

The meeting
will begin in
a few minutes



Energy Efficiency Stakeholder Meeting

February 20, 2025

Agenda

1. Re-cap of Last Meeting
2. New Jersey Energy Efficiency Programs
3. Energy Efficiency Updates
 - NJCEP Updates
 - New Construction Program Update
 - Program Year 4 Technical Reference Manual Update
 - Utility Updates
 - Regulatory Updates
4. Guest Presentation – Clean Energy Learning Center Overview
5. General Q&A
6. Items of Interest
7. Next Meetings

Recap of Last Month

January Monthly Recap

What we covered:

- ✓ NJCEP Updates
 - ✓ NJCEP New Construction Program
- ✓ Utility Updates
 - ✓ Residential Program Overview
- ✓ Guest Presentation
 - ✓ New Construction Building Performance Program Overview
- ✓ 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:

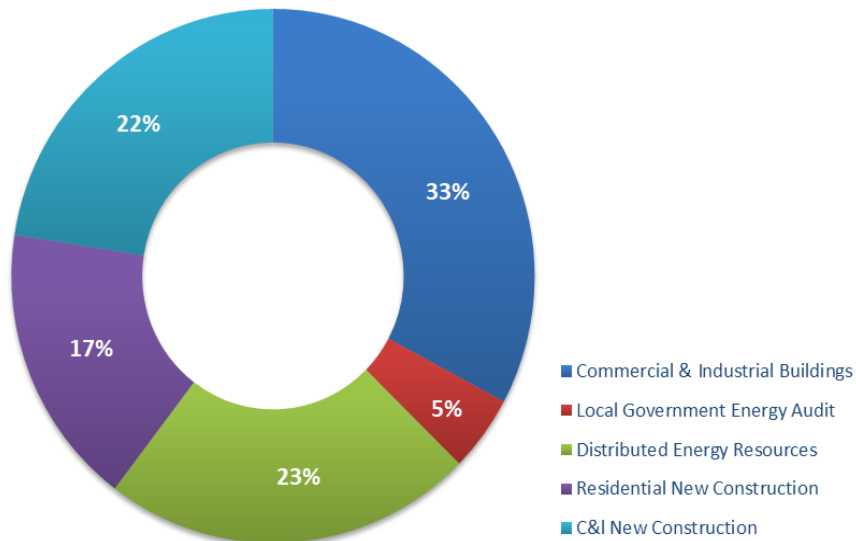
NJCleanEnergy.com/EE - Meeting Materials Archive

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 is a table with columns for Meeting Date, Meeting Agenda, and Meeting Materials. The table lists several meetings from 2024, each with a date, agenda, and materials link. A grey callout box with an arrow points to the table, containing the text: "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
May 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

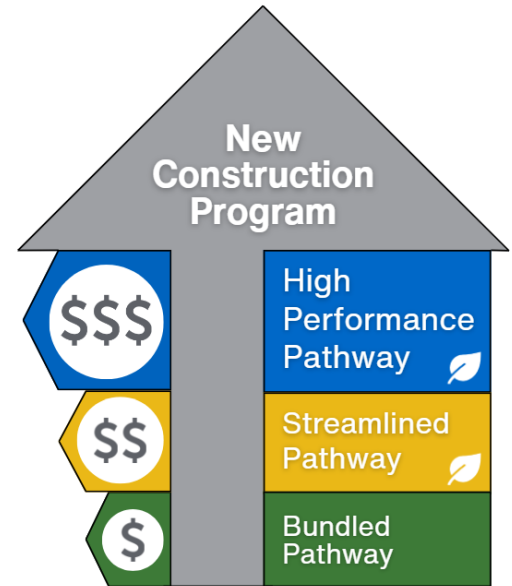
Based on selected pathways and size

WHO IS ELIGIBLE

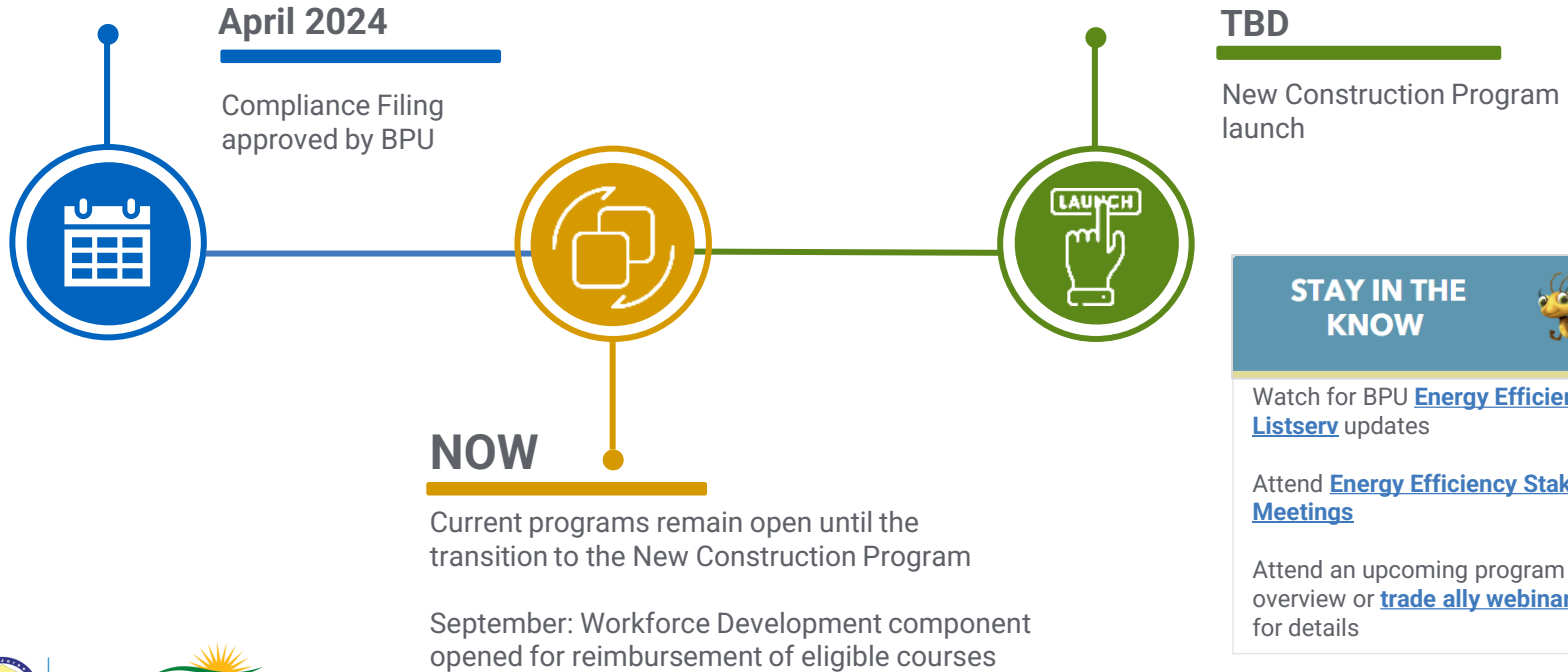
All new construction buildings or eligible major renovation projects

ADDITIONAL OPPORTUNITIES

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



New Construction Program Timeline



TRM Update

Energy Efficiency Updates



TRM Update

Status of the PY5 TRM Update 2-20-25

SWE Leads

- Pete Jacobs
- Lisa Skumatz
- Ralph Prah

NJ Technical Reference Manual (TRM)

- Collection of equations, parameters and guidance for calculating electricity and natural gas savings for programs and measures
- TRM is a Board Approved reference document for calculating energy savings used in
 - Program filings
 - Compliance with CEA energy savings goals
 - Determination of Performance Targets
- TRM is updated annually

Reference: Triennium 2 Energy Efficiency Evaluation Framework

<https://www.nj.gov/bpu/pdf/publicnotice/2.%20EE%20T2%20Evaluation%20Framework.pdf>

TRM Update Process

- TRM Committee oversees the TRM updates
 - LED by Statewide Evaluator (SWE)
 - Includes Utilities, Rutgers, TRC, and Rate Counsel
 - Technical assistance provided by DNV
- Updates include
 - New measures
 - Updates to algorithms and/or parameters
 - Incorporation of evaluation study results
 - Parameter updates, realization rates, in-service rates and net-to-gross ratios, and others

PY5 TRM Update

- PY5 TRM based on PY4 TRM recently completed
- Updates to the PY4 TRM for PY5 include:
 - New measures
 - Fork truck batteries
 - Commercial and industrial building air sealing
 - Dock Door Seals and Shelter
 - Mini-fridge recycling
 - Combination Washer/Dryers
 - Updates to existing measures
 - Commercial and residential boiler right-sizing
 - Deemed values for marketplace weatherization measures

PY5 TRM Update (contd.)

- Updates based on PY3 Evaluation Results
 - Parameter updates include:
 - Commercial lighting operating hours and coincidence factors
 - Residential heating equivalent full-load hours
 - Other parameter updates affecting low flow aerators and showerheads, thermostatic restrictor valves and refrigerated case night covers
 - Fuel splits
 - Measure and program realization rates for kWh, kW and therm gross savings
 - In-service rates
 - Net to gross ratios

PY5 TRM Update Next Steps

- PY5 TRM will be posted for Stakeholder Review shortly
- Once posted, there will be a 2 week comment period
- Comment responses and final edits during March
- EM&V Working Group approval in April
- Planning for Board consideration at May 21st meeting

Thank You!

SWE Leads

- Pete Jacobs
- Lisa Skumatz
- Ralph Prahl

Utility Updates

Energy Efficiency Updates



Utility Updates

NJ Energy Efficiency Stakeholder Meeting

Jessica Hood, PSE&G

Ray Perry, New Jersey Natural Gas

Casey Hennessy, Elizabethtown Gas & South Jersey Gas

Jasmine Huff, Atlantic City Electric

on Behalf of The NJ Joint Utilities – February 20, 2025



Antitrust Statement

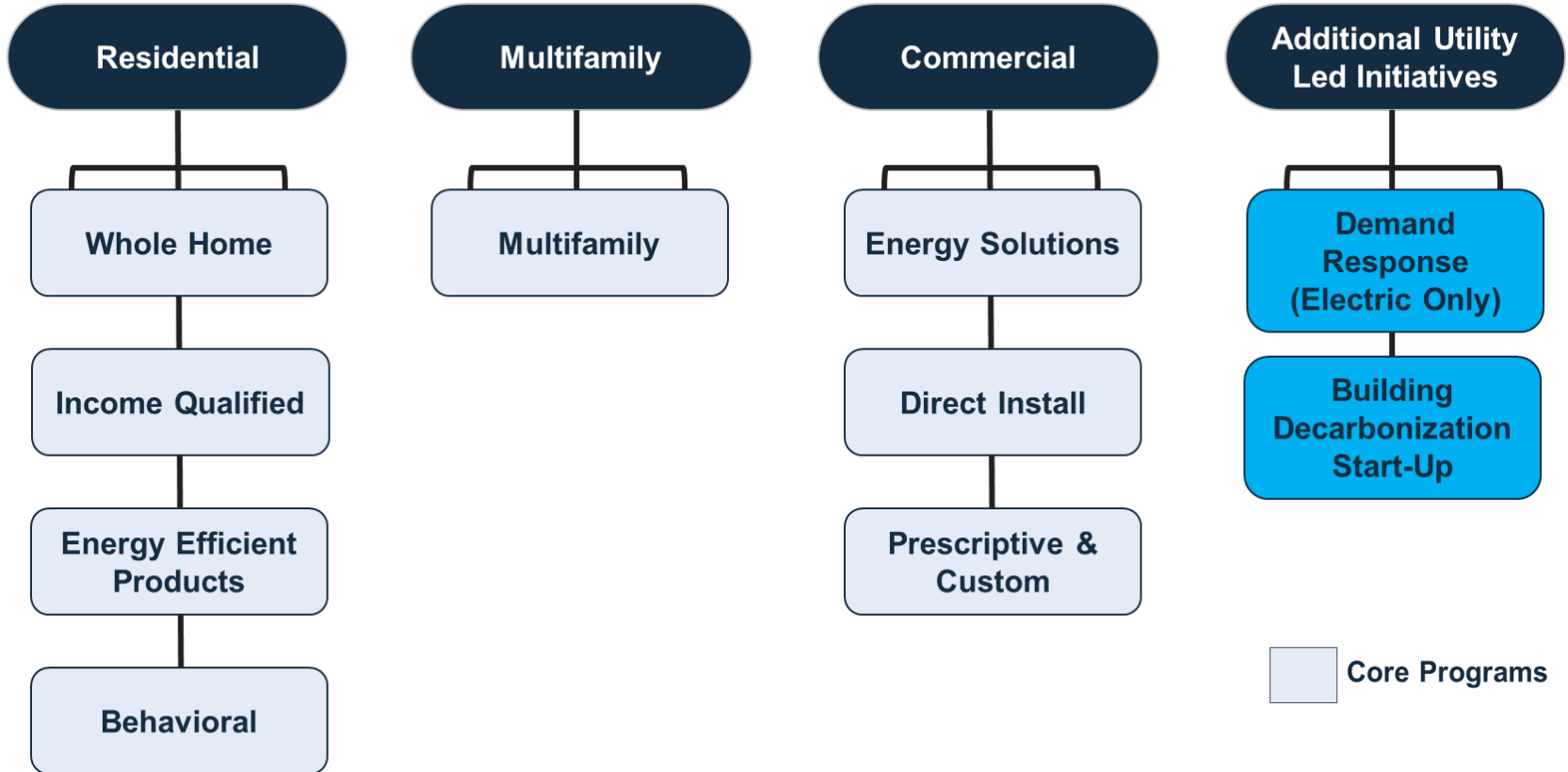
- The New Jersey Utilities are committed to full compliance with all laws and regulations as well as maintaining the highest ethical standards. We adhere to all federal and state antitrust laws.
- Coordination of Energy Efficiency programs by the utilities is in response to BPU requirements set forth 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.
 - The State has retained responsibility for serving some markets and retained a portion of these goals.
- BPU approved Utilities' Triennium 2 programs on October 30, 2024
- Triennium 2 began on January 1, 2025 and runs through June 30, 2027
 - Programs started on or about January 1, 2025
 - Some newer programs may take longer to be operational

Triennium 2 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

- The above includes budgets for incentives and administrative costs

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

Commercial & Industrial Programs

Energy Solutions

Program Pathways:

- Engineered Solutions
- Energy Management

Program Overview & Key Changes



TARGET MARKET

Electric and/or Natural Gas commercial customers > 300KW and >40,000 therms/yr served by at least one NJ investor-owned Utility.

PROGRAM OVERVIEWS

Engineered Solutions

Helps facilities identify and implement comprehensive and cost-effective energy-efficient measures and technology without disrupting operations.

Major Changes:

- ✓ Now open to all large commercial customers.
- ✓ New Tier II.

Energy Management

Provides a comprehensive approach to help improve a facility's energy performance and efficiency.

Several Pathways:

- ✓ Retro Commissioning (RCx)
- ✓ Virtual Commissioning (VCx)
- ✓ Monitoring-based Commissioning (MBCx)
- ✓ Strategic Energy Management (SEM)
- ✓ Building Operations

Program Incentives

Engineered Solutions

Tier I

- No-cost, comprehensive energy audit and engineering services.
- Up to 60% rebate based on measure buy down and cost effectiveness

Tier II

- Engineering Services on an as-needed basis.
- Rebates determined on a project-to-project basis based on kWh and therm caps and cost effectiveness to cover cost for engineering services and installation of measures.

Program Incentives

Energy Management

RCx, MBx:

- Tiered incentive structure based on project stage and final performance. (performance verified by required Measurement & Verification) capped at 70% of the project cost.

SEM:

- Up to 100% of initial energy assessment based on facility type & size.
- Incentive for implementation of SEM plan based on the C&I program offering the measures are attributed.

Building Operations:

- Building Tune-Up: Up to 80% of project cost
- Building Operator Training 70% of cost to attend BOC training up to \$1000 per person.

VCx:

- Advisory services to assist customer to make and understand how changes in building operations settings can produce savings.

Program Process & Pathways

Energy Management

- Retro Commissioning (RCx)
- Virtual Commissioning
- Monitoring-based Commissioning (MBx)
- Strategic Energy Management (SEM)
- Building Tune-up

Engineered Solutions Tier 1

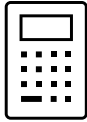
- Comprehensive energy audit to determine potential measures.
- Measures screened to identify those that are cost-effective.
- Engineering services develop bid ready design.
- Construction services contracted via competitive RFP process.
- Measurement & Verification occurs following construction to verify savings.

Engineered Solutions Tier 2

- Follows similar steps, except with an open network model. Contractors can bring projects to the program and may or may not utilize the program's engineers and RFP process.

Repayment Options

INTEREST-FREE



After incentives at
0% APR
for a 5-year term.

FUNDING CAPS



For projects under
\$250,000
balance of project costs can be
fully financed.

For projects more than \$250,000
financing may cover
80%
of the balance of the
project costs.

UNIQUE SEGMENTS



For **MUSH market**
and **OBC territories**,
financing available for
balance of project cost
after incentives for
a 5-year term.

Direct Install

Program Overview & Key Changes

Designed to **maximize** the implementation of **comprehensive, cost-effective, energy efficient measures** for eligible **small business** customers served by at least one NJ investor-owned Utility.

Objectives:

- Promote energy efficiency
- Achieve low installation costs
- Achieve short payback periods
- Minimize out-of-pocket costs to the customer

Major Changes:

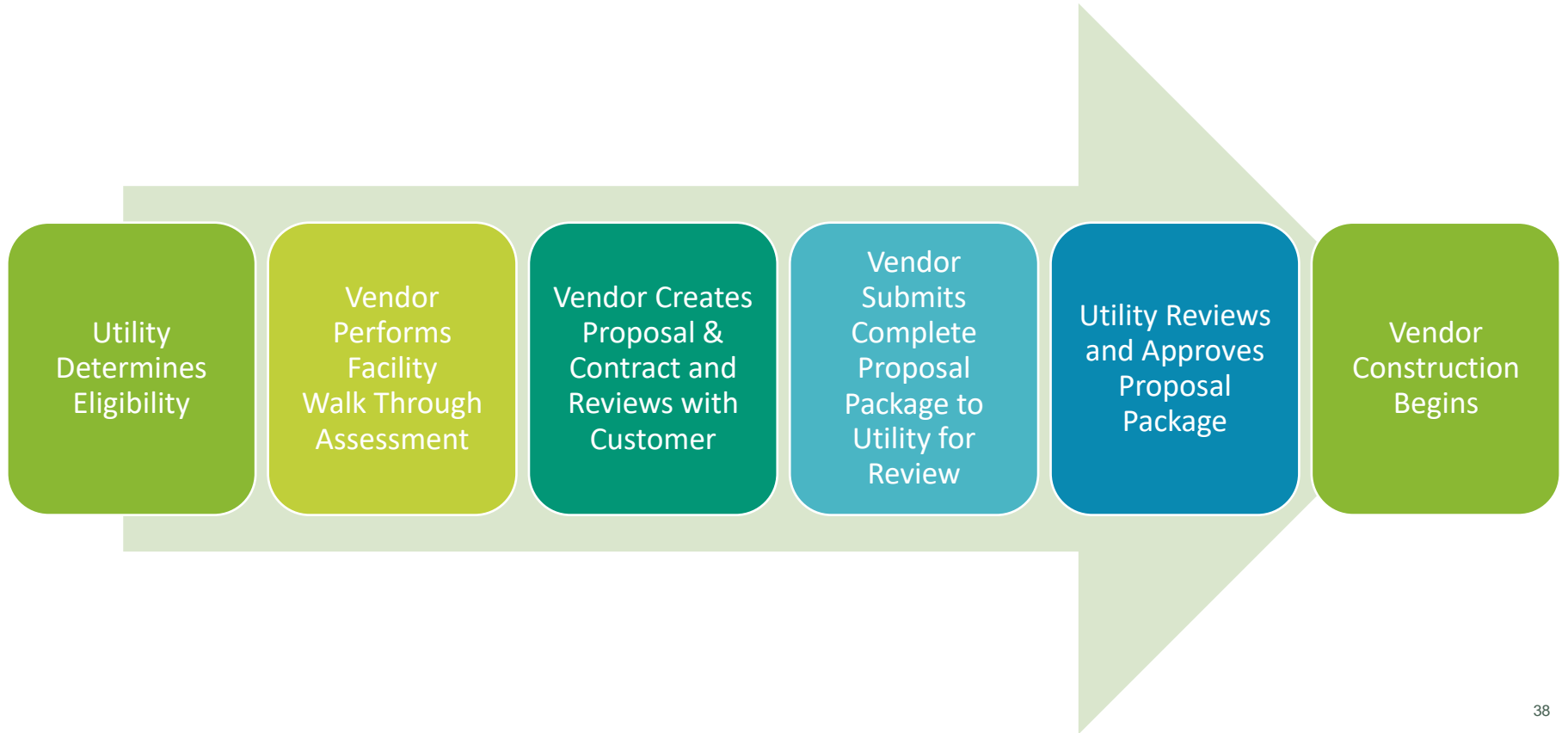
- Utilities working with BPU to improve pathways for municipal and government entities

Program Overview & Key Changes

Overview:

- Direct Install helps customers identify and implement cost-effective, energy-efficient measures for eligible non-residential customers with up to 300 kW average annual demand or up to 40,000 therms of natural gas usage.
 - Vendor completes a walk-through assessment of the facility with the customer and receives a project proposal from the program that details the scope of the project, costs involved, and estimated payment amount.
 - The contractor submits proposal and supporting paperwork to program staff.
 - Once approved the contractor will complete the installation of lighting, controls, refrigeration, heating and air conditioning updates, and more.

Program Process



Program Incentives

- **Incentives Available for 3 Tiers of Customers -**

- **Tier 1:** Average Annual Peak Demand \leq 100kW AND Annual Natural Gas Load \leq 5,000 therms
- **Tier 2:** Average Annual Peak Demand 101 - 300 kW OR Annual Natural Gas Load 5,001 - 40,000 therms
AND
Located in UEZ, OZ, OBC or Local Government, K-12, or 501(c)(3) Non-profit
- **Tier 3:** Average Annual Peak Demand 101 - 300 kW OR Annual Natural Gas Load 5,001 - 40,000 therms

- Incentives Up Tos:

- **Tier 1:** Incentives up to 80% of project costs
- **Tier 2:** Incentives up to 80% of project costs
- **Tier 3:** Incentives up to 70% of project costs

Common Equipment Upgrades

- Lighting & Lighting Controls
- RTUs, Split AC w/ Furnaces & Controls
- Boilers & Furnaces
- Chillers & Refrigeration
- Heat pumps
- Water Heaters
- Motors, VFD, Smart Thermostat

Repayment Options

- Balance of project costs able to be financed at 0% interest for 5-year term
- Repayment terms (if eligible):
 - Financing available up to \$250,000; above \$250,000 financing will cover 80% of balance of project cost
 - For municipal, university, school and hospital (MUSH) and overburdened community (OBC) customers, financing available for balance of project cost after incentives

Prescriptive & Custom

Program Overview & Key Changes

- **Target Market:** Electric and/or Natural Gas commercial or industrial customers served by at least one NJ investor-owned Utility
- **OVERVIEW**
 - **Prescriptive:** Provides incentives to facility owners and operators for the installation of high-efficiency natural gas or electric equipment and controls. Purchases may qualify for a repayment plan to further reduce upfront costs for customers.
 - **Custom:** Calculated or performance-based incentives provided for the installation of non-standard, more complex, natural gas or electric energy efficiency measures that are not defined as a prescriptive program incentive. Projects may qualify for a repayment plan to further reduce upfront costs for customers.
- **Major Changes:**
 - Incentives have changed
 - Financing terms have changed

Program Incentives

Prescriptive:

Individual incentives per piece of equipment

Incentive Categories (not exhaustive):

- Gas Measures
 - HVAC
 - Water Heaters
 - Controls
 - Commercial Kitchen Equipment
 - Commercial Appliances
- Electric Measures
 - Lighting
 - Lighting Controls
 - HVAC
 - Refrigeration
 - Commercial Kitchen Equipment
 - Commercial Appliances

Custom:

Incentives are based on calculated first year savings: Lesser of \$3.75 per therm / \$0.33 per kWh saved capped at 75% of project incremental cost or buy down to a two-year payback. Incentives for projects that are non-standard, variable, or equipment not captured by prescriptive program.

Program Process

- Customers will submit a rebate application form that will guide them through eligibility, guidelines, program requirements, terms and conditions, and general information.
 - Participants may be required to submit an application for pre-approval to confirm measure or project eligibility and reserve funding.
- If accepted and pre-approved by the utilities, a timeline is established for project completion to qualify for a rebate.
- Projects may be required to undergo pre-and post-inspection to validate energy savings.

Repayment Options

- Financing will be available up to \$250K at 0% APR for 5-year term. Above \$250K, financing will cover 80% of balance of project cost at 0% APR for a 5-year term.
- For Municipalities, Universities, Schools and Hospitals (MUSH) & Over-Burdened Community (OBC) customers, financing will be available for the entire balance of the project cost at 0% APR for 5-year term.

Multifamily

Program Overview & Key Changes

- **Target Market:** Electric and/or Natural Gas multifamily customers served by at least one NJ investor-owned Utility
- **OVERVIEW:** This program offers no-cost energy assessments and solutions for multifamily properties, including small to large garden style apartments to multi-story high-rise buildings. It collaborates with property management, Energy Advisors, and tenants to implement energy-efficient measures through offering incentives for energy saving improvements.
- **Major Changes:**
 - Serving both residential and commercial customers, with a renewed focus on commercial services
 - Streamlined application process for program enrollment and pre-screening identifies the best program pathway for customer participation
 - Higher Incentives, up to \$1,750 for the Whole Building pathway (successor to MF HPwES)
 - Incentive adders recognized for properties serving qualifying Low-to-Moderate (LMI) customers as per the filing

Program Incentives

Residential :

- Residential tiered incentive rebates have been increased from a maximum value of \$1,500 to a maximum value of \$1,750 per unit for the Whole Building pathway
- Installation of low- and no-cost energy efficiency measures at no cost to participating customers

Commercial:

- Incentives for commercial customers will align with the proposed tiers of Small Business Direct Install Program and C&I Energy Solutions

Offered Measures List

Residential and/or Commercial

- Air Sealing & Insulation
- LED Lighting
- Smart Thermostats
- Smart Strip Plug Outlets
- Pipe Insulation
- Water Heaters
- Refrigerators
- HVAC

Does not contain all offered measures

* Prescriptive rebates also available to all Multifamily customers

Program Process

This program has been improved to include a streamlined process, providing customers with a single-entry point through which their participation pathway is established. This enhancement allows for a more tailored experience that effectively addresses both residential and commercial energy efficiency needs of the customer.



Program Participation Flow:

1. Customers can contact the utility or implementation contractor (IC) and provide information about their facility in order to receive information regarding program details and enrollment process
2. The utility or IC will assist customers in completing the Multifamily Pre-Audit Questionnaire and may arrange for a virtual or in-person prescreening
3. A suitable pathway will be recommended to the customer based on the completed assessments by the utility or IC. Customers will be informed about available financing options, and those who qualify as LMI may be eligible for additional incentives determined by the utilities
4. Upon customer approval of the recommendations, a pre-inspection will be conducted, followed by the installation of project measures and a post-inspection to confirm project completion

Repayment Options

The Multifamily program may offer OBR or access to financing with comparable terms and improved incentives for income-qualified customers and affordable housing properties.

Residential / Commercial Options:

- Whole Building projects Energy customers can receive up to \$3,000 per unit in project financing with a 7-year term.
- Financing term increases from 5 years to 10 years for other pathways.
- 0% financing available for projects up to \$250,000 over a 5-year period.
- Projects exceeding \$250,000, 80% of the financing will be covered.
- LMI facilities may be eligible for an extended financing term of up to 10 years.



Questions?

Guest Presenter

New Jersey Clean Energy Learning Center Overview

Deane Evans, Executive Director, NJIT Center for Building Knowledge



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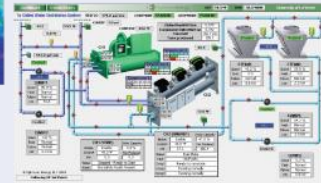
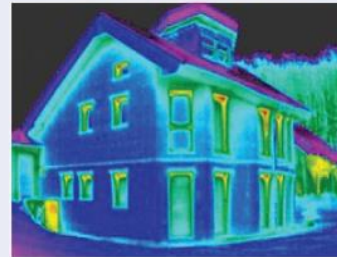
NEW JERSEY CLEAN ENERGY LEARNING CENTER

Deane Evans, Executive Director
NJIT Center for Building Knowledge

NJIT Center for Building Knowledge

The Center for Building Knowledge (CBK) is a research, technical assistance, and training institute affiliated with the Hillier College of Architecture and Design.

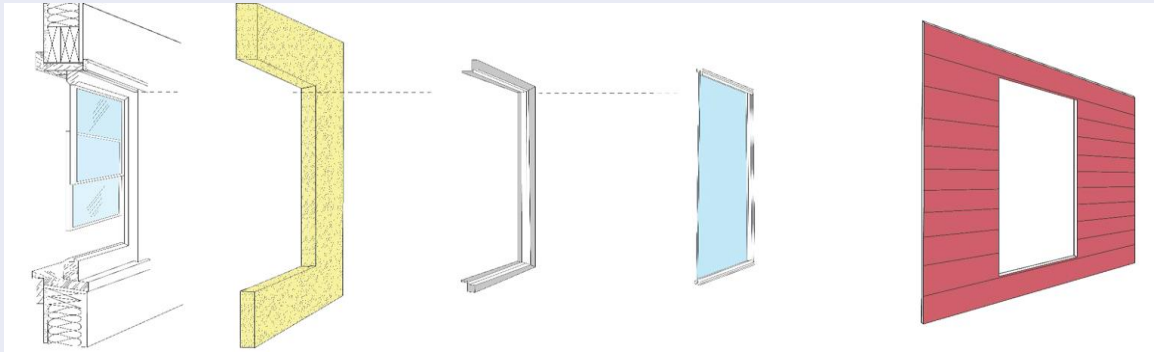
- 35-year-old center
- Non-faculty professionals
- Dedicated to generating new knowledge to improve the built environment and enhance the planning, design, construction, and operation of facilities.



NJIT CBK: Research

U.S. DOE : Renew-Wall: A Systems Approach to Integrated Building Envelope Retrofits

Renew-Wall will design and install an insulation/air barrier/water-resistive barrier system; a re-engineered thermally-broken window surround; and a high performance secondary window into standard re-siding projects

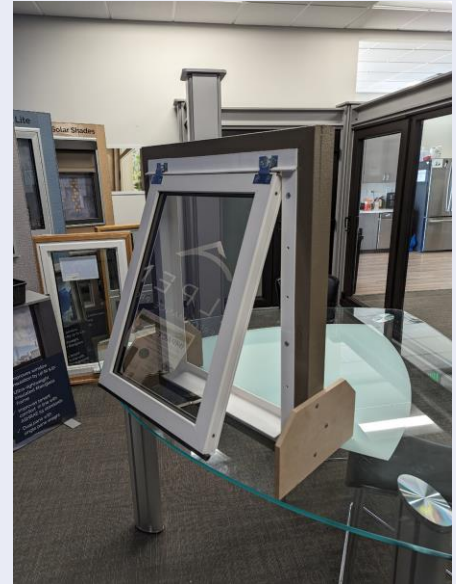


EXISTING
WALL

2" RIGID INSUL

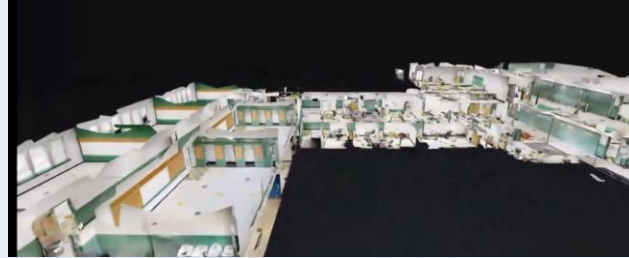
RETROBUCK HP STORM

NEW SIDING



NJIT CBK: Technical Assistance

Newark Board of Education Facilities Condition Assessments



Updated all existing building plans

Scanned each facility room by room

Produced 3D Revit BIM drawings, creating digital twins of each facility

NJIT CBK: Training

- Affordable Green Online Academy – US HUD
- Weatherization Audit Tool Training – ORNL
- Building Commissioning Training – USDOE + BCA
- Asset Score Training and Certificate Program - PNNL
- Certificate of Proficiency in Benchmarking – USDOE + EPA
- Saving Energy in Leased Spaces: Tenant Toolkit – CBEI
- NJ State Energy Manager Training – NJ BPU



NJIT CBK: Training



WELCOME TO THE NEW JERSEY
CLEAN ENERGY LEARNING CENTER

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 closed on 02/07/2025

NEXT STEPS

Findings will be shared shortly

Next Meeting

Energy Efficiency Stakeholder Meetings

www.NJCleanEnergy.com/EE



[Registration Link](#)

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

- ✓ **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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New Jersey's
cleanenergy
program™

Thank you