





Energy Efficiency Stakeholder Meeting

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
 - Utility Updates
 - Regulatory Updates
 - · Triennium 2 Filings Review
- 4. Presentation The Social Science of Climate Change in NJ
- 5. General Q&A
- 6. Items of Interest
- 7. Next Meetings





December Meeting Recap

What we covered:

- ✓ NJCEP and Utility Program Updates
 - ✓ NJCEP New Construction Program
 - ✓ Benchmarking
 - ✓ Community Energy Plan Grant / Community Energy Plan Implementation Grant Update
 - ✓ CHP Feasibility Study
 - ✓ LEUP Higher Education Decarbonization Pilot
- ✓ Regulatory Updates
 - ✓ Triennium 2 Filing Extension
 - ✓ Evaluation, Measurement, and Verification
- ✓ Guest Presenter: NJCEP Year In Review
- ✓ Q&A





New Jersey Energy Efficiency Programs

www.NJCleanEnergy.com/TRANSITION

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 Appliance Rebates
 - HVAC

Appliance Recycling

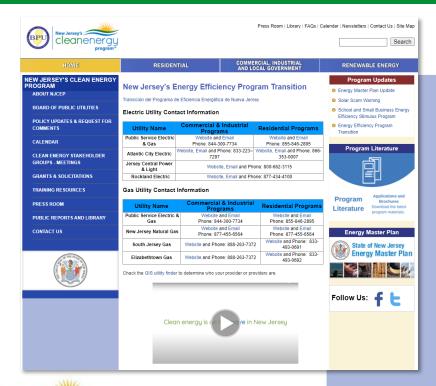
NJBPU and Utility Co-Administered Programs





Energy Efficiency Program Information

www.NJCleanEnergy.com/TRANSITION



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. Excreted 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

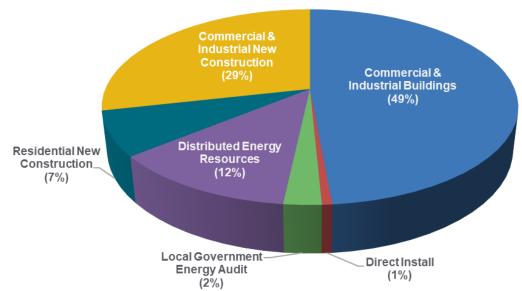




Budget Break-down by Program

FY24 TRC Managed Programs

Incentive Budget: \$148,502,129





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

New Construction Program & Garden State Challenge Pilot Update

Next Steps

- Finalize program design with Board Staff
- Release for public comment as Compliance Filing update



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
- 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.

Sustainable Jersey will provide Technical Assistance for applicants, with a focus on assistance for overburdened municipalities



Community Energy Plan Grant & Community Energy Plan Implementation Grant Update

 Applications for both programs available on the NJCEP website at <u>www.NJCleanEnergy.com/CEP</u>

- Application deadline February 23, 2023
 - All applications must be submitted by 5:00 PM Eastern Time
- Questions can be submitted to: community.energy@bpu.nj.gov



Energy Efficiency Updates: Utility Updates



Utility Updates

NJ Energy Efficiency Stakeholder Meeting

January 18, 2024







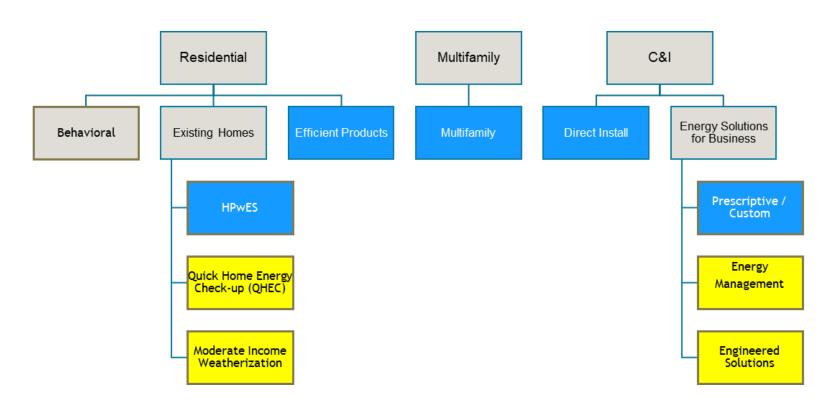








Refresher on Current Program Structure



Residential Programs

Efficient Products

- Rebates and potential for financing options for qualifying HVAC equipment (Furnaces, Boilers, Water Heaters, Heat Pumps, AC systems). Extra incentive for LMI customers
- Rebates for qualifying high efficiency appliances (e.g. refrigerators, freezers, clothes washer and dryers)
- Online marketplace (smart thermostat, lighting, controls, weatherization products)
- Appliance Recycling

Whole house solutions through Home Performance with ENERGY STAR*

- Requires an audit to identify comprehensive solutions for the home. Using principles of building science to evaluate the equipment and the building shell.
- Value of rebate tied to energy savings modeled through software. Must achieve at least 5% energy savings.

Moderate Income Weatherization Program

- Free audit and measures installed for income qualified customers
- Can include limited health and safety upgrades to allow for energy efficiency improvements

Quick Home Energy Check-Up (QHEC)

- o Free in-home assessment-best way to figure out the opportunities to save in your own home
- Includes the installation of free energy saving measures
- NJNG offers a QHEC+ for \$49 provides a more comprehensive review and can include the installation of smart thermostats

Reminder- Low Income customers are served by the NJCEP Comfort Partners program, currently co-managed by the utilities and the BPU

Commercial Programs

Prescriptive

o Set rebate values for qualifying high efficiency equipment

Custom

o Incentives for custom measures or special projects

Direct Install

- Comprehensive, cost-effective, energy-efficient measures for smaller commercial facilities
- Incentives can pay up to 80% of project costs + OBRP

Engineered Solutions

- Complex, customized solutions for municipalities, school districts, health care and non-profit organizations
- Custom incentives and OBRP for balance
- Can be multi-million projects that take several years due to complete-extensive engineering work and long equipment lead times

Energy Management

- o Holistic solutions to improve building performance
- HVAC tune-ups, operator training or strategic energy management
- Incentives and OBRP available

All commercial programs include the opportunity to apply for repayment options

Multifamily Programs

- Targeted to structures with 3 or more units
- Recognize broad range in type of properties
 - Garden style vs. high rise, # of units, Common space, Centralized vs. individual unit heating)
- Prescreen properties to help identify best path
- All paths will offer incentives
- Can combine the direct installation of measures with any of the other paths
- **Multiple pathways –** similar in approach to Commercial Programs
 - Prescriptive/Custom
 - Engineered Solutions
 - Energy Management
 - Direct installation of energy saving measures in units

All commercial programs include the opportunity to apply for repayment options

Utility Updates

- All utilities submitted their filings for the Second Triennium (1/1/2025-6/30/2027), as well as their extension request for the First Triennium (to cover 7/1/2024-12/31/2024)
- Joint Utility Contractor Calls
 - Home Performance with ENERGY STAR contractor call- held this morning
 - Residential HVAC contractor event- Spring- TBD

















Energy Efficiency Updates:

Regulatory – State & Federal

Triennium 2 Filings Review (Docket No. QO23030150)

- Filings initially due on 12/1/23 for the Triennium 2 Energy Efficiency proposals from ACE, ETG, JCP&L, NJNG, PSE&G, RECO, and SJG. All initial petitions were found to be deficient and had to be cured. Initial motions to intervene or participate were due on 12/8/23, and responses to motions were due on 12/14/23.
 - Joint utility motion to participate in other utility filings
 - Motions to intervene from EEA-NJ (7), NJLEUC (6), CPower (4), Convergent (3), Uplight (2), NJPEEC (2), NRDC (2), Sierra Club (2), Google (1)*
 - Motions to participate from Uplight (4), Google (2)
- On January 10, the Board redesignated presiding commissioners and re-opened the filings. for new motions to intervene and participate tied to administrative completeness (7 days).
- Five letters of administrative completeness have been sent (1/12/24); two are pending.

Triennium 2 Filings Review (Docket No. QO23030150)

Next steps:

 Decisions on intervention and participation by presiding commissioners; interveners/parties discuss procedural schedules (e.g., discovery dates); public hearings on each filing; additional opportunities for public input; Triennium 2 starts 1/1/25





What Can Social Sciences Do for Energy Efficiency?

Rachael Shwom, Phd

Professor and Chair, Department of Human Ecology
Lead for Human Dimensions of Adaptation, Mitigation, and Resilience,
Rutgers Climate and Energy Institute

Social Science Can Tell You About

Motivations

- What inspires people to undertake reduce energy consumption?
- Saving money, improving health, improving environment, improving comfort, social status/belonging

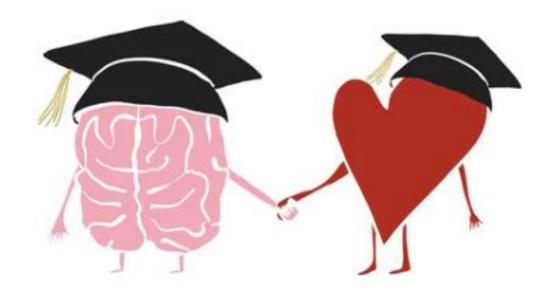
Constraints

- Why don't people undertake reductions in energy consumption?
- Diversity in constraints Inequality in resource access and impacts of energy consumption

Opportunities

• How do we create opportunities for energy saving that tap into these motivations and recognize or overcome these constraints?

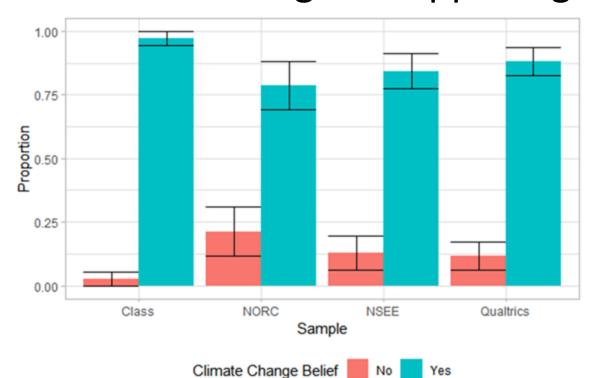




Motivations



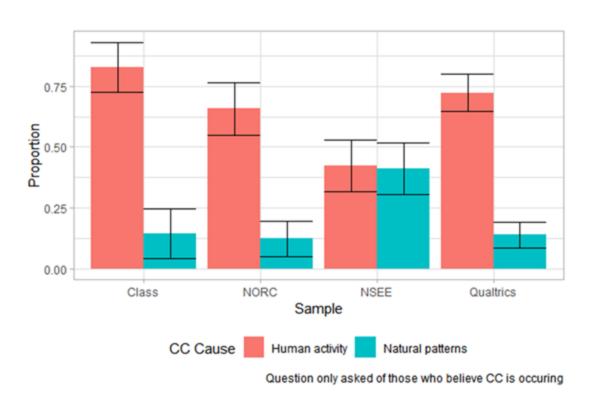
Motivation: The majority of NY/NJ/PA residents Believe Climate Change is Happening





Motivation:

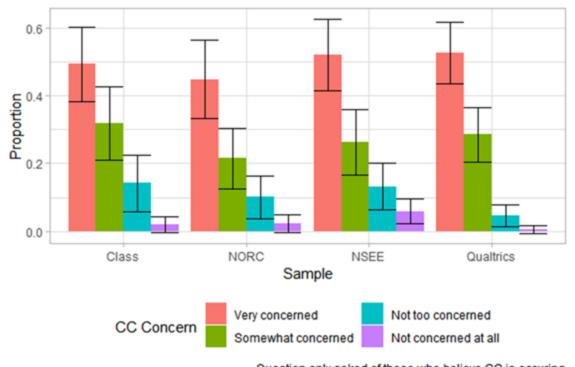
The Majority of Those in NY/NJ/PA Who think it is Happening Believe it is at least in Part Human Activity





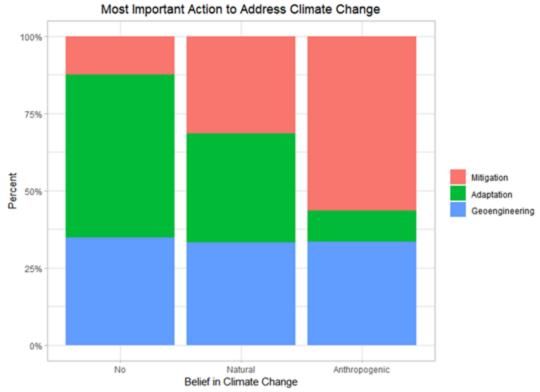
Motivation:

Of those in NJ/NY/PA who believe Climate Change is happening, the majority are very or somewhat concerned





Those who believe climate change is happening and is human caused are most likely to support reduction of greenhouse gases.







Motivation/Constraint: Costs

Energy Burdened Communities

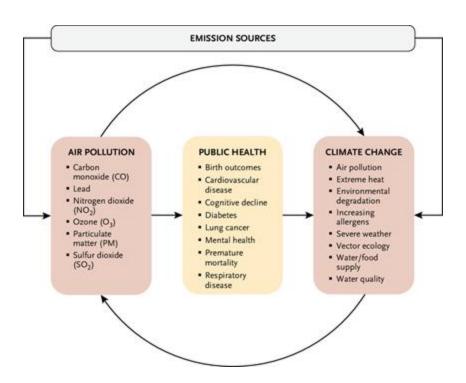
In order to highlight communities in New Jersey that may be experiencing Energy Burden, this map shows only those census tracts which had LEAD calculated Energy Burdens of 6% or more.

3.5% of New Jersey census tracts had Energy Burdens of 6% or higher in 2018.





Motivations: Health Benefits





Motivation: Social Belonging





Opportunities for Programs

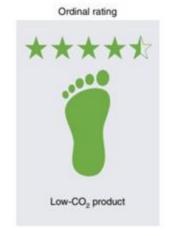
 Change price signals – these are motivations and constraints

- Provide information about different motivations
 - Costs
 - Environmental benefits
 - Health benefits
 - Social belonging



Opportunity: Clarify Savings Opportunities











Labels at all resolution levels shown are currently in use. Certificate labels indicate that the labelled products meet some standard, ordinal ratings differentiate among several levels of carbon footprints of the same product, quantitative labels offer numerical measurements of carbon footprints and some labels combine quantitative and ordinal ratings.

Graphic credits: Roselin Christina.S (stars) and iconoci (footprints), Noun Project (https://thenounproject.com/).



Opportunity: Highlight Health Benefits

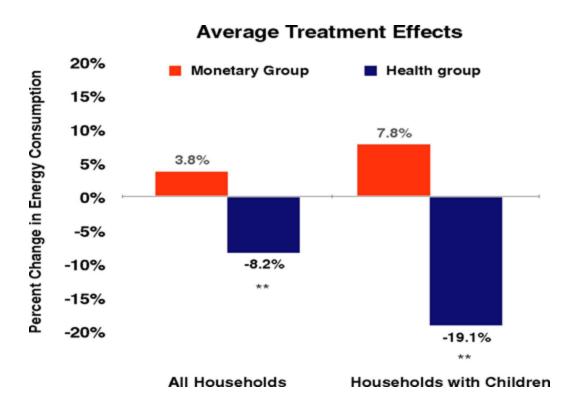
Table S1. Treatment Messages

Group	Treatment Message
Monetary Savings Group	"Last week, you used 66% more/less electricity than your efficient neighbors. In one year, this will cost you (you are saving) \$34 dollars extra."*
Health Group	"Last week, you used 66% more/less electricity than your efficient neighbors. You are adding/avoiding 610 pounds of air pollutants which contribute to health impacts such as childhood asthma and cancer."*
Control Group	None.

^{* &#}x27;Efficient neighbors' in this context means households in the top 10th percentile of household weekly average kWh consumption (households with the lowest electricity use) for similar size apartments in the community.



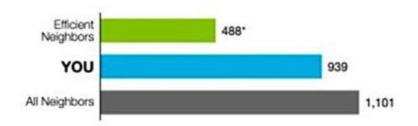
Health Information Mattered in LA





What Others are Doing Matters: Comparative Information for Creating Social Norms

Last Month Neighbor Comparison You used 92% MORE energy than your efficient neighbors.



This energy index combines electricity (kWh) and natural gas (therms) into a single measurement.



Who are your Neighbors? All Neighbors: Approximately 100 occupied, nearby homes that are similar in size to yours (avg 1,104.337 sq ft) and have electric heat Efficient Neighbors: The most efficient 20 percent from the "All Neighbors" group



Decisions Influences: Social Norms



In one study, the greatest interventions included in person face to face "block" meetings. (Steg et al)



Can We Accelerate Energy Efficient Technology Adoption and Conservation Behaviors?

Create Networks for information to travel through

- Bring information to diverse points in the network
- Lower constraints costs, ease of access

• Increase motivation – information that appeals to different motivations



Questions

Rachael Shwom shwomrac@sebs.Rutgers.edu





General Q&A

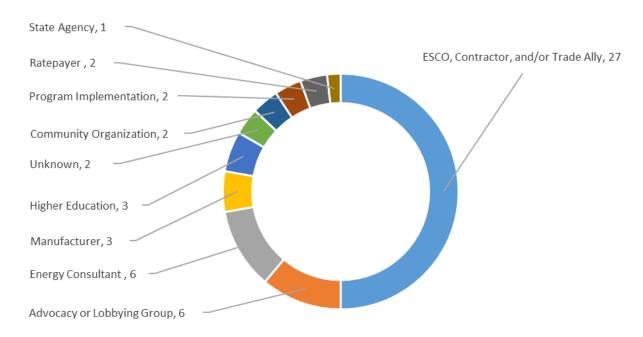
To submit questions in advance for next month: EnergyEfficiency@bpu.nj.gov





Guest Presenter Survey Responses

54 Survey Responses





Guest Presenter Survey Responses

Ranked guest speaker topics

Air Source Heat Pumps (ASHP)

Heat Pump Water Heaters (HPWH)

Demand Response (Programs & Technologies)

Storage Technologies

Air to Water Heat Pump (AWHP)

HVAC Heat Recovery

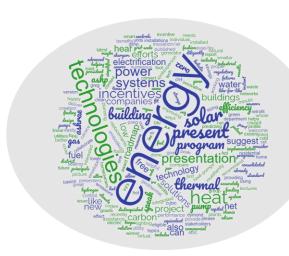
Ground Source Heat Pumps (GSHP) / Geothermal)

Battery Storage

Hydrogen Technologies

Weatherization Technologies

New guest speaker topics





Guest Presenter Survey Responses

Ranked guest speaker topics

Air Source Heat Pumps (ASHP)

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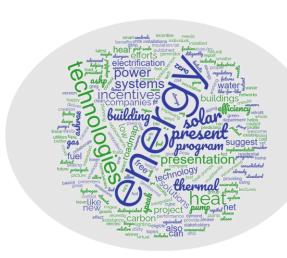
Ground Source Heat Pumps (GSHP) / Geothermal)

Battery Storage

Hydrogen Technologies

Weatherization Technologies

New guest speaker topics





Energy Efficiency Stakeholder Meetings

NJCleanEnergy.com/EE

February Guest Presenter:

Matt Christie

Innovative Heat Pumps Primer TRC

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

February 15, 2024

March 21, 2024

April 18, 2024

May 16, 2024

June 20, 2024

July 18, 2024

August 15, 2024

September 19, 2024

October 17, 2024

(no November meeting)

December 19, 2024



More Information

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