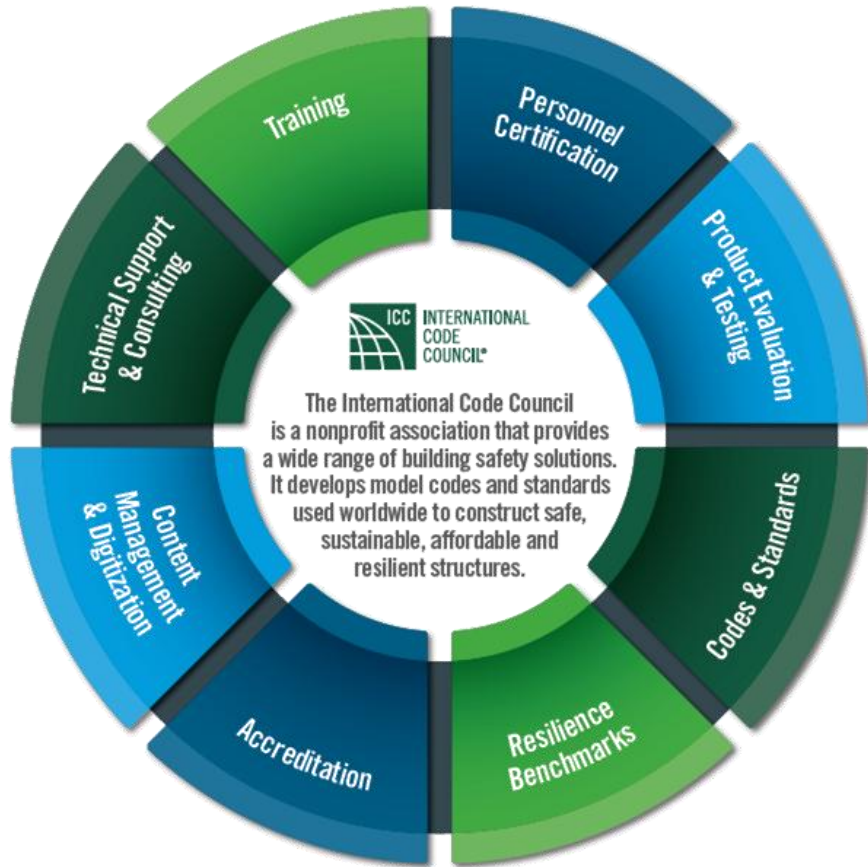
Overheating and Extreme Heat in the U.S.

Ryan Colker, Executive Director, Energy, Resilience & Innovation

IEA BECWG Meeting

April 29, 2026

The Family of Building & Community Solutions



- Codes and Standards
- Personnel Training and Certification
- Product Evaluation
- Accreditation Services
- Codification & Administration Services
- Engineering Support
- Community Resilience Benchmarks™
- Third-Party Evaluation Services

Global Use of International Code Council Family of Solutions

Learn more about [ICC Solutions](#).

Americas:

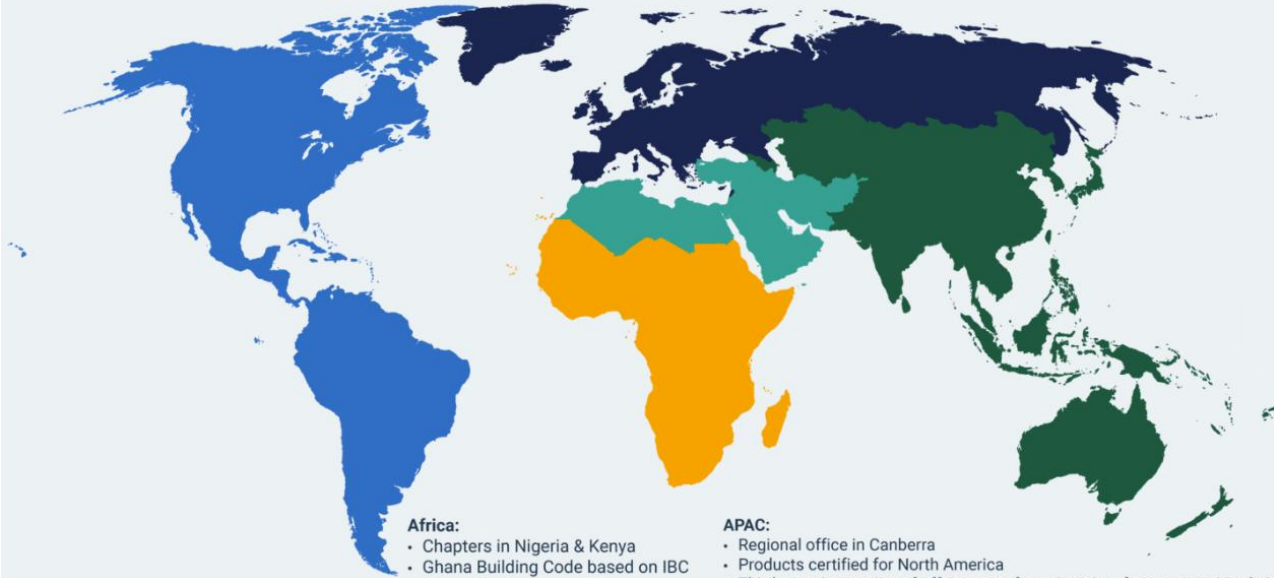
- I-Codes dominate in USA – full suite of solutions
- I-Code use in Mexico, Colombia and Caribbean, and referenced throughout the region
- CARICOM custom codes
- Chapters in Canada, Mexico & Cayman Islands
- Product Certification to USA, Canada & Mexico standards
- Product certification reports accepted throughout the region
- Accreditation
- Canadian Building Codes available on Digital Codes Premium

Europe:

- Products certified for North America
- Third party inspection of offsite manufacturing sites for export to North America
- Collaboration with certification & standards bodies
- Accreditation

MENA:

- Regional office in Dubai
- I-Code based codes in Saudi Arabia, Oman & Abu Dhabi, and for Gulf Building Code. Base I-Codes accepted throughout region
- Training, certification on I-Codes & SBC
- Product certification to Saudi, Abu Dhabi & Dubai building codes
- Accreditation throughout region



Africa:

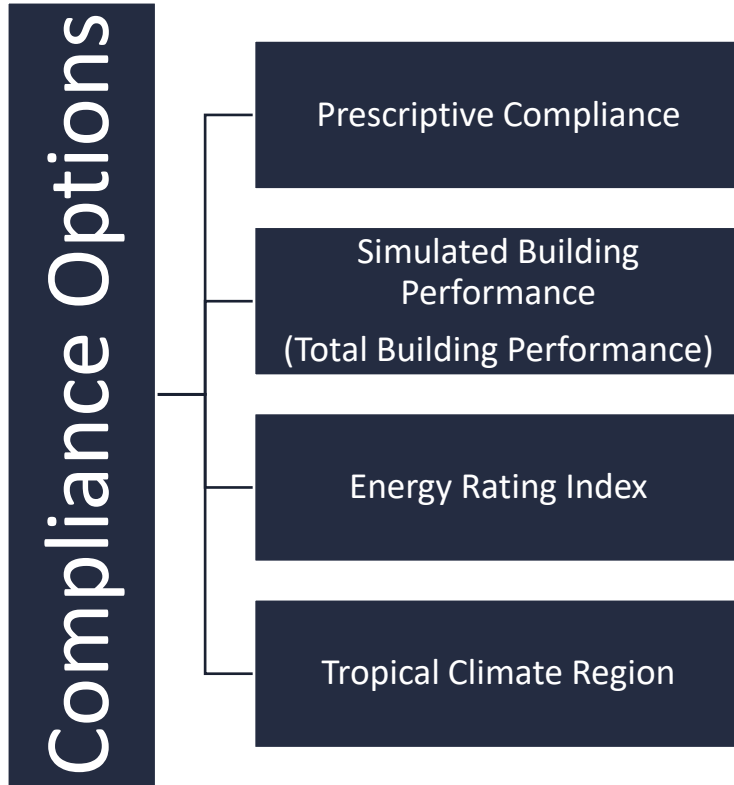
- Chapters in Nigeria & Kenya
- Ghana Building Code based on IBC
- Other I-Codes adopted by reference
- Accreditation

APAC:

- Regional office in Canberra
- Products certified for North America
- Third party inspection of offsite manufacturing sites for export to North America
- Capacity building in Bangladesh
- Marshall Islands custom code
- Base codes referenced throughout region
- JASANZ accredited CAB for WaterMark, CodeMark Australia & ES Mark
- Chapters in Australia, NZ & Bangladesh
- Accreditation



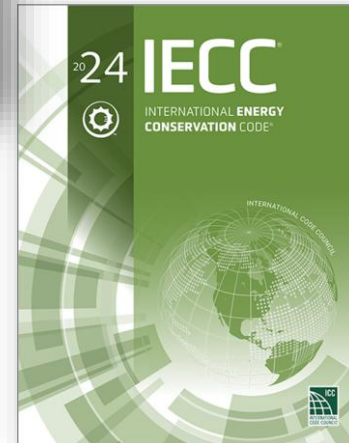
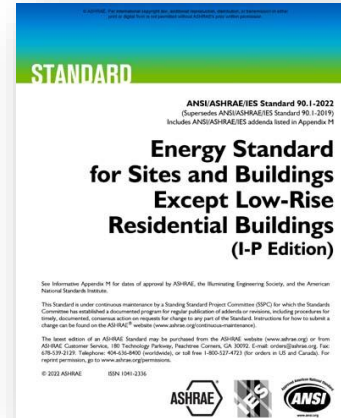
Residential Options



Commercial Options

Commercial compliance path options

- 2024 IECC
 - Prescriptive Compliance
 - Simulated Building Performance
- ASHRAE Standard 90.1 – 2022
- Projects must comply with ONE path fully



Existing Heat Mitigation Strategies

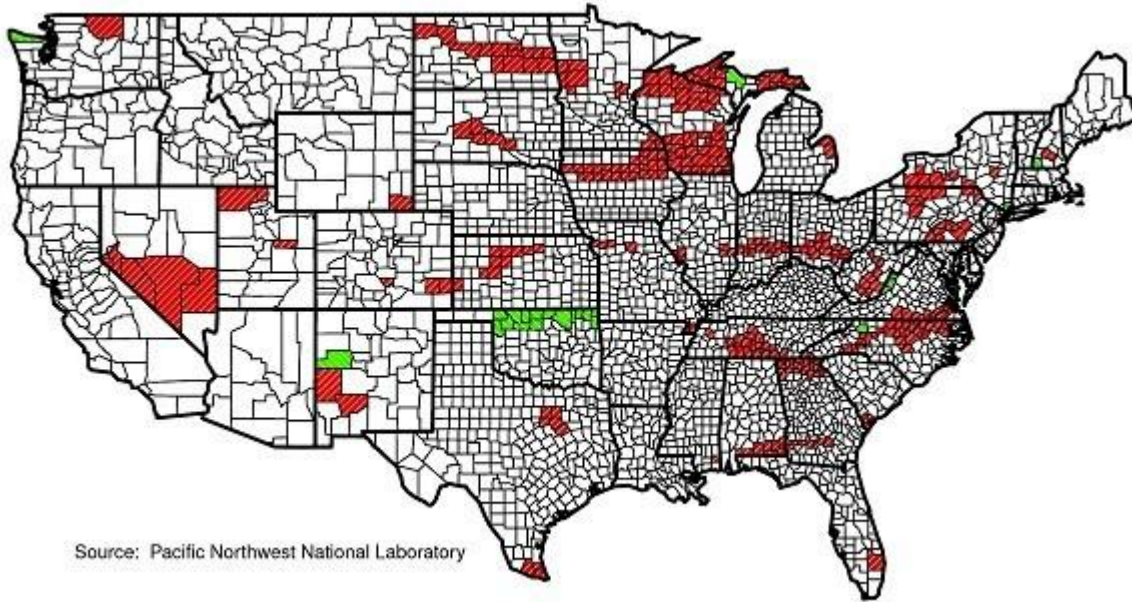
- Comprehensive approach, mostly efficiency based rather than health/comfort (but mold and moisture)
- Don't currently have minimum cooling requirements
- Largely prescriptive-based with performance pathways
- Focus areas:
 - Insulation/Envelope
 - Solar Heat Gain
 - Window to wall ratios
 - Ventilation/Air Changes
 - Duct sealing
 - Cool roofs/solar reflectance
 - Shading

2027 I-Code Development

- Established Extreme Heat Working Group
 - Develop proposals for International Building Code, International Mechanical Code, International Residential Code, International Property Maintenance Code
 - Set cooling requirements (heating already covered in codes)
 - Ultimately not included in 2027 codes, will reconsider for 2030 editions
- 2027 International Energy Conservation Code (in development)
 - Provisions for cool roof, solar reflectance, thermal emittance
 - Tighter fenestration U-factors
 - New options for permanent automated shading

Prior I-Code Development

- 2021 IECC
 - Climate Zone Map Updates
 - ~10% counties changed to lower (warmer) climate zone
 - Updates on duct sealing/testing, air leakage, cool roofs



Source: Pacific Northwest National Laboratory

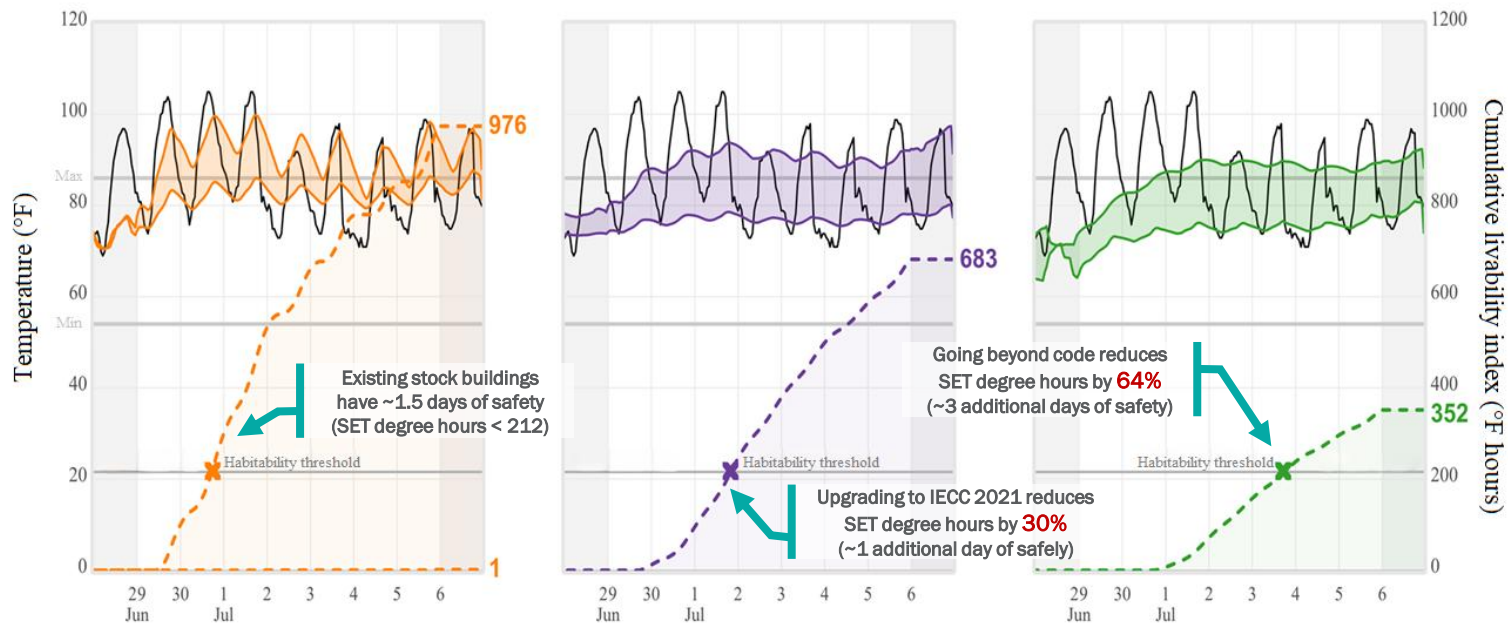
State and Local Extreme Heat Activity

- Minimum cooling requirements
- Largely rental housing/landlord



Energy codes improve resilience

Atlanta, GA (3A): Long Heat Event (2012)



Source: Franconi, E, E Hotchkiss, T Hong, M Reiner et al. 2023. Enhancing Resilience in Buildings through Energy Efficiency. Richland, WA: Pacific Northwest National Laboratory. PNNL-32737, Rev 1.

As building envelope improves via better codes, building occupants can remain safe for longer



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