



NJ Energy Code Collaborative
Existing Buildings and Retrofits Subcommittee
May 8, 2025

Agenda



- Welcome and introductions (5 min)
 - Please introduce yourself in the chat!
 - Purpose, guiding principles & fact sheet
- Rehab Subcode (NJ DCA) (5 min)
- NJ's Existing Building Stock (5 min)
- DOE Grant: Building Performance Standard Pilot (10 min)
- Discussion (30 min)
- Next steps (5 min)

Meeting Guidelines – Antitrust Statement



- Throughout our meetings, participants shall comply with competition law requirements and shall not enter into any discussion, activity or conduct that may violate any applicable competition law. Should the meeting discuss matters that contravene competition law requirements, it is the responsibility of participants to notify the Moderator who will discontinue the discussion or close the meeting.

About New Jersey Board of Public Utilities



Mission Statement

To ensure that safe, adequate, and proper utility services are provided at reasonable, non-discriminatory rates to all members of the public who desire such services. To develop and regulate a competitive, economically cost-effective energy policy that promotes responsible growth and clean renewable energy sources while maintaining a high quality of life in New Jersey.

About Northeast Energy Efficiency Partnerships



- Non-partisan, non-profit organization founded in 1996
- One of six Regional Energy Efficiency Organizations
- We drive market transformation regionally by fostering collaboration and innovation, developing research and tools, and disseminating knowledge



About Rutgers Center for Urban Policy Research



The Built Environment and Green Building Group, formerly Rutgers Center for Green Building develops and implements research, education and training initiatives that promote environmental, economic, and social improvements for buildings and their occupants, in partnership with federal agencies, industry, state and local government, and community and not-for-profit organizations.

NJ ECC Purpose



Establish a timely and robust, stakeholder-guided process to research and develop a New Jersey Zero Energy Building Roadmap that provides options to build government and market capacities to effectively advance an increasingly more energy-efficient building energy code and improve administration, enforcement and compliance, aligned with relevant clean energy policies of the State, including the Energy Master Plan goals and recommendations.

NJ ECC Guiding Principles



The New Jersey Energy Code Collaborative and its subcommittees are committed to establishing a transparent, collaborative, and evidence-based process to advance energy efficiency and high-performance buildings across New Jersey. The following principles guide our work:

- **Shared Commitment to Progress:**
 - we are united by a common goal: to help New Jersey transition toward more efficient, resilient, and high-performing buildings, in alignment with relevant clean energy policies of the State.
- **Welcoming All Perspectives:**
 - we value broad stakeholder engagement and are committed to creating a space where all voices can be heard and respected. Meetings will be facilitated to encourage open dialogue and thoughtful participation.

NJ ECC Guiding Principles



- **Transparency and Accountability:**
 - meeting summaries will be shared with the group for review prior to publication to ensure accurate reflection of discussions and input. We are committed to documenting the process clearly and consistently.
- **Commitment to Education:**
 - we aim to support stakeholders with access to relevant information through educational sessions, panels and other learning opportunities.
- **Draft Net Zero Building Roadmap as Living Document:**
 - the Draft Net Zero Building Roadmap will be treated as a dynamic, evolving resource that reflects emerging best practices, market developments, and stakeholder feedback.
- **Role of the New Jersey Energy Code Collaborative:**
 - the New Jersey Energy Code Collaborative facilitates and informs this process in a manner consistent with the principles.

NJ Rehabilitation Subcode



Overview of NJ Rehabilitation Subcode: NJ DCA

NJ Existing Building Stock



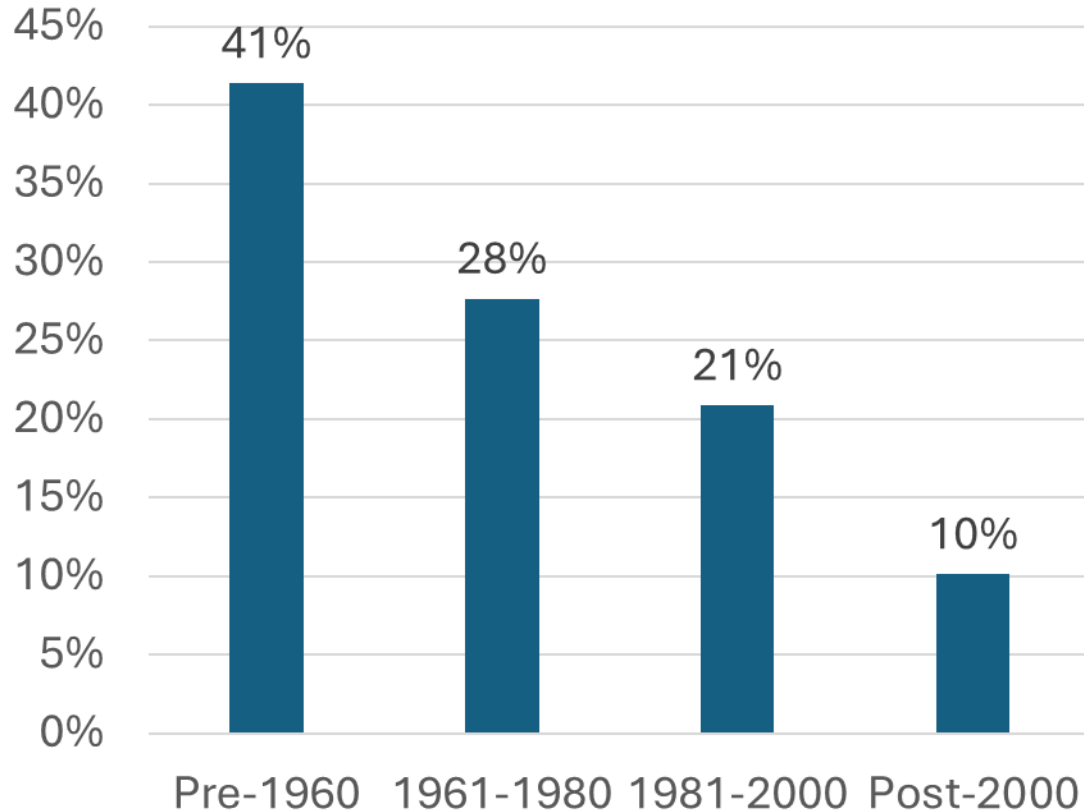
	Residential Single-family detached, single-family attached, manufactured, and 2-4 unit multifamily Except for Multifamily buildings 5+ units	Commercial*	Multifamily 5+ unit
Building Count	2,355,121	112,317	17,960
Data Source	RECS, 2020	CBECS, 2018	NJ Multifamily Baseline Study, 2019

*Mid-Atlantic Data Scaled down to NJ using census data

Building Vintage: Year of Construction

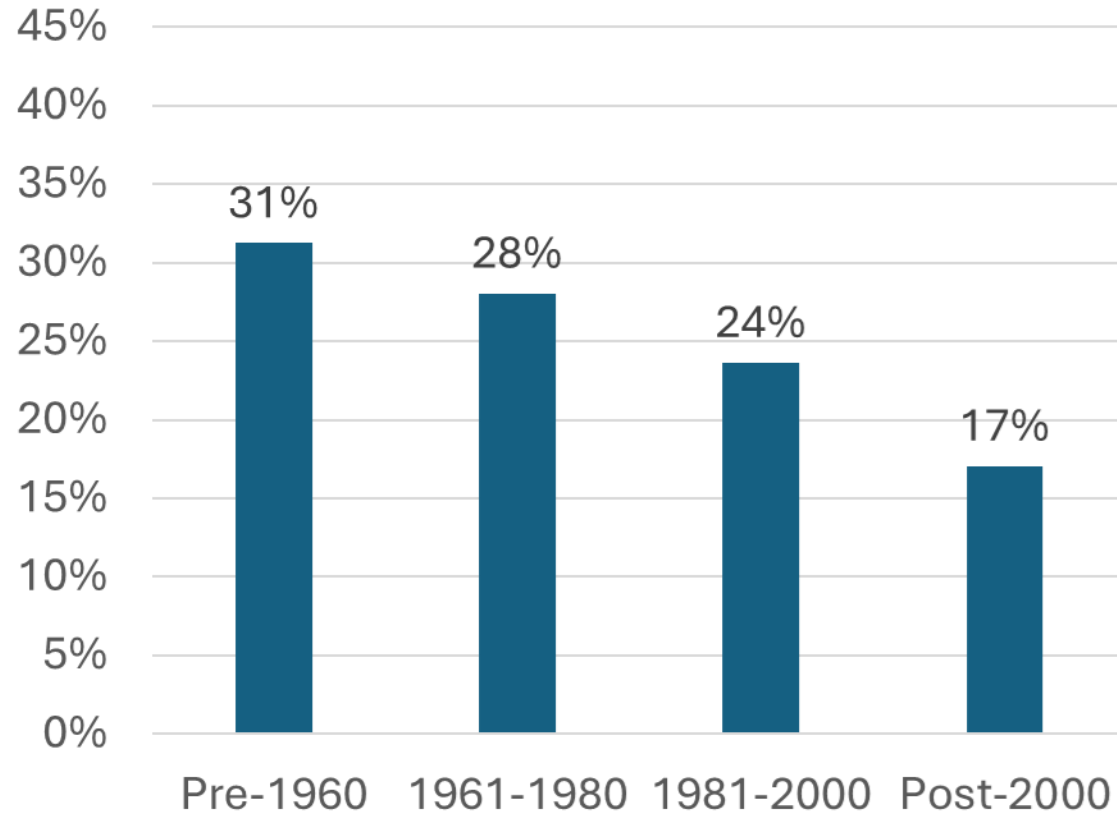


Residential



Source: EIA's Residential Energy Consumption Survey (RECS) 2020
Except for Multifamily buildings 5+ units

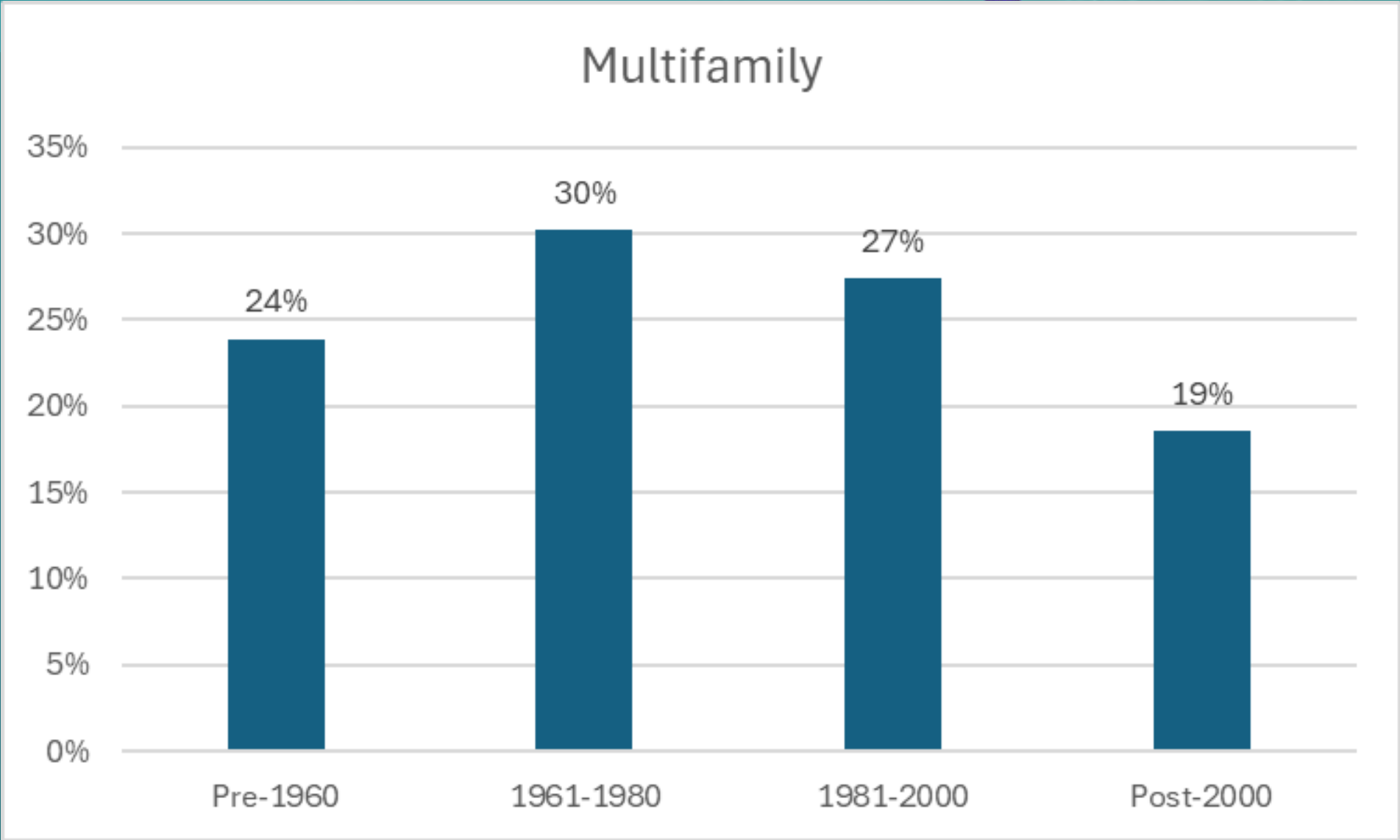
Commercial



Source: EIA's Commercial Building Energy Consumption Survey (CBECS) 2018, Mid-Atlantic Data Scaled down to NJ using census data

*Excluding

Building Vintage: Year of Construction

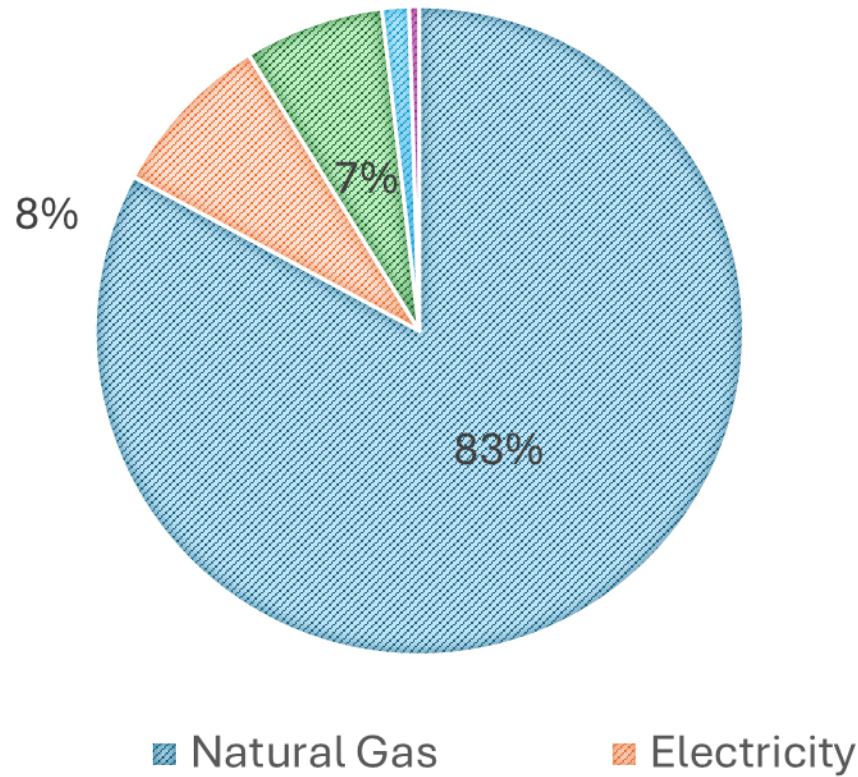


Source: EIA's Residential Energy Consumption Survey (RECS) 2020 for Multifamily buildings 5+ units

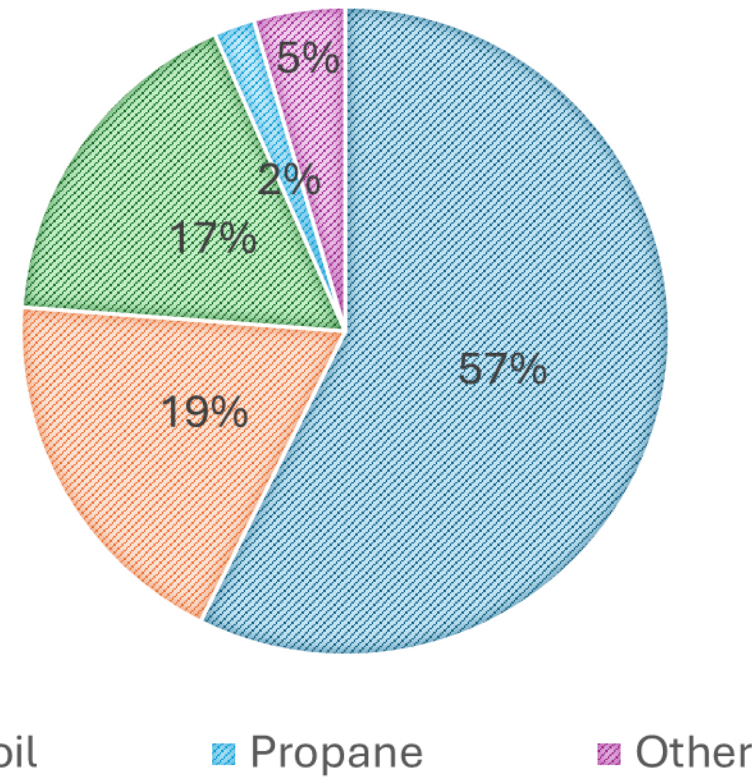
Primary Heating Fuel for NJ



RESIDENTIAL



COMMERCIAL



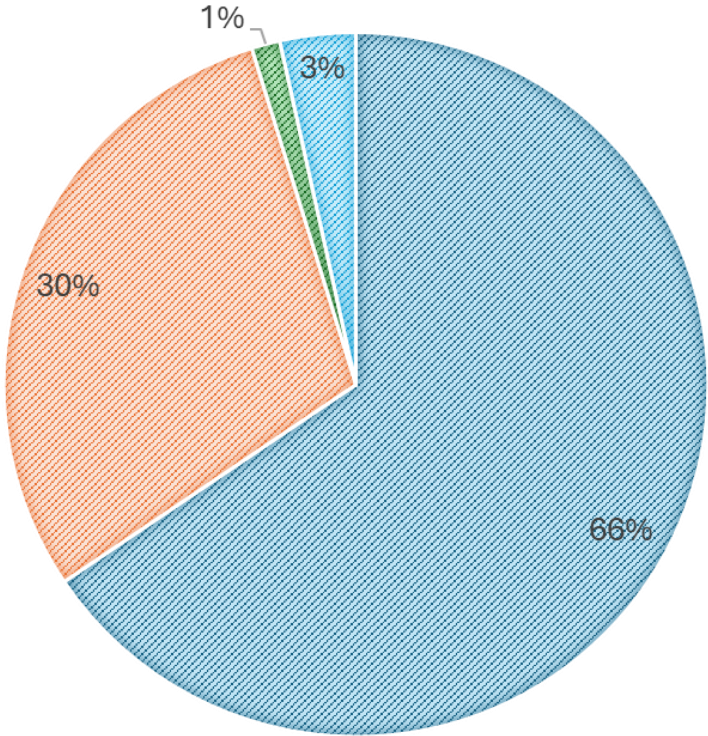
Source: EIA's Residential Energy Consumption Survey (RECS) 2020
Except for Multifamily buildings 5+ units

Source: EIA's Commercial Building Energy Consumption Survey (CBECS) 2018, Mid-Atlantic Data Scaled down to NJ using census data

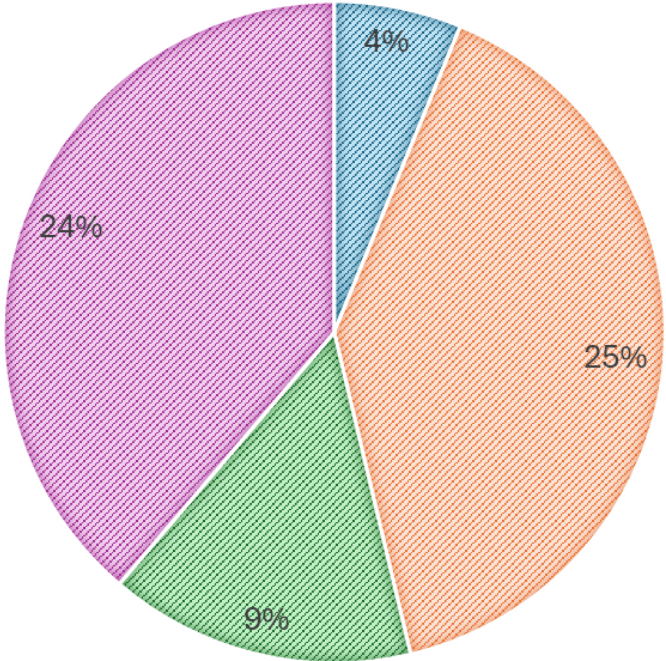
Cooling Type for NJ



RESIDENTIAL



COMMERCIAL



■ Central air conditioner ■ Individual unit ■ Heat Pumps ■ NA ■ No Response

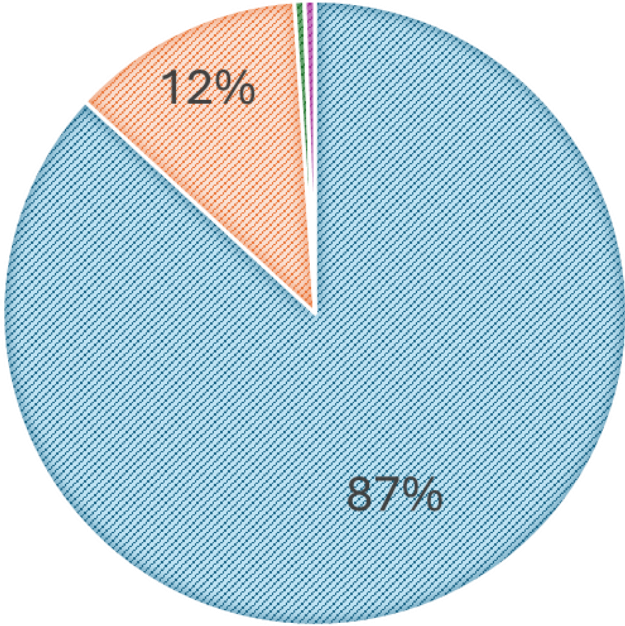
Source: EIA's Residential Energy Consumption Survey (RECS) 2020
Except for Multifamily buildings 5+ units

Source: EIA's Commercial Building Energy Consumption Survey (CBECS) 2018, Mid-Atlantic Data Scaled down to NJ using census data

Primary Heating Fuel & Cooling Type for Multifamily Buildings for NJ



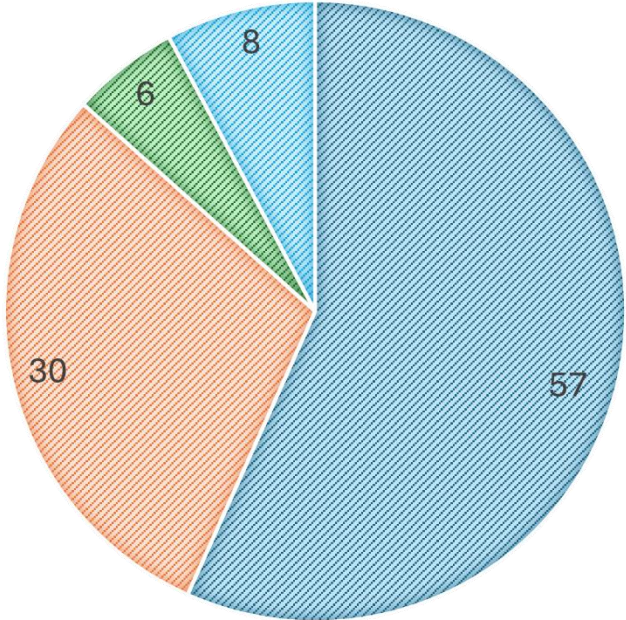
PRIMARY HEATING FUEL



- Natural Gas
- Electricity
- Fuel oil
- Propane
- Other

Source: NJ Multifamily Baseline Study, 2019

PRIMARY COOLING SYSTEM



- Individual Unit
- Central Unit
- Heat Pump
- N/A

Source: EIA's Residential Energy Consumption Survey (RECS) 2020
For Multifamily buildings 5+ units

Existing Building Stock Related Studies



- NJ Energy Code Compliance Study
- Lighting Industry Standard Practice Studies (Residential and Commercial)
- Commercial New Construction Industry Standard Practice
- NJ Multifamily Baseline Study
- RASS - Residential Appliance Saturation Survey
- Commercial & Industrial Baseline Study (forthcoming)

Rutgers is developing an interactive buildings database for NJ that will be web accessible at the NJ Energy Data Center website - <https://njenergydata.rutgers.edu>

Studies can be accessed here:

<https://njcleanenergy.com/main/public-reports-and-library/market-analysis-protocols/market-analysis-baseline-studies/market-an>

DOE Resilient and Efficient Codes Initiative (RECI)



Piloting Evidence-based (Cost-effective) Building Performance Standards (BPS)

Led by Rutgers, partners include BPU, NJIT, NEEP, Energy Solutions, community-based organizations

- Policy research and modeling including in relationship to the Rehab Code
- Lead by Example Pilot (incentivized)
- Stakeholder Engagement
- Development/dissemination of a Playbook and Toolkit for other states.

Building Performance Standards



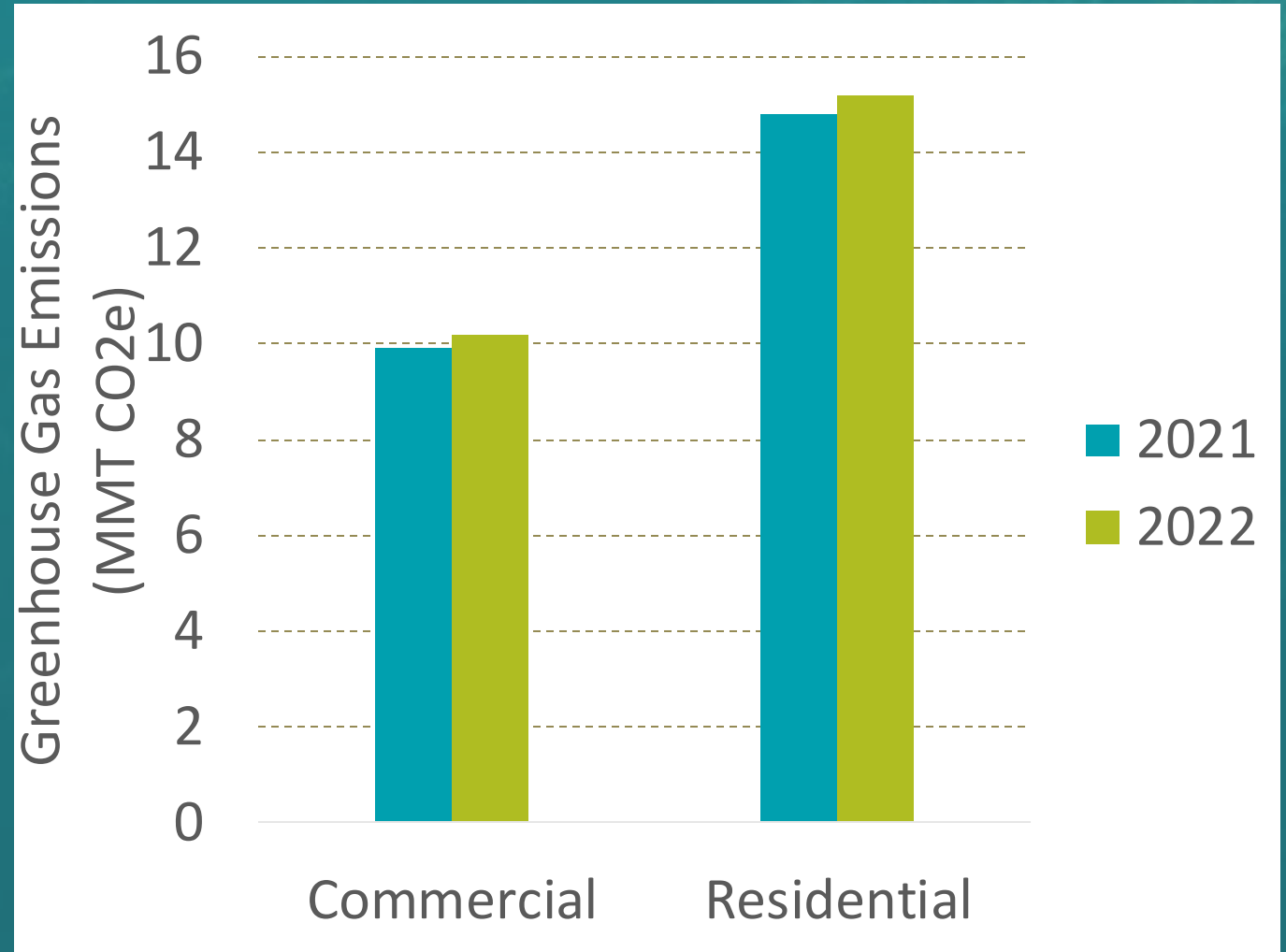
Performance-based standards aimed at reducing energy use and operational costs in existing buildings and improving overall comfort, durability, and resilience for building occupants by setting targets for energy or other performance metrics.

Source: <https://www.energycodes.gov/BPS>

Commercial and Residential buildings are central to meet NJ's greenhouse gas reduction targets



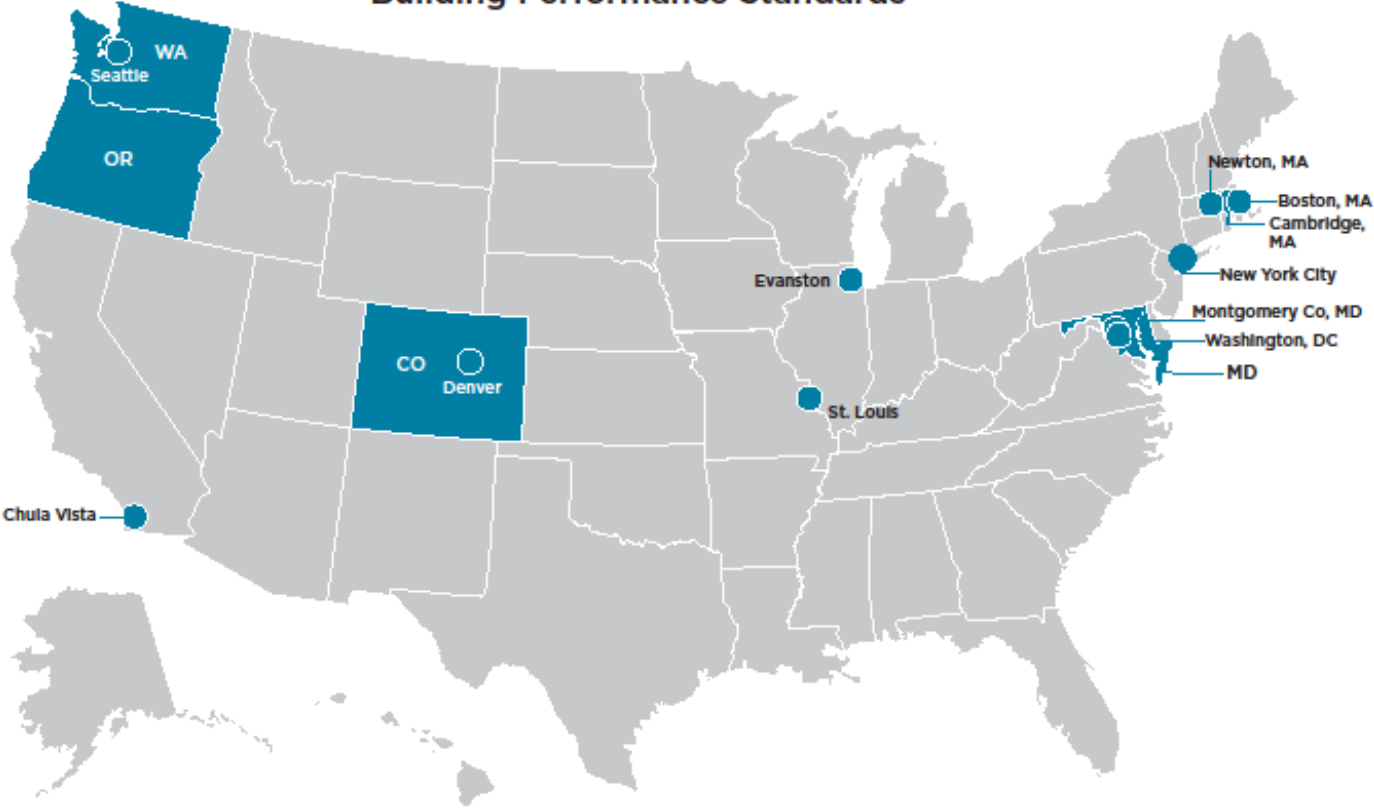
- The commercial and residential sectors represented 26% of the State's 2022 total net emissions.
- In 2022, both the commercial and residential sector emissions increased from 2021, with an annual growth rate of 2.9% and 2.4%



10 cities, 3 states, and 1 county have enacted building performance standards.



U.S. City and State Policies for Existing Buildings: Building Performance Standards



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Source: Institute for Market Transformation, Updated March 2025

10 cities, 3 states, and 1 county have enacted building performance standards.



City/County/State	Year	Covered Buildings	Performance Metric(s)
Boston, MA	2021	Public/Gov't all Comm/MF ≥ 20,000 sq. ft.	GHG emissions intensity
Cambridge, MA	2023	Public/Gov't ≥ 10,000 sq. ft. Comm ≥ 25,000 sq. ft.	GHG emissions intensity
Chula Vista, CA	2021	Public/Gov't/Comm/MF ≥ 20,000 sq. ft.	ENERGY STAR score; Weather Normalized Site EUI
Colorado	2021	Public/Gov't/Comm/MF ≥ 50,000 sq. ft.	Weather Normalized Site EUI; GHG emissions intensity
Denver, CO	2021	Comm/MF ≥ 25,000 sq. ft.	Weather Normalized Site EUI
Evanston, IL	2025	Public/Gov't: ≥ 10,000 sq. ft. Comm/MF ≥ 20,000 sq. ft.	GHG emissions intensity; Weather Normalized Site EUI; Percentage of electricity through renewables
Maryland	2022	Public/Gov't/Comm/MF ≥ 35,000 sq. ft.	GHG emissions intensity
Montgomery County, MD	2022	Public/Gov't/Comm/MF ≥ 25,000 sq. ft.	Weather Normalized Site EUI
New York City, NY	2019	Comm/MF ≥ 25,000 sq. ft.	GHG emissions intensity
Newton, MA	2024	Public/Gov't/Comm ≥ 20,000 sq. ft.	GHG emissions intensity
Oregon	2023	Public/Gov't/MF ≥ 35,000 sq. ft. Comm: ≥ 20,000 sq. ft.	Weather Normalized Site EUI
Seattle, WA	2023	Comm/MF ≥ 20,000 sq. ft.	GHG emissions intensity
St. Louis, MO	2020	Public/Gov't/Comm/MF ≥ 50,000 sq. ft.	Site EUI
Washington	2019	Public/Gov't: ≥ 10,000 sq. ft. Comm/MF ≥ 20,000 sq. ft.	Weather Normalized Site EUI
Washington DC	2018	Public/Gov't: ≥ 10,000 sq. ft. Comm/MF ≥ 50,000 sq. ft.	ENERGY STAR score or Source EUI



Discussion



Next Steps



For more information

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