

U.S. DEPARTMENT OF  
**ENERGY**

Office of  
ENERGY EFFICIENCY &  
RENEWABLE ENERGY

# Timely Tales of Building Energy Codes

Kickoff to the National Energy Codes Conference Seminar Series

Building Technologies Office  
October 2020



The NECC may be on hold, but the discussion continues!

- State and local panel:
    - What's happening in their regions?
    - Role of new and advanced technologies and construction practices? Trends?
    - How they're using codes to support their energy and environmental goals?
  - Discussion
  - Remarks from the Building Technologies Office—what we're thinking about
- > Add questions and comments to the chat as we go!

# NECC SEMINAR SERIES

Catch the entire lineup of sessions weekly—Thursdays @ 1p ET:

- 10/08: Electronic Permitting
- 10/15: HVAC for Low-Load Homes
- 10/22: Performance-Based Compliance
- 10/29: 2021 IECC Commercial
- 11/05: Remote and Virtual Inspections
- 11/12: New for ASHRAE Standard 90.1
- 11/19: 2021 IECC Residential
- 12/03: Advanced Technology and Codes
- 12/10: Policies for EE + Resilience
- 12/17: Field Studies in the NW Region

> Learn more: [energycodes.gov/2020-building-energy-code-webinar-series](https://energycodes.gov/2020-building-energy-code-webinar-series)

FIRST, LET'S LEARN A BIT ABOUT YOU:

- > Where are you from?
- > What do you do?
- > How long have you been doing it?

Standby for our first audience polls...



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# Bringing Innovation to Building Energy Codes

*National Energy Codes Conference Seminar Series*

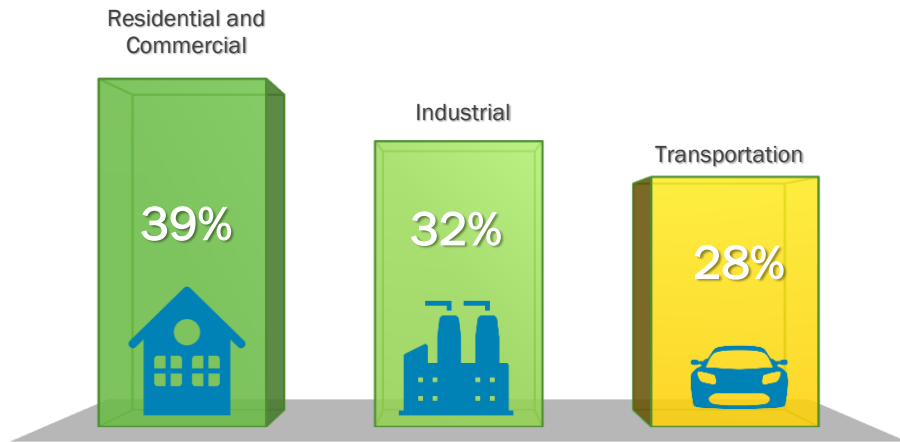
David Nemtzow, Director, Building Technologies Office

October 1, 2020



# U.S. Homes and Commercial Buildings

Our Buildings Use More Energy than Any Other Sector



5.6 million commercial buildings totaling **92 billion square feet**



119.5 million housing units totaling **237 billion square feet**

Buildings use **75% of Electricity** (more at **peak** times)



Emit **35% of CO<sub>2</sub>**



Energy utility bill is **>\$410B annually**



**20+%** of the energy is **wasted**.



**36% of homes** produce **rental income** for their owners



More than **80% of structures** are **>20 years old**

# DOE ROLE IN BUILDING ENERGY CODES

We provide technical assistance across several key areas:

- ✓ Participate in **model code review processes** (e.g., IECC and Standard 90.1)
- ✓ **US Energy Secretary determinations** of energy savings for published editions of the IECC and Standard 90.1
- ✓ **Technical analysis** to support state adoption (e.g., energy, cost, environmental impacts)
- ✓ Develop new **protocols + research methods**  
(e.g., cost-effectiveness analysis, compliance studies, performance-based approaches)
- ✓ **Build Partnerships:** convene stakeholders to address challenges and opportunities—technical assistance forums (e.g., workshops and NECC, IEA)
- ✓ **Develop tools** to support decisions and streamline code implementation in practice (e.g., RES/COMcheck, impact calculators, compliance and training resources)
- ✓ Promulgate standards for **Manufactured Housing** and **Federal Buildings**
- ✓ **Question to NECC audience:** What else?

# WHO ARE WE WORKING WITH?

## Program Partners:

- ✓ DOE national laboratories (PNNL / NREL / LBNL)
- ✓ Model code and standard organizations (ICC, ASHRAE)
- ✓ Federal government agencies (EPA, HUD, FEMA, OMB)
- ✓ State agencies (state energy offices, code and safety agencies)
- ✓ Municipal agencies (e.g., building code and safety departments)
- ✓ Trade and professional organizations, NGOs
- ✓ Research teams



## Key Stakeholders

Designers, builders, contractors, policymakers, building officials, government agencies, energy-efficiency organizations, manufacturers, and more...

And all of *you!*



# NEW FUNDING OPPORTUNITIES

New and recent funding opportunity announcements from the Building Technologies Office:

\$ Buildings Energy Efficiency Frontiers & Innovation Technologies (BENEFIT) [\$80M]

> [www.energy.gov/articles/departments-energy-announces-80-million-innovative-building-technologies-and-practices](http://www.energy.gov/articles/departments-energy-announces-80-million-innovative-building-technologies-and-practices)

\$ Proving Ground: Validating Novel Building Technology Performance [\$10M]

> [www.energy.gov/eere/articles/departments-energy-releases-new-funding-opportunity-validate-novel-building-technology](http://www.energy.gov/eere/articles/departments-energy-releases-new-funding-opportunity-validate-novel-building-technology)

\$ Connected Communities (stay tuned)

> [www.energy.gov/eere/articles/departments-energy-releases-request-information-potential-funding-grid-interactive](http://www.energy.gov/eere/articles/departments-energy-releases-request-information-potential-funding-grid-interactive)

\$ Educational Materials for Professional Organizations Working on Efficiency and Renewable Energy Developments (EMPOWERED) [\$4.5M]

> [www.energy.gov/eere/solar/funding-opportunity-announcement-education-materials-professional-organizations-working](http://www.energy.gov/eere/solar/funding-opportunity-announcement-education-materials-professional-organizations-working)

> **Subscribe:** [www.energy.gov/eere/buildings/subscribe-building-technologies-office-updates](http://www.energy.gov/eere/buildings/subscribe-building-technologies-office-updates)

# WHAT'S ON OUR MINDS THESE DAYS ?

A sampling of key issues and opportunities—here today and on the horizon:

- ✓ Integrating advanced technologies and construction practices—including PV, EVs, storage—to reduce building energy use and related environmental, climate impacts
- ✓ Enabling smarter, connected buildings that interact with and respond to the needs of the utility grid
- ✓ Impacts of Covid-19 on the design and construction industry—including IAQ/ventilation and virtual/remote assessments
- ✓ Supporting the shift toward whole-building performance (performance-based codes)
- ✓ Ensuring robust analytical methods to supporting emerging trends in codes (e.g., performance testing, EE/RE integration, electrification readiness, etc.)
- ✓ Investigating and quantifying the role of energy efficiency in enhancing resilience
- ✓ Role of technology innovation and how it'll impact building energy use (and codes)
- ✓ What else?!

# TODAY: INNOVATION IN BUILDING ENERGY CODES

## State and Local Panelists:

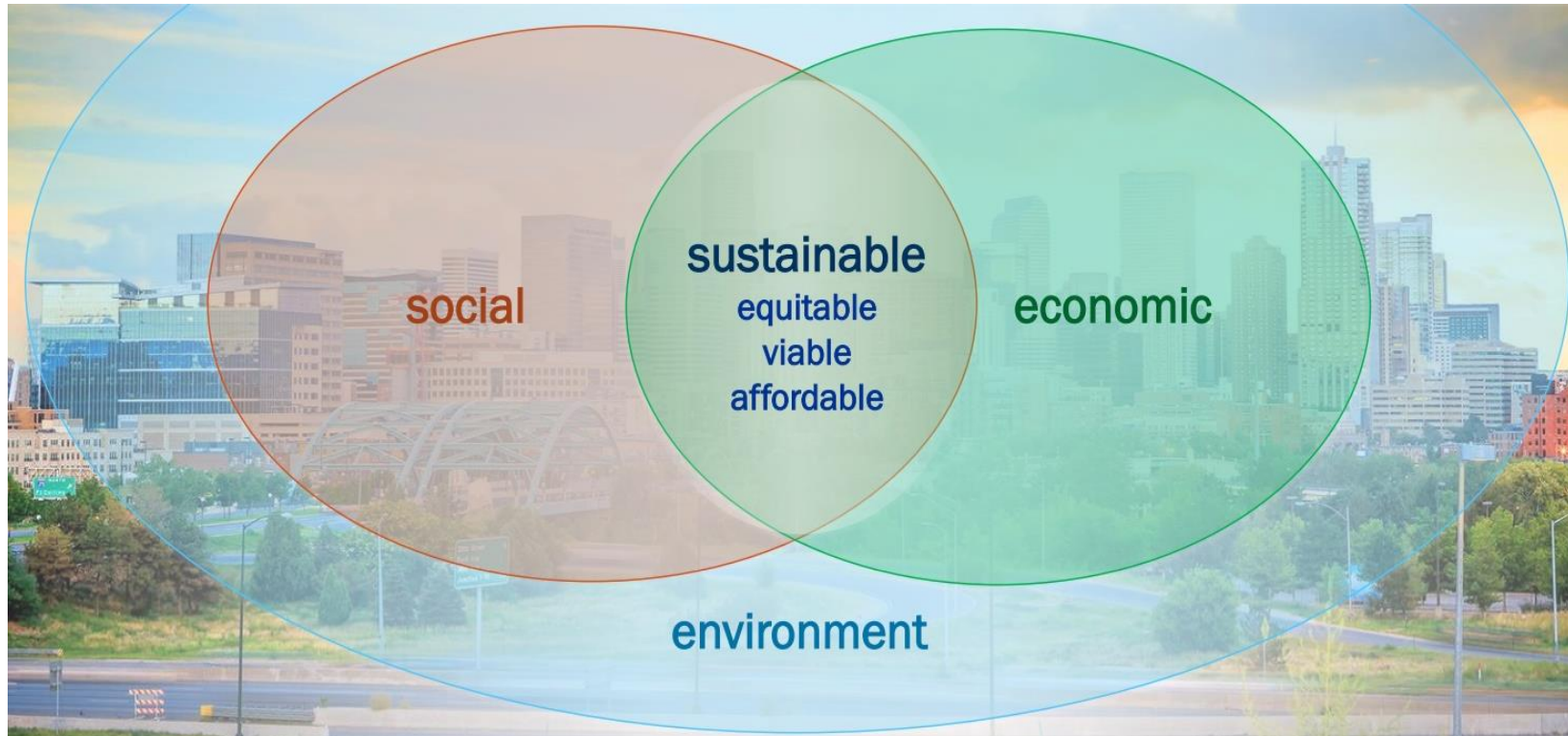
- ✓ **Amber Wood**, Energy Program Administrator  
City and County of Denver
- ✓ **Emily Hoffman**, Director of Energy Code Compliance  
NYC Department of Buildings
- ✓ **Blake Shelide**, Engineer  
Oregon Department of Energy
- ✓ **Ed Carley**, Buildings Program Director  
National Association of State Energy Officials (NASEO)
- ✓ **Ryan Colker**, VP of Innovation, International Code Council (ICC)  
Executive Director, Alliance for National & Community Resilience (ANCR)

# Timely Tales of Energy Codes

## Energy Codes in Denver

10-01-2020

# Denver's Community & Equity

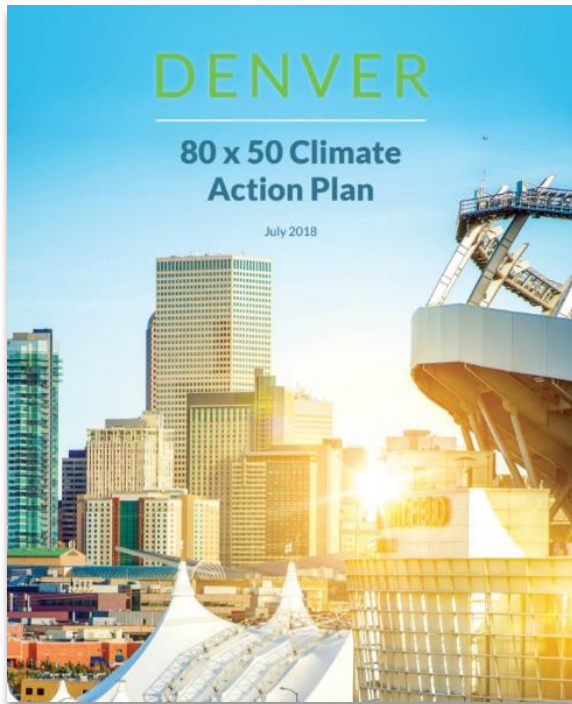


Equity  
Respond to Climate Change  
Affordability  
Resiliency  
Health  
Inclusive  
Connected  
Safe  
Accessible  
Economically vibrant  
Active  
Authentic neighborhoods

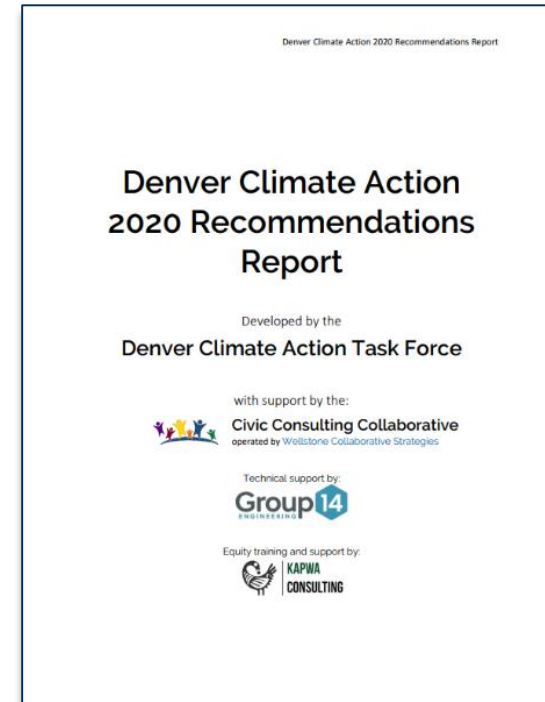


# Denver's Climate Goals: 80% by 2050

## Climate Goals:



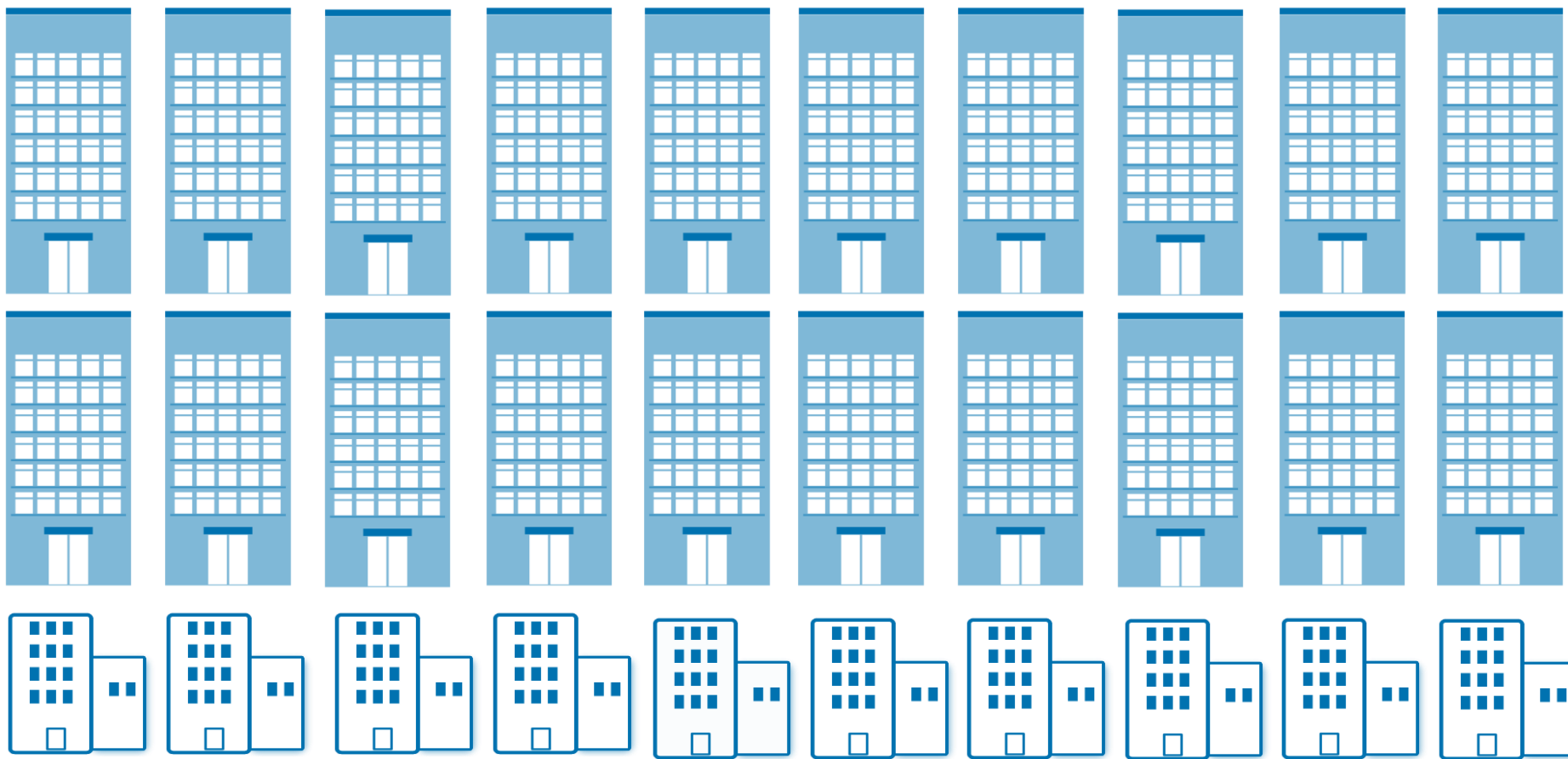
## Climate Recommendations:



# Homes and Buildings Account for 63% of Denver's GHG Emissions

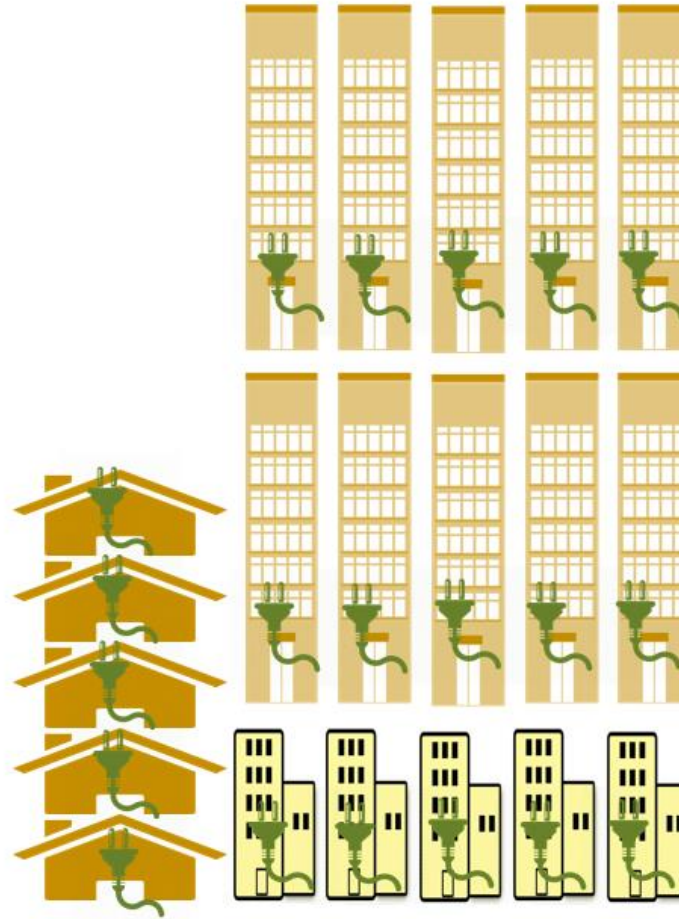


12% GHG



51% GHG

# 80x50 Goal: Net Zero New Construction by 2035

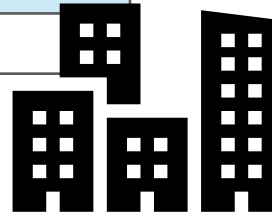


The IPCC tells us we must have net zero new construction in 2020.

By 2050, ~40% of our building stock will be “new” construction

# Denver's Projected New Construction Market

Commercial & Multifamily	5-Year Increase (sqft)
Apartments & Condos	19,300,199
Office and Bank	6,716,497
Warehouses	1,725,054
Hotels	1,638,085
Schools	1,289,142
Misc. Non Res	1,200,500
Hospitals	1,158,273
Stores/Restaurants	1,106,037

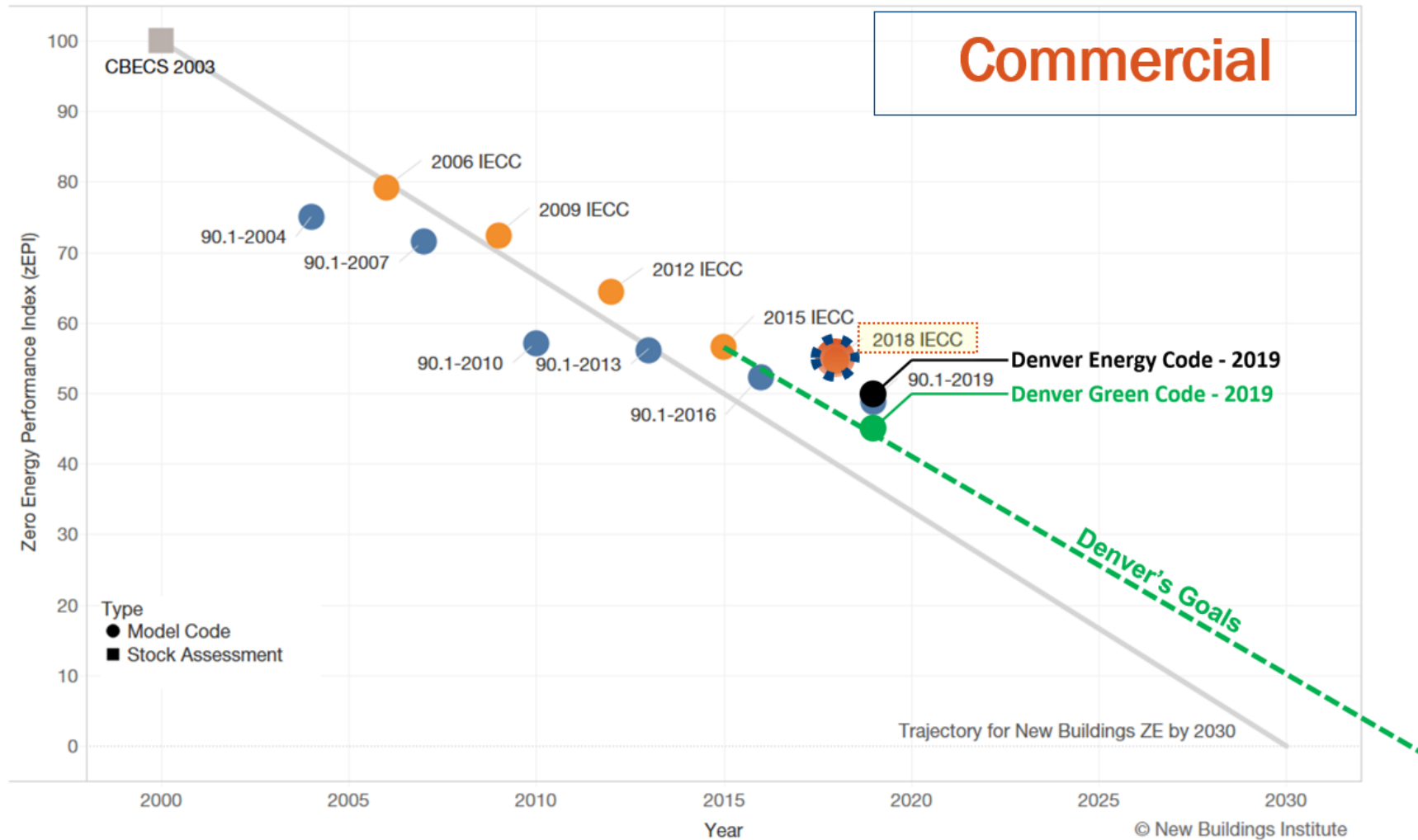


Houses	5-Year Increase (sqft)
One Family Houses	18,876,629
Two Family Houses	859,211



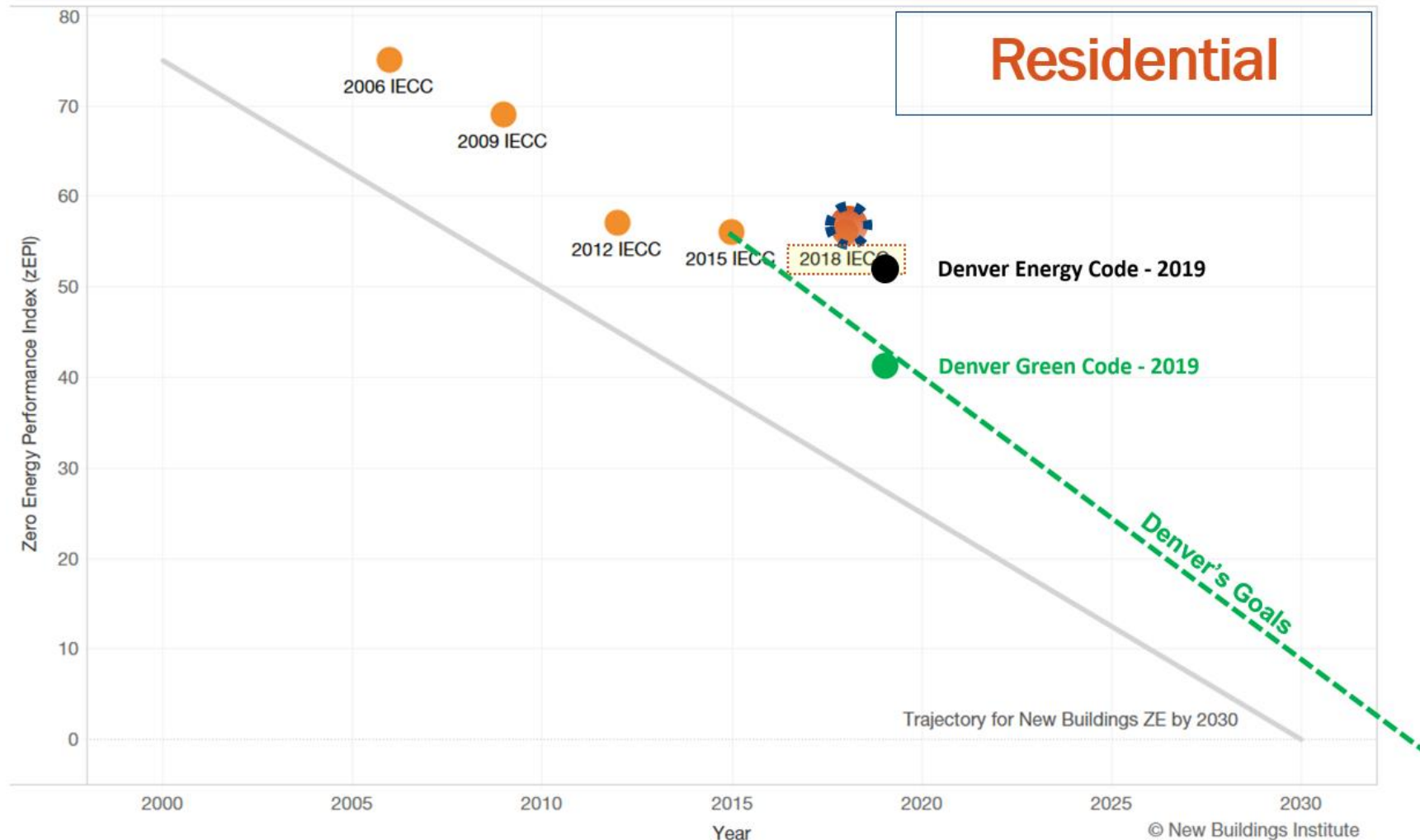
Data Source: Dodge Data and Analytics – Denver City and County New Construction Projections

# 2019 Denver Code: *beyond 2018 IECC*





# 2019 Denver Code: *beyond 2018 IECC*



# Denver's Current New Construction Work

- Green Buildings Ordinance
- Net Zero Implementation Plan
  - Fall 2019 – Dec 2020
- 2021 Code Adoption Process
  - Base Code
  - Denver Green Code





# Questions?



An aerial photograph of New York City, showing a dense urban landscape with numerous skyscrapers and buildings. A semi-transparent blue rectangular overlay covers the central portion of the image, serving as a background for the title and date text.

# SUSTAINABILITY POLICY IN NYC

October 1, 2020

presented by  
**Emily Hoffman, PE, CEM**

# NYC's SUSTAINABILITY PLAN

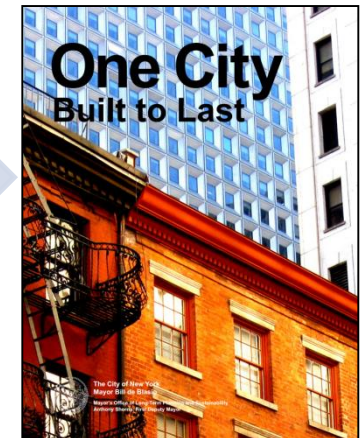
**PlaNYC  
(2007)**

• 30% x 2030



**One City  
Built to Last  
(2014)**

• 80% x 2050  
• 40% x 2030





# NYC's SUSTAINABILITY PLAN

## OneNYC 2050 = 8 Visions for a Sustainable NYC

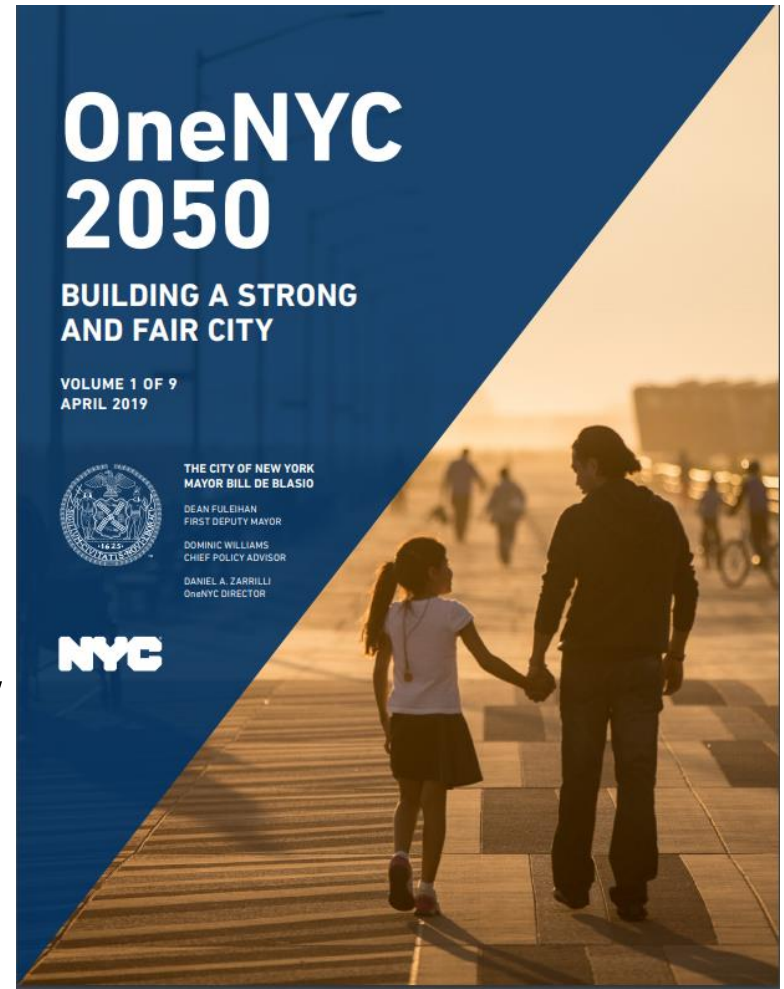
### Vision 6- A Livable Climate

- Achieve Carbon Neutrality
- 100% Clean Electricity

### Vision 8- Modern Infrastructure

- 20% electric vehicle share of new motor vehicle sales by 2025

<http://onenyc.cityofnewyork.us/reports-resources/>



# SUSTAINABILITY AT DOB

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## Legislation that drives our work



- **Local Law 32 of 2018**
- **Mandates a much more stringent energy code**
- **2019 & 2022 follow NYSERDA Stretch Code**
- **2025 set energy limits for buildings 25,000 sq. ft. and greater**

# SUSTAINABILITY AT DOB

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## Legislation that drives our work



- **Local Law 97 of 2019** - mandates GHG limits for buildings 25,000 Sq. Ft. and greater beginning in 2024
- Caps will reduce over time to require deep-energy retrofits, based on their occupancy

# 2020 NYCECC

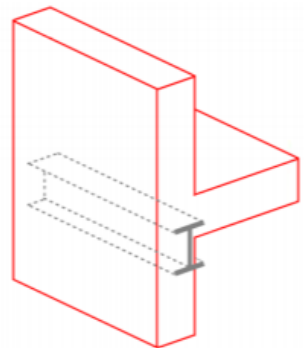
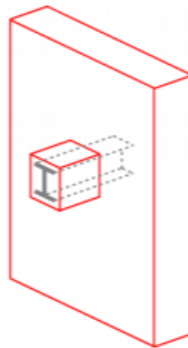
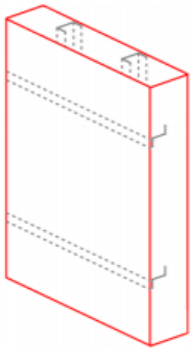
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- ***Effective date May 12<sup>th</sup>, 2020***
- **Provisions based on:**
  - **2020 New York State Energy Code**
    - **2018 IECC and ASHRAE 90.1-2016**
  - **NYSERDA NYStretch Energy Code-2020**
  - **Additional provisions adopted by NYC Advisory Committee**

# 2020 NYCECC: THERMAL BRIDGE

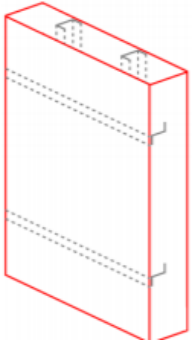
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- ***NEW REQUIREMENT:*** Document 3 types of thermal bridging on plans
- Clear Field Assemblies, Point Source and Linear
- All new construction, additions, alterations of envelope (residential + commercial provisions)



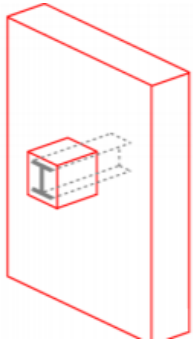


# 2020 NYCECC: THERMAL BRIDGES



## CLEAR FIELD Thermal Bridges

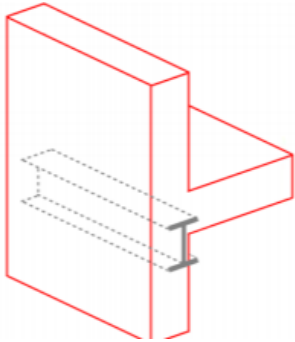
CFTB.no	Assembly/Thermal Bridge Description	Assembly ID in Energy Analysis <sup>1</sup>	Section Detail Location
CFTB.1	Concrete roof deck with R-33ci	RF-1	A-502/4
CFTB.2	Concrete roof deck with R-30ci	RF-2	A-502/5
CFTB.3	CMU wall, EIFS finish	WT-1	A-501/1
CFTB.4	CMU wall, Metal panel cladding	WT-2	A-501/2



## POINT Thermal Bridges

PTB.no	Assembly/Thermal Bridge Description	Size [sq. inches]	Number of Occurrence	Section Detail Location
PTB.1	Structural beam penetration on walls @ courtyard	14	6	A-502/7
PTB.2	Structural column (pilotis) penetrating 2nd floor slab/soffit @ courtyard	21	4	A-504/1
PTB.3	Main entrance canopy structural member penetration on walls	9	2	A-504/2

# 2020 NYCECC: THERMAL BRIDGES



LINEAR Thermal Bridges						
LTB.no	Type of Thermal Bridge	$\Psi$ - Value [Btu/hr.ft.° F]	$\Psi$ - Value Source/ Calculation	Total Length [ft]	Assembly ID in Energy Analysis <sup>1</sup>	Section Detail Location
LTB.1	Parapet	0.42	Default value from Table C402.6	284	n/a	A507/1
LTB.2	Balcony	0.45	$\Psi$ - Value of better performing details per BC Hydro Building Envelope Thermal Bridging Guide v.1.2	34	WT-B	A507/7
LTB.3	Floor Slab Edge-1	0.44	Default value from Table C402.6	72	WT-SE1	A507/2
LTB.4	Floor Slab Edge-2	0.40	$\Psi$ - Value of better performing details per BC Hydro Building Envelope Thermal Bridging Guide v.1.2	21	WT-SE2	A507/3
LTB.5	Fenestration Perimeter	0.32	Default value from Table C402.6	617	n/a	A702/1, A702/2, A702/5, A702/6
LTB.6	Shelf Angle	0.41	Default value from Table C402.6	65	n/a	A508/2, A508/3

1. Envelope COMcheck report on EN-004

For additional resources see 2020 NYCECC How To Guide:

[https://www1.nyc.gov/assets/buildings/pdf/h2g\\_all\\_2020\\_nycecc.pdf](https://www1.nyc.gov/assets/buildings/pdf/h2g_all_2020_nycecc.pdf)

# ENERGY MODELING: ENVELOPE BACKSTOP

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- **NEW REQUIREMENT:** “Envelope Backstop” for new buildings 25,000 sq. ft. & greater
- Different provisions for Residential/Non-res occupancy
  - **-15%** allowance for Residential (Multifamily/Dormitory)
  - **-7%** allowance for all other
- Submission requirements include COMcheck + EN1 Form (modeling compliance form)

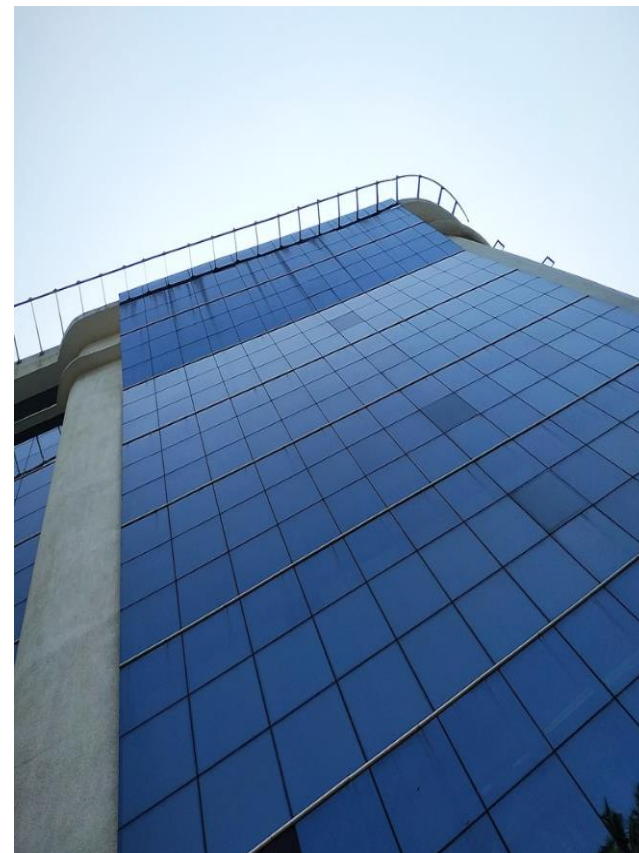


Photo source: Wikipedia Commons

# ENERGY MODELING: ENVELOPE BACKSTOP



COMcheck Software Version 4.1.4.2

## Envelope Compliance Certificate

### Project Information

Energy Code: 2020 New York City Energy Cons. Code, App. CA Modeling Envelope Backstop  
Project Title:  
Location: New York, New York  
Climate Zone: 4a  
Project Type: New Construction  
Vertical Glazing / Wall Area: 49%  
Performance Sim. Specs: EnergyPlus 8.1.0.009 (EPW: USA\_NY\_New.York-LaGuardia.AP.725030\_TMY3.epw)

Construction Site: Owner/Agent: Designer/Contractor:

### Building Area

### Floor Area

1-Multifamily : Residential	55000
2-Retail : Nonresidential	10000

Qualifies for 2020 NYCECC, App. CA Modeling : Envelope design -6% (allowable margin = -13.8%)

# ELECTRIC VEHICLE 'READY' REQUIREMENTS

- **Commercial garages & open lots**
  - Added to Building Code in 2014 (Local Law 130 of 2013)
  - 20% of spaces
  - Panel capacity and conduit for future installation of Level 2 charger
- **Residential provisions (new)**
  - 1 per dwelling or 5% for common lots
  - Outlet for Level 2 charger OR
  - Panel capacity and conduit for future installation of Level 2 charger
- **Required for alterations when electric capacity is increased**



Photo Source: US Department of Energy



A high-angle, black and white aerial photograph of a dense urban area, likely New York City. The image shows a vast expanse of skyscrapers and buildings, with a few parks visible as green spaces. The text "Thank you!" is overlaid in the center.

Thank you!

[energycode@buildings.nyc.gov](mailto:energycode@buildings.nyc.gov)



# Oregon Department of **ENERGY**

## 2020 Building Energy Code Seminar Series

Blake Shelide, PE  
Facilities Engineer  
Oregon Department of Energy



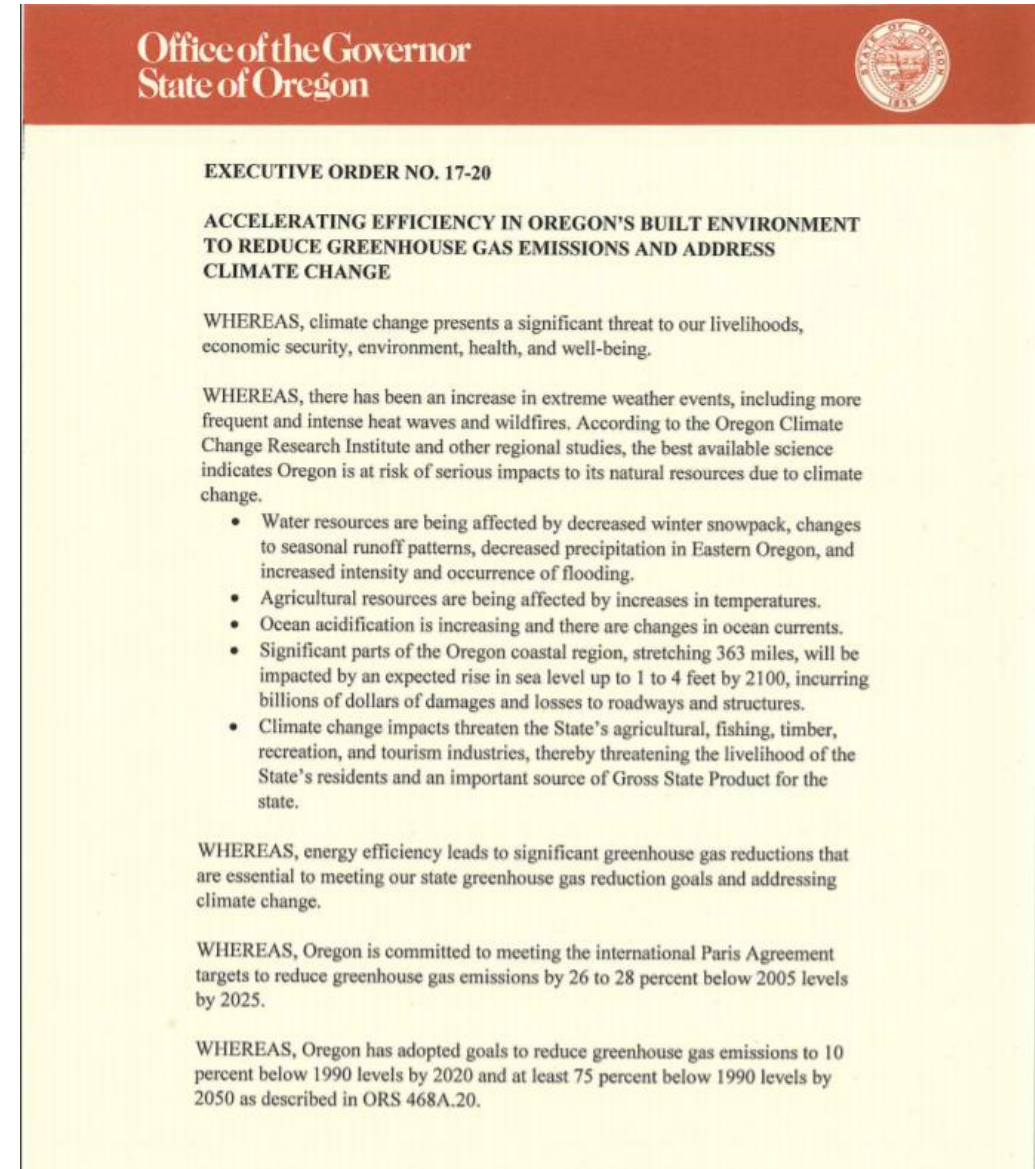
# EO 17-20 (Energy Efficiency)

## Three key sections

1. Energy efficiency leadership in state buildings
2. Building codes and appliance standards
  - US DOE ZERH equivalency
  - Solar-ready, EV-ready
3. Existing buildings and affordable housing

EO available:

[http://www.oregon.gov/gov/Documents/executive\\_orders/eo\\_17-20.pdf](http://www.oregon.gov/gov/Documents/executive_orders/eo_17-20.pdf)



# EO 20-04 (Greenhouse Gas Emissions)

## Broad directives for state agencies to reduce GHG emissions

- 60% reduction in new building annual site consumption of energy (excluding transportation and appliances) by 2030, from a 2006 baseline
- Re-focus on Reach Code
- Appliance standards - complementary work to codes, helps address non-regulated “plug loads”

Office of the Governor  
State of Oregon



### EXECUTIVE ORDER NO. 20-04

#### DIRECTING STATE AGENCIES TO TAKE ACTIONS TO REDUCE AND REGULATE GREENHOUSE GAS EMISSIONS

WHEREAS, climate change and ocean acidification caused by greenhouse gas (GHG) emissions are having significant detrimental effects on public health and on Oregon's economic vitality, natural resources, and environment; and

WHEREAS, climate change has a disproportionate effect on the physical, mental, financial, and cultural wellbeing of impacted communities, such as Native American tribes, communities of color, rural communities, coastal communities, lower-income households, and other communities traditionally underrepresented in public processes, who typically have fewer resources for adapting to climate change and are therefore the most vulnerable to displacement, adverse health effects, job loss, property damage, and other effects of climate change; and

WHEREAS, climate change is contributing to an increase in the frequency and severity of wildfires in Oregon, endangering public health and safety and damaging rural economies; and

WHEREAS, the world's leading climate scientists, including those in the Oregon Climate Change Research Institute, predict that these serious impacts of climate change will worsen if prompt action is not taken to curb emissions; and

WHEREAS, the Intergovernmental Panel on Climate Change has identified limiting global warming to 2 degrees Celsius or less as necessary to avoid potentially catastrophic climate change impacts, and remaining below this threshold requires accelerated reductions in GHG emissions to levels at least 80 percent below 1990 levels by 2050; and

WHEREAS, Oregon, as a member of the U.S. Climate Alliance, has committed to implementing policies to advance the emissions reduction goals of the international Paris Agreement; and

WHEREAS, GHG emissions present a significant threat to Oregon's public health, economy, safety, and environment; and



[https://www.oregon.gov/gov/Documents/executive\\_orders/eo\\_20-04.pdf](https://www.oregon.gov/gov/Documents/executive_orders/eo_20-04.pdf)



# Commercial Energy Code

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Oregon is aligning with quick adoption of ASHRAE 90.1

- ASHRAE 90.1-2016 in October 2019
- ASHRAE 90.1-2019 next

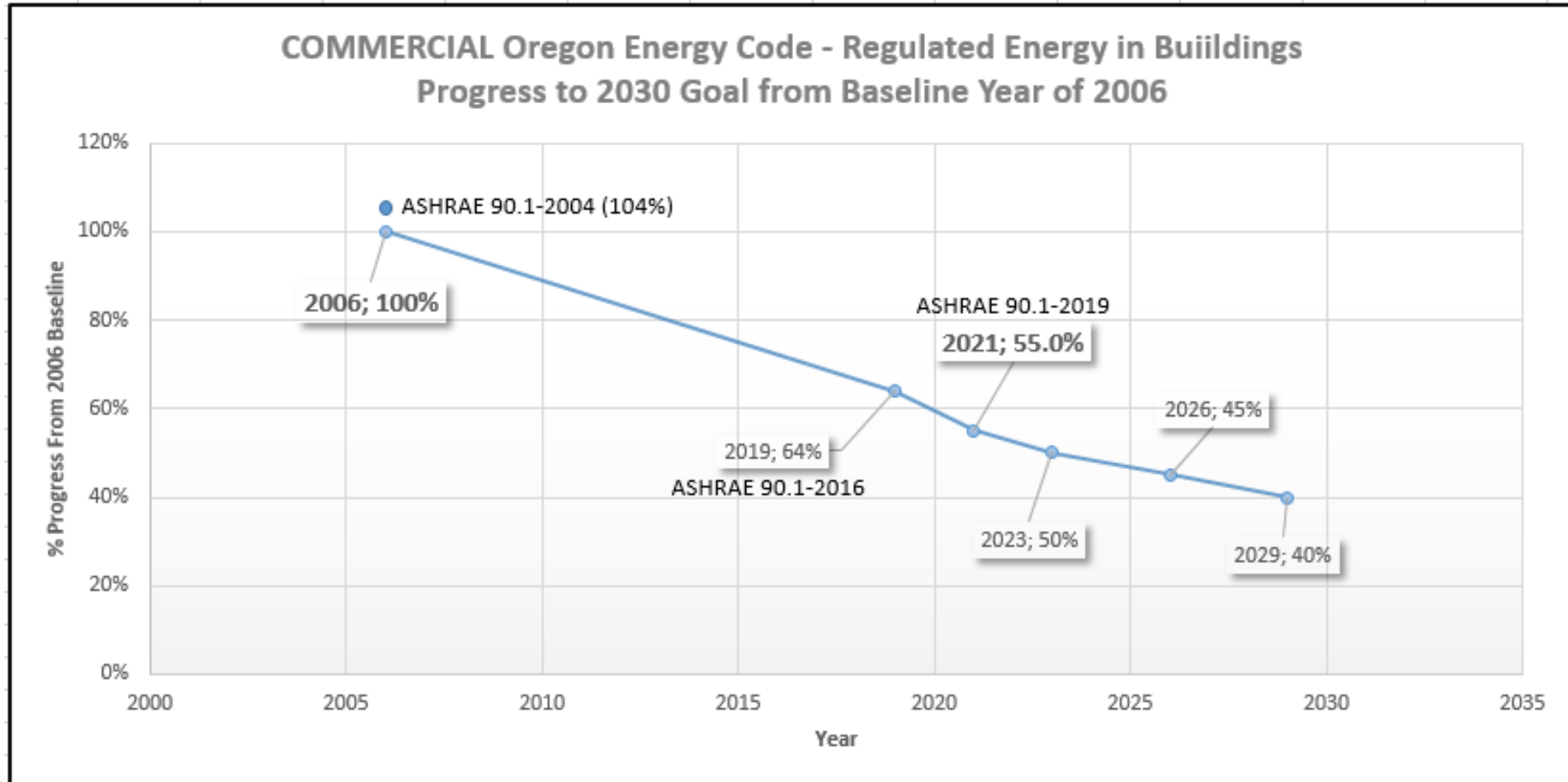


**Incorporation of Architecture 2030  
Framework for estimating energy  
consumption and renewables for a  
Zero Net Energy Building**



# Getting to the 60% Target

- Oregon's Commercial Code Progress



# Associated topics

- Home Energy Scoring
- Appliance standards
- Wildland Urban Interface code (wildfire hazard mitigation)

Effective: January 24, 2019

## SECTION R327 WILDFIRE HAZARD MITIGATION

**R327.1 Purpose.** The purpose of this section is to provide minimum standards for dwellings and their accessory structures located in or adjacent to vegetated areas subject to wildfires, to reduce or eliminate hazards presented by such fires.

**R327.2 Scope.** The provisions of this section shall apply to all dwellings required to be protected against wildfire by a jurisdiction which has adopted wildfire zoning regulations. The additional provisions of Section R327.4 shall apply when a local municipality has adopted a local ordinance specifically recognizing Section R327.4 and consistent with Sections R327.4 through R327.4.8.



# **Ed Carley, Buildings Program Director**

**National Association of State Energy Officials (NASEO)**



INTERNATIONAL  
CODE  
COUNCIL®

# Codes & The Energy/Resilience Nexus

Ryan M. Colker  
Executive Director

Alliance for National & Community Resilience  
Vice President, Innovation, International Code Council



Alliance for  
National & Community  
Resilience

# The Family of Building & Community Solutions



ICC  
INTERNATIONAL  
CODE  
COUNCIL®



ICC  
EVALUATION  
SERVICE

Innovation  
RESEARCH LABS



INTERNATIONAL  
ACCREDITATION  
SERVICE®



GENERAL  
CODE



S.K. GHOSH  
ASSOCIATES



Alliance  
for Resilience



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

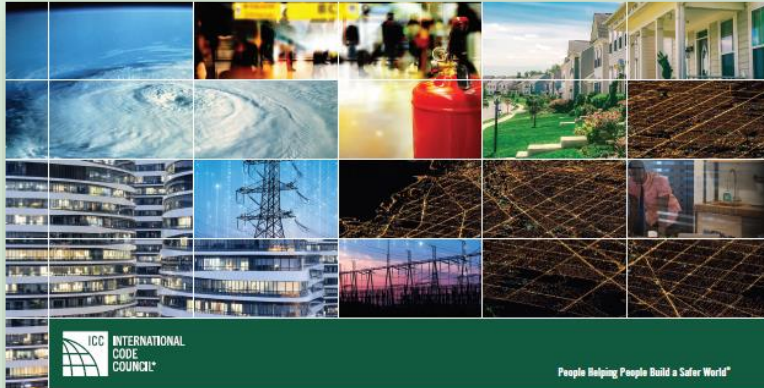


# Cities and states have committed to energy or greenhouse gas emissions goals



Pledge, Compact, Commitment, or Initiative	Number of Participating US Local Governments
Climate Mayors	407
We are Still In	307
Ready for 100	148
Under2MOU	26
Bloomberg American Cities Climate Challenge	25
Rockefeller 100 Resilient Cities	24
2030 Districts	21
DOE Zero Energy Schools Accelerator	14
DOE Energy Accelerator	11
DOE Zero Energy Districts Accelerator	4

# Energy Codes & Resilience



## The Important Role of Energy Codes in Achieving Resilience

**Durability**  
Durability ensures  
home is livable  
for decades

**Moisture  
Management**  
Rot, mold,  
mildew

Works in Tandem with  
Other Model Codes



**Extreme Weather  
Protection**  
Better envelopes  
Habitability –  
more lives saved

**Energy Efficiency**  
Grid Stability  
Microgrids  
Energy Storage

**Fire Safety**

Second in a series

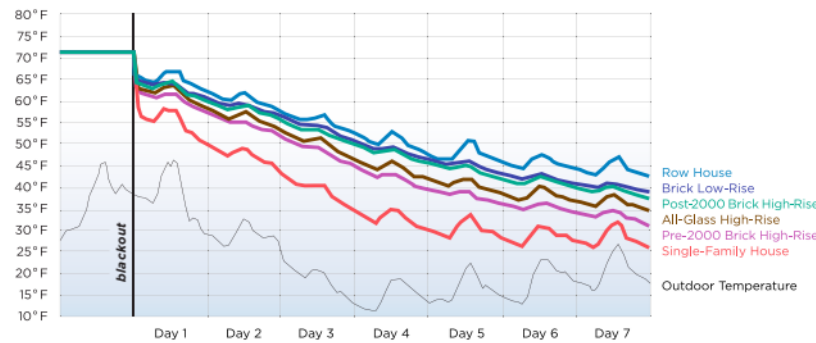
[https://www.iccsafe.org/wp-content/uploads/19-18078\\_GR\\_ANCR\\_IECC\\_Resilience\\_White\\_Paper\\_BRO\\_Final\\_midres.pdf](https://www.iccsafe.org/wp-content/uploads/19-18078_GR_ANCR_IECC_Resilience_White_Paper_BRO_Final_midres.pdf)

# Passive Survivability, Extreme Heat/Cold



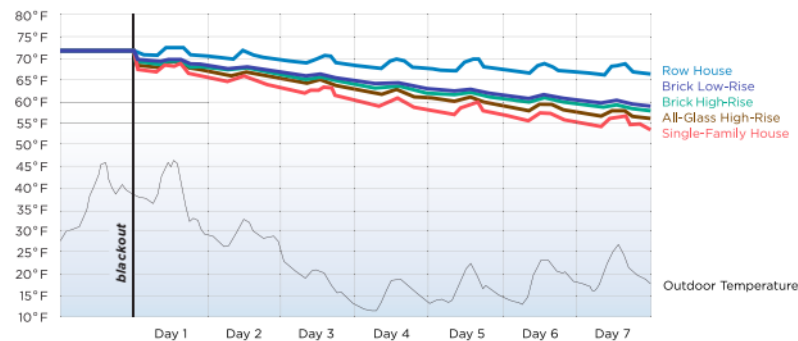
## Indoor Temperatures During a Winter Blackout

### Typical Building



A typical detached single-family house would fall below freezing on the fourth day. After a week, all the other buildings would be almost as cold, between 32°F and 43°F indoors.

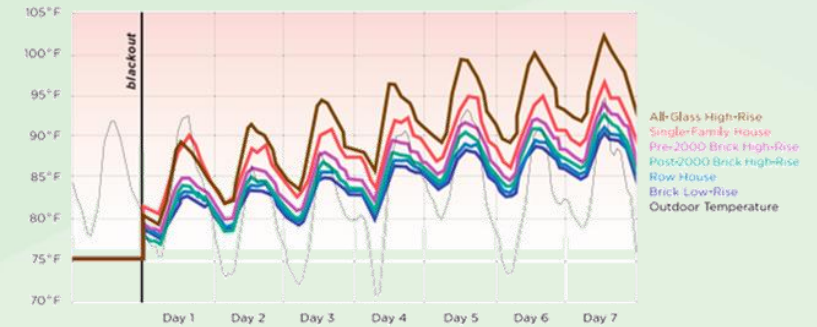
### High-Performing Building



At the end of the week, there would be an 18°F to 27°F difference between a typical existing building and a high-performing building of the same type. All the high-performing buildings would maintain temperatures above 54°F.

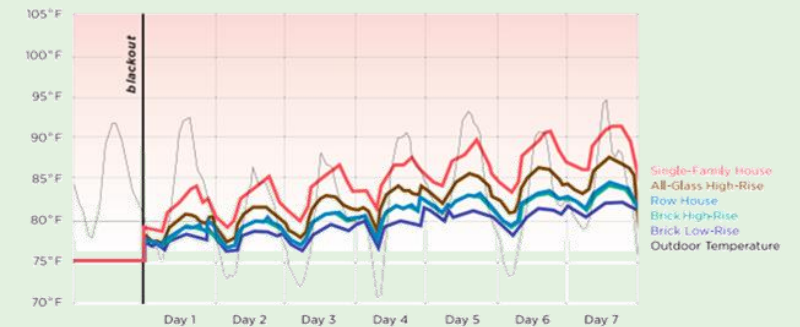
## Indoor Temperatures During a Summer Blackout

### Typical Building



The typical all-glass high-rise apartment and single-family house heat to almost 90°F on the first day. The all-glass apartment climbs above 95°F on the fourth day and peaks over 100°F. The brick buildings, including the row house, low-rise and high-rise apartments, stay cooler throughout the week but still end above 85°F.

### High-Performing Building

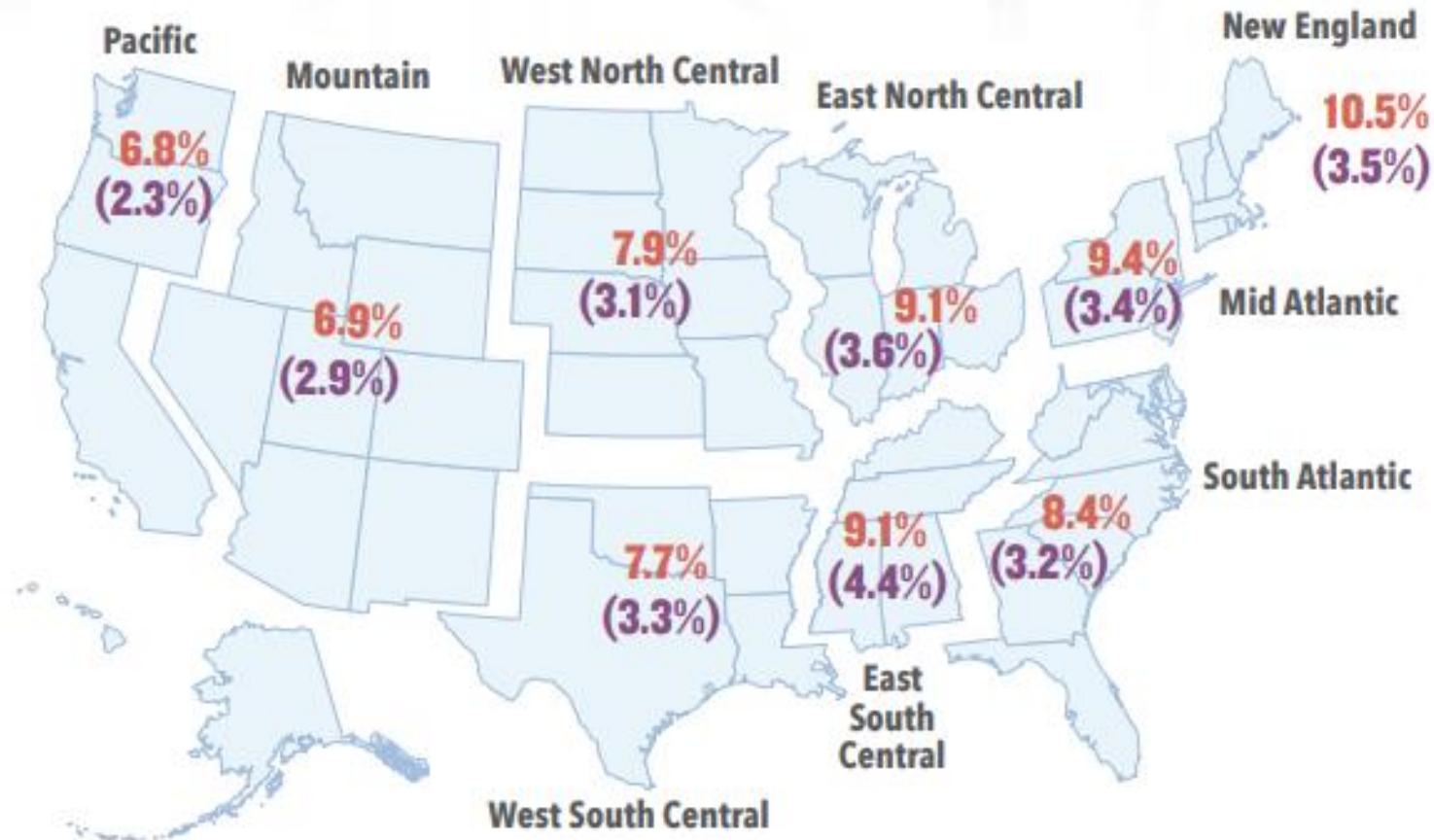


High-performing brick buildings, including the row house and brick low- and high-rise apartments, would stay below 80°F for the first half of the week, and never go above 85°F. The high-performing glass building reaches 88°F and the single-family house still rises above 90°F.



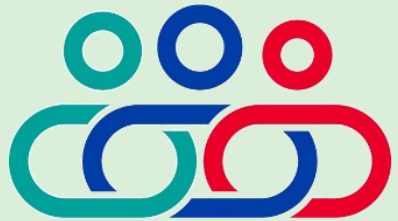
# Energy & Low-Income Households

FIGURE 3. Median low-income (< 200% FPL) energy burdens by region (red) compared to median energy burdens by region (purple)



- Median low-income energy burden by region
- Median energy burden by region

# Community Functions



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# Survey of Code Departments & COVID-19



April 2020		September 2020
93%	Continuing to perform inspections	98%
65%	Some or all employees that conduct plan review or inspections working remotely	47%
30%	Do not have the capability to do any aspect of electronic/remote permitting	28%
41%	Do not have the capability to do electronic/remote plan reviews	39%
<a href="https://www.iccsafe.org/advocacy/coronavirus-response-center/survey/">https://www.iccsafe.org/advocacy/coronavirus-response-center/survey/</a>		
Do not have the capability for		

## Recommended Practices for Remote Virtual Inspections (RVI)



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## Maintaining Building Safety During the COVID-19 Pandemic

*Considerations for Moving Permitting and Plan Review Online*  
April 8, 2020

Code departments are adapting to ensure that they can continue to perform their public safety mission while protecting code officials, the construction workforce and the public at large from the spread of COVID-19. To support our members at this time, the International Code Council has compiled important considerations and a set of potential solutions code departments should think about as they navigate these uncharted waters.

The options offered here are intended to address the short-term needs for permitting and plan review for jurisdictions that do not currently have them. Upon conclusion of the pandemic, code departments are encouraged to consider more permanent, formalized solutions based on the experiences and lessons learned.

While the content presented here is general in nature, code departments know their local conditions and are aware of state specific requirements including stay-in-place orders, interpretations, and waiver procedures. Code Council chapters and building associations can be important sources of local information. The Code Council has also assembled resources on its [Coronavirus Response Center](#).

Always abide by the recommendations of local health officials, the U.S. Centers for Disease Control and Prevention (CDC), and other national and international health authorities.

### General considerations for remote operations

- Communicate new procedures through various channels (website and emails) to relevant groups (chapters and industry groups). Update your website frequently to address frequently asked questions.
- Adopt basic online security practices (e.g. don't open exe files, use virus scanning software). Your government's IT department can provide guidance.
- Consult with your legal counsel to assure compliance with all federal, state and local requirements.
- Ensure adherence to record-keeping rules to ensure that no information is lost and inspection information is accessible as projects proceed.
- Consult your existing permitting software provider (if you have one in place) to determine what services they can provide and how information from virtual and remote inspections can integrate with your existing system. If you do not have one in place, you can contact [International Code Council Community Development Solutions](#) for help.
- Assure that remote staff have access to the codes and standards they need. The [Code Council's Digital Library](#) offers online access to all ICC model codes and standards and most state codes.



People Helping People Build a Safer World®

## Maintaining Building Safety During the COVID-19 Pandemic

*Considerations for Virtual and Remote Inspections*  
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### General considerations for remote operations

- Communicate new procedures through various channels (website and emails) to relevant groups (chapters and industry groups). Update your website frequently to address frequently asked questions.
- Communicate new procedures to users through various channels (website, emails, postings, chapter outreach, industry groups). Update your website frequently to address common questions.
- Adopt basic online security practices (e.g. don't open exe files, use virus scanning software). Your government's IT department can provide guidance.
- Ensure adherence to record-keeping rules to assure that no information is lost and inspection information is accessible as projects proceed.
- Consult with your legal counsel to assure compliance with all federal, state and local requirements.
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# Forthcoming Resources



- Adoption and Implementation Toolkit
  - Zero Energy, Low Carbon Buildings
- Off-Site Construction Standards
  - MEP, Energy Efficiency & Water Conservation
- International Green Construction Code
- 2021 I-Codes

# Questions?



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Resilience



INTERNATIONAL  
CODE  
COUNCIL®

Ryan M. Colker, J.D.

Vice President, Innovation

Executive Director, Alliance for National & Community Resilience

International Code Council

500 New Jersey Ave., NW

6<sup>th</sup> Floor

Washington, DC 20001

202-370-1800x6257

[rcolker@iccsafe.org](mailto:rcolker@iccsafe.org) • [ANCR@resilientalliance.org](mailto:ANCR@resilientalliance.org)

[iccsafe.org](http://iccsafe.org) • [resilientalliance.org](http://resilientalliance.org)



[@rmcolker](https://twitter.com/rmcolker) • [@ANCRResilience](https://twitter.com/ANCRResilience)

TO HELP PRIME THE DISCUSSION:

- > What are the most important issues facing energy codes today?
- > How can DOE best support energy codes?

Standby for audience polls...



The background of the slide is a photograph of a power line tower and its associated cables stretching across the frame. The scene is set during sunset or sunrise, with a bright sun low on the horizon to the left, casting a warm orange glow. The sky transitions from a deep orange near the horizon to a dark blue at the top. Several other power line towers are visible in the distance, creating a sense of depth. The overall mood is industrial yet serene.

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# PANEL DISCUSSION

## Innovation in Building Energy Codes





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# WHAT'S NEXT?

## NECC Seminar Series

# UPDATE: NATIONAL ENERGY CODES CONFERENCE (NECC)

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Here's where things currently stand:

- ORIGINAL: May 2020 (postponed due to Covid-19)
- TENTATIVE: May 11-13, 2021 at the Palmer House Hilton in Chicago, IL

Please hold this date in hopeful anticipation of our typical NECC lineup in a safe and healthy setting. However, recognizing the uncertain nature of in-person gatherings, the revised date and location may yet change—please plan accordingly.

> Check back for updates in the coming months:

[energycodes.gov/2020-national-energy-codes-conference](https://energycodes.gov/2020-national-energy-codes-conference)

# NECC SEMINAR SERIES

The NECC may still be on hold, but the discussion continues!

Catch the entire lineup of sessions in the coming weeks—Thursdays @ 1p ET:

- 10/8: Electronic Permitting
- 10/15: HVAC for Low-Load Homes
- 10/22: Performance-Based Compliance
- 10/29: 2021 IECC Commercial
- 11/5: Remote and Virtual Inspections
- 11/12: New for ASHRAE Standard 90.1
- 11/19: 2021 IECC Residential
- 12/3: Advanced Technology and Codes
- 12/10: Policies for EE + Resilience
- 12/17: Field Studies in the NW Region

> Learn more: <https://www.energycodes.gov/2020-building-energy-code-webinar-series>



# THANK YOU

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A big thanks to everyone who's helped make the NECC Seminar Series possible:

- Pacific Northwest National Laboratory (PNNL)
- International Code Council (ICC)
- National Association of State Energy Officials (NASEO)
- Regional Energy Efficiency Organizations:
  - Midwest Energy Efficiency Alliance (MEEA)
  - Northeast Energy Efficiency Partnerships (NEEP)
  - Southeast Energy Efficiency Alliance (SEEA)
  - South-central Partnership for Energy Efficiency as a Resource (SPEER)
  - Southwest Energy Efficiency Partnerships (SWEET)
- Our many presenters, speakers, discussion panelists and session leaders

**And all of our participants!**



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## JEREMY WILLIAMS

Building Technologies Office

U.S. Department of Energy

[jeremy.Williams@ee.doe.gov](mailto:jeremy.Williams@ee.doe.gov)

