



Energy Efficiency Stakeholder Meeting

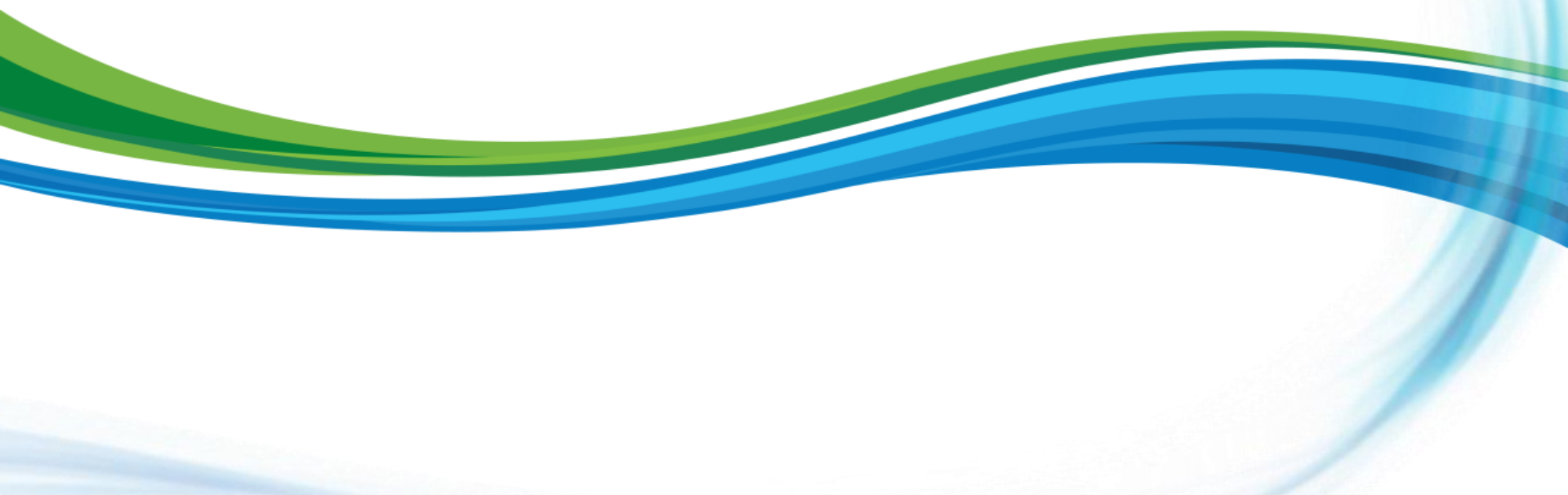
July 18, 2024

Agenda

1. Re-cap of Last Meeting
2. New Jersey Energy Efficiency Programs
3. Energy Efficiency Updates
 - NJCEP Updates
 - New Construction Program Update
 - Community Energy Plan Grant / Community Energy Plan Implementation Grant Update
 - Benchmarking Update
 - Statewide Evaluator – Behavioral Programs Findings
 - Statewide Evaluator – Technical Reference Manual
 - Utility Updates
 - Regulatory Updates
 - Triennium 2 Filings Review
4. Guest Presentation – Building Weatherization Technology
5. General Q&A
6. Items of Interest
7. Next Meetings



Recap of Last Month



June Meeting Recap

What we covered:

- ✓ NJCEP Updates
 - ✓ NJCEP New Construction Program
 - ✓ Community Energy Plan Grant / Community Energy Plan Implementation Grant Update
 - ✓ Benchmarking Update
 - ✓ Rutgers EE Workforce Report
- ✓ Utility Updates
- ✓ Regulatory Updates
 - ✓ Triennium 2 Filings Review
- ✓ Guest Presentation: HVAC Heat Recovery
- ✓ Q&A



New Jersey Energy Efficiency Programs



New Jersey Energy Efficiency Programs

<http://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 & Power & Fuel Cells
- *State facilities are also eligible for utility programs

Utility Administered Programs



- Existing buildings (residential, commercial, industrial, government)
- Efficient Products
 - Lighting & Marketplace
 - HVAC
 - Appliance Rebates
 - Appliance Recycling

NJBPU and Utility Co-Administered Programs



Energy Efficiency Program Information

<http://www.njcleanenergy.com/EEP>



Press Room | Library | FAQs | Calendar | Newsletters | Contact Us | Site Map

HOME
RESIDENTIAL
COMMERCIAL, INDUSTRIAL AND LOCAL GOVERNMENT
RENEWABLE ENERGY

NEW JERSEY'S CLEAN ENERGY PROGRAM

ABOUT NJCEP

BOARD OF PUBLIC UTILITIES

POLICY UPDATES & REQUEST FOR COMMENTS

CALENDAR

CLEAN ENERGY STAKEHOLDER GROUPS - MEETINGS

GRANTS & SOLICITATIONS

TRAINING RESOURCES

PRESS ROOM

PUBLIC REPORTS AND LIBRARY

CONTACT US

New Jersey's Energy Efficiency Program Transition

Transición del Programa de Eficiencia Energética de Nueva Jersey

Electric Utility Contact Information

Utility Name	Commercial & Industrial Programs	Residential Programs
Public Service Electric & Gas	Website and Email Phone: 844-300-7734	Website and Email Phone: 855-846-2895
Atlantic City Electric	Website, Email and Phone: 833-223-7297	Website, Email and Phone: 866-353-0007
Jersey Central Power & Light	Website, Email and Phone: 800-652-3115	
Rockland Electric	Website, Email and Phone: 877-434-4100	

Gas Utility Contact Information

Utility Name	Commercial & Industrial Programs	Residential Programs
Public Service Electric & Gas	Website and Email Phone: 844-300-7734	Website and Email Phone: 855-846-2895
New Jersey Natural Gas	Website and Email Phone: 877-455-6564	Website and Email Phone: 877-455-6564
South Jersey Gas	Website and Phone: 888-263-7372	Website and Phone: 833-483-0691
Elizabethtown Gas	Website and Phone: 888-263-7372	Website and Phone: 833-483-0692

Check the GIS utility finder to determine who your provider or providers are.



Program Updates

- Energy Master Plan Update
- Solar Scam Warning
- School and Small Business Energy Efficiency Stimulus Program
- Energy Efficiency Program Transition

Program Literature

Applications and Brochures
Download the latest program materials.

Energy Master Plan

State of New Jersey
Energy Master Plan

Follow Us:

FREQUENTLY ASKED QUESTIONS

Frequently asked questions (FAQs) are grouped by the following subject areas; you can jump to any section by clicking on one of the topics below:

- [General FAQs](#)
- [Commercial & Industrial Programs FAQs](#)
- [Residential Programs FAQs](#)
- [Contractor Specific FAQs](#)
- [Questions](#)

General FAQs

Why are some energy efficiency programs now managed by the utility companies? (updated August 9, 2022)

The transition of the administration of certain energy efficiency programs from NJCEP to the utilities occurred in accordance with the mandates from the Clean Energy Act of 2018. These new programs allow the utilities to work directly with customers to achieve energy savings. The Board considered the following in establishing this transition:

- Programs that rely heavily on the use of contractors will be handled at the utility level, where the utility companies can build strong relationships and lead co-branded advertising and marketing efforts.
- Utilities will handle programs that rely on customer data or advanced metering infrastructure (AMI) to streamline customer data access layers and minimize the sharing of data to protect customer privacy.
- Utilities are well-suited to deliver certain energy efficiency programs, such as those that are based on existing customer relationships and that rely on utility data and systems.
- Utility administration works best for programs that can leverage utilities' knowledge of energy consumption, customer demographics, workforce infrastructure, and existing customer relationships within their service territories. Utility access – and increased customer access – to energy use data enables the design of more personalized services and programs, targeted outreach, and individualized solutions for customers.
- Utilities can offer flexible financing options, such as on-bill repayment.
- Customers may have more "brand awareness" and direct communication with their utility, which facilitates the broader adoption of energy efficiency measures.



Energy Efficiency Updates:

New Jersey's Clean Energy Program



More NJCEP Information

Quarterly Newsletter:

www.NJCleanEnergy.com/NEWSLETTER

Clean Energy Program Filings:

www.NJCleanEnergy.com/FILINGS

Clean Energy Program Monthly Progress to Goal Report

www.NJCleanEnergy.com/EE - Meeting Materials Archive



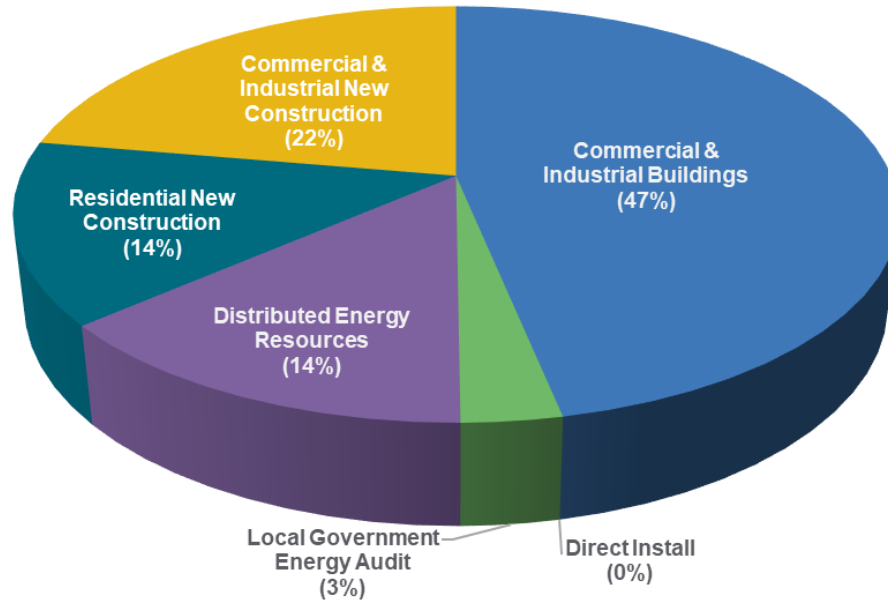
Progress to Goals Report is posted with post-EE Stakeholder Meeting resources after this meeting



Budget Break-down by Program

FY24 TRC Managed Programs

Incentive Budget: \$146,536,918



Energy Efficiency Programs FY24

NJCEP/TRC Managed

Closed

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

Closing Out

- C&I Buildings (existing buildings)
- SmartStart Retrofit
- Pay for Performance Existing Buildings
- 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

Comfort Partners



What is the New Construction Program?

COMING
SOON

ABOUT THE PROGRAM

Three pathways to fit your needs to achieve greater energy savings

INCENTIVES

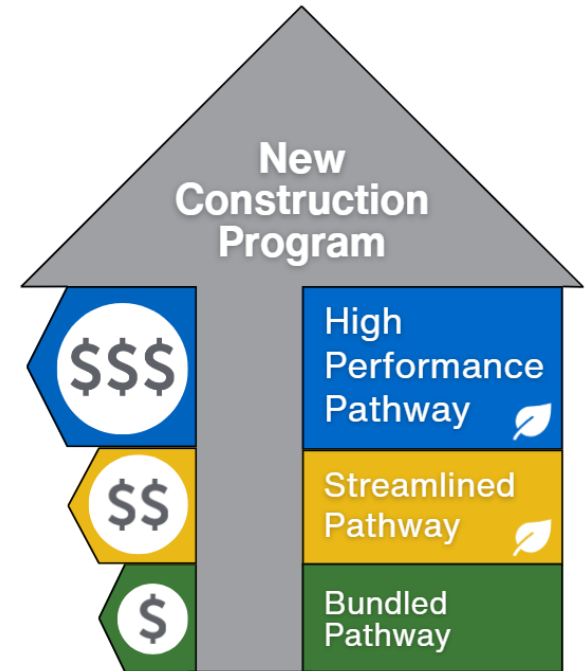
Based on selected pathways and size

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

COMING SOON

3/6/2024

Compliance Filing posted for Public Comments

3/27/2024

Public comments close for Compliance Filing

NOW

Current programs remain open until the transition to New Construction Program

TBD

New Construction Program Launch

LAUNCH

Community Energy Plan Grant & Community Energy Plan Implementation Grant Update

These two grant programs support municipalities with community-level clean energy initiatives.

Community Energy Plan Grant (CEPG) Program

- Grants for municipalities to develop community energy plans aligned with their respective needs
- Two grant award levels
 - \$10,000
 - \$25,000 – overburdened municipalities

Community Energy Plan Implementation (CEPI) Grants

- Grants for municipalities to implement community energy projects
- Applicants eligible for \$250,000 with possibility of additional awards if funds remain after all priority projects are funded.

UPDATE: Staff is developing award recommendations for the Board's consideration and anticipates Board action in the near future.



Benchmarking Update

- As of April 2nd, postal mailings were sent to commercial building owners
- The submission deadline is July 1, 2024 for this reporting year (2023)
 - Building owners will have a 90-day grace period after the July 1st date to report
- A Helpdesk is available to answer questions about the benchmarking program and Portfolio Manager
 - To view frequently asked questions, submit a general inquiry or an exemption request, receive instructions for how to report, and obtain training resources and important updates: <https://nj.beam-portal.org/helpdesk/>
 - To submit an inquiry to the Helpdesk, please visit: <https://nj.beam-portal.org/helpdesk/> and select "New Ticket"
 - To respond to a previously submitted ticket or a received email, please email njbpbenchmarking@beam-portal.org or call 888-533-4571



*SWE Stakeholder Presentation –
Behavioral Program Findings & State Evaluation Plan Update)*

NJ – Behavioral Findings & Context

SWE Leads – Jacobs & Skumatz

July 18, 2024

Behavioral Programs – 1. Filings Start High

NJ TRM and NJ Study Results

- Most of the PY2 evaluations are in the same order of magnitude/ranges as the TRM values
 - One (ACE) is showing low value with a confidence interval that includes zero
 - NJNG is higher than the “range”
- The percentages are translated into kWh and Therms per HH in the last two columns
- Red circles indicate PY4 numbers that are substantially higher than the evaluated savings values.
- *How can values PER HH “jump”?*

Results may compel utilities to revisit these savings. Program designs are fairly similar, and have been for a dozen years. Programs being delivered in the usual way

Table 1: Adjusted Percent Savings from NJ TRM and NJ Utility Studies (with conf intervals)-Behavioral Adjusted Percent Savings (% annual consumption of each residential customer)

Utility	Electricity				Natural Gas				kWh & Therms per household (HH)	
	2023 TRM	PY2 Evaluations			2023 TRM	PY2 Evaluations			Eval	PY4
	Mean	LCI	Mean	UCI	Mean	LCI	Mean	UCI		
PSE&G	0.56%	0.53%	0.65%	0.77%	0.41%	0.44%	0.56%	0.68%	41.1 / 4.5	58.2 / 10.0*
ETG					0.50%	0.33%	0.46%	0.59%	4.3	2.7
SJG					1.07%	0.69%	0.89%	1.09%	7.3	3.6
RECO	0.20%	0.22%	0.5%	0.78%					57.3	100.0
ACE		(-0.16%)	0.32%	0.80%					36.0	107.4
NJNG						0.91%	1.39%	1.87%	15.4	2.5
JCPL		0.26%	0.33%	0.40%					53.2	50.5

Table Note: RECO results not adjusted for uplift *PSEG are PY4-6 average values

Behavioral Programs – 2. Projections Grow

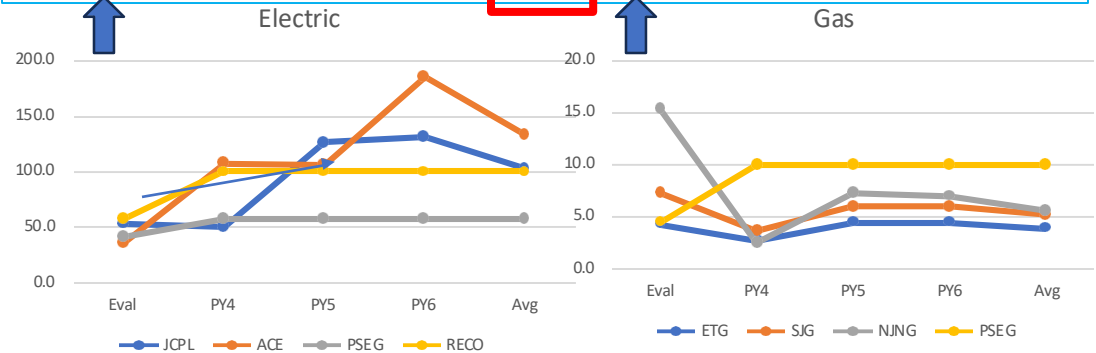
- PY2 evaluated values are replicated in the columns with blue arrows (kWh and therms per HH)
- ACE, RECO, and PSE&G again, start high in PY4 compared to evaluated.
- Electric utilities show substantial growth over 3-year period (red boxes).
- Gas utilities show growth, but do not exceed their evaluated values (blue boxes)
- *How is EDC savings growth PER HH achieved? What is the mechanism that leads to growth?*

Per HH: Values PER HH can grow slightly year 1 to year 2 or 3, then plateau and decline.

New Signups / Cohorts: First cohorts are highest users (➔ highest savings).

Table 2: HER Evaluated Results and Projections Used in the Triennium 2 Filings

Utility	Electric Savings (kWh per household)					Natural Gas Savings (therm per household)				
	Evaluated	Tri 2 Forecast				Evaluated	Tri 2 Forecast			
		PY2	PY4	PY5	PY6		Avg	PY2	PY4	PY5
ETG						4.3	2.7	4.5	4.5	3.9
JCPL	53.2	50.5	126.8	131.3	102.8					
SJG						7.3	3.6	6.0	6.0	5.2
NJNG						15.4	2.5	7.3	7.0	5.6
ACE	36.0	107.4	106.3	185.7	133.1					
PSEG	41.1				58.2					10.0
RECO	57.3	100.0	100.0	100.0	100.0	4.5				



Discussion / Questions

2024 TRM Update Status

SWE Lead – Jacobs

July 18, 2024

TRM Update Schedule

Generic schedule	2024 update date	Version
PY 4 minus 6	7/1/2024	New measure soft deadline
PY 4 minus 5	8/1/2024	Measure updates from eval studies
PY 4 minus 4	9/1/2024	TRM draft ready for stakeholder review
PY 4 minus 3	10/1/2024	TRM ready for Board review
PY 4 minus 2	11/1/2024	TRM implementation
PY4 start	1/1/2025	TRM effective

Corrections and Clarifications to the 2023 Triennial TRM

- Set up a Q/A Log for TRM committee requests
 - ~50 entries
- Example requests:
 - Update baseline condition definition and clarify where dual baseline calculations are needed
 - Correct typos and formula errors
 - Provide missing default values and baseline efficiency references
 - Consolidation of measures in NTG appendix
- Questions and answers addressed in the bi-weekly TRM Committee meetings

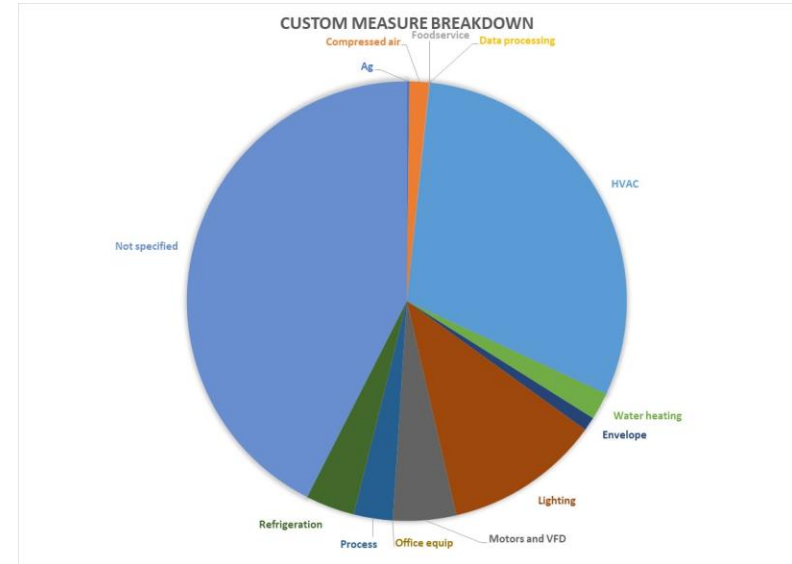
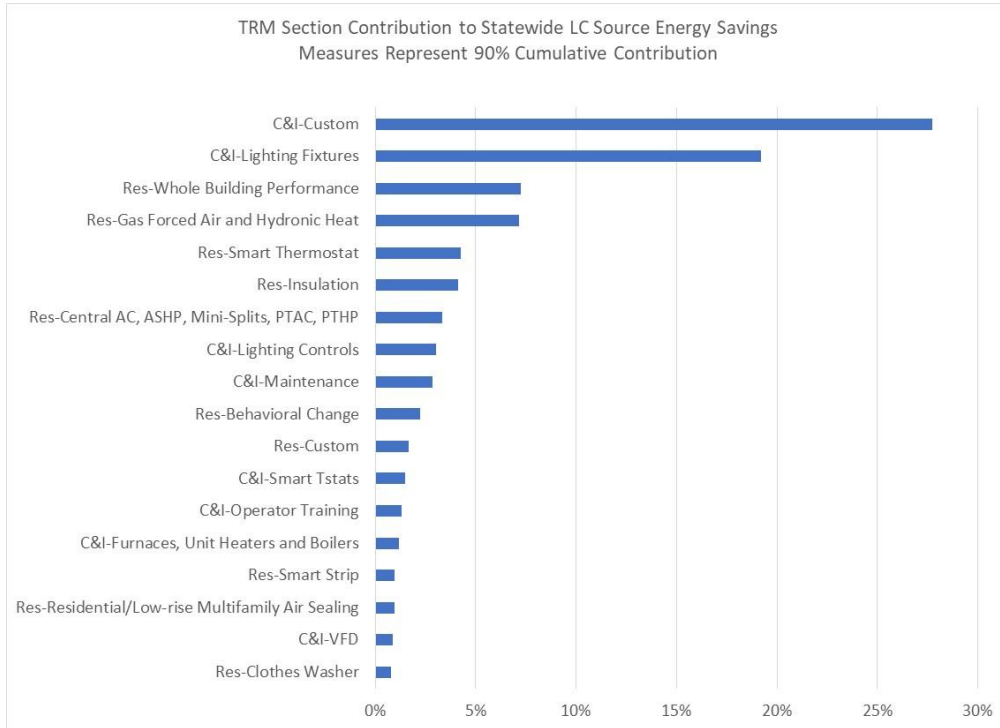
Measures Updated Based on Additional Research

- Based on DNV review and input from TRM committee
- Measures addressed include:
 - Residential refrigerators
 - Residential furnaces and boilers
 - C&I Heat/Energy Recovery Ventilators
 - C&I Refrigeration Door Closers
 - Residential Clothes Washers
 - Residential and C&I heat pumps
 - Residential New Construction

New Measures

- Measures added to 2024 update based on TRM committee requests
 - C&I Switched reluctance motors
 - C&I Gas heat pumps
 - Residential Advanced combi boiler
 - Residential landscaping equipment
 - Residential window film
 - C&I Fuel use economizer
 - Residential Infiltration/weatherization measures
 - Electric forklift
 - Commercial Weatherization

TRM Measure Contribution to Tri 2 Portfolio



Impacts of 2024 Update Changes to Priority Measures

Measure section	Sector	End Use	Measure	Portfolio contribution	Change	Savings change
3.7.1	C&I	Lighting	Lighting Fixtures	19%	Add AML back in	large decrease, but AML mostly used in Tri2 filing
2.3.3	Residential	HVAC	Furnaces and Boilers	7%	Added measures	None
2.3.1	Residential	HVAC	Heat pumps	3%	Cooling EFLH update; partial displacement	small increase
3.7.2	C&I	Lighting	Lighting Controls	3%	HVAC interactions	small decrease
3.5.1	C&I	HVAC	Heat pumps	1%	Added partial displacement	A wash?

AML = Adjusted Measure Life
 EFLH = Equivalent Full Load Hours

Discussion / Questions

Energy Efficiency Updates:
Utility Updates



Utility Updates

NJ Energy Efficiency Stakeholder Meeting

Anita Ramakrishnan, PSE&G

on Behalf of The NJ Joint Utilities – July 18, 2024



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.

Utility Updates

- **All utilities submitted their filings for the Second Triennium (1/1/2025-6/30/2027)**
 - All utilities continue to work with the parties toward settlement
- **Status of the Extension Requests for the First Triennium (to cover 7/1/2024-12/31/2024)**
 - Extensions were approved for all Utilities.
- **Joint Utility Contractor Calls**
 - Next Residential HPwES contractor call scheduled for July 18
 - Next HVAC contractor call to be held in the fall
- **Appliance Recycling**
 - Utilities are restarting the appliance recycling program; some utilities have restarted the programs, and others will have the program up and running soon
- **Community Events**
 - ACE is participating in the following upcoming community events:
 - **Winslow TWP Juneteenth**; June 22, 2pm-6pm; Peter Volpa Park at 569 Sickler Ave, Sicklerville, NJ 08081
 - JCPL is participating in the following upcoming community events:
 - Brick Summerfest 7/18/2024
 - Monmouth County Fair 7/24/2024
 - Warren County Farmers 7/27/2024
 - There are also multiple Supply House outreach visits scheduled
 - South Jersey Gas will be sponsoring the Stone Harbor Green Fair on July 18th
 - New Jersey Natural Gas at the Blue Claws on August 15th and outreach events planned for National Dig Safe Day (8/11)

Utility Updates

Current Campaigns

- PSE&G
 - External communications promoting the various smart thermostat sales on the PSE&G Marketplace
 - Bill inserts, Residential e-newsletter, Google Postcard , MyEnergy Postcard , MyEnergy Challenge Email, PSEG.com Homepage Banner, Social media on PSEG's Facebook, Instagram, and X accounts
- NJNG
 - Discounts on smart thermostats via the NJNG Marketplace extended through July 30th
 - Omnichannel marketing approach communicating promotion to residential customers using historical marketplace purchase data and propensity modeling for further personalization and segmentation.
 - Primary channels: marketplace banner, direct mail postcard, social ads, social posts, drip emails and customer newsletter
- ETG, and SJG are offering promotions on their Efficient Products marketplaces
 - www.elizabethtowngasmarketplace.com
 - www.southjerseygasmarketplace.com
- JCPL
 - Multiple marketing initiatives being implemented with a focus on all electric customers for the extension period only

New Jersey Natural Gas Primary Updates

NJNG x Sustainable Jersey Energy Outreach Technical Assistance Renewed

- Includes engagements that guide municipalities through completing a residential or commercial energy efficiency outreach campaign.
- Participants receive:
 - Technical assistance to plan and implement an energy efficiency outreach campaign.
 - Customized outreach materials (program signage, social media graphics, etc.)

Quick Home Energy Checkup+ (QHEC+) \$1 Promotion

- From June 12 through Sept. 30, 2024, NJNG customers can schedule a QHEC+ for \$1.
- Promotional channels:
 - Email
 - Bill insert and door hangers
 - Direct mail
 - Social media ads
 - Publication advertising

Bonus Incentive:

Various smart thermostats are on sale through July 30th. Customers can take advantage of these deals and have their new device installed for free during their QHEC+.

NJNG Updates

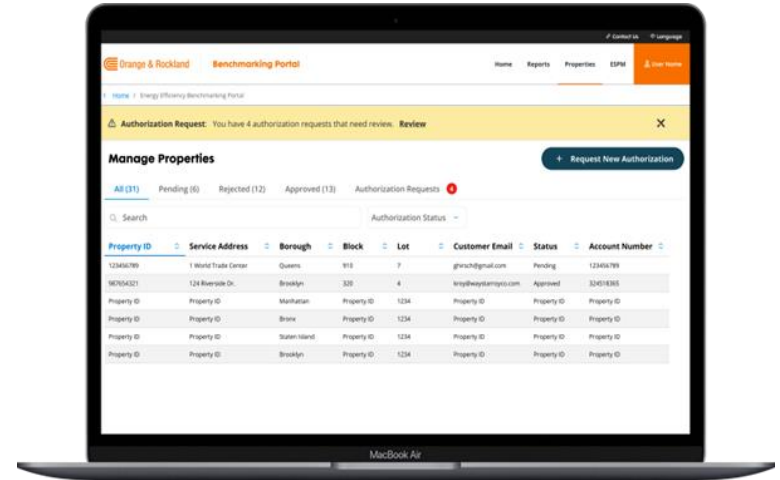
Don't Miss Out on the Don't Hog Energy Video Contest

- NJNG has worked closely with the Alliance to Save Energy on student educational materials for more than a decade, including free school assemblies featuring the Energy Hog.
- Interest in developing a new video resource to support energy education for younger grades.
- NJ residents can create an animated video based on “The Efficient Fable of the Big Bad Energy Hog.”
- Winning video takes home \$10,000!
- Submissions due by November 15.
- See full details and judging criteria [here](#).
- Please share the information with creative contacts in your network.



Rockland Electric Launches Building Energy Usage Portal (BEUP)

- BuildingEnergyUsage.ORGU.com
- RECO launched its BEUP system on June 20th.
- BEUP is an automated web-services system that can pull the annual aggregated electric usage data for a property and share it with the EPA Energy Star Portfolio Manager site.
- BEUP enables large commercial customers to comply with the NJ Benchmarking Law under the 2018 Clean Energy Act.
 - Covered building owners (> 25 ksf) should have received notice from State beginning on April 1st.
 - Submission deadline for Second Reporting Year is July 1, 2024. Covered buildings have a grace period of up to 90 days.
- Non-covered building owners may also use BEUP to benchmark their properties.



Energy Efficiency Updates:

Regulatory – State & Federal



Triennium 2 Filings Review (Docket No. QO23030150)

- February 26, 2024 – Presiding Commissioners’ Orders
 - Summaries of proposed utility programs, budgets, cost recovery mechanisms
 - Rulings on motions to intervene and participate
 - New Jersey Natural Gas Company (QO23120868)
 - Intervenors: EEA-NJ, NJLEUC, NRDC, NJPEEC, Sierra Club
 - Participants: Uplight, Joint Utilities
 - Elizabethtown Gas Company (QO23120869)
 - Intervenors: EEA-NJ, NJLEUC
 - Participant: Uplight, Joint Utilities
 - South Jersey Gas Company (QO23120870)
 - Intervenors: EEA-NJ, NJLEUC
 - Participant: Uplight, Joint Utilities
 - Atlantic City Electric Company (QO23120871)
 - Intervenors: EEA-NJ, NJLEUC
 - Participants: Convergent, CPower, Google, Uplight, Joint Utilities
 - Jersey Central Power & Light Company (QO23120872)
 - Intervenors: EEA-NJ, NJLEUC
 - Participants: Convergent, CPower, Google, Joint Utilities
 - Public Service Electric & Gas Company (QO23120874)
 - Intervenors: EEA-NJ, NJLEUC, NRDC, NJPEEC, Sierra Club
 - Participants: Convergent, CPower, Google, United, Uplight, Joint Utilities
 - Rockland Electric Company (QO23120875)
 - Intervenor: EEA-NJ
 - Participant: CPower, Joint Utilities



Triennium 2 Filings Review (Docket No. QO23030150)

- Status:

- Prehearing orders: procedural schedules, issues to be resolved
 - PSE&G: March 28
 - ACE, JCP&L, RECO: April 12
 - NJNG, SJG, ETG: April 23
- Further commissioner orders suspending procedural schedules during settlement: <https://www.nj.gov/bpu/agenda/presidingcommissionerorders.html>
- Settlement conferences (March–July 2024) – budgets, programs, incentives
- Public hearings (May–June 2024)
- Board action (summer–early fall 2024)
- Triennium 2 starts January 1, 2025

Guest Presentation: Building Weatherization Technology



Christine Liaukus, RA, CPHC
New Jersey Institute of Technology (NJIT)

Renewing Building Envelopes

Maximizing the Energy Efficiency of Common Residential Exterior Upgrade Projects

Christine Liaukus, RA, CPHC

Re-Side Tight Re-Side Right Renew-Wall



What is Re-Side Tight?



- Re-Side Tight practices harness the opportunity to improve a home's energy performance **while** it's being re-sided.
- Detailing the water-resistive barrier to also act as an **air-barrier** increases the value of a re-siding job.

Proving Re-Side Tight



Funding: **PSE&G**

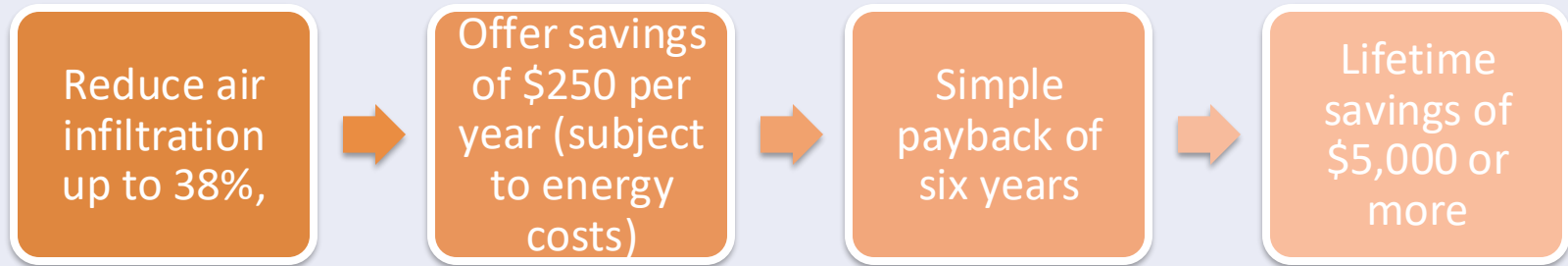
Research: **CBK at NJIT**

Studied the change in air-leakage
in 15 NJ homes that were re-
sided using the
Re-Side Tight approach

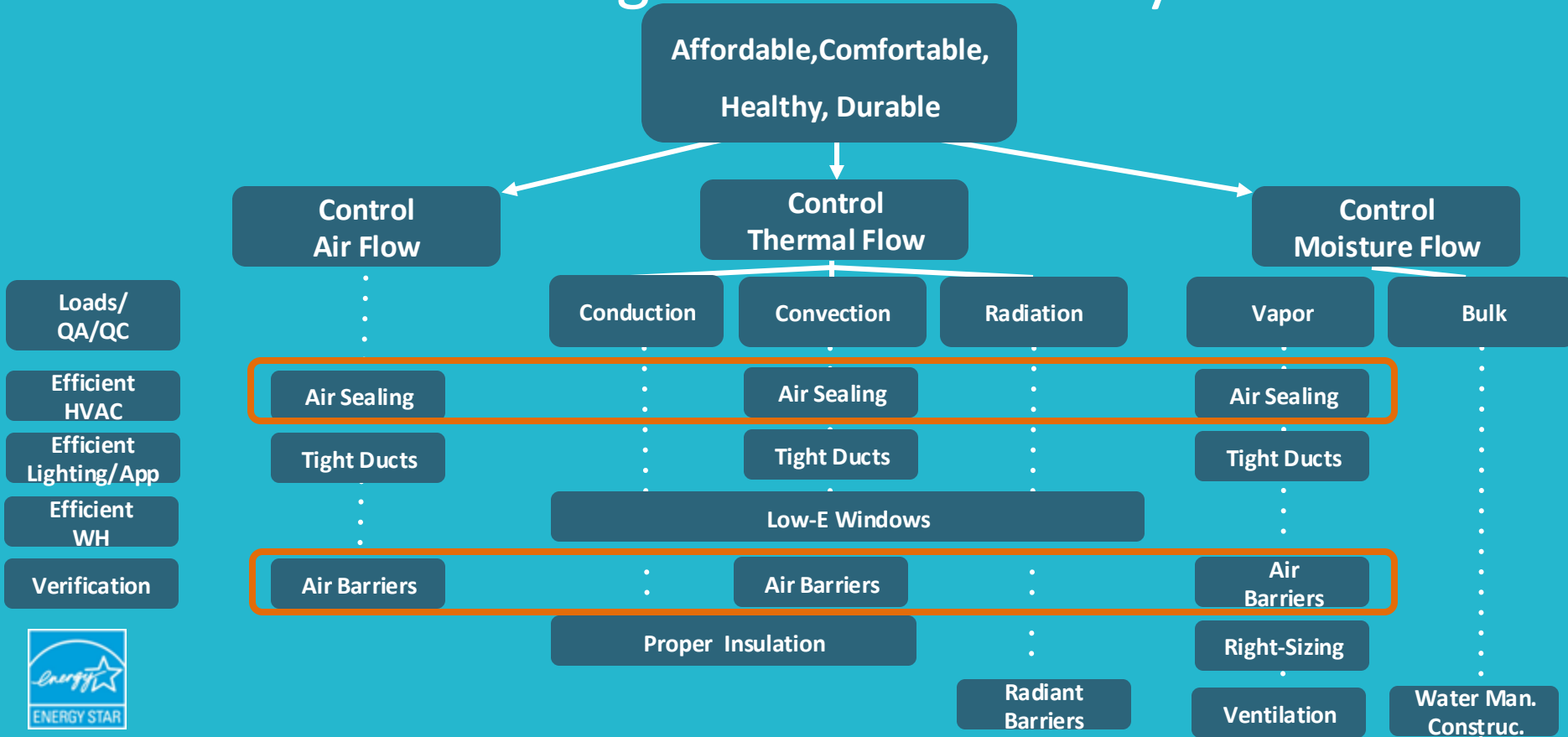
Product support: **DuPont,
Pactiv, Panasonic, Sto-Corp**

Re-Side Tight Findings

Re-Side Tight found that a WRB when also installed as an **Effective Air-Barrier** can:



When Viewing the House as a System



Re-Side Right

Install rigid insulation as the WRB and air barrier during a standard re-siding job





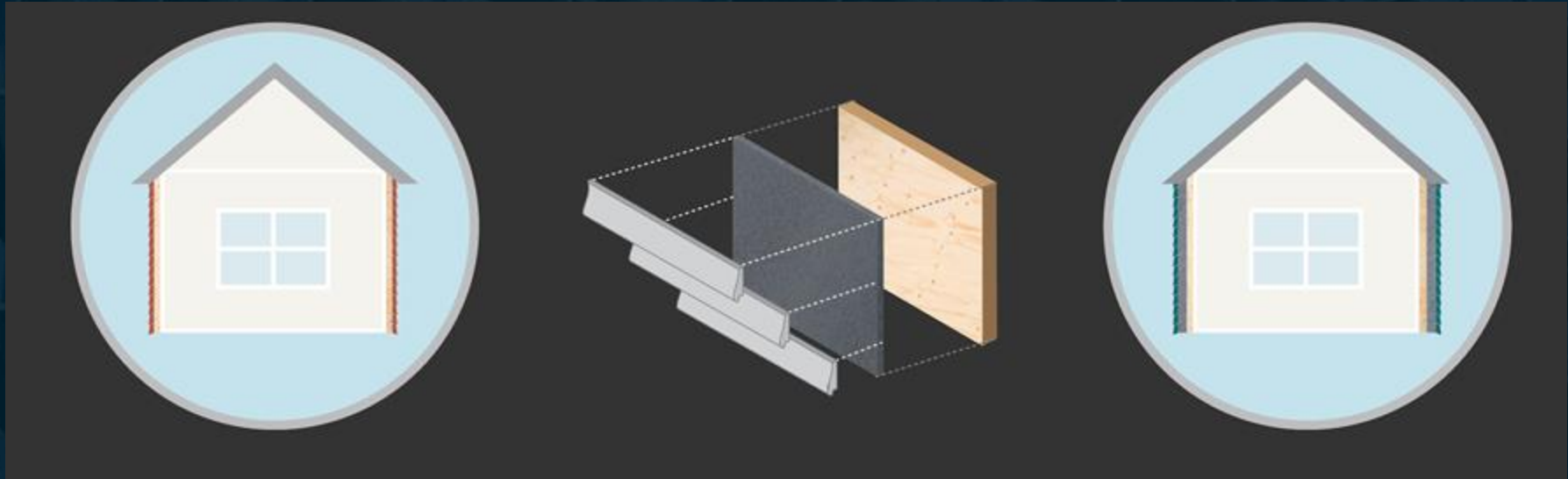
Re-Side Right

Principal Investigator - Christine Liaukus, RA

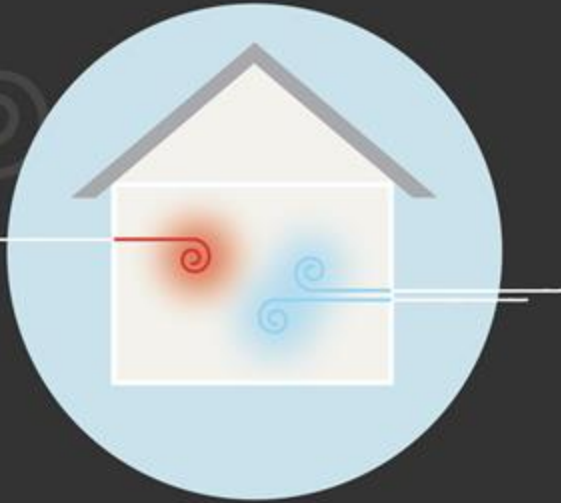




RE-SIDE RIGHT



Re-side Right enhances a typical re-siding job by adding continuous insulation that also serves as a WRB and air barrier



Most houses leak a lot of air

This leads to drafts, energy loss, and compromised building durability. Reducing the leakage helps minimize these issues.

&

Could use more insulation

Added insulation reduces heat loss in the winter & heat gain in the summer. Adding continuous insulation on the exterior also reduces thermal bridging through the walls, further enhancing thermal performance.



Insulation without an air barrier is like wearing a sweater when riding a bicycle in the cold weather: the air gets through and you don't stay warm.



If you put a wind breaker (air barrier) over the sweater, the air flow is diminished and the sweater (insulation) keeps you warm.

As explained by Henry Gifford

INSTALLATION PROCEDURES



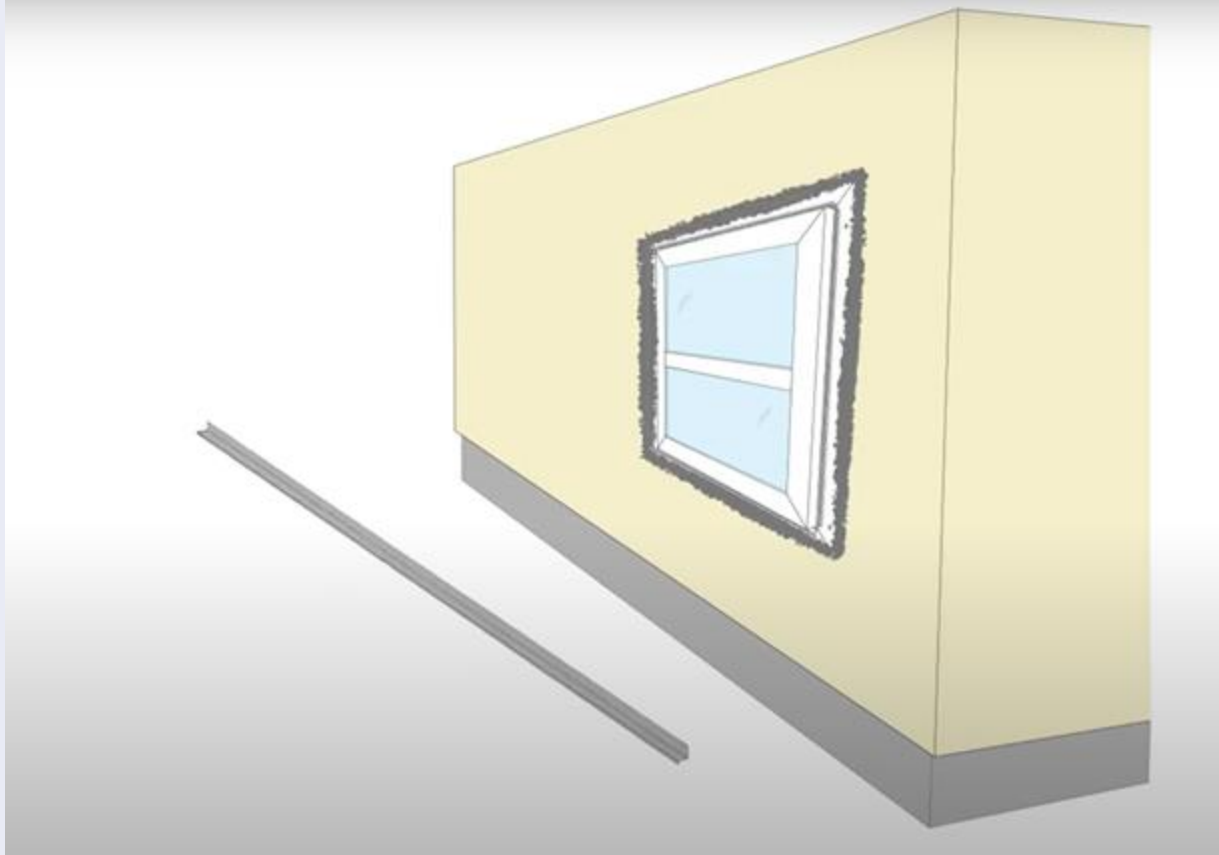
1. Tear off siding



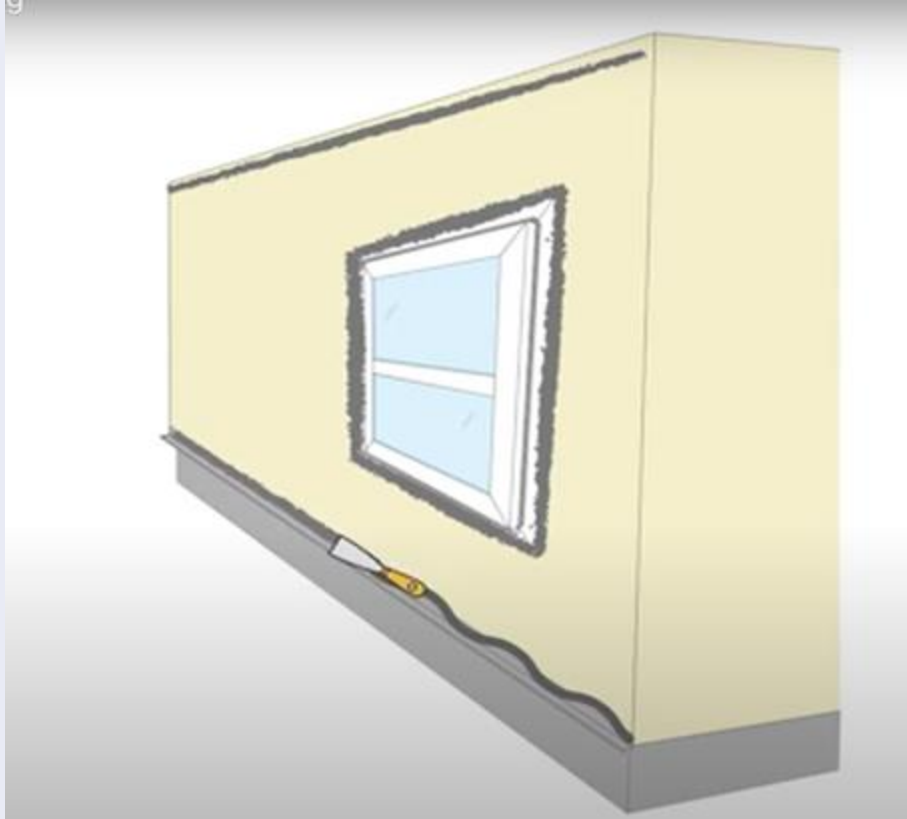
2. Repair substrate, fill large openings



3. Seal between foundation and framing as needed



4. Install base flashing



5. Install liquid flashing at sheathing top, base and around windows and doors



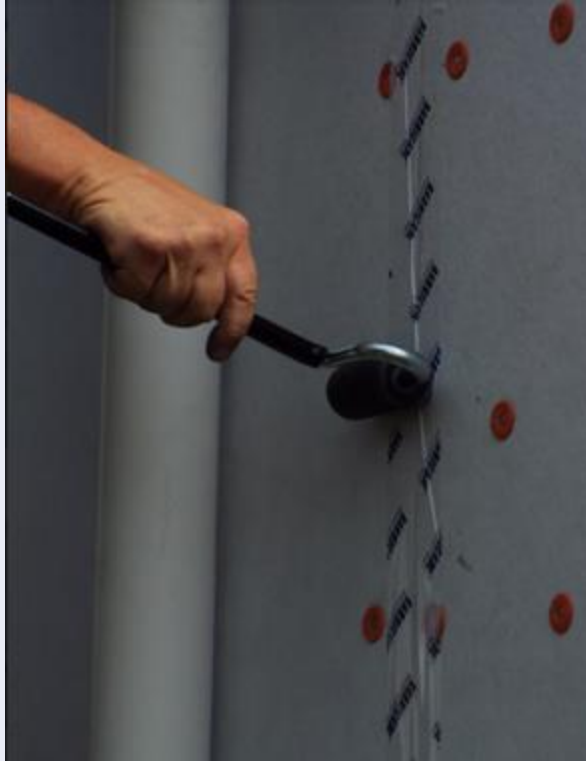
Liquid flashing application at window jamb



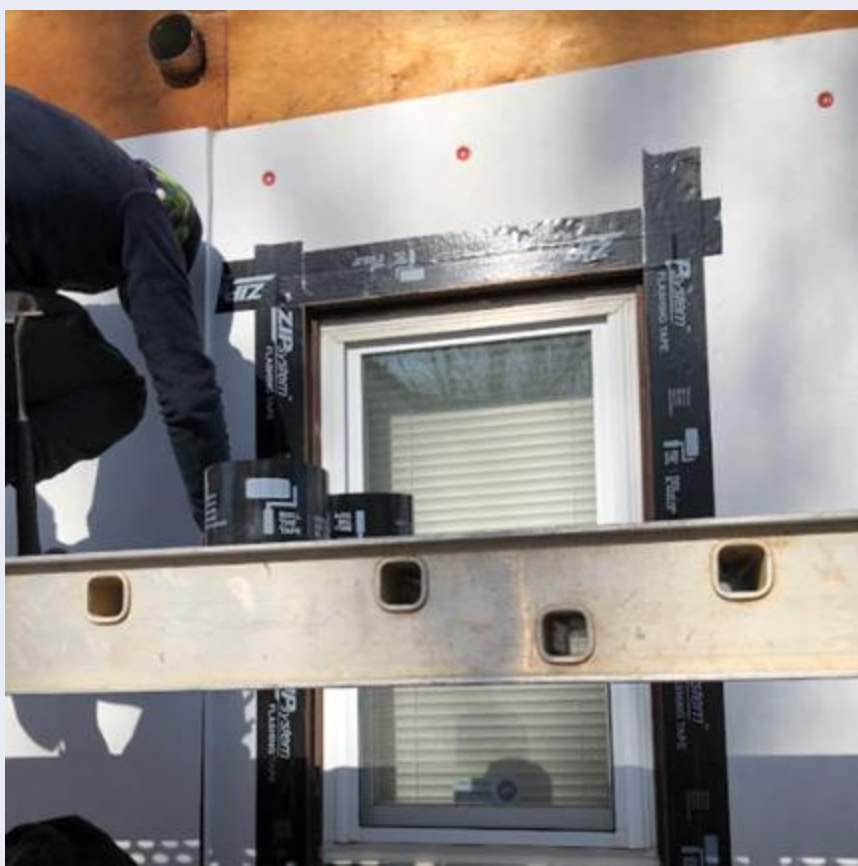
6. Install 1" rigid insulation with cap nails or an auto feed screw gun



7. Tape all joints with construction tape



Tape is pressure activated and needs to be rolled

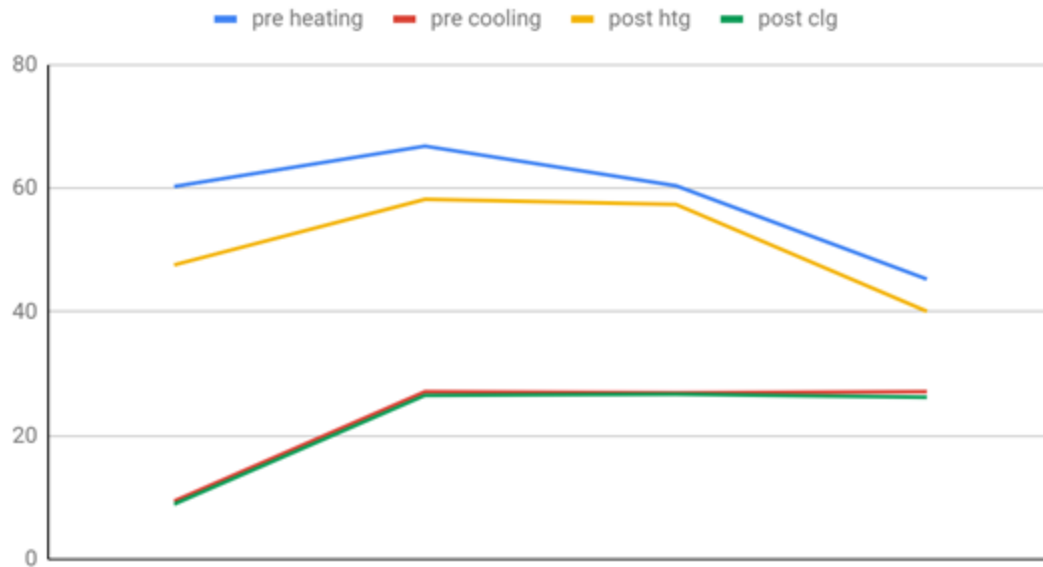


8. Install self-adhered flashing at jambs and head of windows/doors



9. Install siding

Pre and Post Siding Source Energy (MMBtu/yr)



1. In what town do you live?

2. How long have you lived in your house?

- Less than 1 year
- Between 1 year and 5 years
- More than 5 years

3. Since the completion of your siding job, have you noticed any comfort changes in your home?

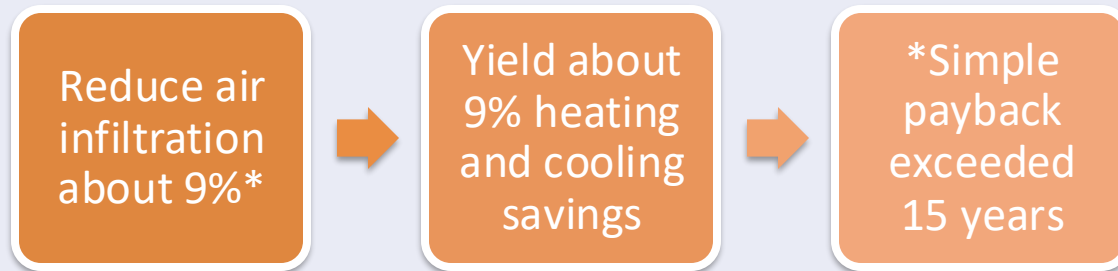
- More comfortable
- No change
- Less comfortable
- Not sure

4. Have you noticed any difference in the acoustic performance of your home?

- There is less noise from outside
- There is no change in noise from the outside
- There is more noise from outside
- Not sure

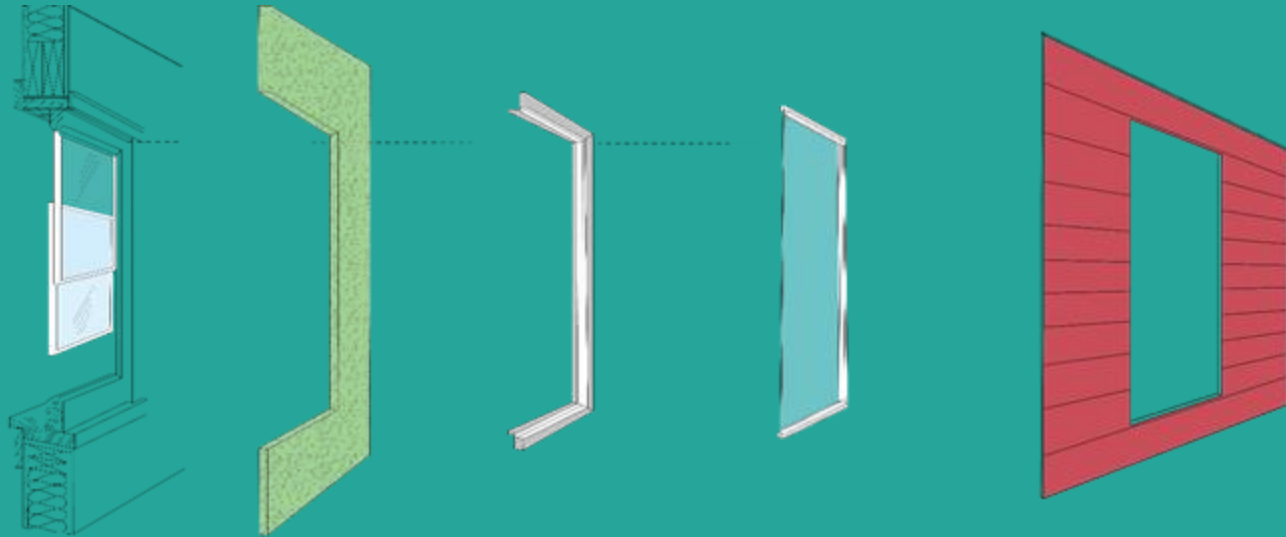
Re-Side Right Findings

Re-Side Right found that a WRB faced rigid insulation installed as an **Effective Air-Barrier** can:



Renew-Wall

Addresses entire wall area by adding a high performance secondary window and thermal buck











CASA PASSIVA – MF PASSIVE HOUSE RETROFIT, CHRIS BENEDICT, R.A. Christine Liaukus, R.A., Passive House Consultant

Riseboro Community Partners

Retrofit of 9 apartment
buildings in Brooklyn to the
Passive House standard

Boiler to mini splits and ERV's
– inside out systems

EIFs and triple glazed windows





Photo credit: Christine Liaukus



Photo credit: Christine Liaukus



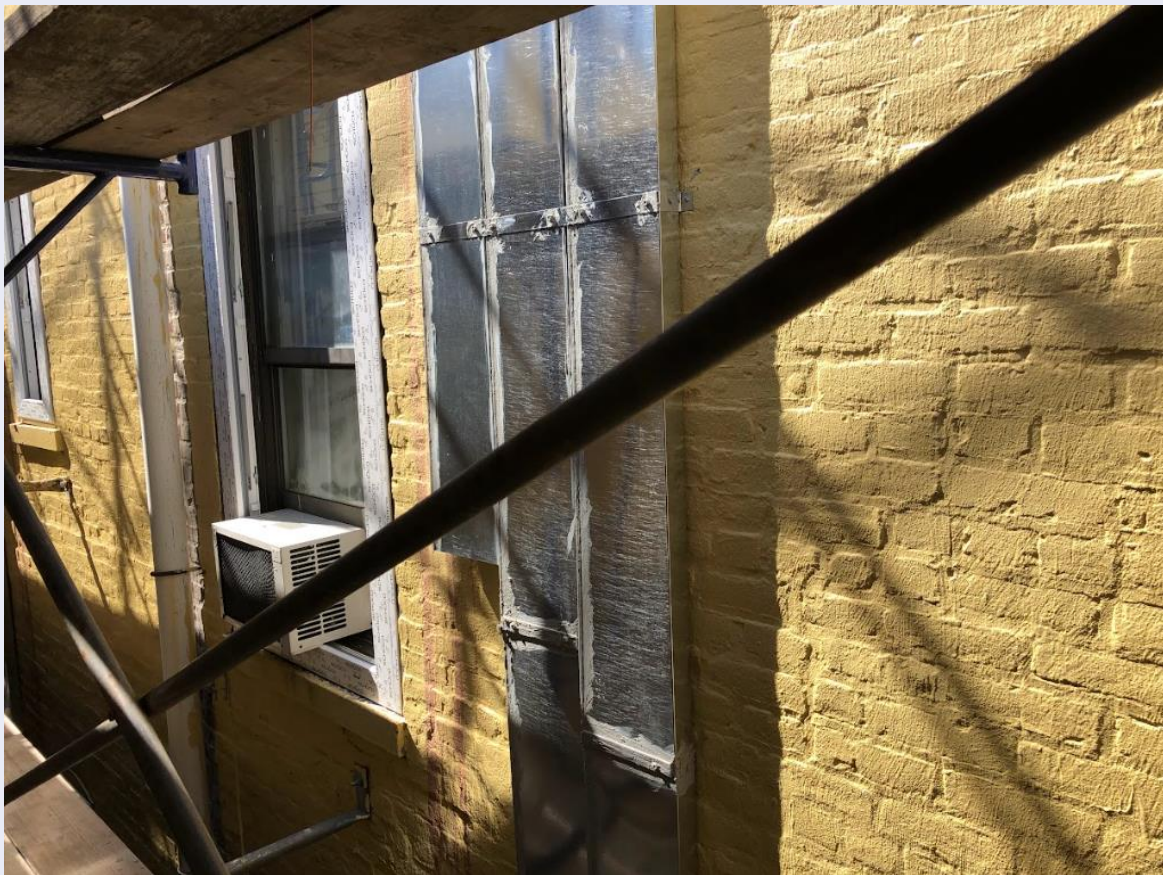


Photo credit: Christine Liaukus



Photo credit: Christine Liaukus



Photo credit: Christine Liaukus



Photo credit: Christine Liaukus

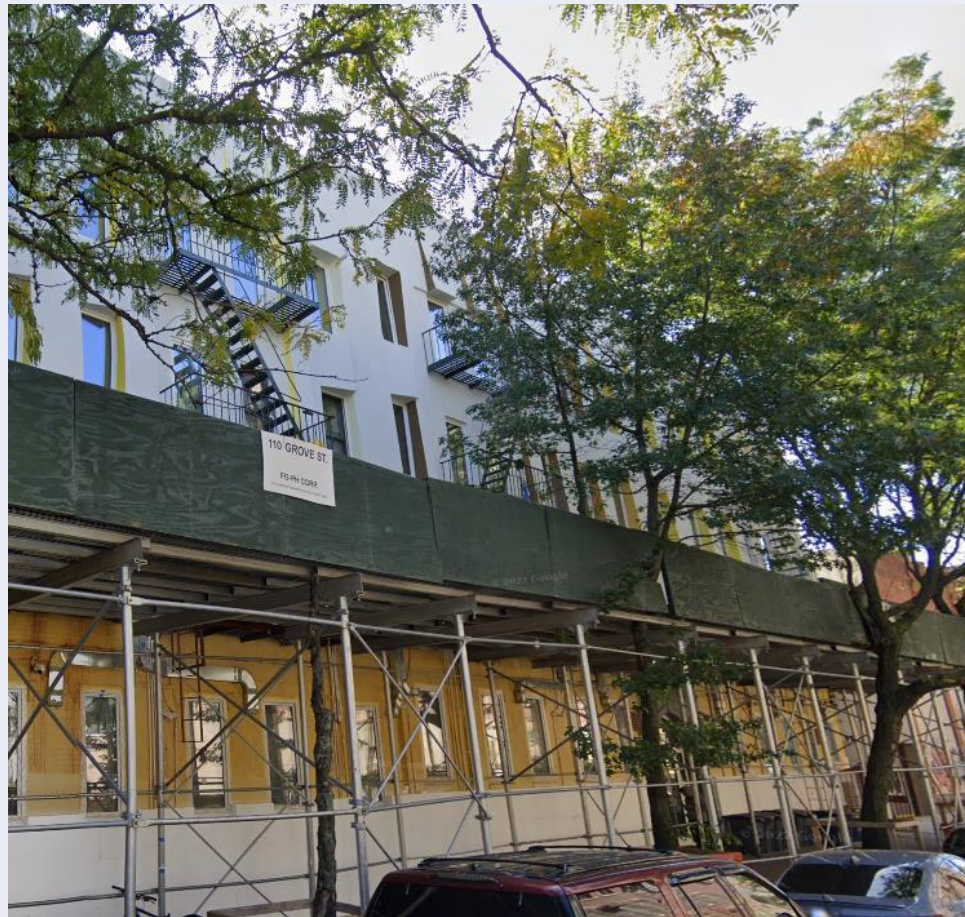


Photo credit: Google Street View



Photo credit: NY Housing Conference

Thank you!

Renewing Building Envelopes

Maximizing the Energy Efficiency of Common Residential Exterior Upgrade Projects

Christine Liaukus, RA, CPHC

General Q&A



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

Items of Interest



Next Meetings



Energy Efficiency Stakeholder Meetings

NJCleanEnergy.com/EE

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

August 15, 2024

September 19, 2024

October 17, 2024

(no November meeting)

December 19, 2024



More Information

VISIT

NJCleanEnergy.com

NJCleanEnergy.com/EE

CONTACT

EnergyEfficiency@bpu.nj.gov

866.NJ.SMART (657.6278)

EE LISTSERV

NJCleanEnergy.com/LISTSERVS



@NJCleanEnergy

THANK YOU

