



## To Infinity and Beyond: Workshopping the Buzz about Energy Codes



Alison Lindburg, Director, Building Codes & Policy

January 31, 2024

# Who is your favorite Toy Story character?

*Scan QR Code or go to Menti.com*



**Menti.com**

**Access Code:  
6318 4561**

# Agenda

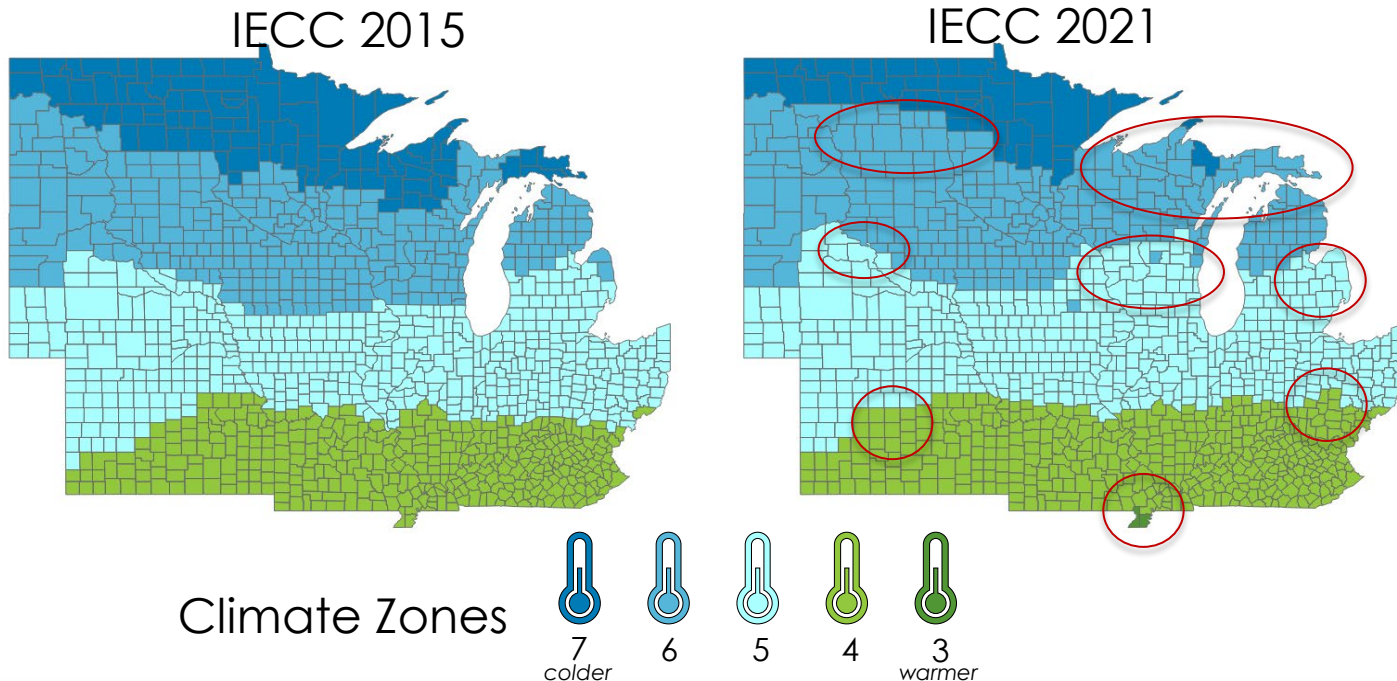
- Midwest background
- Level-setting presentations
- Workshop

# The Need for Decarbonization

## The Midwest is Getting Warmer

Midwest Climate Zones - IECC 2015

Midwest Climate Zones - IECC 2021



176  
Midwest  
counties  
shifted to  
warmer  
climate  
zones

# Commercial Buildings

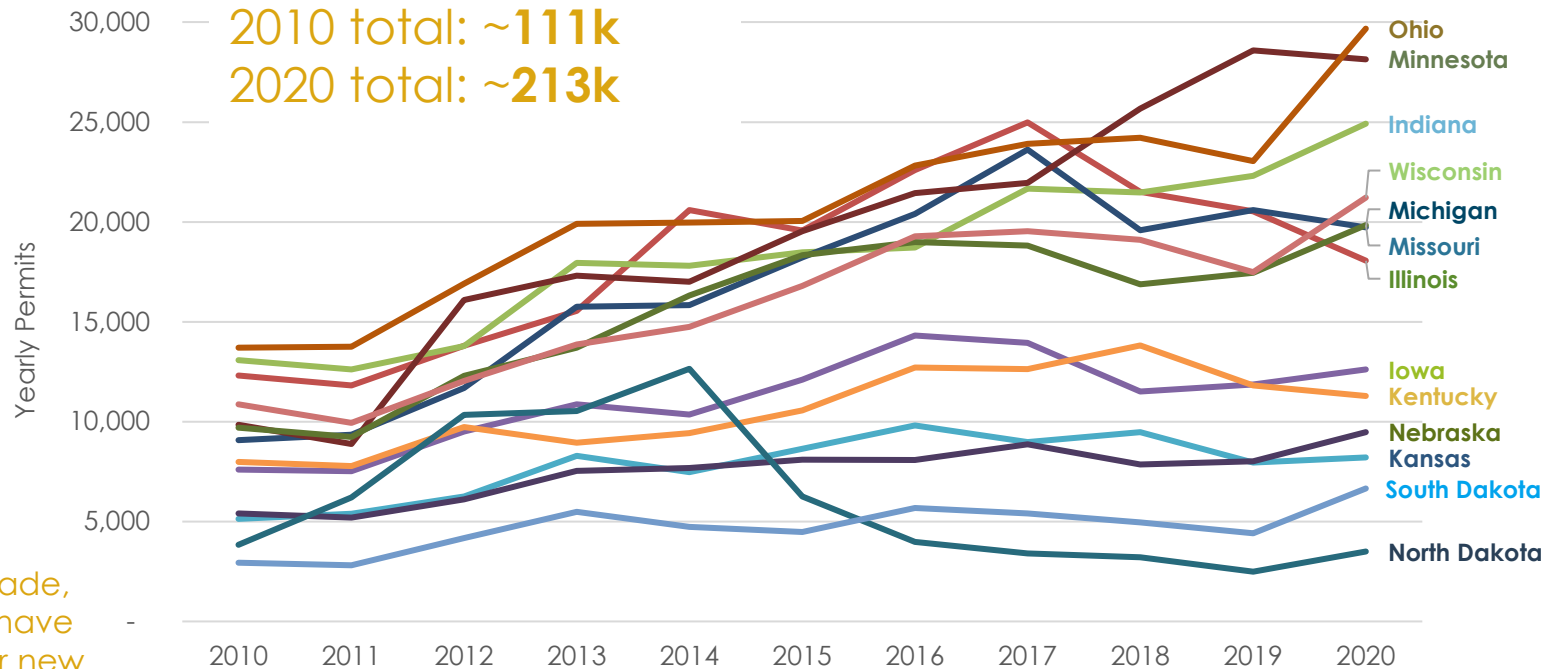
## *New Construction vs. Existing Buildings*

Type	Region	Number of buildings	Total floorspace	Average floorspace
Existing buildings	Midwest (excl. Kentucky)	1,719,000	26,128,000,00	15,000
New construction	Midwest	3,468	182,897,239	52,739
<i>Addition %</i>		<i>0.20%</i>	<i>0.66%</i>	

New commercial buildings are **added at about 0.2% annually** in the Midwest and new buildings tend to have a much higher square footage on average

# Residential Buildings

## New Construction Yearly Building Permits: MEEA States



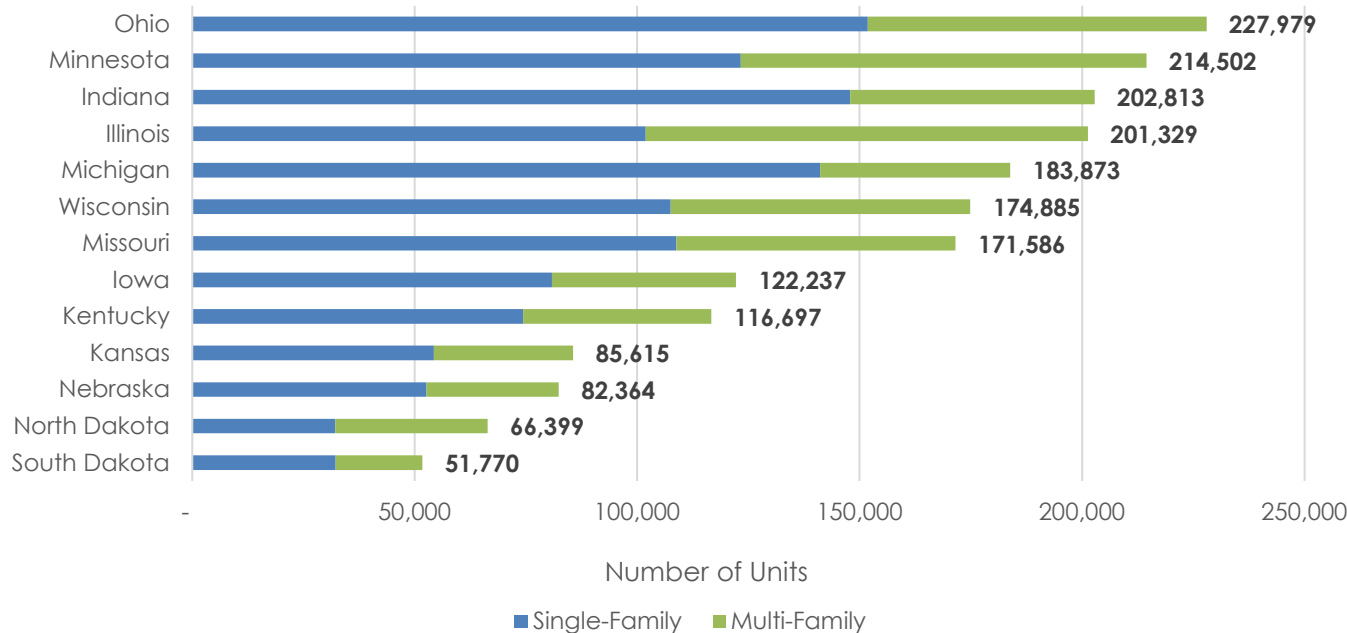
Over the past decade, Midwestern states have nearly **doubled** their new housing permits.



# Residential Buildings

## New Construction Building Permits: MEEA States

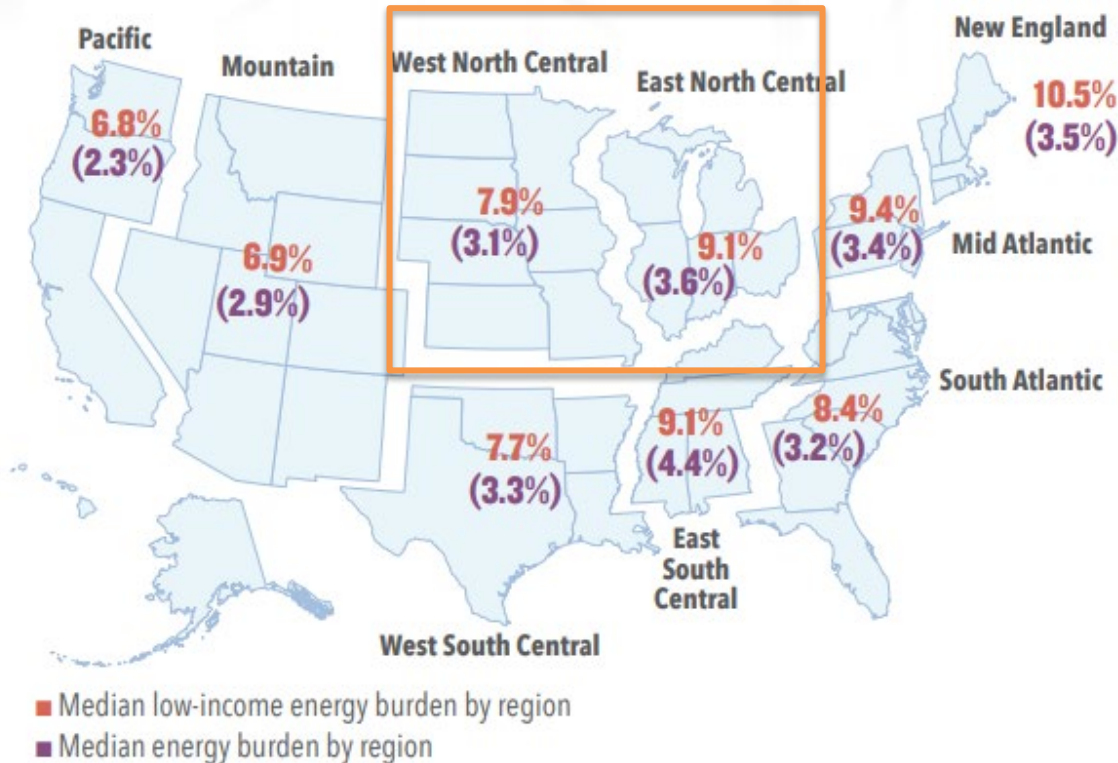
New Residential Construction Permits by State (2010-2020)



Single-Family construction dominates the housing market in the Midwest, except in IL and MN, where multi-family has more permits.

# Buildings & Equity

## Energy Burden

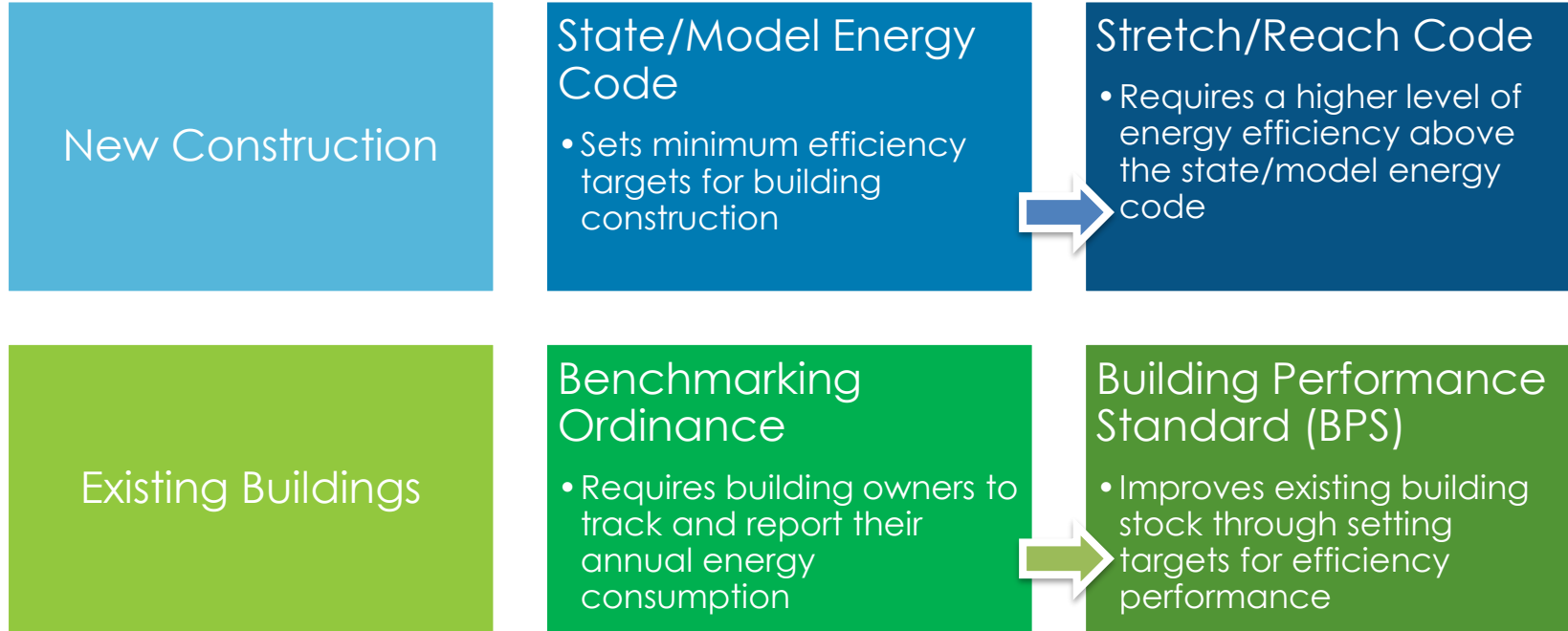


The East North Central region has the **second highest** energy burden in the US





# Building Policies



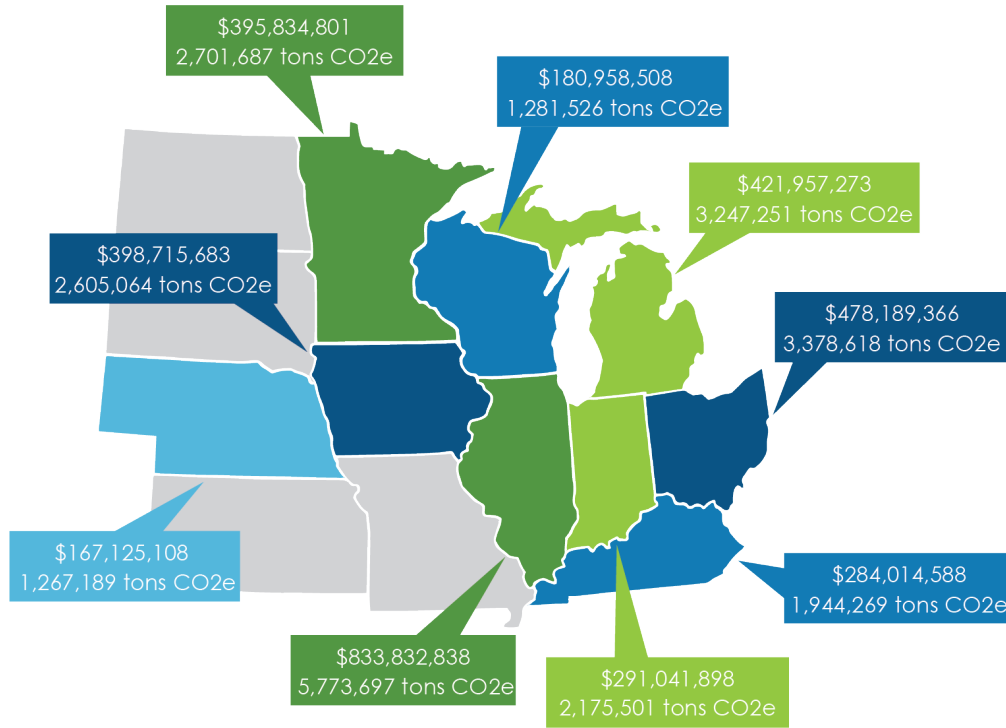
# New Construction

*A smaller but essential market*

- New buildings, and newly renovated buildings, could still be in service in the next century
- Therefore, new construction is a critical market for long term reduction of energy consumption and GHG emissions
- When you are trying to get out of a hole, the first thing to do is stop digging
  - Stop creating buildings with unnecessary energy consumption and GHG emissions

# Building Energy Code Impacts in the Midwest

## Cumulative Savings 2009-2019



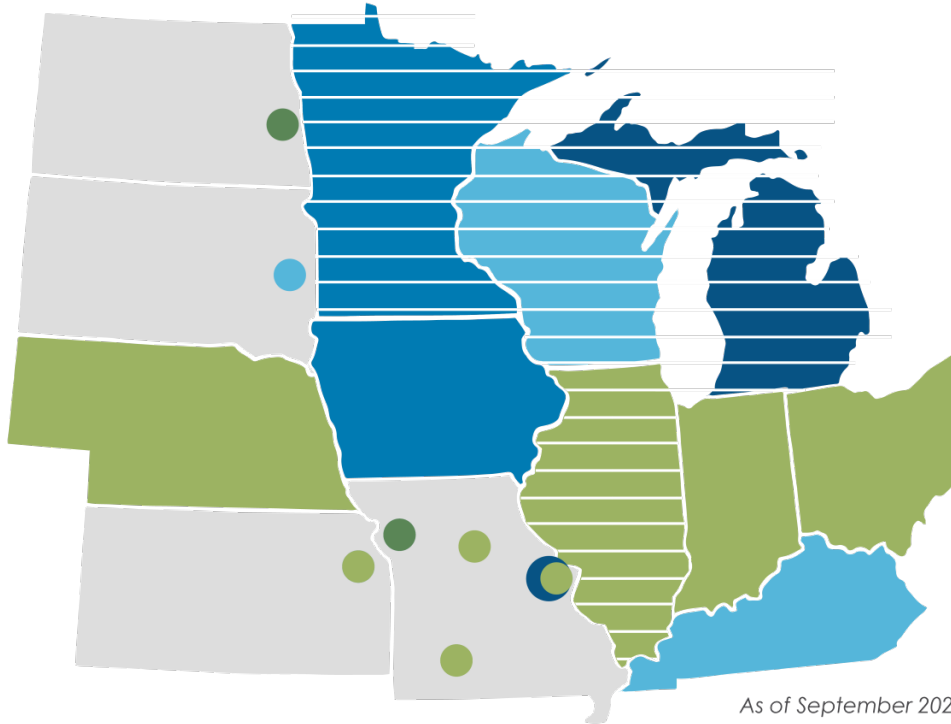
## Midwest Totals

Energy Savings:  
~212 Million MMBTU

Cost Savings:  
~\$3.5 Billion

Carbon Savings:  
~24.5 tons of CO2e

# Residential Building Energy Codes

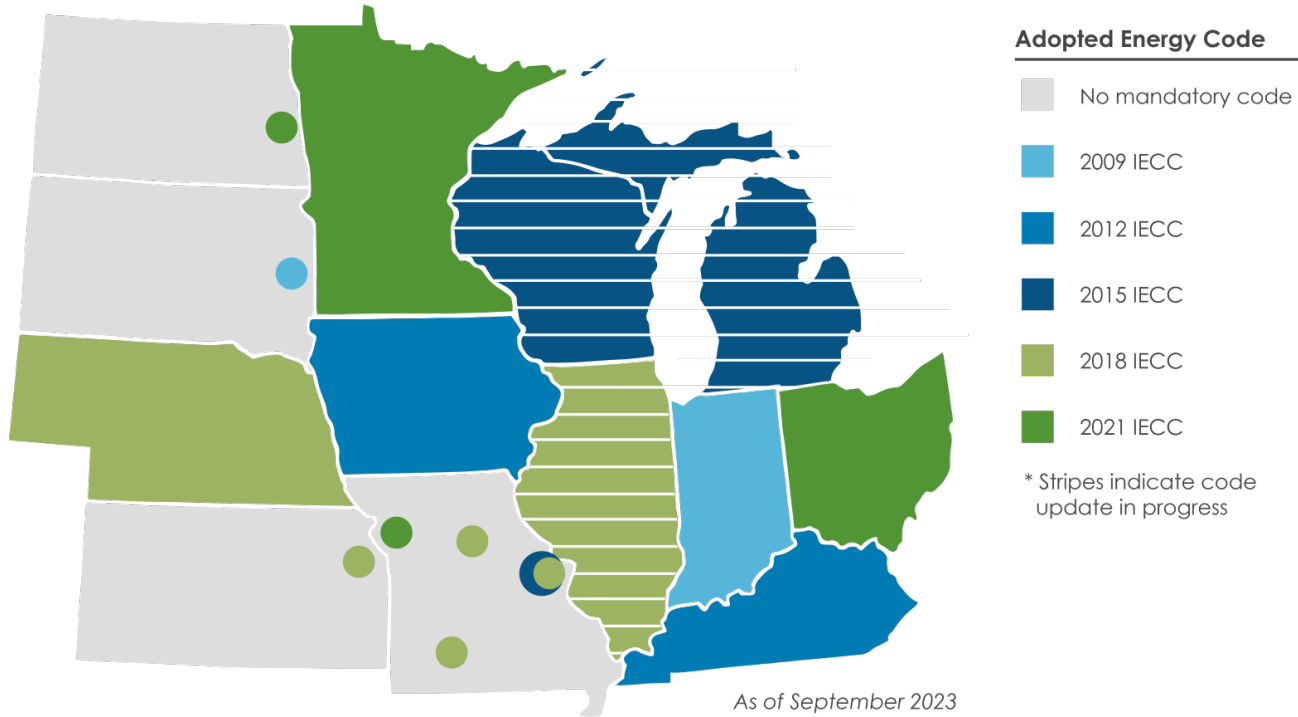


## Adopted Energy Code

- No mandatory code
- 2009 IECC
- 2012 IECC
- 2015 IECC
- 2018 IECC
- 2021 IECC

\* Stripes indicate code update in progress

# Commercial Building Energy Codes



# Stretch Codes in the Midwest

## **Illinois is developing a stretch code that can be adopted by local municipalities.**

- Targets move to net-zero energy by 2032.
- First target is 9.1% more efficient than current commercial Illinois code, and 23.1% than current residential Illinois code.
- Allows for Passive House Institute US (PHIUS) as alternative compliance path for the stretch code

## **Minnesota now must meet incremental net-zero targets for its statewide commercial energy code.**

- Targets move to net-zero energy by 2036.
- Requires state to incrementally achieve 80% energy savings in the commercial code adoption with baseline as ASHRAE 90.1 2004.



# Eric Fowler

Fresh Energy

# Fresh Energy

Fresh Energy is a MN energy policy nonprofit working across the economy for a just, carbon-free future.

Eric Fowler: Senior Policy Associate,  
Buildings

- Support code adoption
- Electrification advancement
- Building performance policy



Fresh Energy

# A challenge: political opposition

To anything that could raise the first cost of a building, regardless of

- Ongoing energy savings
- Increasing consumer options for electric alternatives
- GHG emissions reductions
- Efficiency beyond the building (EV readiness)



Fresh Energy

# Ross Igoe

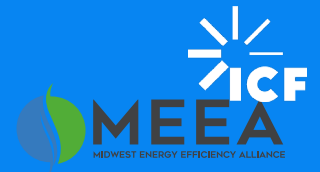
ICF

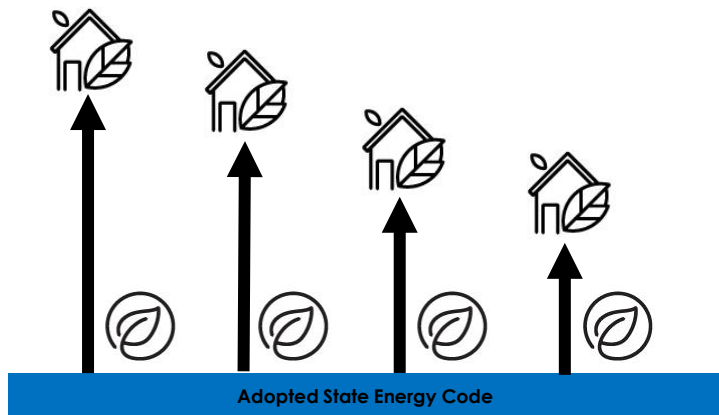


# **Workshopping the Buzz about Energy Codes Implementers Role in Code Adoption & Compliance**

1/31/2024

Ross Igoe  
Manager, Residential  
ICF





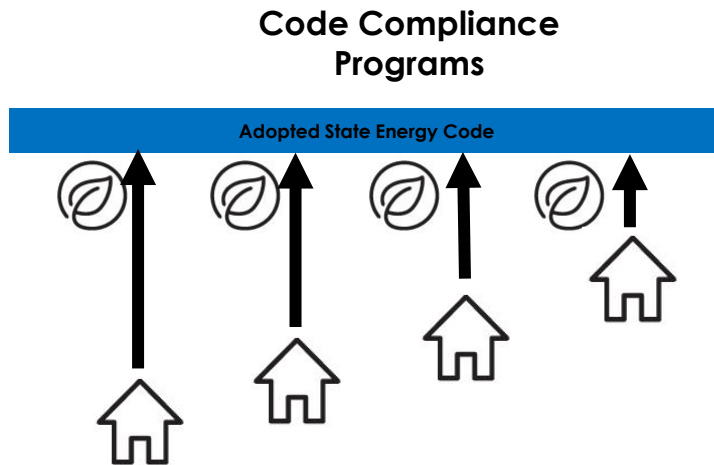
### Above-Code Programs

- Utilities claim savings based on performance above baseline
- Participation dependent on builder meeting program requirements
- Typically requires participation from a third-party (i.e., HERS Rater)



Code Built Home

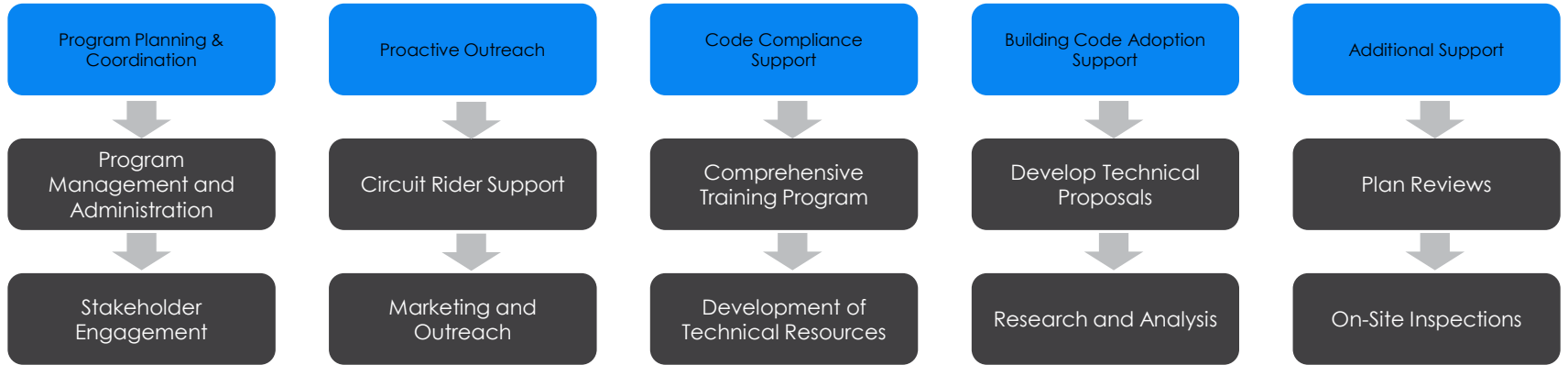
- Utility claims savings based on below code homes achieving code compliance and supporting increased compliance rates
- Participation dependent on education and training of market actors (code officials, HERS raters, builders)



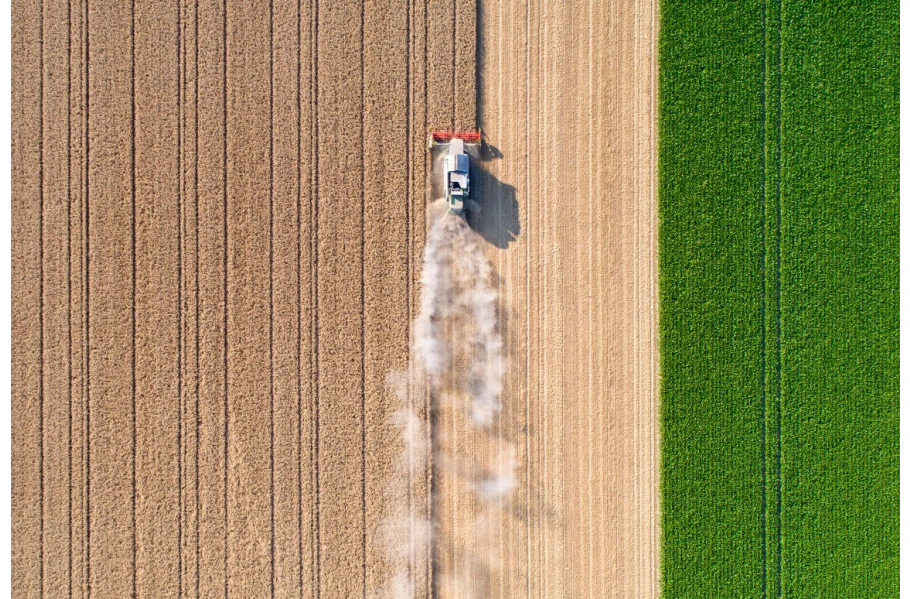
### Code Compliance Programs

➔ Overview: [Above-Code vs Code Compliance Programs](#)





➔ Stakeholder: Implementers Role in Code Compliance



Barriers & Challenges: [Metro vs Rural Code Compliance Support](#)

# Jeannette LeZaks

Slipstream



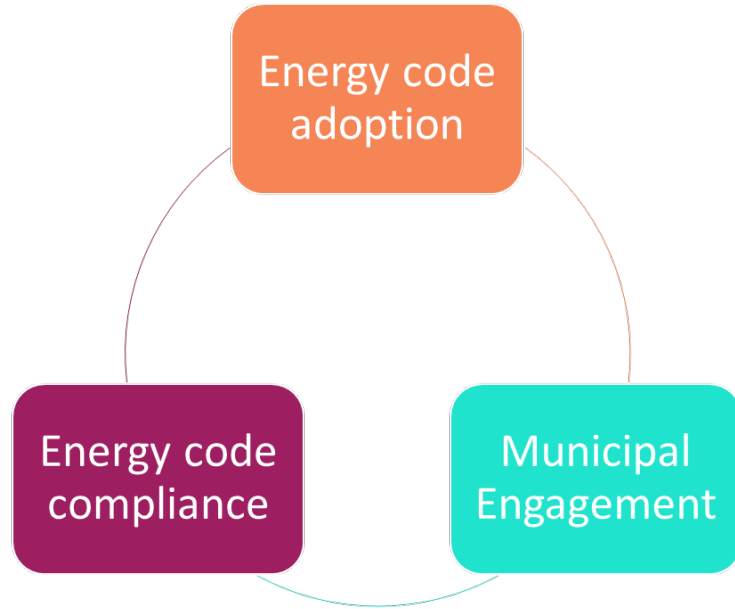
# Climate + Clean Energy Solutions for everyone.

The knowledge, people, and  
resources to solve our biggest  
energy challenges.



# DOE Resilient and Efficient Codes Implementation

*Building a Strong Foundation for Wisconsin Code Adoption, Compliance, and Local Support*





# Wisconsin DOE Resilient and Efficient Codes Funding Project Partners





# Advancing stretch codes and building performance standards in IL

## Project goal

- Engage with municipalities to adopt and implement advanced building policies
- Develop support programs to help implement
- Develop savings and attribution methodologies that follow market transformation protocols

## Utility funders

- ComEd, currently
- Nicor Gas, Peoples Gas and North Shore Gas, previously



# Advancing stretch codes and building performance standards in IL

## Project objectives

- Engage with municipalities to adopt and implement advanced building policies
- Develop utility-funded support programs to help implement those policies
- Develop savings and attribution methodologies that follow market transformation protocols



## Opportunities for Utility Support

What is the likelihood of your community adopting stretch codes in 2024?

0  
Not very likely

0  
Somewhat likely

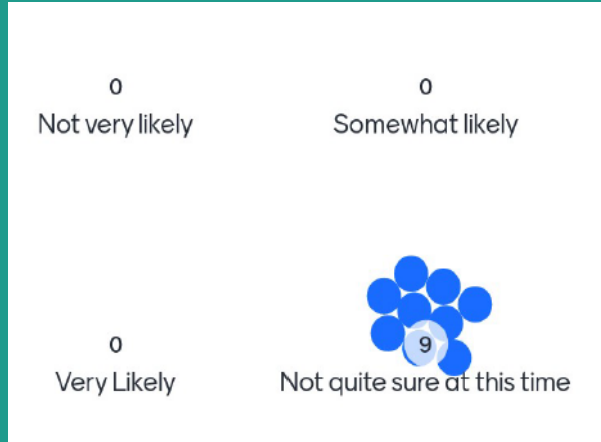
0  
Very Likely

9  
Not quite sure at this time



## Opportunities for Utility Support

What is the likelihood of your community adopting stretch codes in 2024?



Technical and research support for policy development

Trainings for municipal staff on implementation

Contractor-focused technical guidance and trainings

Incentives for meeting design requirements

# Challenges

**What are the challenges in successfully complying with energy codes?**

**What challenges (and opportunities) are specific to utilities?**

# Questions?



**Jeannette LeZaks**  
Slipstream

[jlezaks@slipstreaminc.org](mailto:jlezaks@slipstreaminc.org)

# Erin Beddingfield

US DOE SCEP

# Workshop

## *Each Table Has a Different Challenge*

- Adoption Advancement
- Utility Program Support
- Urban vs. Rural
- Technical Assistance Resources
- Stretch Code Adoption, Compliance and Enforcement



# Workshop

## *Each Table Has a Different Challenge*

You've been given funding to advance energy code **adoption** and provide **compliance** support in your state/jurisdiction. What do you do to address the challenge listed at your table?

Consider:

- What stakeholder groups are necessary to be successful?
- How do you effectively convey the importance of energy efficiency and energy codes?
- How do you include equity in the solution?

# Report Out

- 1 Key Takeaway
- 1 Action Item/Next Step

# Contact Info



[alindburg@mwalliance.org](mailto:alindburg@mwalliance.org)

312.784.7257



[www.mwalliance.org](http://www.mwalliance.org)