

The meeting
will begin in
a few minutes



Energy Efficiency Stakeholder Meeting

January 16, 2025

Agenda

1. Re-cap of Last Meeting
2. New Jersey Energy Efficiency Programs
3. Energy Efficiency Updates
 - NJCEP Updates
 - New Construction Program Update
 - Utility Updates
 - Residential Program Overview
4. Presentation – New Construction Building Performance Program Overview
5. General Q&A
6. Items of Interest
7. Annual EE Stakeholder Survey Announcement
8. Next Meetings

Recap of Last Month

December Monthly Recap

What we covered:

- ✓ NJCEP Updates
 - ✓ NJCEP New Construction Program
- ✓ Utility Updates
 - ✓ Triennium 2 Programs Overview
- ✓ Guest Presentation: NJCEP Year In Review
- ✓ Q&A

New Jersey Energy Efficiency Programs

www.NJCleanEnergy.com/EEP

NJBPU and NJCEP Administered Programs



- New Construction (residential, commercial, industrial, government)
- Large Energy Users
- Energy Savings Improvement Program (financing)
- State Facilities Initiative*
- Local Government Energy Audits
- Combined Heat and Power, & Fuel Cells

* State facilities are also available for utility programs

Utility Administered Programs



- Existing Buildings (residential, commercial, industrial, government)
- Efficiency Products
 - Lighting & Marketplace
 - HVAC
 - Appliance Rebated
 - Appliance Recycling

NJBPU and NJCEP Administered Programs



New Jersey's Clean Energy Program

Energy Efficiency Updates



More NJCEP Information

Quarterly Newsletter:

NJCleanEnergy.com/NEWSLETTER

Clean Energy Program Filings:

NJCleanEnergy.com/FILINGS

Clean Energy Program Monthly Progress to Goal Report:

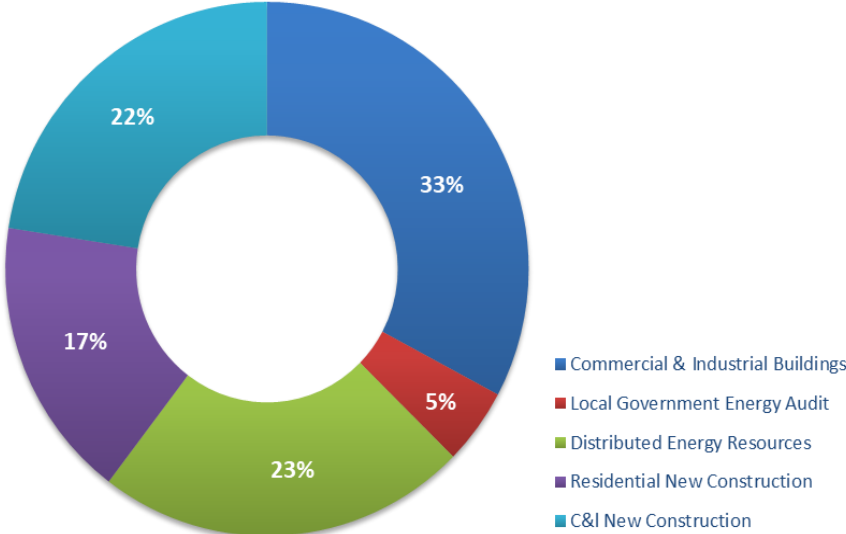
NJCleanEnergy.com/EE - Meeting Materials Archive

The screenshot shows the website for New Jersey's Clean Energy Program. The main navigation bar includes Home, Energy Efficiency, Electric Vehicles, and Renewable Energy. The left sidebar contains links for NEW JERSEY'S CLEAN ENERGY PROGRAM, ABOUT NJCEP, BOARD OF PUBLIC UTILITIES, POLICY UPDATES & REQUEST FOR COMMENTS, CALENDAR OF EVENTS, and CLEAN ENERGY STAKEHOLDER. The main content area is titled "Energy Efficiency Meeting Materials Archive" and features a "Select A Year to View:" dropdown menu set to 2024. Below this, there are two links to return to meeting calendars. A table lists meeting dates, agendas, and materials for 2024. A grey callout box points to the June 20, 2024 entry, stating: "Progress to Goals Report is posted with post-EE Stakeholder Meeting resources following this meeting". The right sidebar includes "Program Updates", "Energy Master Plan", and "Join Our Listserv".

Meeting Date	Meeting Agenda	Meeting Materials
June 20, 2024	Agenda	Slide Deck, Webinar Recording & PTG Report
May 16, 2024	Agenda	Slide Deck, Webinar Recording & PTG Report
Apr 18, 2024	Agenda	Slide Deck, Webinar Recording & PTG Report
Mar 21, 2024	Agenda	Slide Deck, Webinar Recording & PTG Report
Feb 15, 2024	Agenda	Slide Deck, Webinar Recording & PTG Report
Jan 18, 2024	Agenda	Slide Deck, Webinar Recording & PTG Report

Budget Break-down by Program (TRC Managed Programs)

FY25 Incentive Budget: \$136,939,168



Energy Efficiency Programs FY25

NJCEP

Closed

- Residential Products & HVAC
- Residential Existing Homes
- Direct Install

Closing Out

- C&I Buildings (existing buildings)
 - SmartStart Retrofit EB
 - Pay for Performance EB
- School & Small Business Stimulus Program (federally funded)

NJCEP/TRC Managed

Open

- New Construction
Was: Residential New Construction, SmartStart New Construction, Pay for Performance New Construction, Customer Tailored Energy Efficiency Pilot New Construction
- Large Energy Users
- Local Government Energy Audit
- Distributed Energy Resources

BPU/Utility Managed

Open

- Comfort Partners

Coming Soon: New Construction Program

ABOUT THE PROGRAM

Three pathways to fit your needs to achieve greater energy savings

INCENTIVES

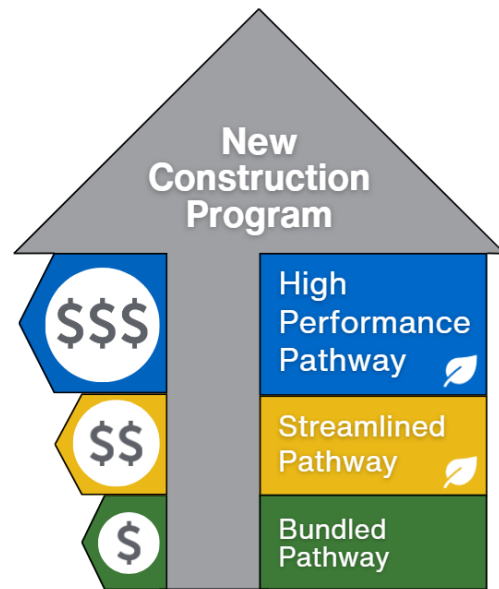
Based on selected pathways and size

WHO IS ELIGIBLE

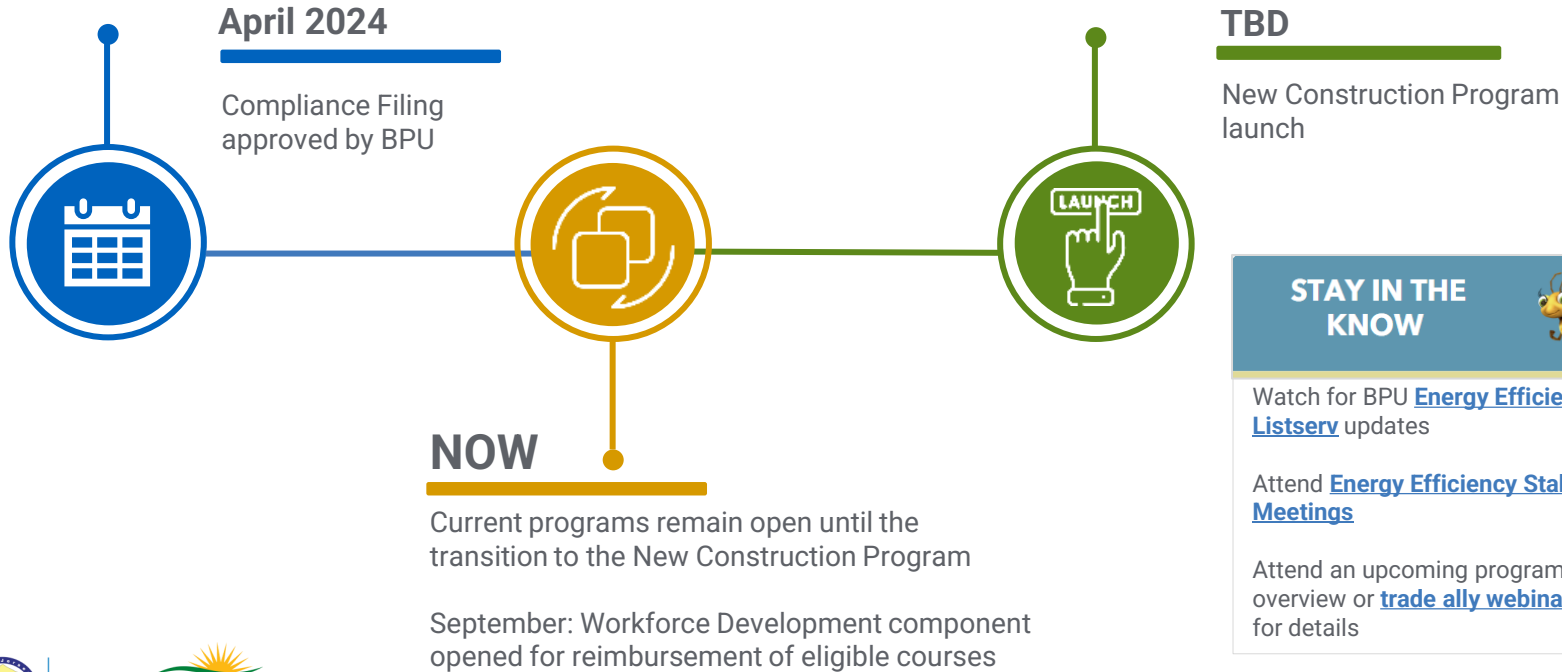
All new construction buildings or eligible major renovation projects

ADDITIONAL OPPORTUNITIES

Incentives for energy efficiency beyond code requirements, encouraging greater energy savings



New Construction Program Timeline



Utility Updates

Energy Efficiency Updates



Utility Updates

NJ Energy Efficiency Stakeholder Meeting

Jessica Hood, PSE&G

Jamie Mize, New Jersey Natural Gas

Kyle Haddock, Rockland Electric

Frank Vetri, Elizabethtown Gas

on Behalf of The NJ Joint Utilities – January 16, 2025



Antitrust Statement

- The New Jersey Utilities are committed to full compliance with all laws and regulations as well as maintaining the highest ethical standards. We adhere to all federal and state antitrust laws.
- Coordination of Energy Efficiency programs by the utilities is in response to BPU requirements set forth in the 1st and 2nd triennium EE Framework Orders.
- The utilities do not engage in price fixing or any other anticompetitive behavior.

Triennium 2 Utility Programs

Background

- The Clean Energy Act of 2018 requires utilities to reduce the energy use in their territory by 2.0% for electricity and 0.75% for gas within 5 years of implementation.
- BPU approved Utilities' Triennium 2 programs on October 30, 2024
- **Triennium 2 began on January 1, 2025 and runs through June 30, 2027**
 - Energy Efficiency programs started on or about January 1, 2025
 - Building Decarbonization and Demand Response program start dates may vary

Triennium 2 Programs

 **Core Programs**

Triennium 2 Utility Budgets

	ETG	SJG	NJNG	PSE&G	ACE	JCP&L	RECO	TOTAL
Residential	\$38,871,000	\$73,794,000	\$76,100,000	\$618,000,000	\$144,000,000	\$148,000,000	\$16,013,000	\$1,114,778,000
Commercial & Industrial	\$22,072,000	\$15,860,000	\$93,500,000	\$1,210,000,000	\$184,000,000	\$447,750,000	\$24,147,000	\$1,997,329,000
Multifamily	\$64,883,000	\$41,337,000	\$12,900,000	\$205,000,000	\$67,000,000	\$5,250,000	\$800,000	\$397,170,000
Building Decarbonization	\$0	\$0	\$7,250,000	\$101,000,000	\$32,500,000	\$27,000,000	\$3,600,000	\$171,350,000
Demand Response	\$0	\$0	\$0	\$26,000,000	\$22,500,000	\$9,900,000	\$799,000	\$59,199,000
Other Non-Core (incl. WFD and CBO Outreach)	\$1,675,000	\$1,775,000	\$2,250,000	\$49,000,000	\$2,000,000	\$2,350,000	\$960,000	\$60,010,000
Net Transfers for Dual Fuel Projects	\$20,700,000	\$49,600,000	\$33,000,000	-\$16,000,000	-\$52,000,000	-\$43,000,000	\$5,000,000	-\$2,700,000
	\$148,201,000	\$182,366,000	\$225,000,000	\$2,193,000,000	\$400,000,000	\$597,250,000	\$51,300,000	\$3,797,136,000

Triennium 2 OBR and Financing

- 0% interest On-Bill Repayment (OBR) or financing available from all utilities for eligible measures
- Funding available for OBR from the below utilities:

ETG	SJG	NJNG	PSE&G	JCP&L
\$71,704,000	\$125,426,000	\$160,500,000	\$968,000,000	\$176,500,000

- Funding available to buydown interest rates for third party financing from the below utilities:

ACE	RECO
\$75,500,000	\$3,500,000

Residential Programs

Whole Home Energy Solutions

Program Overview & Key Changes

- Target Market: Electric and/or Natural Gas residential customers served by at least one NJ investor-owned Utility
- Two (2) Components:
 1. Comprehensive review of the home (equipment and envelope) and plan development for customer to achieve deeper energy savings
 - Program ensures work is performed by skilled professionals, who must go through training and become BPI (Building Performance Institute) certified
 2. Incentives and/or financing to encourage customer to pursue upgrades, including attic insulation, wall insulation, sealing air leaks, sealing ductwork, upgrading HVAC equipment, etc.
- Major Changes:
 - QHEC (Quick Home Energy Check-Up) and HPwES (Home Performance with Energy Star®) combined into Whole Home Energy Solutions
 - Higher incentives, up to \$6,000
 - Higher financing cap for on-bill repayment (\$25,000)
 - Increased focus on Building Decarbonization (Update March 2025)

Program Incentives

- Home Energy Assessment: No cost or nominal fee for more comprehensive assessments. That fee may be discounted.
- \$2,000 + \$200 for each % point of savings above 5% (\$6,000 cap), customer must have minimum 5% savings to qualify

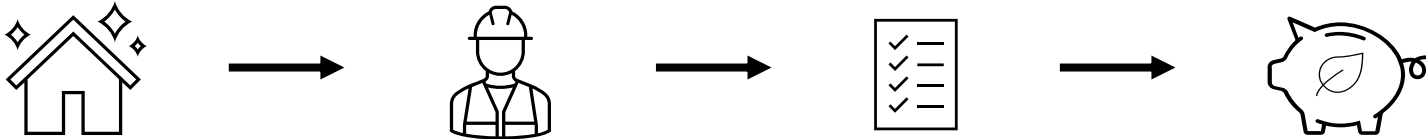
When a project achieves
**5% total energy savings
(TES)**, a customer will receive
the **minimum \$2,000 rebate**.



For every additional TES point,
the customer will receive an **extra
\$200** towards their rebate – **up to
the \$6,000 maximum**.

Program Process

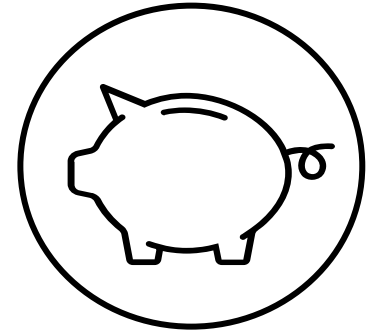
- Customer Offered Multiple Pathways to Participate:
 1. Customer Can Begin With Contacting Utility OR Contractor to Conduct Whole Home Energy Assessment
 2. Utility/Contractor Will Educate Customer on Program Offerings & Incentives Available
 3. Coordinate Customer with Participating Contractor Network & Trade Allies



- Before Project Begins: Contractor and customer discuss recommended measures, aligned with Whole Home program standards (i.e, air sealing, insulation). Once the customer is approved for the loan, many participating contractors will commence the work with no up-front costs to the customer
- After Project Completion: Lead Utility sends loan and rebate checks directly to the contractor (provided the customer has assigned the incentive to the contractor)
 - Utility sponsors also conduct quality assurance checks to confirm work has been done correctly

Repayment Options

- Projects less than \$10,000 eligible for 7-year term at 0% APR
- Projects greater than \$10,000 and up to \$25,000 eligible for a 10-year term at 0% APR
- Low-to-Moderate Income customers will be offered an extended 10-year term, regardless of principal
- Additional shorter-term loans available, specific to utility



Income Qualified

Program Overview & Key Changes

- Target Market:
 - Served by at least one NJ investor-owned Utility
 - Single family and multifamily buildings up to 8 units
 - Income qualified Moderate-Income customers, examples;
 - 251-400% of federal poverty levels
 - Properties within identified moderate income boundaries
 - Categorically eligible if participating in similar income social service programs

- Key updates
 - **Increased building size**
 - **Increased investment in EE measures for deeper energy savings**
 - **Increased funding to overcome health and safety barriers**
 - **Enhanced use of geography-based and categorical eligibility**

Program Incentives

- Customers may receive no-cost energy efficiency measures and upgrades within a per project guideline and a health and safety protocol
 - Audit and measures guideline: \$14,000 + \$1,000 with Utility approval
 - Health & Safety expense protocol of \$2,500 or higher with Utility approval
- The program may include design components that provide benefits to low-income customer where participation or services are deferred by the NJ Comfort Partners Program
- All services provided under this program are at no cost to the customer to participate, so financing is not relevant

Program Process

- Utility staff and/or third-party implementation companies will oversee all aspects for each Utility including the qualifications of staff and contractors working in the program and qualification of customers who participate
- Eligible customers will receive:
 - a comprehensive energy assessment of their home,
 - direct install measures (such as showerheads, aerators, LED bulbs, power strips, etc.), and
 - **based on the assessment & diagnostics, recommendations may include the installation of**
 - weatherization measures (insulation, air sealing, duct sealing),
 - health & safety improvements to overcome barriers to weatherization measures.
 - repairs or replacement of water heating, heating, and/or cooling systems
- Energy education to better understand participants' usage pattern, practices, and action steps
- Utilities may focus marketing efforts on homes that have a greater opportunity for annual and lifetime savings and where possible, utilize metered data to target homes.

Energy Efficient Products

Program Overview & Key Changes

- Target Market: Electric and/or Natural Gas residential customers served by at least one NJ investor-owned Utility
- Program Pathways:
 - Online Marketplace
 - Point of Sale Rebates
 - In-Store sale events and at the time of purchase
 - Online/Mail-In Appliance Rebates
 - Appliance Recycling
 - HVAC Rebates (midstream and downstream)
 - Special events or partnerships with local organizations
- Major Changes for Triennium 2:
 - Expanded enhanced incentives for LMI customers
 - Increased focus on Building Decarbonization

This site is for residential customers only. Orders may be delayed due to the Holidays. If you're not a residential customer – see retailers directly.

Contact | FAQ | Order Information

PSEG MARKETPLACE

Search

Cart 0

On Sale Shop Energy-Efficient Products

December *deals*

Give your home a gift that you will love.

Shop now

Heating 68 Indoor 65

* Price reflects the manufacturer's sale price less the PSEG instant rebate. While supplies last. Rebate limitations and restrictions apply. Refer to FAQ page for details. Google and Nest Thermostat are trademarks of Google LLC.

Featured Products

Sale	Google Nest Thermostat ★★★★★ \$129.99 full price	Sale	ecobee Smart Thermostat Enhanced ★★★★★ \$189.99 full price	Sale	Sensi Touch smart thermostat ★★★★★ \$169 full price
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Program Incentives

- **Online Marketplace:** Incentives available for a variety of energy efficient equipment, such as smart thermostats, power strips, water fixtures, air conditioners, dehumidifiers, air filters, etc.
- **Point of Sale Rebates:** Instant rebates available in select retailers for energy efficient products such as bath fans, dehumidifiers, air purifiers, room A/Cs
- **Online and/or Mail-In Appliance Rebates:** Incentives may be available for refrigerators, washers and dryers, freezers, thermostats, etc.
- **Appliance Recycling:** Rebates available for recycling refrigerators & freezers, room A/Cs, and dehumidifiers (recycling includes appliance pickup)
- **HVAC Rebates:** Incentives available for the installation of furnaces, A/C condensers, efficient water heaters, etc.
- **Special events and partnerships with local organizations**
 - Recycling drop off events at retail stores (small appliances)
 - Appliance trainings on discounted appliances at retail stores for customer knowledge (table event)
- **Kits:** Kits to introduce and promote energy efficiency technologies with high in-service rates that can be easily installed in a customers' home.
 - Advanced powerstrips, night light, faucet aerators, etc.

Program Incentives

HVAC	Marketplace	Appliance Recycling	Post Purchase Rebates	Point of Sale Rebates
Water Heater (\$500-\$750)	Air Purifiers (\$50)	Refrigerators (\$100)	Refrigerators (\$75-\$100)	Bath Fans (\$25)
Heating & Cooling Equipment (various)	Smart Thermostats (\$100)	Freezers (\$100)	Washer Dryers (\$100-\$300)	Dehumidifier (\$40)
LMI Incentives (\$300)	Dehumidifier (\$40)	Room A/C (\$35)	Freezers (\$25)	Air Purifiers (\$50)
Smart Thermostats (\$100)	Advanced Power Strips Tier 1 - (\$15) Tier 2 - (\$30)	Dehumidifier (\$35)	Dishwasher (\$30)	Room A/C (\$30)

- Key Changes:

- **Air conditioning rebates significantly reduced**
- **Unsolicited kits will not be sent**
- **Condensing-to-Condensing HVAC units no longer eligible for incentives**
- **For washers/dryers, rebates only available for electric equipment**

Program Process

- **Marketplace:** Customers are able to receive an instant rebate at the point of purchase through the e-commerce website.
- **Appliance Recycling:** Customers can schedule an appliance pick-up once their account has been verified as eligible if the conditions of appliances has been met.
- **Appliance Rebates:** Online and/or mail-in application available for efficient equipment from the retailer, program website or contractor.
- **HVAC:** Trade allies are able to leverage the program and offer customers rebates through their normal course of business. Additionally, PSE&G and RECO also have midstream rebates for energy efficient HVAC equipment upgrades available through a network of qualified trade allies.

Repayment Options

- Financing options available at 0% interest for select measures (mostly HVAC measures)
- Repayment terms (if eligible):
 - Up to \$25,000 for a 7-year term at 0% APR
 - Low to Moderate Income customers may be offered a 10-year term
 - Additional shorter-term loans available, specific to utility

Behavioral

Program Overview & Key Changes

- The Residential Behavioral program educates customers by providing them with easy-to-understand information about their home energy usage.
- Customers regularly receive no cost paper and/or electronic Home Energy Reports encouraging them to reduce energy usage by comparing them to similar homes in their neighborhood and motivating them to take actionable steps to achieve energy savings through behavioral changes.
- Utilities can leverage the Home Energy Reports to potentially achieve increased customer engagement resulting in greater cross promotional opportunities with other energy efficiency programs and incentives.
- Where appropriate reports will leverage AMI data to enhance insights.



ELIZABETHTOWN GAS | Home Energy Report | January 2025 | Address: 4796 Fake St

Hi John Smith,

Congratulations! Your home is among the **most energy-efficient** within the Elizabethtown Gas service area. While you're doing a great job, there are ways to save even more. Check out the tips below.

How am I doing this month?

My Home Comparison | Natural Gas

37 thermometers (Your Home) | 153 thermometers (Efficient Home)

Things to do

- Review your monthly energy usage: elizabethtowngas.com/homeenergyreport
- Get rebates for high-efficiency equipment: elizabethtowngas.com/rebates
- Save energy & money at ETG Marketplace: elizabethtowngasmarketplace.com

***Who am I being compared to?**

Group size	Sq. footage	Year built
317 Homes	1,400-2,000	1961-1971

*We compare your home usage to similar homes in the Elizabethtown Gas service area. The lowest-consuming 25% of homes in your comparison group make up the Efficient category. Your actual spend may vary based on your specific customer rate. A therm is a universal unit of measure for natural gas usage.

Improve the accuracy of your report. Tell us more about your home. Please go to the link: elizabethtowngas.com/homeenergyreport

How can I save more?

- Save up to \$16/year**
Save on hot water use
Making a few small changes in how you use water can easily save you 5% on your hot water use. Start in the morning by shortening your showers by a minute or two, and don't let the hot water run when you shave or brush your teeth. When doing laundry, wash your clothes in cold water. In the kitchen, run the water only when rinsing the dishes.
- Save up to \$62/year**
Consider new exterior doors
Doors and windows are the most common places for air leakage and heat loss. Replacing old, inefficient doors with new, ENERGY STAR® rated exterior doors and storm doors can lower your energy bills and make your home feel less drafty. ENERGY STAR doors have better insulation and seals than standard doors.

Questions? Give us a call at 1.844.508.3427 Monday - Friday, 9a.m.-7p.m. ET | Email HomeEnergyReport@elizabethtowngas.com

Program Overview & Key Changes

- In addition to the Home Energy Reports, customers may also receive:

Automated:

- **High Usage Alerts**
 - Notifies a customer that their energy bill may be higher due to changes in the weather.

Optional:

- **Online Home Energy Assessment**
 - Assists customers in determining home energy efficiency and provides customized energy savings recommendations.
- **Online Customer Portal**
 - Provides customers with usage information, recommendations, tips, and can link customers to other available energy efficiency programs.
 - Data retrieved via the Online Customer Portal may be leveraged to refine feedback provided on the customer's future Home Energy Reports.

Program Overview & Key Changes

- Major Changes
 - There are no major changes in the Behavioral Program between Triennium 1 and Triennium 2.

Questions?

Guest Presentation: New Construction Building Performance Program Overview

Steven Nadel

American Council for an Energy-Efficient Economy



Programs to Promote Zero/Near-Zero Energy and Carbon for New Homes and Buildings

Steven Nadel
January 2025

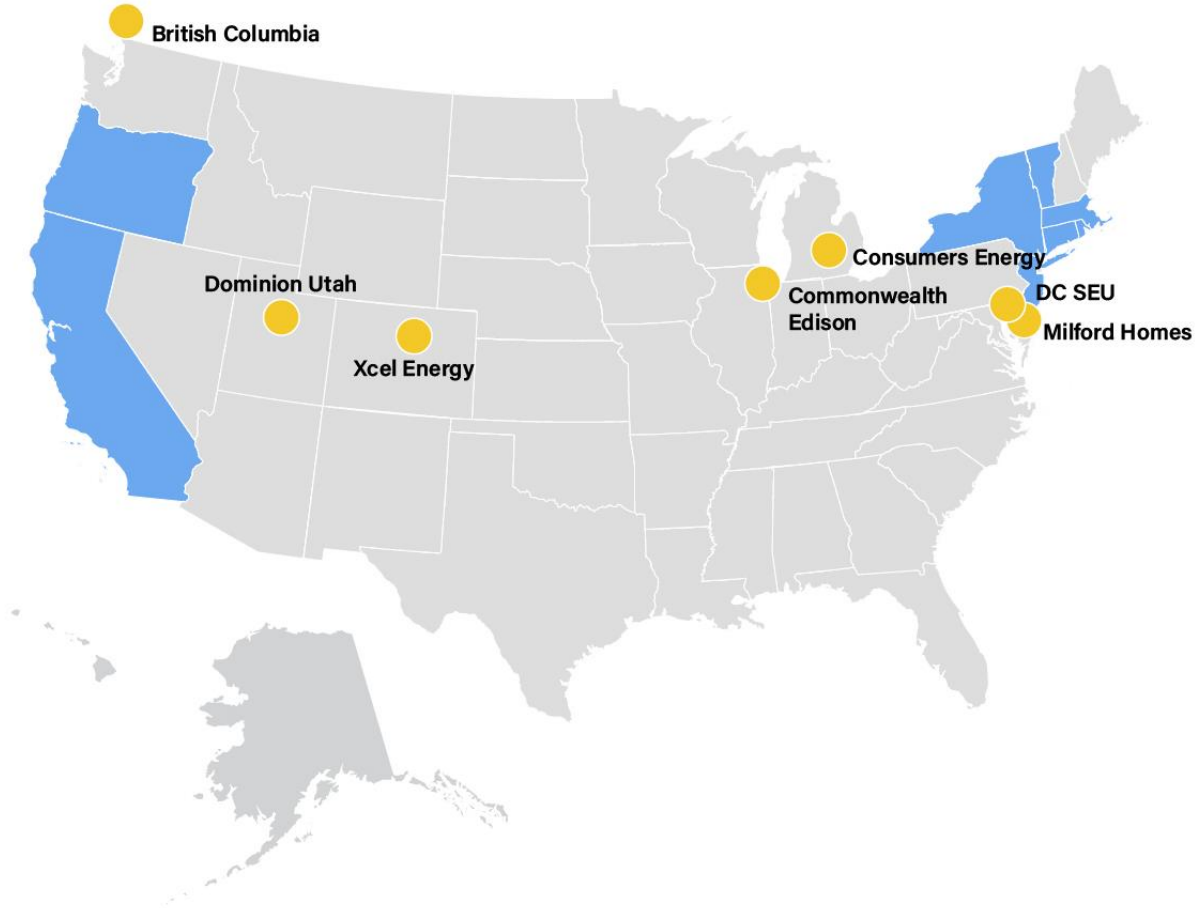


Background



- May 2024 paper: www.aceee.org/white-paper/2024/05/programs-promote-zero-energy-and-zero-carbon-new-homes-and-buildings
- Include net-zero and zero-ready
- Some programs focus on energy, some on carbon, some both
- Total of 22 programs examined, 14 residential, 8 commercial

Programs Included



Single and Multifamily

- DOE Zero-Energy-Ready Homes
- NJ Residential New Construction
- NYSERDA Building Better Homes
- Mass., Conn. & RI Residential New Construction
- Rhode Island Zero Energy for the Ocean State (ZEOS)
- Efficiency Vermont Certified and High Performance
- California Energy Smart Homes
- District of Columbia Net Zero Energy Program
- Dominion Energy Utah Pay for Performance
- Commonwealth Edison All-Electric New Construction
- Consumers Energy All Electric New Home Construction Program
- Xcel Colorado All-Electric New-Home Program



Multifamily Only

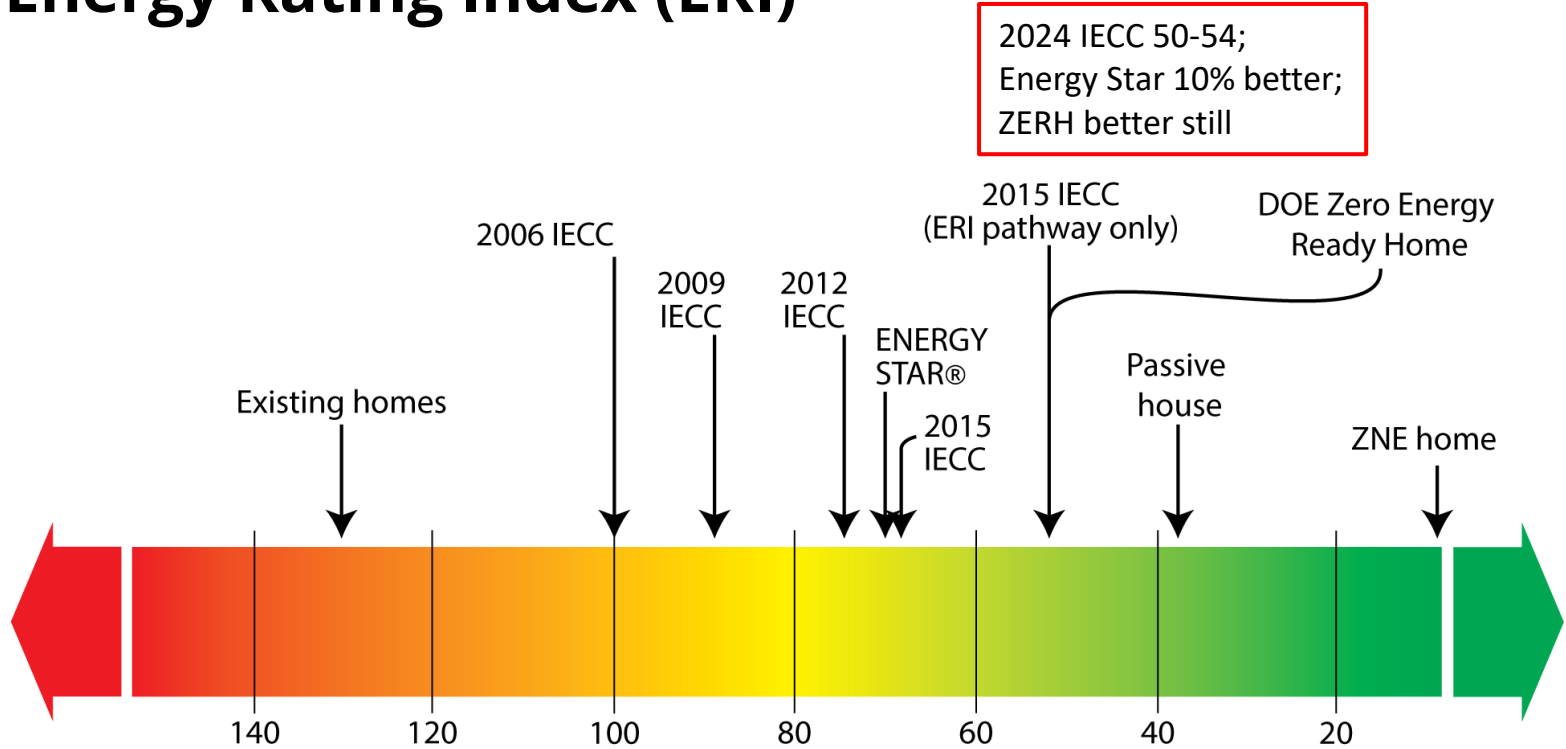
- NYSERDA Buildings of Excellence competition for carbon neutral multifamily buildings
- Mass Save Passive House Multi-Family Buildings
- British Columbia Zero Energy Challenge



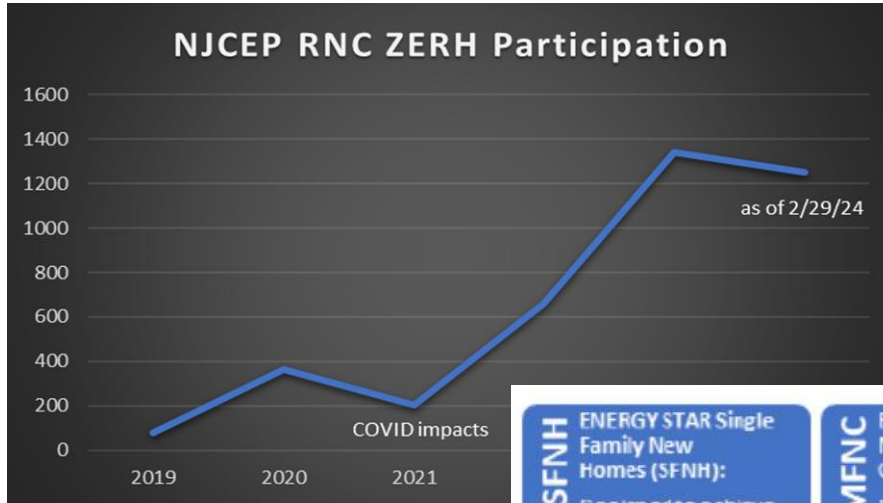
Residential Energy Specifications

- **International Energy Conservation Code (IECC):** revised every 3 years, 2024 edition just published
- **ASHRAE 90.2 :** Designed as stretch code; not yet widely used
- **Energy Star:** ~10% energy savings relative to most recent IECC
- **Energy Star Next Generation:** Energy Star plus HP for heating, HPWH, induction cooking and EV-charging or conduits
- **Zero Energy Ready Homes (ZERH):** DOE program. Energy Star plus additional criteria including stronger envelope requirements and electric-ready
- **Passive House:** (international and US): Very specific envelope and other requirements; “maximum efficiency”
- **45L federal tax credit:** \$2500 to builder for Energy Star, \$5000 for ZERH
- **Leadership in Environmental Design (LEED):** incorporates energy and other sustainability criteria; residential not widely used

Energy Rating Index (ERI)



New Jersey Residential New Construction



SFNH ENERGY STAR Single Family New Homes (SFNH):
Designed to achieve 10% more energy efficiency than the building code. These homes meet ENERGY STAR version 3.1 or version 3.2 standards, which means they are ENERGY STAR certified.

MFNC ENERGY STAR Multifamily New Construction (MFNC):
Requires 15% increased energy savings above code. These homes meet MFNC version 1.1 or version 1.2 standards, also allowing them to be ENERGY STAR certified.

ZERH Zero Energy Ready Home (ZERH):
Requires a high energy efficiency achievement in new home construction. Each ZERH must earn ENERGY STAR certification as a prerequisite, in addition to the program specific requirements.

ZERH+RE ZERH + Renewables (ZERH+RE):
Same requirements as the ZERH pathway with the additional requirement that 100% the building's modeled energy usage is met by renewable energy systems installed prior to completion of the home.

Example: Energize Connecticut

All-Electric Home Specification Sheet

Single Family & Single Family Attached Dwellings			
	Tier 1	Tier 2	Tier 3
Total UA Alternative Compliance or HERS Index Score ¹	Total UA ≥ 7.5% better than 2021 IECC or HERS Index Score ≤ 55	Total UA ≥ 15% better than 2021 IECC or HERS Index Score ≤ 45	Total UA ≥ 25% better than 2021 IECC or HERS Index Score ≤ 10
Heat Pump (Space Heating) ²	Required		
Space Conditioning Connectivity & Controls ³	Optional	Required	
Heat Pump (Domestic Hot Water) ⁴	Required		
Hot Water Distribution Efficiency ⁵	Required		
Envelope Infiltration Rate (ACH)	ACH50 ≤ 2.5	ACH50 ≤ 2.0	ACH50 ≤ 1.5
Duct Leakage Rate (CFM)	2021 IECC code minimum requirements	All ductwork must be located in conditioned space	
Balanced Ventilation Systems	Optional	Required HRV / ERV (≥70% SRE / ≥40% TRE)	
Induction Cooking ⁶	Optional		Required
Electric Vehicle Readiness ⁷	Required		
Solar PV ⁸	Optional		Required

Energize Connecticut Incentives

All-Electric Home & High Performance Certification Bonus Incentives				
All-Electric Home Incentive				
Requirements	Tier	Single Family Applicant Rebate	Single Family Attached Applicant Rebate	Multifamily Applicant Rebate
1. Projects pursuing the All-Electric Home Incentive must be built to the specifications indicated on the All-Electric Home Specification form(s) (Pages 3-4) 2. Incentives capped at \$500,000 per project (Tier 1), \$750,000 per project (Tier 2), and \$1,000,000 per project (Tier 3)	<input type="checkbox"/> Tier 1	\$7,500	\$3,000	\$1,500
	<input type="checkbox"/> Tier 2	\$10,000	\$4,000	\$2,500
	<input type="checkbox"/> Tier 3	\$12,500	\$5,000	\$3,500
Heat Pump Adder Incentive				
Requirements	CEE Tier/ENERGY STAR®	Single Family Applicant Rebate	Single Family Attached Applicant Rebate	Multifamily Applicant Rebate
Air source heat pump systems must meet Consortium for Energy Efficiency (CEE) Tier 2 specifications, and ground source heat pumps must meet current ENERGY STAR certified requirements.	CEE Tier 2 (Air Source) ENERGY STAR (Ground Source)	\$250/Ton (\$1,000 Cap/Unit) \$150/Ton (\$500 Cap/Unit)		\$125/Ton (\$500 Cap/Unit)
High Performance Certification Rebate Chart				
Requirements	Qualifying Criteria (Please check all that apply)	Single Family Applicant Rebate	Single Family Attached Applicant Rebate	Multifamily Applicant Rebate
1. Additional energy modeling and design incentives available for Single Family Attached and Multifamily Passive House projects with 5 or more units. Please refer to Passive House Incentives form. 2. Must provide all proper documentation for certification. 3. Passive House Certification Bonus Project cap is \$60,000; all other certification bonus project caps limited to \$20,000. 4. Rebate is available for up to a maximum of two certifications per home. 5. All projects must provide HERS Rating documentation from HERS Rating Path participation, above.	<input type="checkbox"/> Passive House*	\$1,000	\$1,500	\$1,500
	<input type="checkbox"/> DOE Zero Energy Ready Home	\$750	\$500	\$500
	<input type="checkbox"/> LEED for Homes	\$500	\$250	\$250
	<input type="checkbox"/> NGBS Silver	\$500	\$250	\$250
	<input type="checkbox"/> ENERGY STAR	\$500	\$250	\$250

Mass Save Passive House

- Began with training for builders in Passive House and construction techniques
- Program helps pay for a project feasibility study (up to \$10,000) and for energy modeling (75% up to \$20,000)
- Financial incentives of \$3,000 per unit are offered for meeting Passive House standards, \$500 upon completion of design and remainder paid upon completion of construction and a final inspection
- In addition, performance incentives of \$0.75 per kilowatt-hour (kWh) and \$7.50 per therm are paid for actual first-year energy savings
- More than 70 Passive House feasibility studies have been completed and 119 buildings with more than 6,700 units are on track for Passive House certification by 2026



Which Residential Specifications are Best?

- If goal is to eventually move new construction to net zero, then need to move towards Passive House and include that as a high tier
- DOE Zero Energy Ready in on this pathway and is being included in many programs
- Energy Star is not as efficient and is not truly zero-ready but provides a potential entry point
- Energy Star next generation adds electric to Energy Star
- Programs provide valuable technical assistance for all levels
- Recognize that program incentives are in addition to federal tax incentives; biggest additional incentive need is for Passive House as this goes beyond the federal specs

Commercial

- Energy Trust of Oregon Path to Net Zero
- NYSERDA
- Efficiency Vermont
- Connecticut, Massachusetts and Rhode Island
- California Energy Design Assistance (CEDA)
- Consumers Energy Zero Net Energy Pilot Program



Commercial Energy Specifications

- **ASHRAE 90.1** : Designed as stretch code; not yet widely used. Referenced in IECC
- **International Energy Conservation Code (IECC)**: revised every 3 years, 2024 edition just published
- **Leadership in Environmental Design (LEED)**: incorporates energy and other sustainability criteria. Not commonly used for energy efficiency programs. Has zero energy, carbon and water specs
- **Living Future Institute's Living Building Challenge**: a comprehensive living-buildings specification and certifies zero-energy and zero-carbon performance
- **Passive House** (international and US): Very specific envelope and other requirements; “maximum efficiency”. Starting to be used for offices

Energy Trust of Oregon



- Completed 53 projects with a total of 4.2 million sq. ft.
- Key design strategy elements:
 1. “Early target setting” to position building owners and teams to set and achieve net-zero goals
 2. “Build a community around net zero” to support broad market adoption
- Currently, the program includes:
 - Early design assistance
 - Technical assistance (60% of the cost to conduct energy studies such as shoebox modeling, computational fluid-dynamics analysis, daylighting studies, energy modeling, and commissioning design review, not to exceed \$40,000)
 - Installation incentives (\$0.30 per first-year estimated kWh savings and \$1.20 per therm)
 - Solar-ready incentives (up to \$1,800 to determine solar potential, up to \$20,000 for a solar system, or up to \$15,000 to build to solar-ready standards)
 - Assistance with energy metering (up to 50% of the cost up to \$20,000)
- Required energy savings for participation is 80% of average existing building EUI
- Energy Trust estimates that about three-quarters of eligible commercial new-construction projects are participating in the program

Mass-Save Commercial New Construction

PATH 1: NET ZERO/LOW EUI BUILDINGS

Customer Incentives

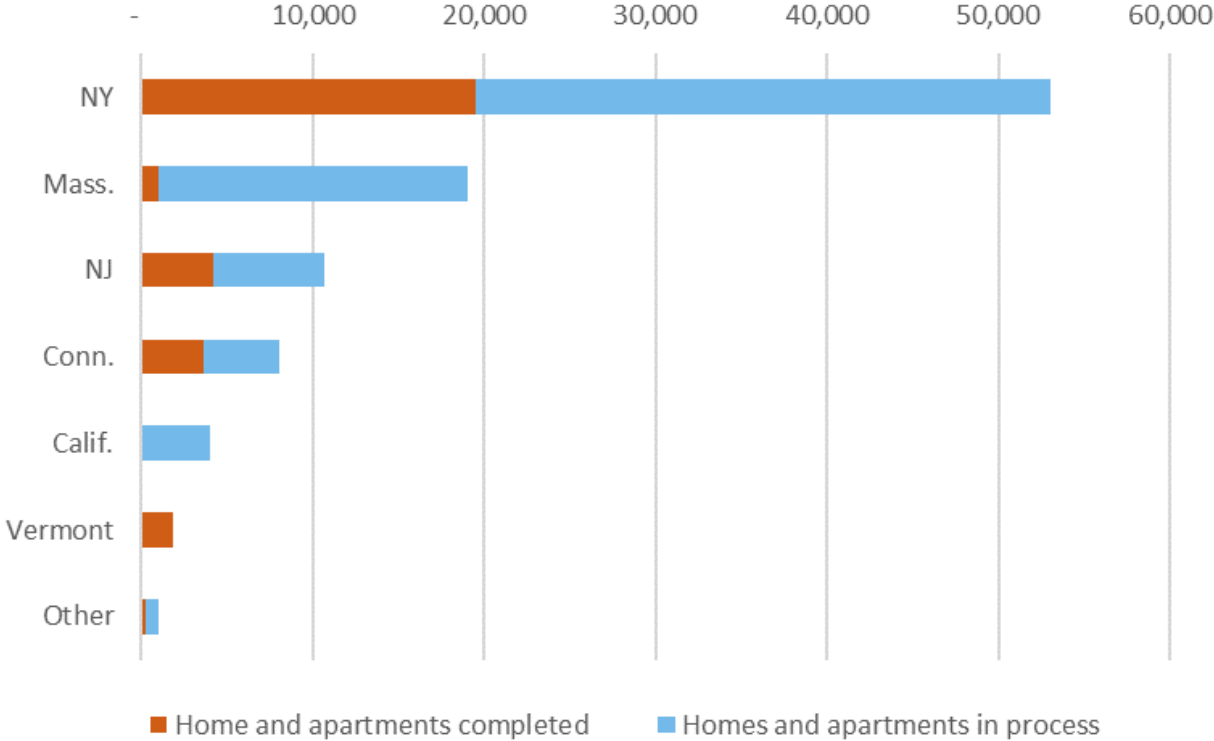
Construction Incentive	up to \$2.00/sf
Post Occupancy Incentive	\$1.50/sf
Space Heating Heat Pump Adder*	
• Air Source Heat Pumps:	\$800/ton
• Variable Refrigerant Flow (VRF):	\$1,200/ton
• Ground Source Heat Pumps:	\$4,500/ton
ZNE Or PH Certification Incentive	\$3,000
Technical Assistance For Net Zero Expert Consultant Services	50% of fee up to \$10,000
Verification Incentive	50% of fee up to \$10,000

PATH 2: WHOLE BUILDING EUI REDUCTION APPROACH

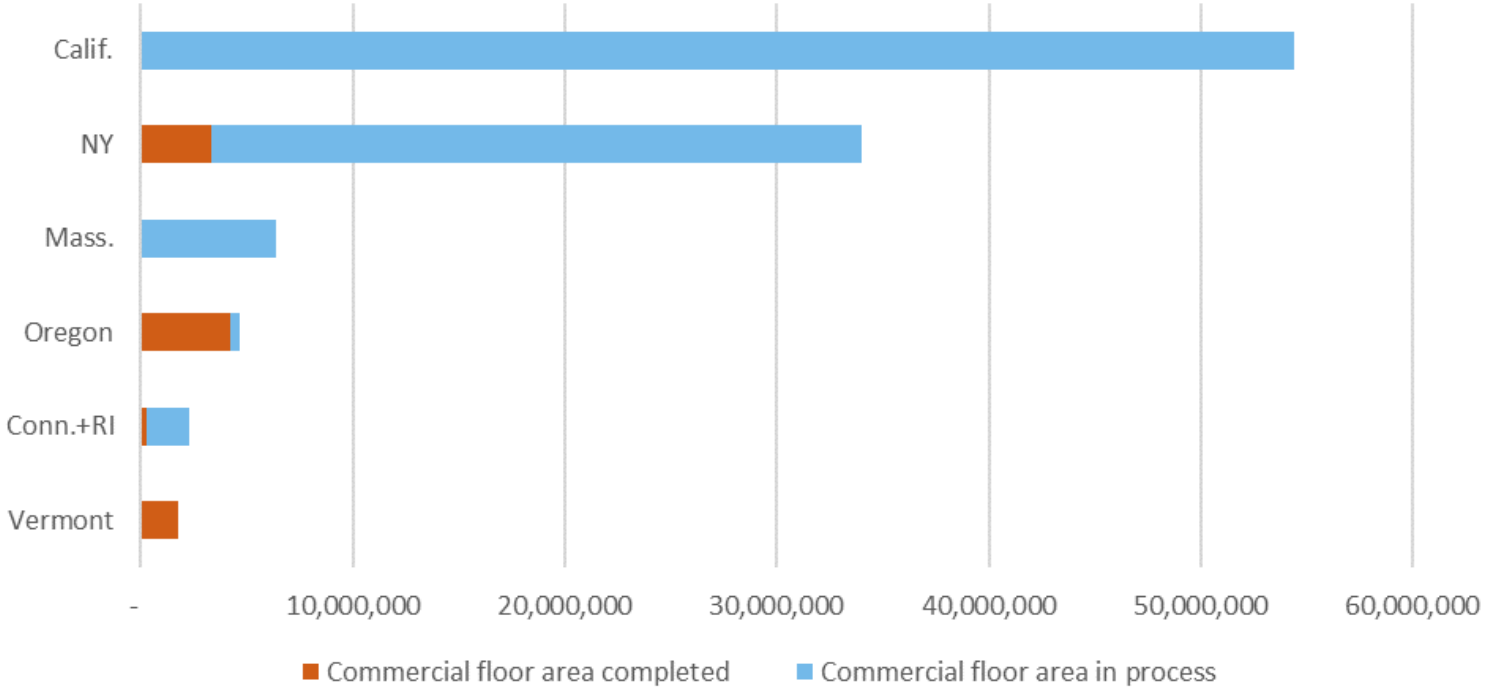
Customer Incentives

Incentive rate range (based on EUI % reduction)	\$0.35/sf - \$1.25/sf
Space Heating Heat Pump Adder*	
• Air Source Heat Pumps:	\$800/ton
• Variable Refrigerant Flow (VRF):	\$1,200/ton
• Ground Source Heat Pumps:	\$4,500/ton
Technical Assistance	up to 75% cost share (capped at \$20,000 per Sponsor)
Verification Incentive	50% of fee up to \$10,000

Residential Completions and In-Process



Commercial Completions and In-Process



Some Findings



- Most of the programs focus on zero-energy-ready new construction, several have zero-energy paths
- For homes, ZERH, Passive House and Energy Star NextGen commonly used
 - Some programs use HERS ratings, although two (Massachusetts and Consumers) are planning to shift from HERS to Passive House or ZERH
- In many of the residential programs, the majority of units are in multifamily buildings
 - Several programs explicitly target affordable housing, while other programs give higher incentives for affordable housing
- A growing number of new-construction programs require electric space and water heating
 - Some programs that allow fossil-fuel heating provide extra incentives for electrifying these end uses
 - Several program managers note that as their electric grids become increasingly clean, going all-electric can become a path to zero emissions

Some Findings (continued)

- Programs find that training for builders is important, as are special efforts to target the largest builders
- For the commercial programs, often based on savings relative to base code or meeting zero/near-zero specs
 - **Building a community of practitioners is important as is intervening early in the design process and using this early intervention to set and follow through on energy design goals**





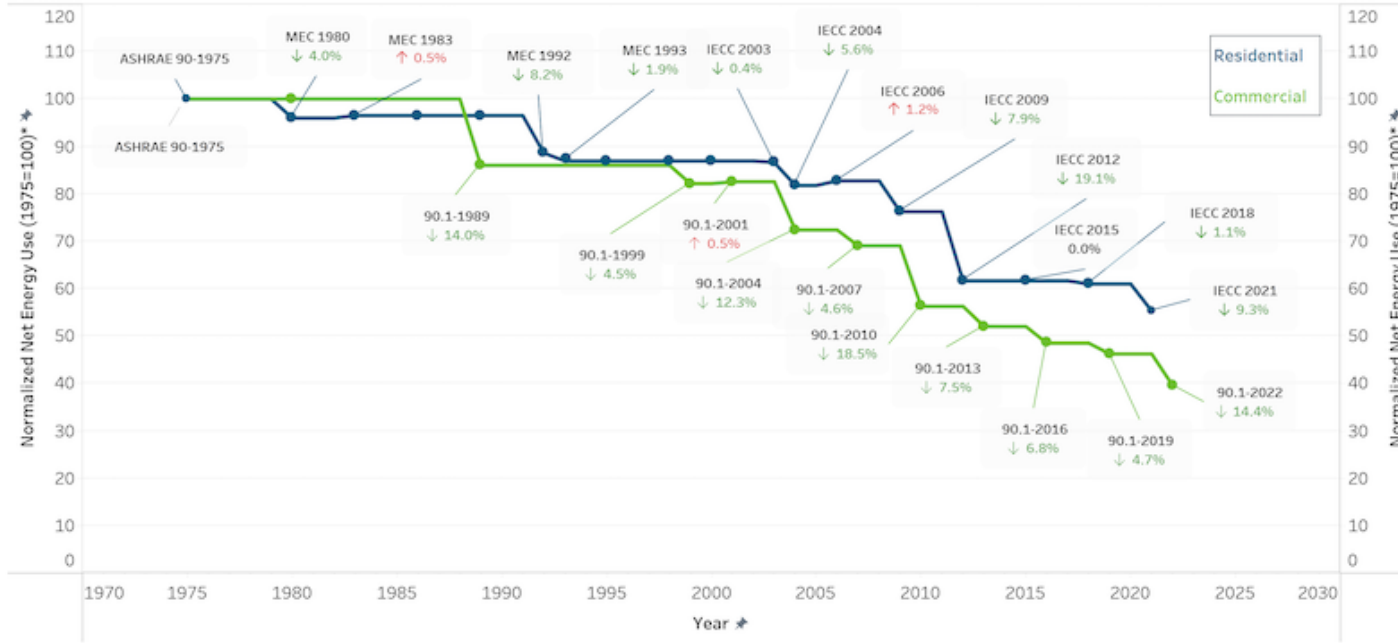
Conclusions

- Programs to promote zero-energy and zero-energy-ready homes and buildings are growing in number, driven by a desire to achieve energy savings and greenhouse emissions reductions relative to even the most stringent building codes
- These programs make important contributions to efforts to transform new-construction markets and ultimately to make zero-energy and zero-carbon building common practice
 - Get to the point that builders, architects and developers consider “zero” to be part of standard practice
 - Ultimately incorporated into building codes

Building Energy Code Progress



Estimated Improvement in Residential & Commercial Energy Codes
(1975 - 2022)



*Net energy use includes the contribution of renewable energy generation

ACEEE Pathway to Zero Project

- Develop three sets of amendments to *residential* IECC to create a pathway to net zero, tentatively:
 1. Zero-ready (meets DOE zero-ready spec and qualifies for \$5000 federal tax credit; includes electric-ready)
 2. Near-zero (very-high efficiency based on Passive House standard plus some solar, may require heat pumps, maybe some demand response)
 3. Zero (net zero energy and carbon, more solar and demand response, perhaps some storage)
- Includes California, Colorado, Massachusetts, Maryland, New York and Washington; hope to work with additional states





Contact

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ACEEE ::

General Q&A

To submit questions in advance for next month: EnergyEfficiency@bpu.nj.gov



Items of Interest

Annual EE Stakeholder Survey



PURPOSE

To identify topics of interest for guest presentations at 2025 meetings

TIMELINE

Survey will close on 1/31/25

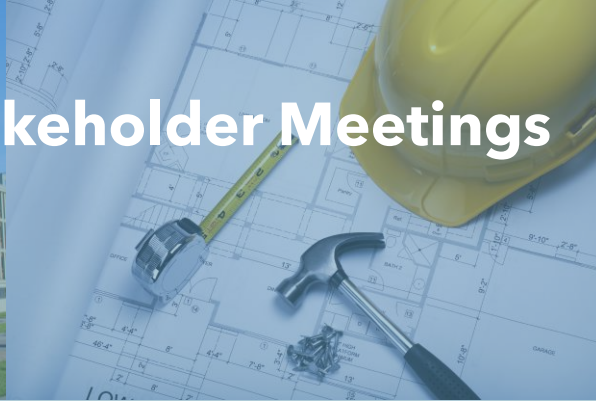
WHERE TO FIND

Link will be shared via EE Stakeholder Listserv

Next Meeting

Energy Efficiency Stakeholder Meetings

www.NJCleanEnergy.com/EE



[Registration Link](#)

3rd Thursday of the Month, 1:00 - 2:30 pm

- ✓ **February 20, 2025**
- ✓ March 20, 2025
- ✓ April 17, 2025
- ✓ May 15, 2025
- ✓ June 26, 2025
- ✓ July 17, 2025
- ✓ August 21, 2025
- ✓ September 18, 2025
- ✓ October 16, 2025
- No November Meeting*
- ✓ December 18, 2025



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Thank you