



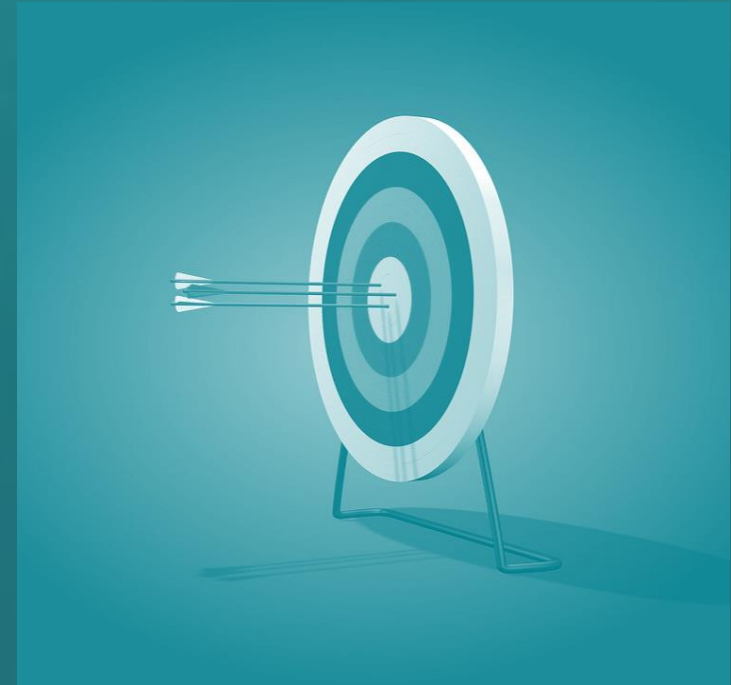
New Jersey Zero Energy Building (ZEB) Code Collaborative Meeting #1

Thursday March 25th, 2021

Goals for the Meeting



- *The purpose of this meeting is to convene a diverse group of stakeholders in New Jersey to discuss the topics relating to code adoption and building decarbonization to reach the states goal of 100% clean energy by 2050.*
- *This meeting will allow collaborative members to ask questions about the collaborative and combine efforts on decarbonization goals for New Jersey.*
- *This meeting will also provide important insight into stakeholder need and collaborative meeting topics*



Agenda



1:00 – Welcome & Introduction

1:20 – Background on ZEB Collaborative

1:35 – ZEB Roadmap Discussion

- **Timeline and Deliverables**
- **Stakeholder Survey**

1:45 – New Jersey Energy Master Plan (EMP) Overview

2:00 – New Jersey Energy Code Overview

- Q & A with Darren Port
- Energy Code Compliance Baseline Project

2:20 – Concluding Poll and Next Steps

Northeast Energy Efficiency Partnerships



“Assist the Northeast and Mid-Atlantic region to reduce building sector energy consumption by at least 3% per year and carbon emissions by at least 40% by 2030 (relative to 2001)”

Mission

We seek to accelerate regional collaboration to promote advanced energy efficiency and related solutions in homes, buildings, industry, and communities.

Vision

We envision the region's homes, buildings, and communities transformed into efficient, affordable, low-carbon, resilient places to live, work, and play.

Approach

Drive market transformation regionally by fostering collaboration and innovation, developing tools, and disseminating knowledge



Opening Poll



What topic areas related to codes and building decarbonization can the ZEB Collaborative help New Jersey better address?

https://www.polleverywhere.com/free_text_polls/OXOwheCZ0rrSXbkwR5PeA

NEEP's 2020-2021 New Jersey Work



- Participate in NJ Energy Efficiency Advocates Table
 - Work with NJ energy efficiency advocates to conduct outreach and education on state energy efficiency goals
- Ongoing technical assistance to stakeholders on appliance standards legislation
- Convene building energy code collaborative



Background on Zero Energy Building (ZEB) Code Collaborative



Background:

- 2019 Energy Master Plan- 100% clean energy by 2050

Purpose:

- Build consensus among stakeholders

Goals:

- Develop roadmap to provide options to meet state goal

Scope:

- Convene 5 collaborative meetings
- Address topics based on stakeholder interest and needs
- Produce informed roadmap with options for next steps NJ can take



ZEB Collaborative Timeline



Date	Objectives
January 2021	<ul style="list-style-type: none">• Execute MOU with BPU and RCGB
February 2021	<ul style="list-style-type: none">• Invite & Confirm NJ ZEB Collaborative Participants
March 2021	<ul style="list-style-type: none">• Engage Advisory Committee• NJ ZEB Collaborative Meeting #1 (Project, Goals, Roles, Survey)• Conduct NJ ZEB Codes Survey• Conduct Follow-up Outreach and Research
April 2021	<ul style="list-style-type: none">• Review of Survey Results• Prepare Context and Options Report• NJ ZEB Collaborative Meeting #2 (Review Context and Options Report, review NJ ZEB Roadmap scope, format, target audiences)
May 2021	<ul style="list-style-type: none">• NEEP work internally with RCGB, BPU, DCA to draft ZEB roadmap• Advisory Committee meeting• NJ ZEB Collaborative Meeting #3 (Review Draft NJ ZEB Roadmap)• Edit draft of ZEB roadmap
June 2021	<ul style="list-style-type: none">• NJ ZEB Collaborative Meeting #4 (Share Final ZEB Roadmap)
July 2021	<ul style="list-style-type: none">• Hold Public Briefing to publicly release the NJ ZEB Roadmap

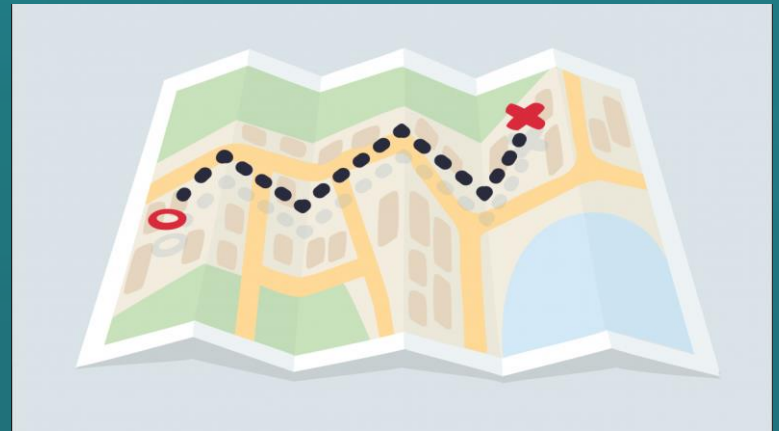
NJ ZEB Roadmap



Guided by NJ ZEB Collaborative feedback and Advisory Committee

The roadmap could address:

- Advancing Zero Energy Code Development
- Improving Code Administration, Enforcement and Compliance
- Related decarbonization strategies informed by stakeholder survey like workforce training, electrification, existing buildings, etc



Stakeholder Survey

- identify key issues, information, and perspectives important to roadmap development
- Identify important topics to be addressed during collaborative meetings
- Determine stakeholder needs and best practices for building decarbonization related to energy codes



New Jersey Energy Master Plan (EMP) Overview

NEW JERSEY'S BUILDING DECARBONIZATION

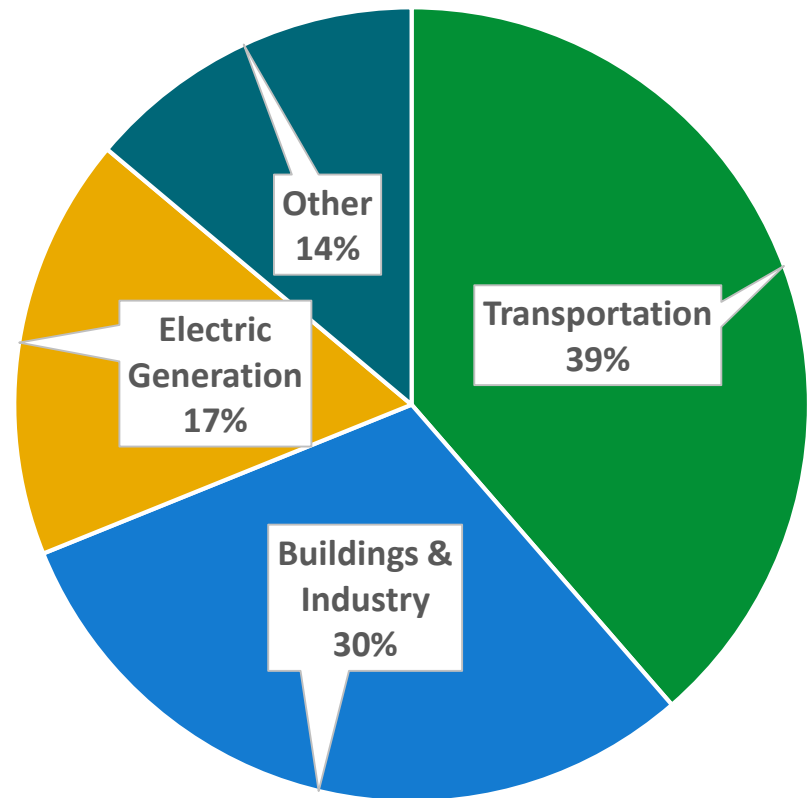


New Jersey Energy Master Plan

- New Jersey's latest Energy Master Plan was released on January 27, 2020
- The EMP is built on three pillars:
 - ✓ 100% clean energy by 2050
 - ✓ 80% reduction in emissions by 2050 relative to 2006 levels
 - ✓ Stronger and Fairer New Jersey

NJ Net GHG Emissions, 2018

The residential, commercial, and industrial sector combined is the 2nd largest source of emissions in NJ, behind transportation.



Building Sector Priorities

- Achieving New Jersey's climate and clean energy goals will require immediate action in all sectors
- Key priorities to reduce energy use and emissions from the building sector include:
 - Increasing energy efficiency
 - Improving buildings' thermal envelopes
 - Decarbonizing buildings
- The Global Warming Response Act Report (DEP, October 2020) further reiterates these goals and strategies

Decarbonization

Decarbonization

The reduction of carbon, or to remove carbon from...

- In buildings, carbon is primarily found in heating sources (e.g., natural gas, heating oil, propane) and appliances (e.g., water heaters, gas stoves)

Electrification

Replacement of fossil fuels with electricity for heating and appliances in a way that reduces overall climate emissions and other air pollutants.

- In buildings, electrification often entails heating buildings with ground- or air-sourced heat pumps instead of boilers and furnaces and using electric water heaters and stoves.

Building Sector Opportunities

- Reduce energy demand first
 - Increasing energy efficiency and improving thermal envelopes are the best actions we can take for reducing energy use, thereby also lowering ratepayer costs and climate and air pollutants.
- Decarbonize second
 - For the greatest economic and environmental benefits, prioritize the electrification of new construction and existing construction heated by electric baseboard heating, fuel oil, and propane.
 - Also consider customers installing central A/C.

Building Sector Challenges

- Cost factors
 - Managing upfront capital investments and ongoing operating costs
- Reliability and redundancy
 - Using electric heat sources most efficiently and maintaining back-up heat
- Education and awareness
 - Enabling customers to decarbonize at or near the point of failure of a heat source or appliance

Equity Considerations

- EE priorities include affordability, equity, environmental justice, economic development, decarbonization, and public health.
 - Strategy 3.1.5 – Adopt equitable clean energy financing mechanisms that enable greater penetration of energy efficiency opportunities for all customers
- New Jersey’s transition to a clean energy economy must be done in a way that supports economic growth, benefits all customers equitably, and works with existing industry partners to give them the clarity and forecasting they need to adjust business models for future success.

Conclusion

- Building electrification is a critical measure to reduce energy demand and greenhouse gas emissions.
- In combination with broad transportation electrification and decarbonization of the electricity system, New Jersey can reasonably and affordably meet its climate goals.

New Jersey Energy Code Overview Q & A with Darren Port

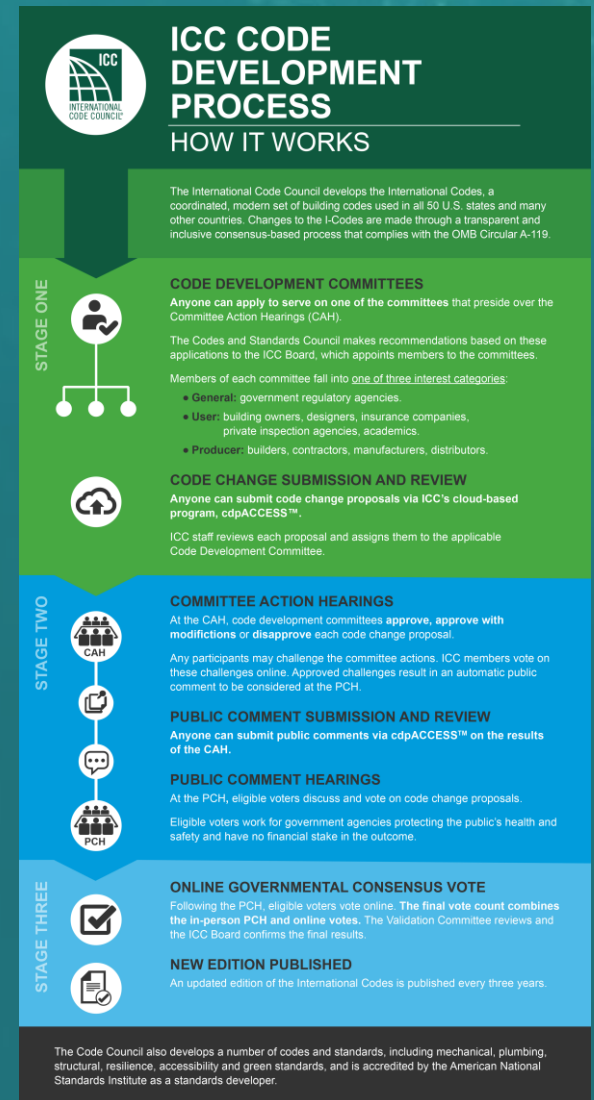
Overview of ICC Process and Changes



What is the ICC code development process for the IECC?

What is the role of governmental members and why are they important?

Have there been any recent changes to the development process for IECC?



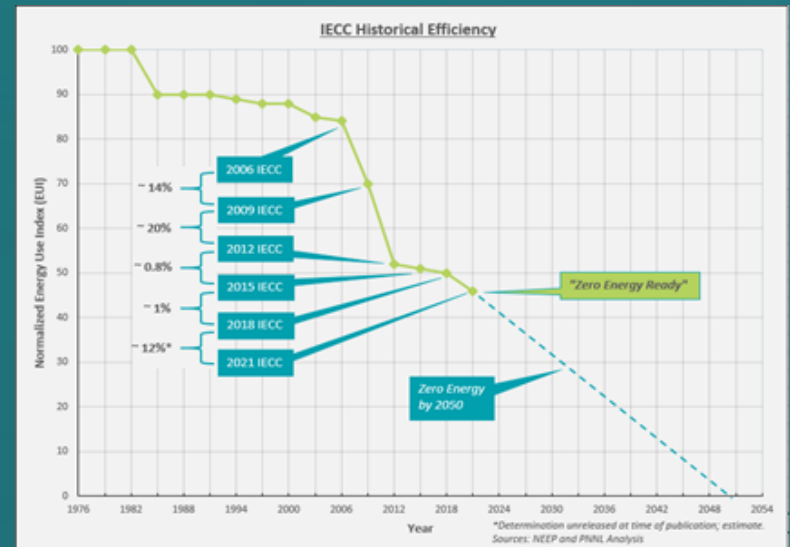
Overview of IECC 2021 for New Jersey

What are some of the changes New Jersey can expect with IECC 2021?

Can IECC 2021 adoption put the state on track to reaching a zero energy code?

What other code adoption tools and strategies will be needed to get to zero energy?

What would New Jersey need to adopt a stretch code or above code policy?



Rutgers Center for Green Building: Energy Code Compliance Baseline Project



- Outreach and Stakeholder Process
 - Timeline
 - Stakeholder participation
 - Methodology
 - Outcomes and next steps



Closing Poll



What New Jersey specific topics related to codes and building decarbonization should the ZEB Collaborative discuss during upcoming meetings?

https://www.polleverywhere.com/free_text_polls/QdgdbYb64EYmlUHmUgC1P

Next Steps

- Next ZEB collaborative meeting:
 - Meetings will be the 3rd or 4th week of the month
 - Will send out doodle poll to meeting attendees
- Look out for Stakeholder Survey
 - Share with your network
- Reach out with any questions

For additional info and questions, contact:
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