September 2024 PEX Meeting

September 16, 2024

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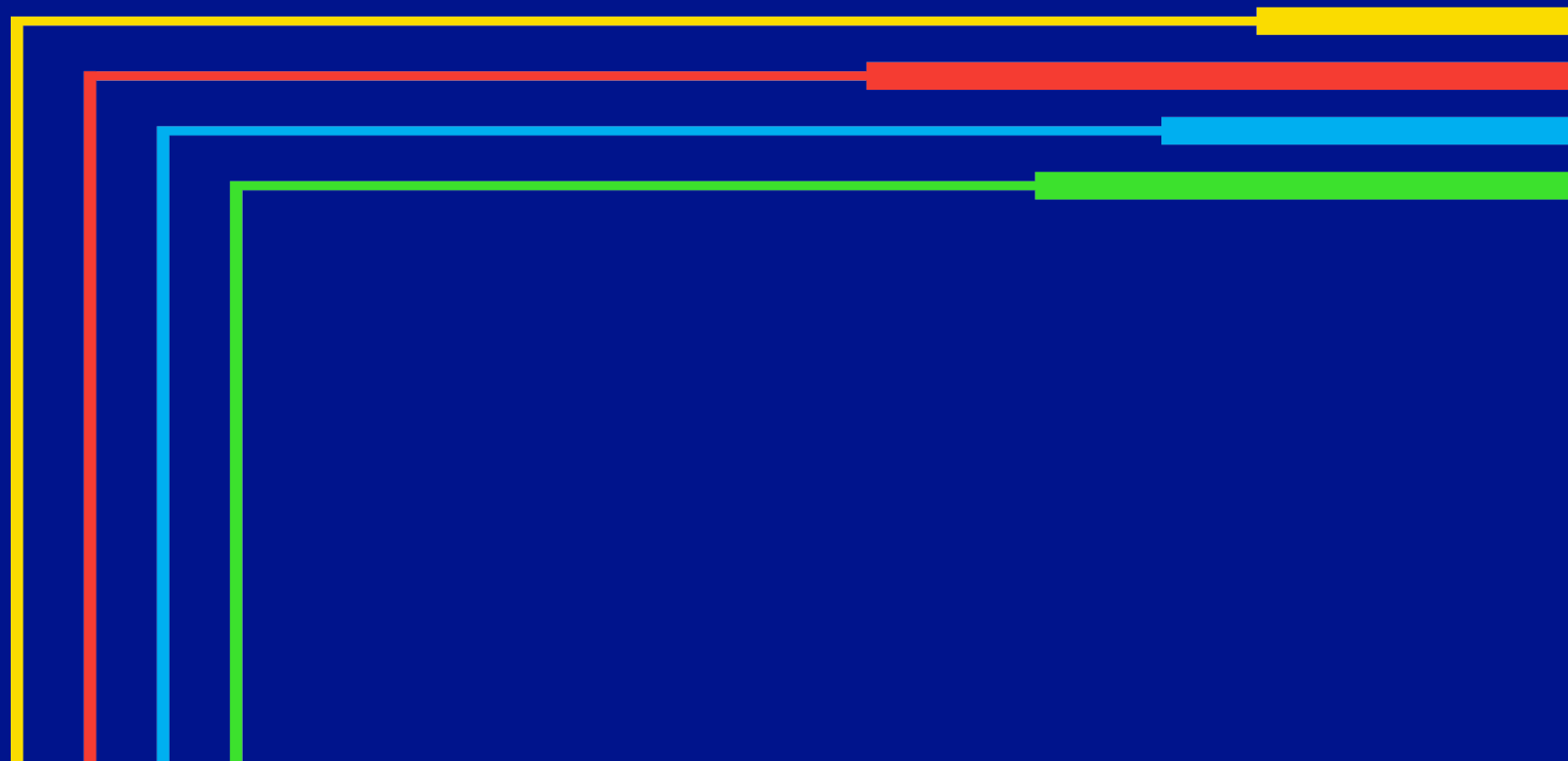
Contents

01 Safety Moment – Fall Leaf Safety Tips

Tara Reisner Tara.Reisner@nationalgrid.com
Lead Project Manager - Starting 10/1/24



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Leaf Collection/Disposal Safety Tips

1. **Be aware of your surroundings: wet leaves and debris can increase the risk of slipping and falling.**
2. **Wear appropriate, skid-resistant shoes.**
3. **Use the right rake: a rake that's too long or short can strain your back, arms, and torso.**
4. **Avoid burning leaves, especially when wet: burning can release carcinogens and dangerous chemicals into the air. If you must burn, utilize respiratory protection and burn in an isolated area.**

Check before jumping in leaf piles!

1. Wet leaves can increase the risk of coming in contact with mold – avoidance is best for those with a mold allergy.
2. Check for ticks after coming in contact with leaves.
3. Make sure sharp debris has been removed from the pile before jumping.
4. Bugs, frogs, and snakes could be nesting in a pile, especially if it's been sitting for a few days.
5. Never allow children to play in a pile specifically meant for leaf pick-up in close proximity to the road.

Sources

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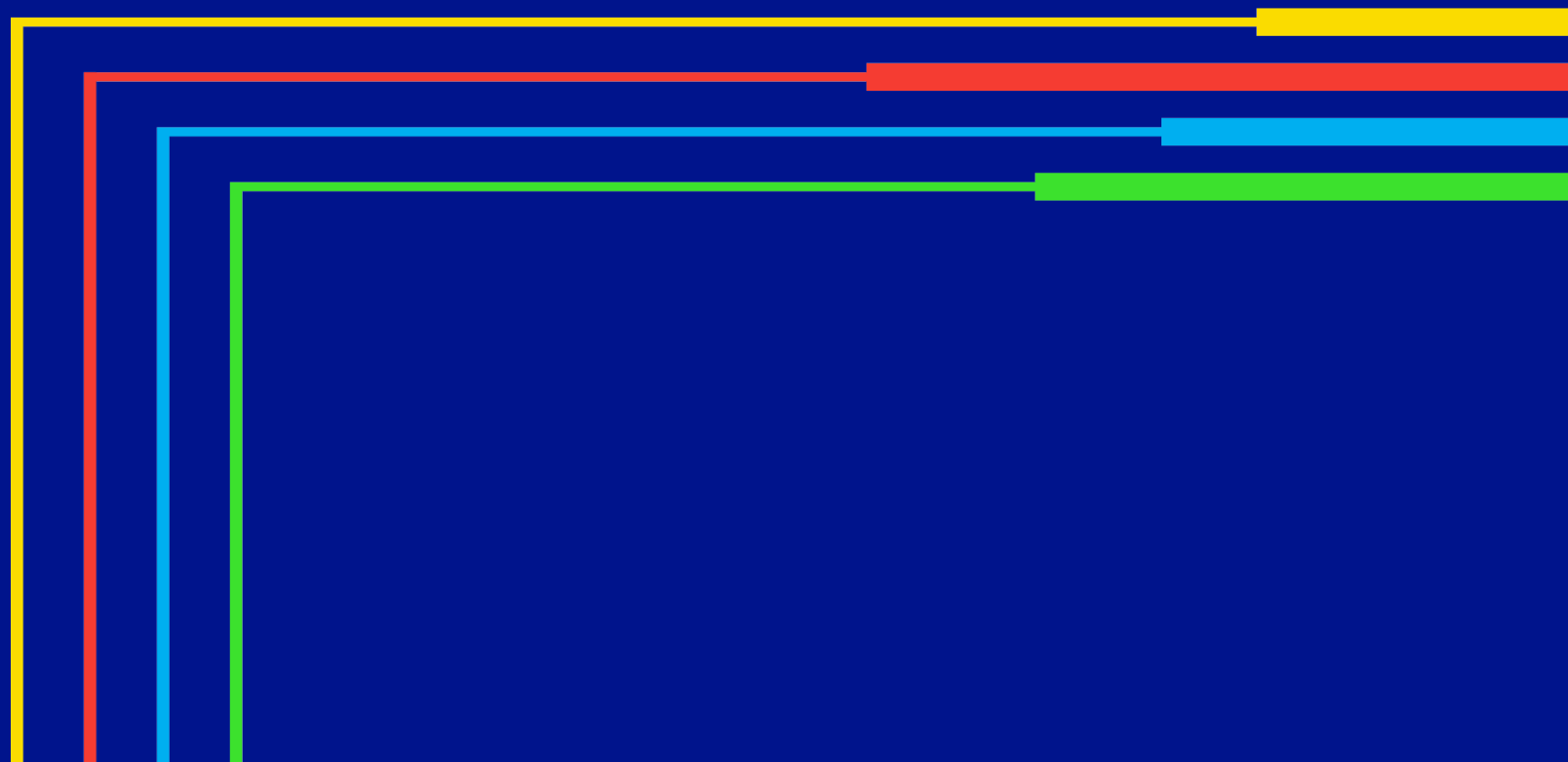
02 Year End Closeout and the Next 3-Year Plan

Christopher Porter christopher.porter@nationalgrid.com



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September PEX Summit

September 16, 2024
Northborough, MA

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Agenda

- Current (2022-4) Three-Year Plan – Where We Stand
- Next Three-Year Plan – What to Expect

Agenda

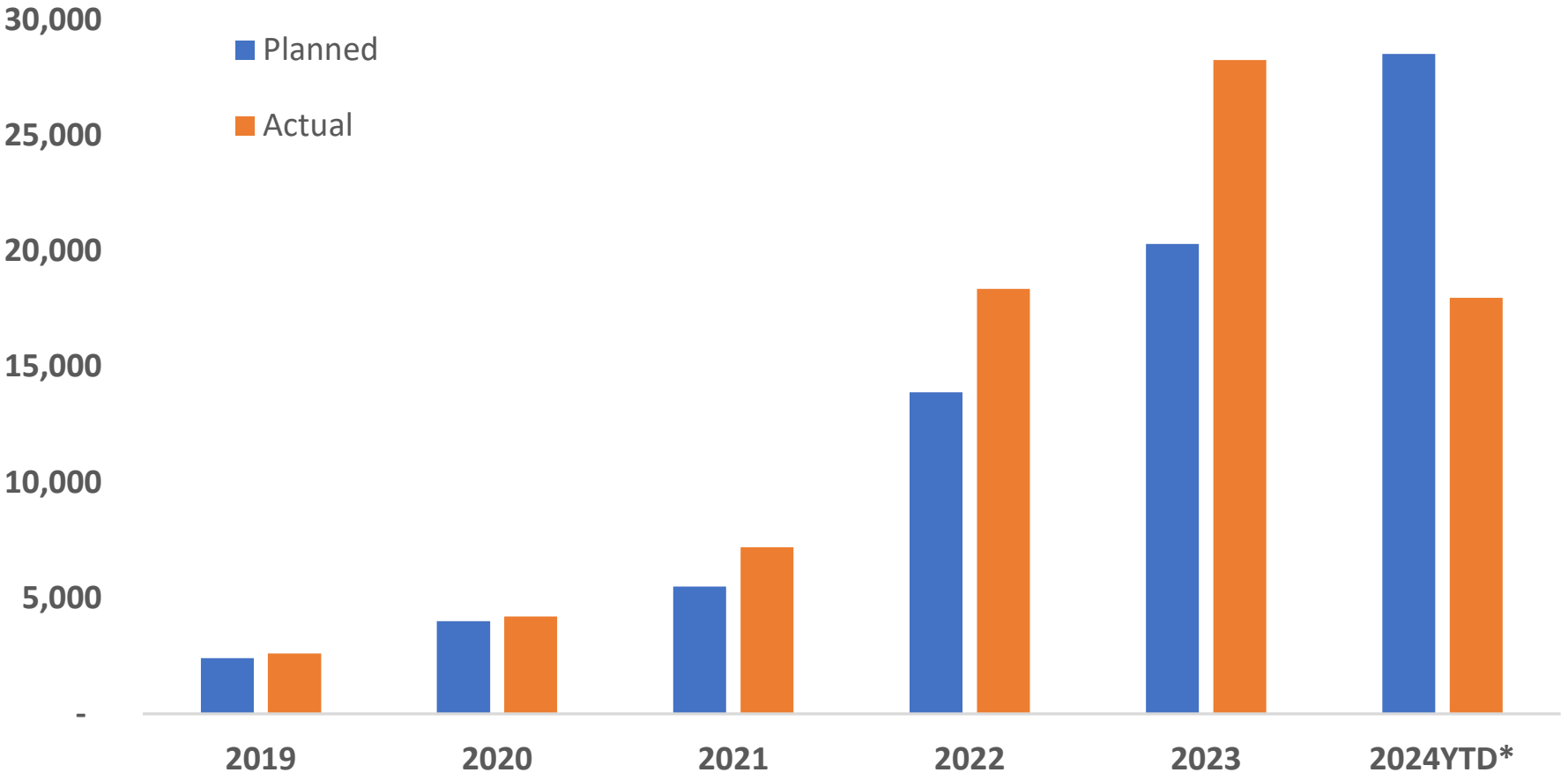
- Current (2022-4) Three-Year Plan – Where We Stand

- Next Three-Year Plan – What to Expect

Current Three-Year Plan Term - Themes

- Begin the explicit pivot to being a decarbonization program, including introduction of binding GHG reduction goals
- Electrification and equity
- De-emphasis of selected legacy energy efficiency measures

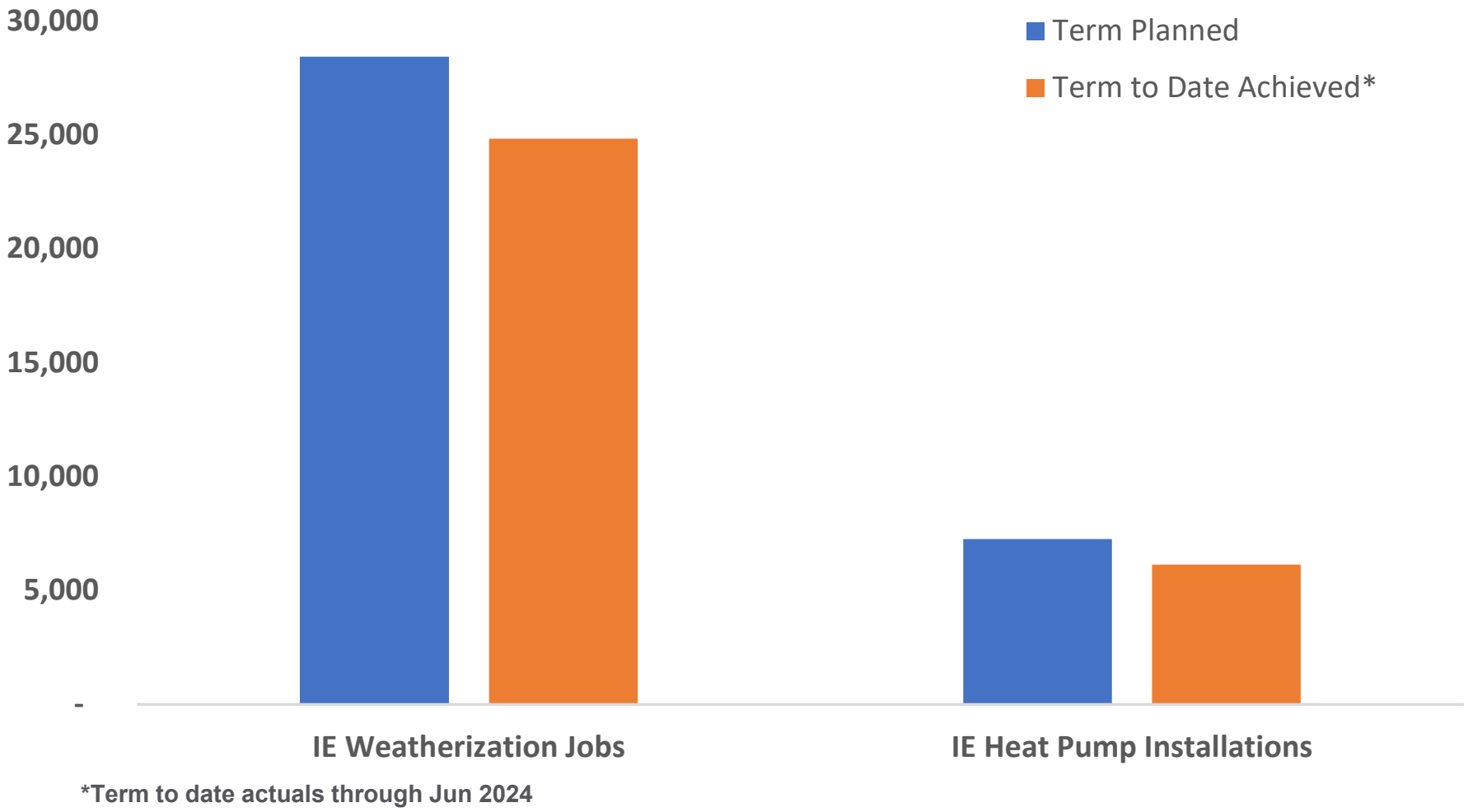
Success #1: Residential electrification



*CY24 YTD actuals through Jun 2024

82% CAGR in residential household heat pump adoption, 2019-2023

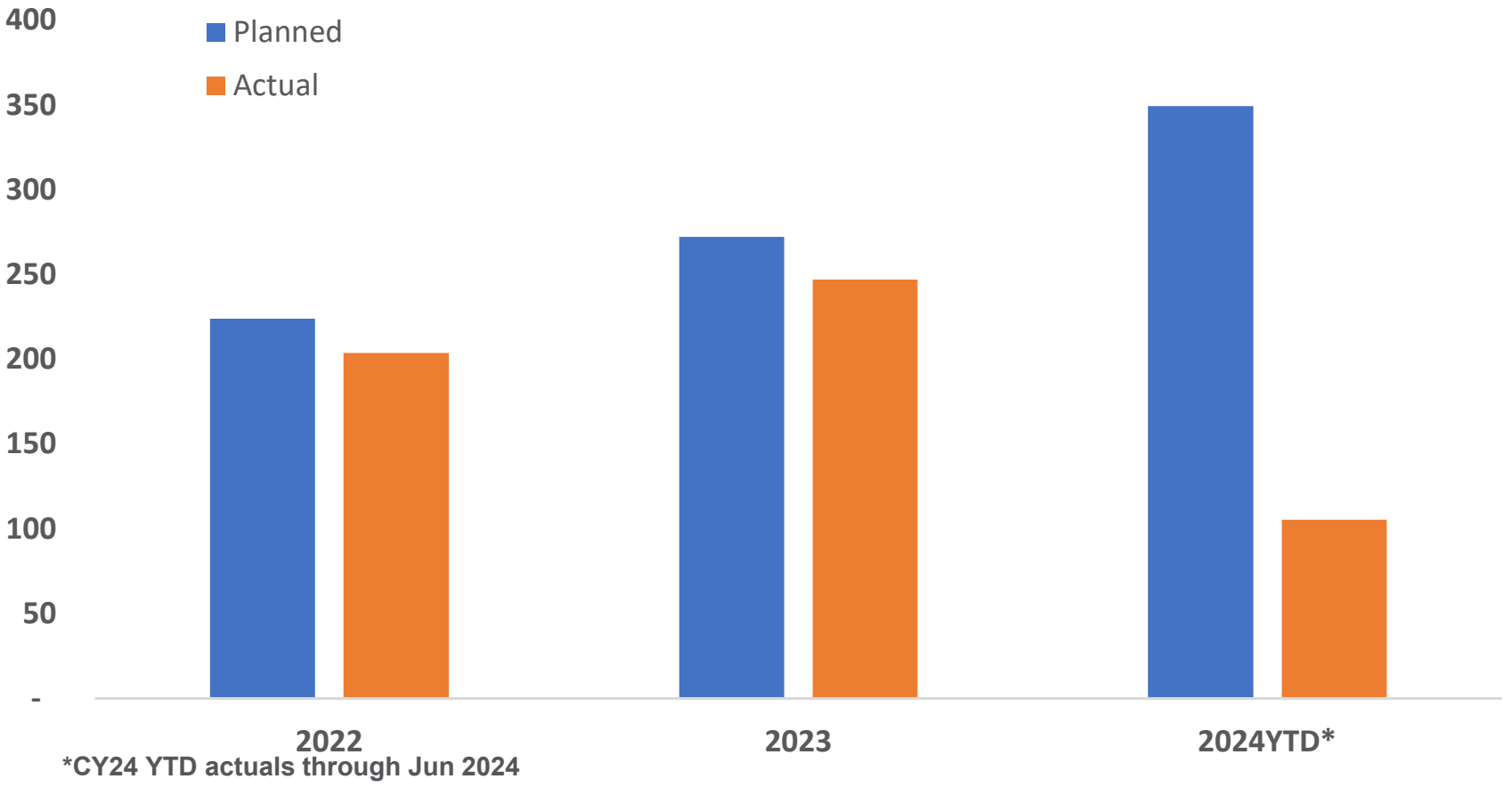
Success #2: Execution on income-eligible program goals



*Term to date actuals through Jun 2024

On pace to exceed key income eligible program metrics

Success #3: Progress towards decarbonization mandate and associated emissions reductions

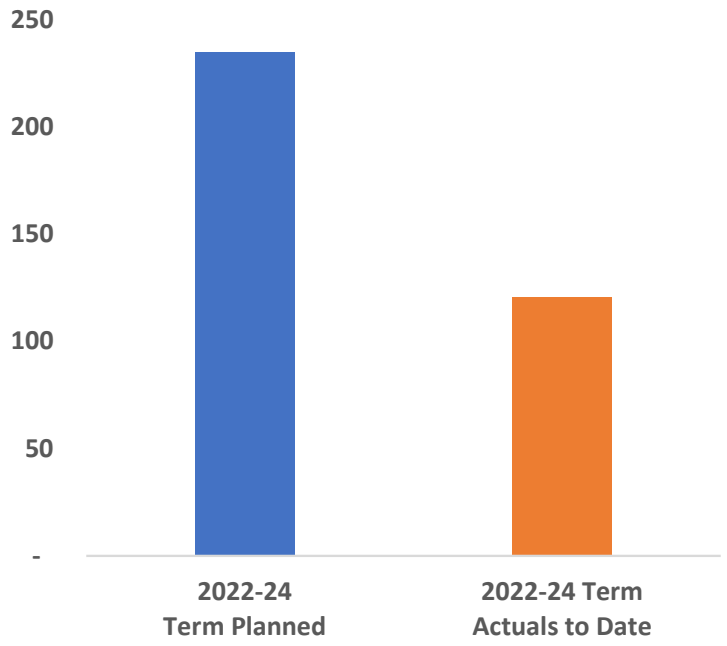


Significant progress towards extraordinarily ambitious GHG reduction targets

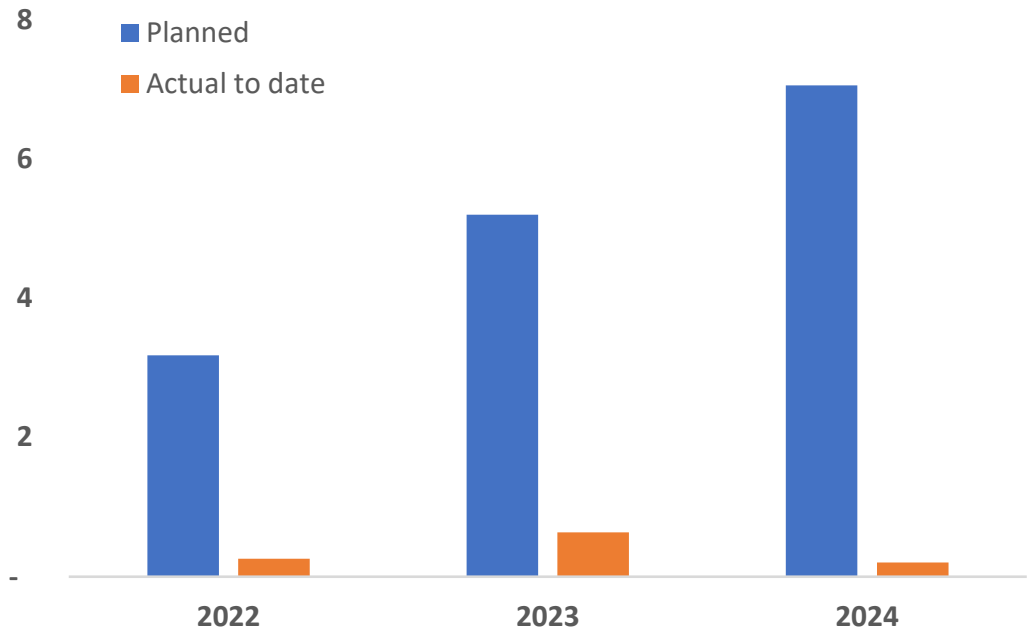
C&I Program Results (National Grid only)

(2022-4 term, millions lifetime MMBTU savings)

All C&I measures



C&I electrification measures



*Actuals inclusive of program results through Jun 2024

National Grid C&I results are improving, but lag other sectors (and planned results) term to date

Sprinting through the finish line

- **Enhanced incentives for Lighting, VFDs, Compressors, and Transformer projects that can drive claimable savings in CY24**
  - Projects eligible for up to 50% if installed project costs
  - Terms and conditions apply, please work through your National Grid sales rep and see project specific offer letter language

- **PEX Financial Awards**
  - Categories include most qualified enhanced incentive projects, most electrification apps displacing delivered fuels, most net lifetime therm savings for gas EE projects

- **Dedicated "Project Completion Manager" hired, 10/1 start date**

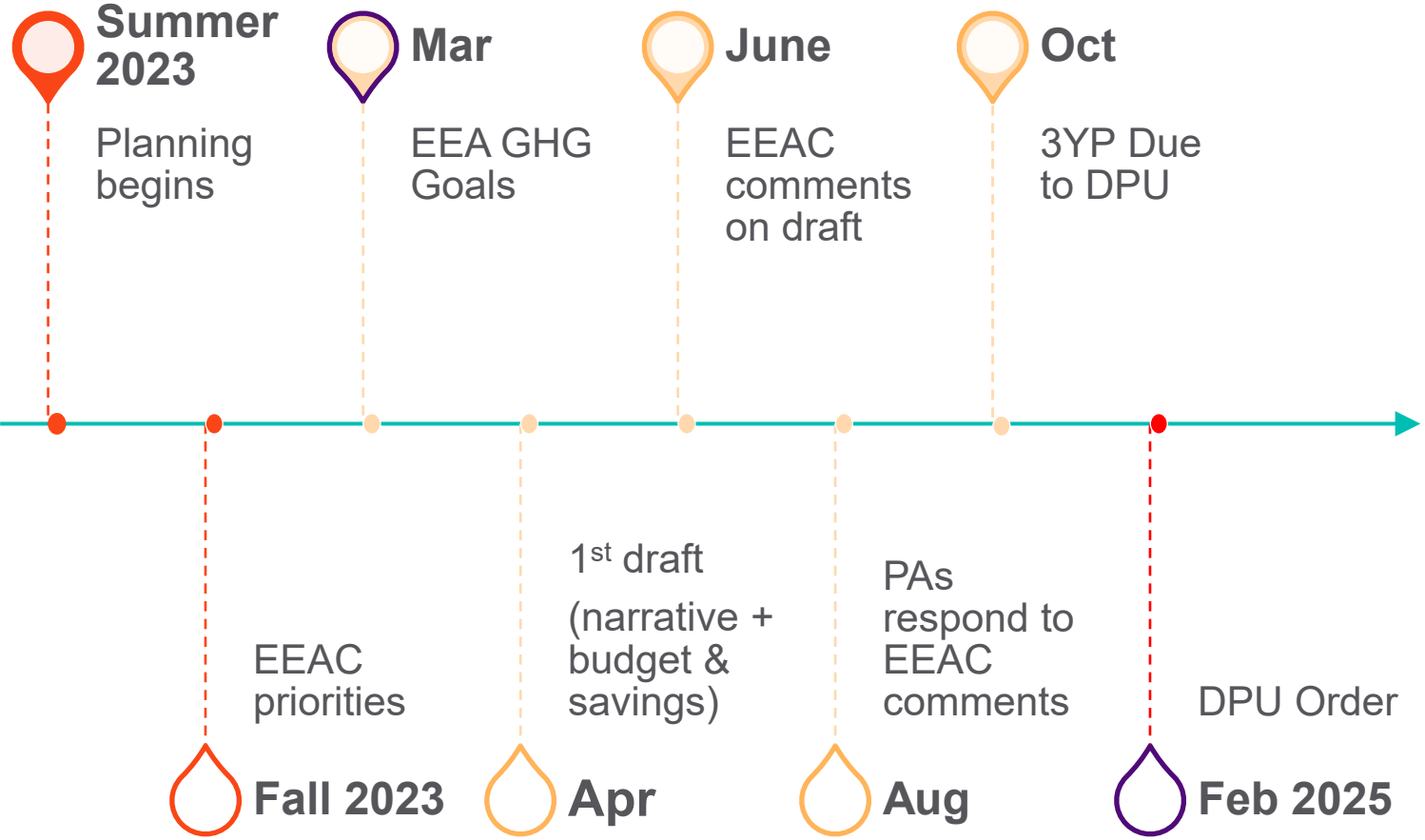
Significant investments in place to support strong finish to term

Agenda

- Current (2022-4) Three-Year Plan – Where We Stand

- Next Three-Year Plan – What to Expect

2025-7 Plan Development Process



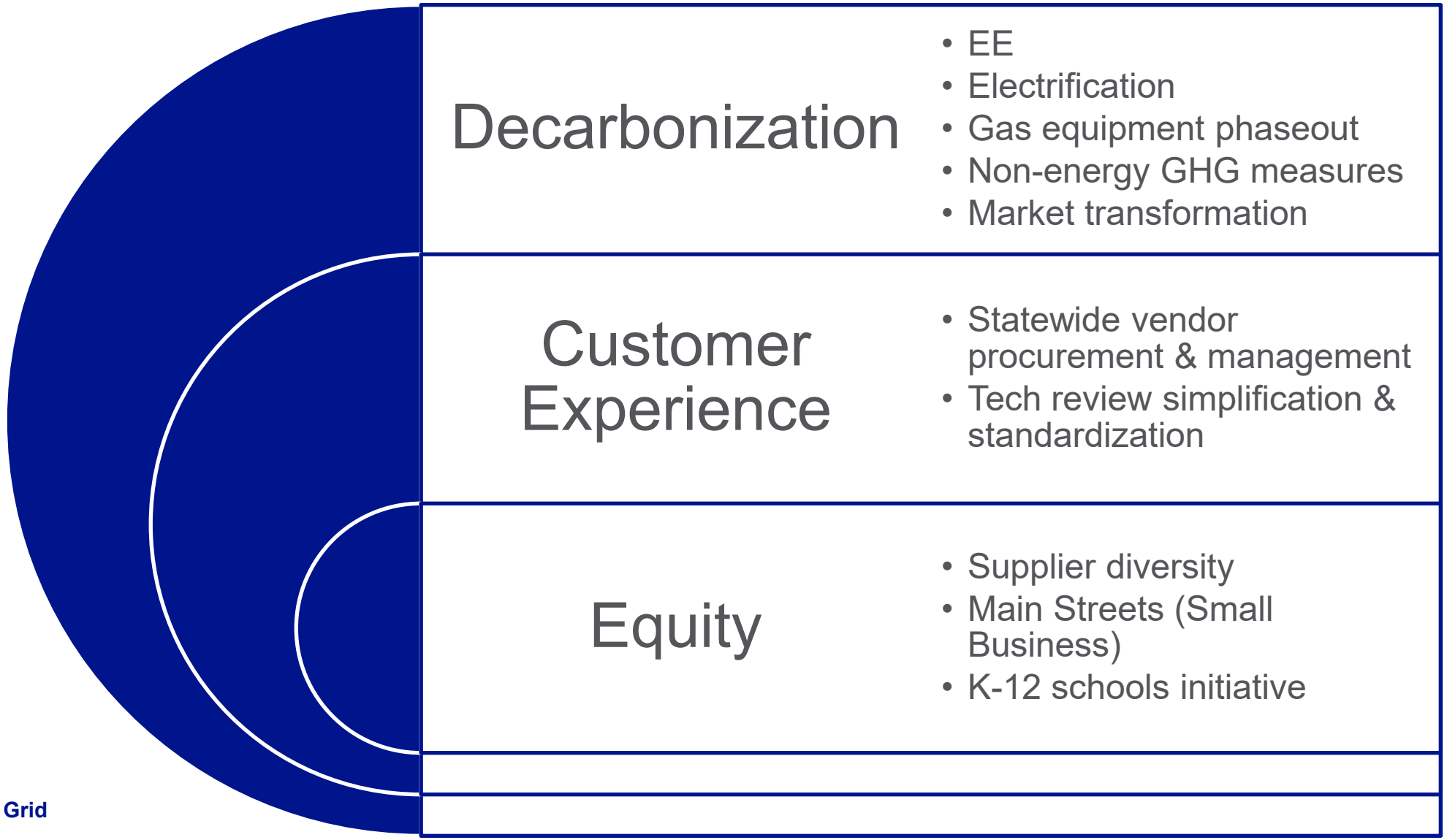
State Mandate:

- Reduce 2030 GHG emissions by 1,000,000 MTCe
- $5 billion budget

Stakeholder Input:

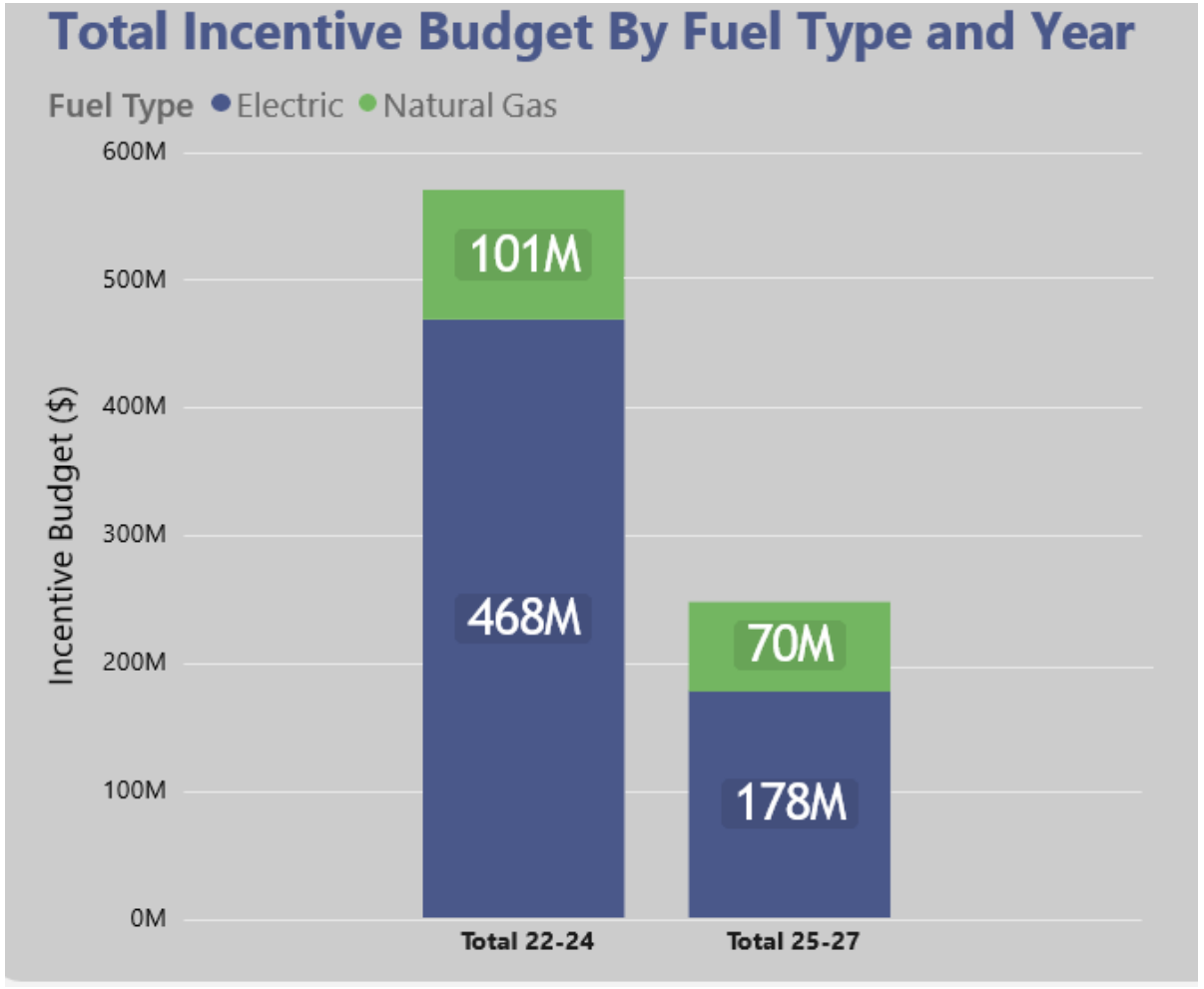
- Energy Efficiency Advisory Council recommendations
- C&I Working Group
- Program vendors, trade allies

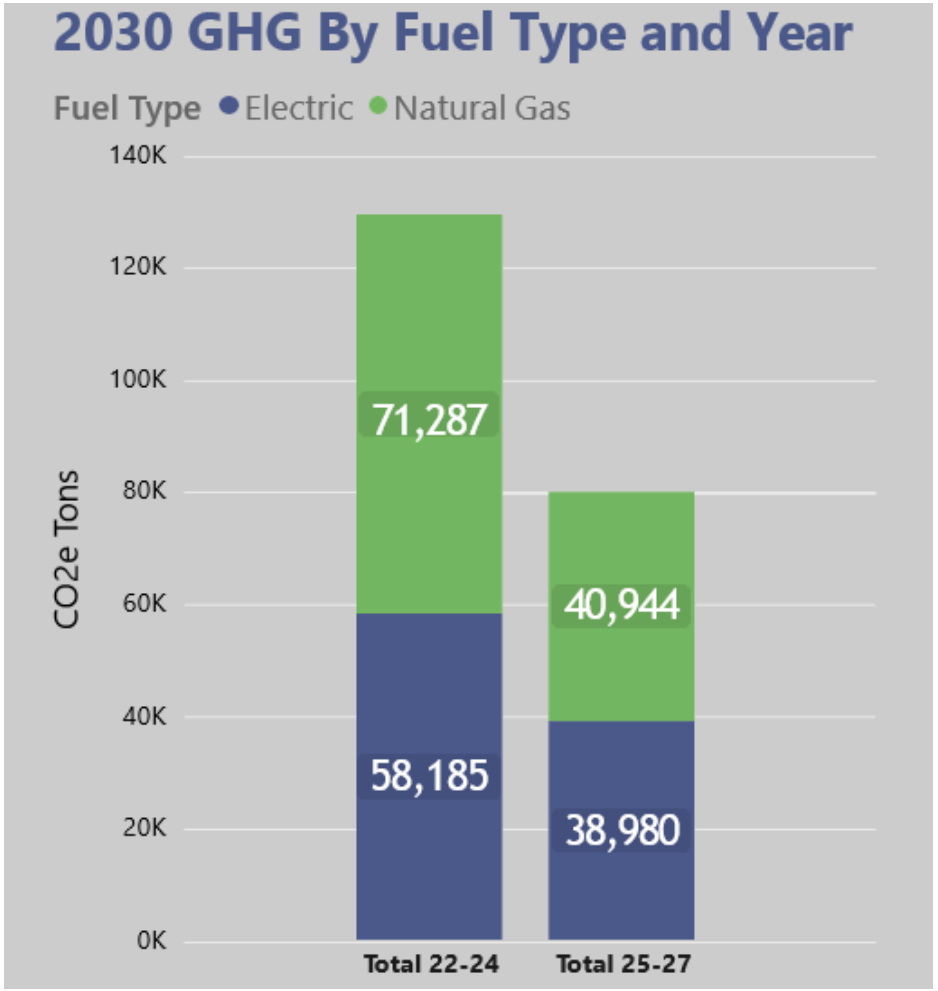
Key plan priorities and themes



C&I Goals in 2025-2027 (National Grid only)

- DRAFT NUMBERS SUBJECT TO ADJUSTMENT -





Budgets and savings goals for the C&I sector have been lowered compared to the 2022-2024 term, to align achievability and prior term performance

Expanded Support for Opportunity Identification and Scoping

Offering	Description
Portfolio Prioritization Plans	Leverage equipment lists, benchmarking, and other readily available customer information to prioritize buildings for further study
Decarbonization Roadmaps	In-depth exploration of decarbonization strategies with plan to implement over long timeframe. Support BERDO/BEUDO compliance and other ad hoc requests.
Comprehensive Building Assessments	Decarbonization assessment covering EE and electrification opportunities
Existing Building Commissioning (EBCx)	Optimize building operational performance – focus on HVAC controls
Specialized Studies	Niche energy saving opportunities (compressed air, steam traps, refrigeration, etc.)

Program Administrators will propose dramatic expansion of support for building and campus level assessments, long-term roadmaps, and existing building commissioning studies

Enhanced Support for Schools

Support energy efficiency and electrification improvements in **schools across the state**

- Support for municipal energy managers
- Decarbonization roadmap support and additional technical assistance
- Enhanced incentives
- Assistance for communities in applying for federal and state funding
- Equipment training for facilities staff at schools and other public agencies
- Increased collaboration with state agencies involved in funding schools

Proposed non-energy saving GHG measures

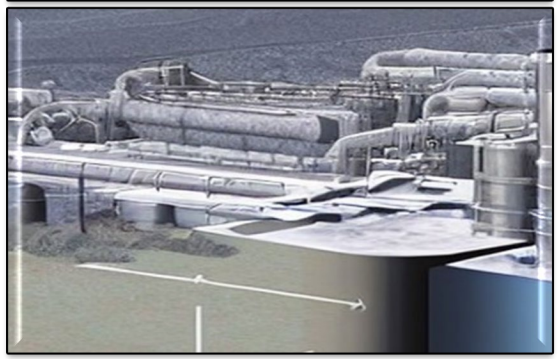
Introducing cost-efficient measures to provide customers with additional opportunities to reduce GHG emissions

Behind-the-Meter Gas Leaks

Embodied Carbon

Refrigerant Leaks

Carbon Capture



Source: DeepAI.org

Gas equipment phase-out

No longer supported:

- New gas-fired equipment in non-exempt (‘hard to electrify’, income-eligible) situations

Still supported:

- Heating, cooling, ventilation, and hot water controls, including combustion controls
- Existing building commissioning (retro-commissioning)
- Steam traps
- Energy recovery
- Equipment, pipe, and duct insulation and sealing
- Weatherization
- Hard-to-electrify equipment (mostly process equipment)

Gas programs will continue to exist, but are evolving to align with statutory requirements

03 Introduction to New National Grid Team Members

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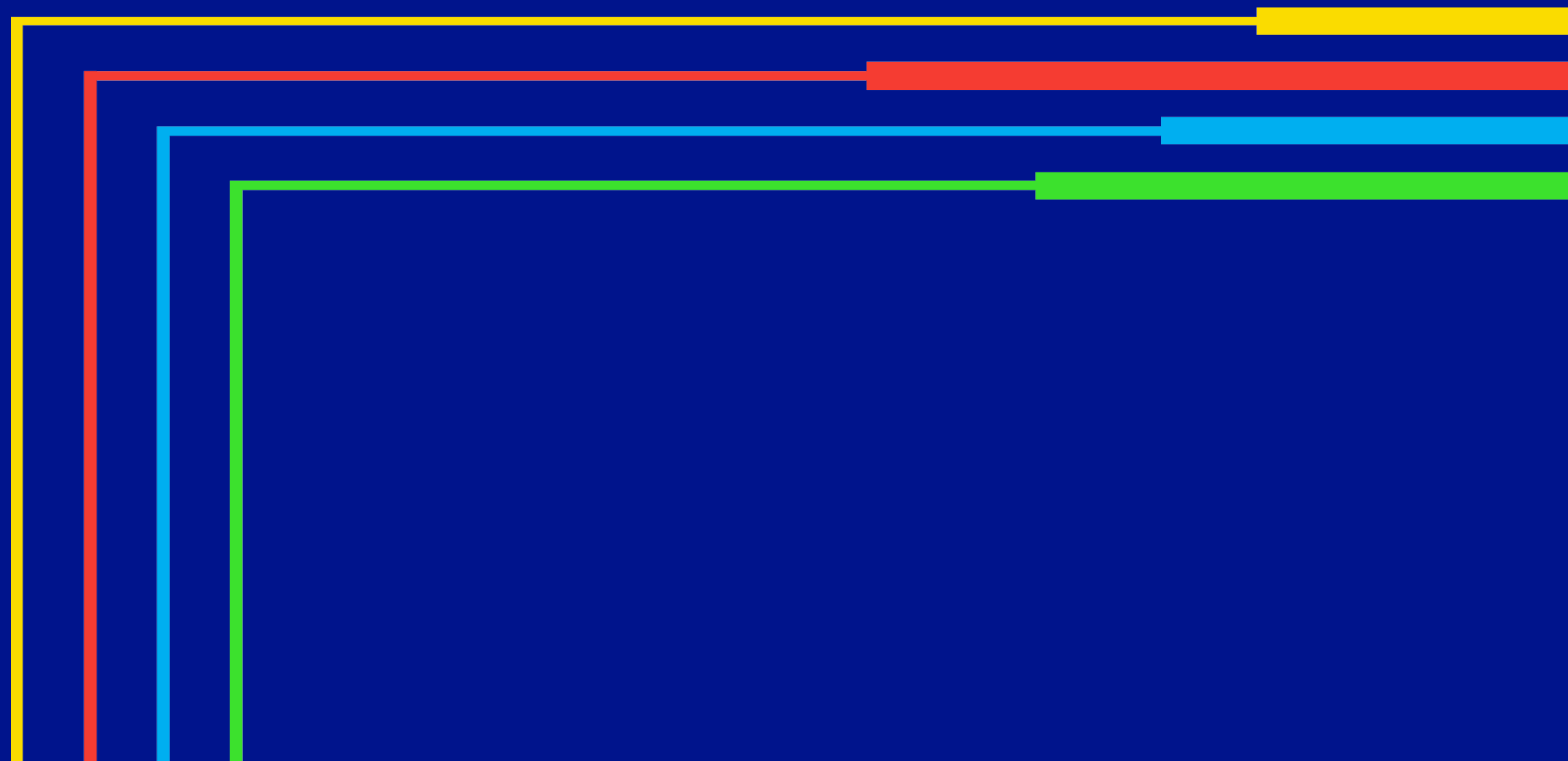

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New Team Members

Kimberly Murphy

Amanda Formica

Kevin Silveira

Nick Valles

Tara Reisner

04 Study Opportunities in the Next 3-Year Plan

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Existing Building Technical Assistance Studies

Decarbonization Roadmaps	Partner with customers to develop in depth and robust exploration of decarbonization strategies, typically for multiple buildings, with a plan to implement over a long-time horizon.
Portfolio Prioritization Plans	High level study leveraging benchmarking, equipment lists, and other customer information to prioritize buildings for further study (i.e. via a Comprehensive Building Assessment or other study).
Comprehensive Building Assessments	Decarbonization assessment identifying energy efficiency and electrification opportunities for a single building.
Focused Studies	Detailed study of specific EE/Decarb measures → Actionable savings/cost estimates.
Specialized Studies	Streamlined investigation and implementation support for niche measures such as steam traps, compressed air, and commercial refrigeration.

*All studies are performed by energy engineers and **DO NOT** include architectural, design, or construction services*

Decarbonization Roadmaps

Description:

In-depth, high rigor assessment of the strategies a customer would need to employ to meet specific decarbonization targets, typically for a portfolio of buildings. In addition to weatherization, building electrification and energy efficiency, this study may also address other impacts such as motor vehicle fleets, maintenance equipment, and the embodied carbon of construction materials.

Deliverable:

A detailed report identifying a path or multiple paths toward decarbonization enabled by the implementation of energy saving and electrification measures, incorporating renewable energy technologies and purchasing RECs. This report would quantify the impacts of Mass Save incentives, federal tax incentives, and alternative compliance payments on the life cycle analysis and include GHG modeling. The costs and energy savings estimates are at a high level and may require further study.

Next Steps:

As customers looks to implement energy saving or electrification measures identified, they may move forward with a Focused Technical Assistance study, employ Existing Building Commissioning, or engage in a Specialty Study.

Mass Save Sponsor Support (Typical Study cost: $100,000-300,000+)

Sponsors support will be greater for firms from our competitively bid bench than for those firms procured by the customer directly. In either case, PA support would not exceed 50% of the total study cost.

Portfolio Prioritization Plans

Description:

Quick, low rigor assessment of several buildings within a customer's portfolio. Assessment includes existing energy usage, summary of major building systems (type, age, operating condition, etc.), as well as customer considerations such as planned upgrades, space use changes or other site dynamics.

Deliverable:

A report detailing findings with benchmarking comparing the performance of each building to other like buildings. The Portfolio Prioritization Plan separates the buildings into different tiers based on their decarbonization potential.

Next Steps:

Customers may use the findings from a Portfolio Prioritization Plan to determine which buildings to address first. This may include engaging in a Comprehensive Building Assessment or Existing Buildings Commissioning for the selected buildings.

Mass Save Sponsor Support:

Sponsors will identify a resource from a bench of competitively bid energy engineering firms and will fund the full cost of these studies.

Comprehensive Building Assessments

Description:

A scoping study to assess the current conditions at a facility and identify energy saving and carbon emissions reducing opportunities, including weatherization and building electrification. Additional scope can be added to include the context of local ordinances such as BERDO and BEUDO.

Deliverable:

A report stating the findings including high level estimates on the probable cost to install as well as energy and carbon emission impacts for identified opportunities. The assessment may present conflicting opportunities as well as opportunities that could be implemented in conjunction with each other.

Next Steps:

A Focused Study or a Specialty Study or go straight to measure implementation. A hand off to the Mass Save Existing Building Commissioning or Deep Energy Retrofit offerings could also be the outcome of a Comprehensive Building Assessment.

Mass Save Sponsor Support:

Sponsors would typically cover 100% of the cost when using firms from our competitively bid bench and aim to cover up to 25% of the study costs when using firms procured directly by the customer.

Focused Study

Description:

A detailed study investigating the economic and energy impacts of implementing a measure or specific set of measures. Often needed when submitting a Mass Save application for custom projects where an estimate of energy savings and cost is required.

Deliverable:

A report stating the findings including detailed estimates on energy and carbon emission impacts and implementation costs for each measure. The Focused Study also clearly defines what needs to be installed to realize savings and receive an incentive from the Sponsors of Mass Save.

Next Steps:

Mass Save Custom Incentive Application → Incentive Offer → Implementation → Post Inspection → Incentive Payment

Mass Save Sponsor Support:

Sponsors would typically cover up to 50% of the cost when using firms from our competitively bid bench and aim to cover up to 25% of the study costs when using firms procured directly by the customer.

Specialty Study
Description: A streamlined study aimed at identifying savings and easing program participation for a specific set of measures. Current measures include steam traps, commercial refrigeration and compressed air.
Deliverable: A Specialty study will identify savings and collect the necessary documentation to access Mass Save program incentives. Where appropriate, implementation may be integrated into the process to provide an even more seamless customer experience.
Next Steps: Mass Save Incentive Application → Incentive Offer → Implementation → Post Inspection → Incentive Payment
Mass Save Sponsor Support: Support would vary from measure to measure.

Existing Building Commissioning (EBCx) Investigation Study

Description:

An in depth investigation into faults and energy savings opportunities in an existing building system. Studies may identify capital improvements but will primarily focus on low to no cost optimization measures.

Deliverable:

The EBCx Investigation study will include information about system testing and results, a list of recommended measures with estimated savings and costs to implement, plus a set of contractor ready scopes of work for recommended improvements.

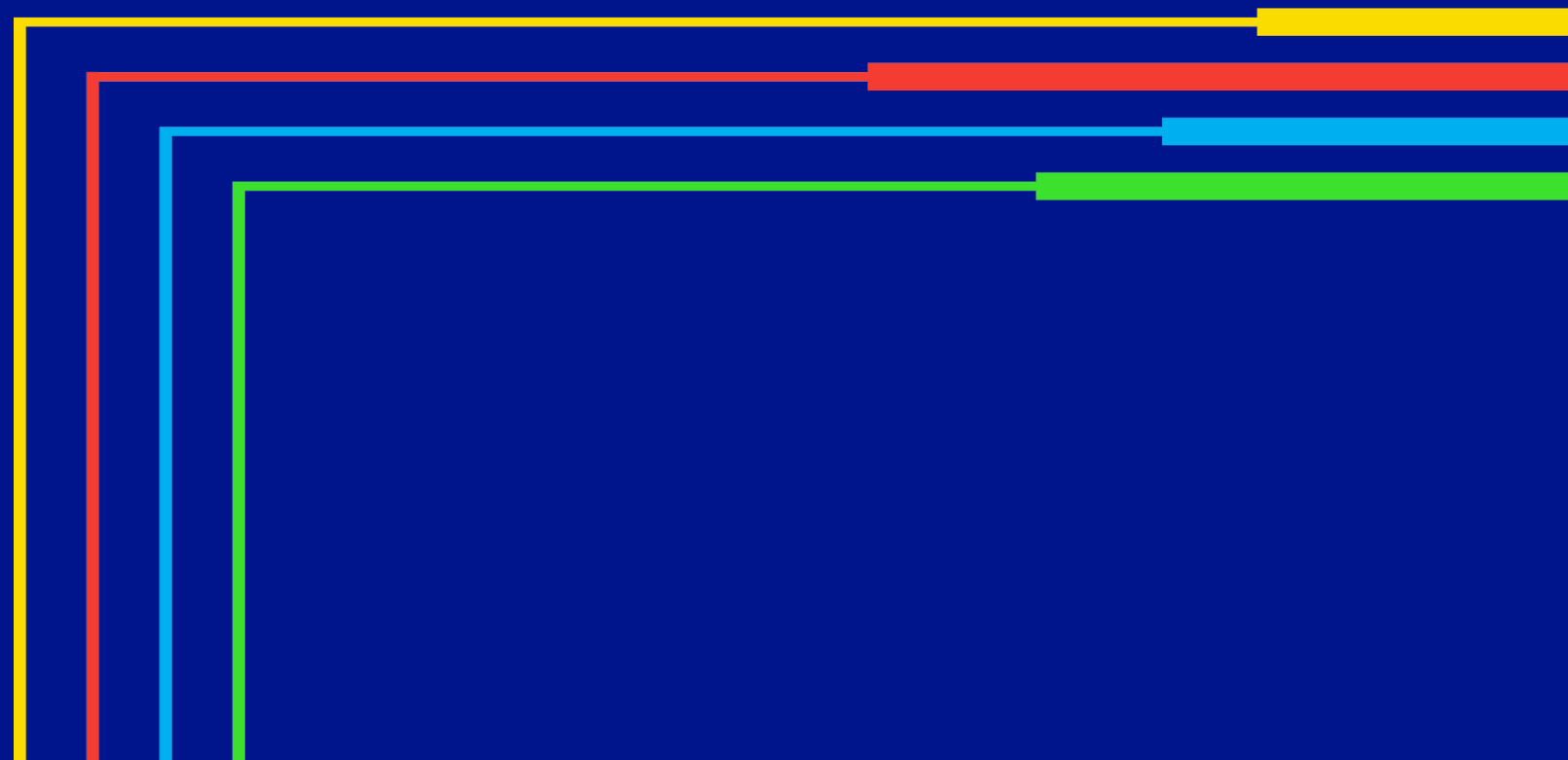
Next Steps:

EBCx Investigations will occur as part of participation in the EBCx offer.

Mass Save Sponsor Support:

Prior to the investigations, eligible customers will receive up to $2,500 per million kWh annual usage for a screening study. Qualified customers will receive up to $25,000 per million kWh annual usage for the EBCx Investigation Study. Customers who implement recommended energy savings measures will also be eligible for $0.17 / kWh saved and $1.20 / therm saved. Total Sponsor support will be capped at 100% of total project costs, including studies and implementation.

05 BREAK



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06 Newton's Building Emissions Reduction and Disclosure Ordinance - Overview and Compliance Strategies

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City of Newton Proposed BERDO

Building Emissions Reduction and Disclosure Ordinance

National Grid PEX Meeting

September 16, 2024

BERDO Notes for PEX Meeting

- Newtonma.gov/NewtonBERDO
- List of covered buildings with addresses and mailing addresses: 293 commercial buildings over 20,000 SF
- Will be adding residential buildings over 20,000 SF: 120 buildings
- Proposed ordinance on the website
- This power point is from May 28th ZAP meeting
- Sept 23rd ZAP meeting-vote to approve BERDO

PEX vendor notes

- Newton BERDO does not include electricity emissions.
- Phased decarbonization measures such as: air sealing, insulation, controls, electrification of DHW, electrification of space heating.
- Decarbonization over time: building owners have 20 to 25 years to get to zero carbon. You can do parts of buldings. You don’t have to do the whole building all at once.
- End of life equipment replacement.
- Electricity savings measures and PV can be used to improve cash flow of overall projects.
- Other consultant services: Portfolio Manager, Individual Compliance Schedules, Portfolios, ACP overall BERDO compliance plan.

City Council Resolution Calling for BERDO

- Resolution passed unanimously in April 2022
- “NOW, THEREFORE BE IT RESOLVED, That the City Council commits to developing an ordinance that will require large property owners to report energy use and emissions to the city annually, and in subsequent years demonstrate reductions in energy use and emissions to meet benchmarks established for their building type, with the goal of becoming carbon neutral by 2050.”

What is BERDO?

- BERDO is an ordinance that will require large buildings to report energy and emissions to the City.
- It requires large buildings to gradually reduce GHG emissions over time to zero by 2050.
- BERDO is necessary for the City to meet its Climate Action Plan target of zero emissions by 2050.

Why BERDO?

- Efficient approach to advancing Climate Action Plan targets through 2050
- Substantially reduces Newton's total emissions by regulating a small number of buildings
  - 293 buildings, 179 owners, 19.3 million sq. ft.
- **Buildings**: 1.3% of buildings. 0.7% of owners, 14% of gross floor area (GFA)
- **Emissions**: 34% of buildings emissions and 23% of Newton emissions
- Consistent with local strategies in Greater Boston area
  - Boston BERDO 2.0 (2021)
  - Cambridge BEUDO amendments (2023)
  - Watertown BERDO (planned 2024)

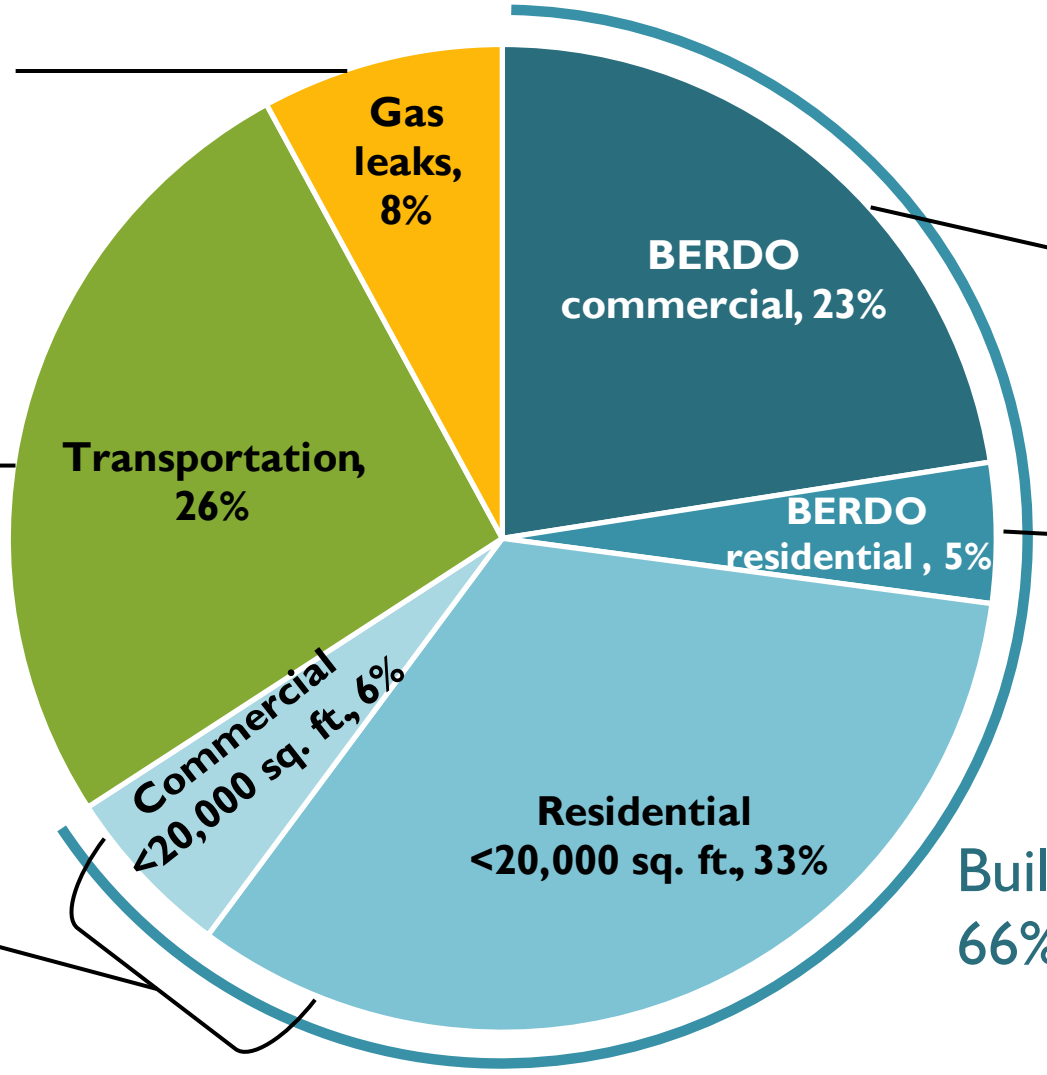
Newton BERDO Team

Subject matter experts developing BERDO policy since March 2022

- **City Staff**:
  - **Policy leads**: Bill Ferguson, Ann Berwick, Liora Silkes, Andrew Lee
  - **Coordinating with**: Josh Morse, Barney Heath, John Sisson
- **NCCE**: Halina Brown, Phil Hanser, Michael Gevelber
- **Green Newton**: Dan Ruben
- **Consultant**: Philip Eash-Gates, Synapse Energy Economics

Why BERDO?

Newton's GHG emissions:
City goal of carbon neutral by 2050



Address through National Grid

Address through BERDO now: 292 buildings (179 owners)

Address through BERDO in 2025: 120 buildings (94 owners)

Address through complete streets, bike infrastructure, EV adoption and charging

20,000+ buildings: Address through 4 Our Future campaign for residential buildings, small commercial incentives

Building emissions: 66% of total

Note: "Commercial" includes institutional and industrial buildings

Buildings Covered

- BERDO covers commercial buildings
- Exception: state and federal buildings
- 293 buildings ≥20,000 sq. ft. GFA
- Mayor proposes to add residential buildings ≥20,000 sq. ft. GFA in April 2025, including centrally heated residential condos

Policy Design: Covered Buildings

Scope	Number of buildings	Number of owners	Gross floor area (sq. ft.)	Emissions (Metric tons CO2e)	% of Newton emissions, all sectors
All buildings ≥20,000 sq. ft. GFA	413	267	26,624,758	202,794	28%
Only commercial buildings ≥ 20,000 sq. ft. GFA. (No residential buildings).	293	179	19,308,136	167,860	23%

Proposed Covered Buildings

- Large impact by regulating a small number of buildings
  - 293 buildings, 179 owners, 19.3 million sq. ft.
- **Buildings**: 1.3% of buildings, 0.7% of owners, 14% of gross floor area (GFA)
- **Emissions**: 34% of buildings emissions and 23% of Newton emissions

Tier	Description	Count of Buildings	Number of Owners	Total GFA (sq. ft.)	Emissions (metric tons CO_2e)	
1	Commercial, GFA ≥ 100,000 sq. ft.	47	29	8,631,279	77,774	46%
2	Commercial, GFA 50,000–99,999 sq. ft.	70	41	4,948,885	42,246	25%
3	Commercial, GFA 35,000–49,999 sq. ft.	67	51	2,825,059	23,480	14%
4	Commercial, GFA 20,000–34,999 sq. ft.	109	94	2,902,913	24,381	15%
Total	**All covered buildings**	**293**	**179***	**19,308,136**	**167,860**	**100%**

*Note that the total number of covered building owners is less than the sum of the rows, because some owners appear in multiple tiers.

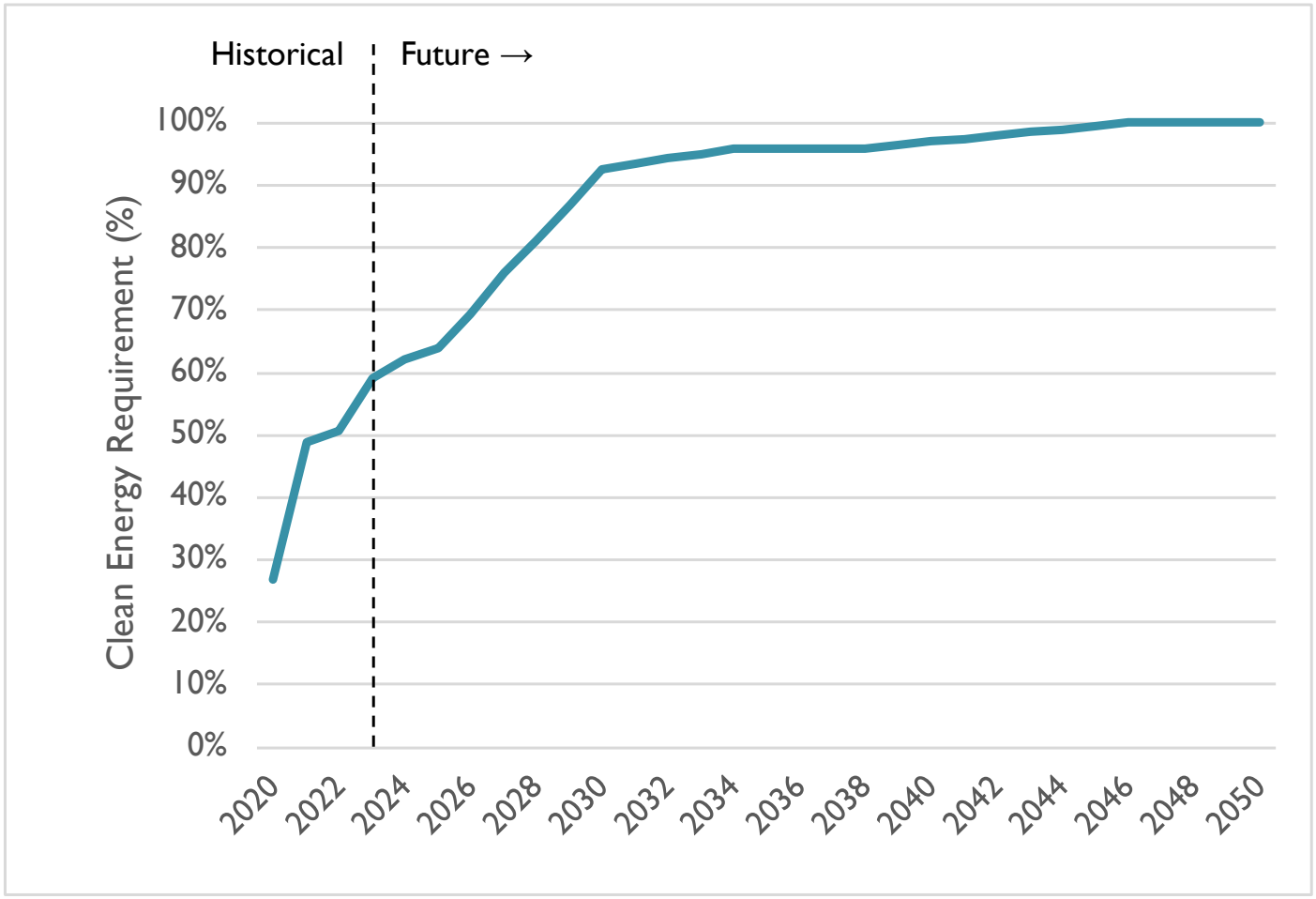
Proposed Compliance Timeline

Building Tier	Building Tier Description	Buildings count	1st Energy and Emissions Report Due	1st Emissions Compliance Year	1st Report under Emissions Compliance
Tier 1	Commercial ≥ 100,000 sq. ft. GFA	47	Sept. 15, 2025	2027	Sept. 15, 2028
Tier 2	Commercial 50,000–99,999 sq. ft. GFA	70	Sept. 15, 2026	2028	Sept. 15, 2029
Tier 3	Commercial 35,000–49,999 sq. ft. GFA	67	Sept. 15, 2026	2029	Sept. 15, 2030
Tier 4	Commercial 20,000–34,999 sq. ft. GFA	109	Sept. 15, 2026	2030	Sept. 15, 2031

Electricity Excluded from Emission Standard

- Because State policy eliminates grid emissions over time, BERDO can exclude electricity
- Greatly simplifies reporting and compliance
  - Will cover onsite natural gas, oil, and propane emissions only
  - Owners will report electricity use, but not electricity emissions
- Reporting is covered in more detail later

Massachusetts Clean Electricity Regulations



Source: [Massachusetts Department of Environmental Protection 310 CMR 7.75: Clean Energy Standard (CES)]

- Combined clean and renewable electricity procurement mandates:
  - 92 percent by 2030
  - 100 percent by 2050
- Technologies included in statutes:
  - Solar
  - Wind
  - Ocean
  - Fuel cells with qualified fuel
  - Qualified landfill methane gas
  - Large hydro
  - Low-impact, small hydro
  - Qualified biomass
  - Geothermal
  - Nuclear
  - Municipal waste

Newton BERDO Simplifies Reporting

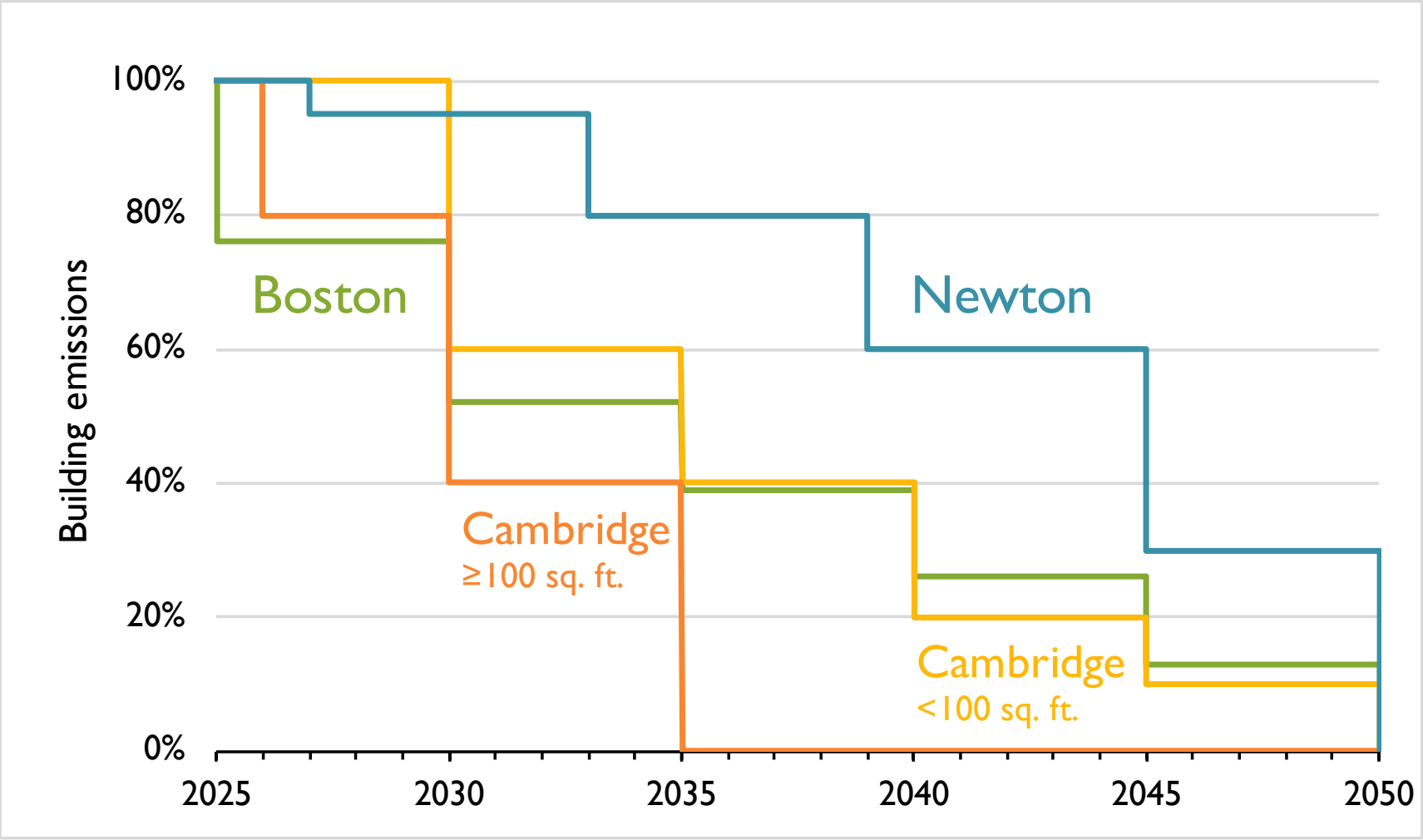
- Submit reports via ENERGY STAR Portfolio Manager
  - Free, industry-standard, widely adopted webtool
  - Junior staff learned the tool and reported 30 City buildings in about 15 hours
- Report all energy use—electricity, natural gas, fuel oil, propane
  - Annually for the prior year
  - One bill per utility account provides 12 months data
  - Receipts for delivered fuels—fuel oil and propane
  - Aggregated tenant data is available to owners through utility portal
- The City will provide training and education

Boston as a Model: Proposed Differences

- **Building types**: Initially excludes residential—apartments and condos
- **Scale**: 47 buildings in year 1 (vs. 3,975 in Boston), ramping to 293; lower staff demand
- **Scope**: Includes direct emissions only; excludes electricity emissions
- **Timeline**: Requirements phased in over 4 years, beginning in 2027 (vs. 2025 in Boston, 2031 for bldgs. 20k to 35k SF)
- **Compliance periods**: Longer in Newton; aligned with capital planning cycles
- **Stringency**: Reductions are more gradual; first major decrease in 2033 (vs. 2025 in Boston)
- **Enforcement**: Penalties begin in year 3 of emission standards

Proposed Rate of Emissions Reduction

More gradual than Boston and Cambridge



Notes: Boston and Cambridge include electricity emissions; Cambridge allows Carbon offsets for buildings ≥100,000 sq. ft.

Newton Proposed Rate of Emissions Reduction

Building use	Emission standards ($kgCO_2e$/sq. ft.)				
	Period 1	Period 2	Period 3	Period 4	Period 5
Assembly	6.1	3.7	2.3	1.1	0.0
College/University	9.5	5.7	3.5	1.5	0.0
Education	4.1	2.8	1.9	0.9	0.0
Food Sales & Service	6.8	4.4	3.2	1.5	0.0
Healthcare	14.3	9.2	6.5	3.2	0.0
Lodging	4.6	3.1	2.1	1.0	0.0
Manufacturing/Industrial	3.9	2.9	2.2	1.0	0.0
Office	3.1	2.0	1.2	0.5	0.0
Retail	3.4	2.3	1.4	0.6	0.0
Services	6.5	4.2	2.9	1.4	0.0
Storage	2.5	1.8	1.3	0.6	0.0
Technology/Science	14.6	10.7	6.7	2.8	0.0

Includes direct GHG emissions only (electricity emissions excluded)

Table 2. Compliance Periods by Building Use—Tier 1 Buildings: Non-residential Buildings Equal to or Greater than 100,000 square feet Gross Floor Area.

Building use	Emission standards ($kgCO_2e/SF/yr$)					
	2027-2031	2032-2036	2037-2041	2042-2045	2046-2049	2050-
Assembly	8.4	6.0	4.7	2.8	1.4	0.0
College/University	12.6	8.5	5.8	3.4	1.6	0.0
Education	4.2	3.3	2.6	1.7	0.8	0.0
Food Sales & Service	19.0	13.4	10.2	6.4	3.2	0.0
Healthcare	15.2	12.6	10.1	6.6	3.2	0.0
Lodging	6.3	4.7	3.7	2.4	1.1	0.0
Manufacturing/ Industrial	27.1	22.9	18.6	11.7	5.0	0.0
Office	5.9	4.4	3.3	2.0	0.9	0.0
Retail	9.3	6.3	4.4	2.2	0.9	0.0
Services	9.3	6.5	4.7	3.0	1.5	0.0
Storage	7.3	5.1	3.4	1.8	0.6	0.0
Technology/Science	20.3	15.9	12.3	7.0	3.3	0.0

Table 3. Compliance Periods by Building Use—Tier 2 Buildings: Non-residential Buildings Equal to or Greater than 50,000 Square Feet and Less than 100,000 Square Feet square feet **Gross Floor Area.**

Building use	Emission standards ($kgCO_2e/SF/yr$)					
	2028-2032	2033-2037	2038-2041	2042-2045	2046-2049	2050-
Assembly	8.4	6.0	4.7	2.8	1.4	0.0
College/University	12.6	8.5	5.8	3.4	1.6	0.0
Education	4.2	3.3	2.6	1.7	0.8	0.0
Food Sales & Service	19.0	13.4	10.2	6.4	3.2	0.0
Healthcare	15.2	12.6	10.1	6.6	3.2	0.0
Lodging	6.3	4.7	3.7	2.4	1.1	0.0
Manufacturing/ Industrial	27.1	22.9	18.6	11.7	5.0	0.0
Office	5.9	4.4	3.3	2.0	0.9	0.0
Retail	9.3	6.3	4.4	2.2	0.9	0.0
Services	9.3	6.5	4.7	3.0	1.5	0.0
Storage	7.3	5.1	3.4	1.8	0.6	0.0
Technology/Science	20.3	15.9	12.3	7.0	3.3	0.0

Table 4. Compliance Periods by Building Use—Tier 3 Buildings: Residential Buildings Equal to or Greater than 50,000 Square Feet and Non-residential Buildings Equal to or Greater than 35,000 Square Feet and Less Than 50,000 square feet Gross Floor Area.

Building use	Emission standards ($kgCO_2e/SF/yr$)					
	2029-2033	2034-2037	2038-2041	2042-2045	2046-2049	2050-
Assembly	8.4	6.0	4.7	2.8	1.4	0.0
College/University	12.6	8.5	5.8	3.4	1.6	0.0
Education	4.2	3.3	2.6	1.7	0.8	0.0
Food Sales & Service	19.0	13.4	10.2	6.4	3.2	0.0
Healthcare	15.2	12.6	10.1	6.6	3.2	0.0
Lodging	6.3	4.7	3.7	2.4	1.1	0.0
Manufacturing/ Industrial	27.1	22.9	18.6	11.7	5.0	0.0
Office	5.9	4.4	3.3	2.0	0.9	0.0
Residential	4.8	3.5	2.6	1.6	0.8	0.0
Retail	9.3	6.3	4.4	2.2	0.9	0.0
Services	9.3	6.5	4.7	3.0	1.5	0.0
Storage	7.3	5.1	3.4	1.8	0.6	0.0
Technology/Science	20.3	15.9	12.3	7.0	3.3	0.0

Table 5. Compliance Periods by Building Use—Tier 4 Buildings: Non-residential Buildings Equal to or Greater than 20,000 Square Feet and Less Than 35,000 square feet Gross Floor Area.

Building use	Emission standards ($kgCO_2e/SF/yr$)					
	2030-2033	2034-2037	2038-2041	2042-2045	2046-2049	2050-
Assembly	8.4	6.0	4.7	2.8	1.4	0.0
College/University	12.6	8.5	5.8	3.4	1.6	0.0
Education	4.2	3.3	2.6	1.7	0.8	0.0
Food Sales & Service	19.0	13.4	10.2	6.4	3.2	0.0
Healthcare	15.2	12.6	10.1	6.6	3.2	0.0
Lodging	6.3	4.7	3.7	2.4	1.1	0.0
Manufacturing/ Industrial	27.1	22.9	18.6	11.7	5.0	0.0
Office	5.9	4.4	3.3	2.0	0.9	0.0
Retail	9.3	6.3	4.4	2.2	0.9	0.0
Services	9.3	6.5	4.7	3.0	1.5	0.0
Storage	7.3	5.1	3.4	1.8	0.6	0.0
Technology/Science	20.3	15.9	12.3	7.0	3.3	0.0

Proposed Compliance Timeline

Building Tier	Building Tier Description	Buildings count	1st Energy and Emissions Report Due	1st Emissions Compliance Year	1st Report under Emissions Compliance
Tier 1	Commercial ≥ 100,000 sq. ft. GFA	47	Sept. 15, 2025	2027	Sept. 15, 2028
Tier 2	Commercial 50,000–99,999 sq. ft. GFA	70	Sept. 15, 2026	2028	Sept. 15, 2029
Tier 3	Commercial 35,000–49,999 sq. ft. GFA	67	Sept. 15, 2026	2029	Sept. 15, 2030
Tier 4	Commercial 20,000–34,999 sq. ft. GFA	109	Sept. 15, 2026	2030	Sept. 15, 2031

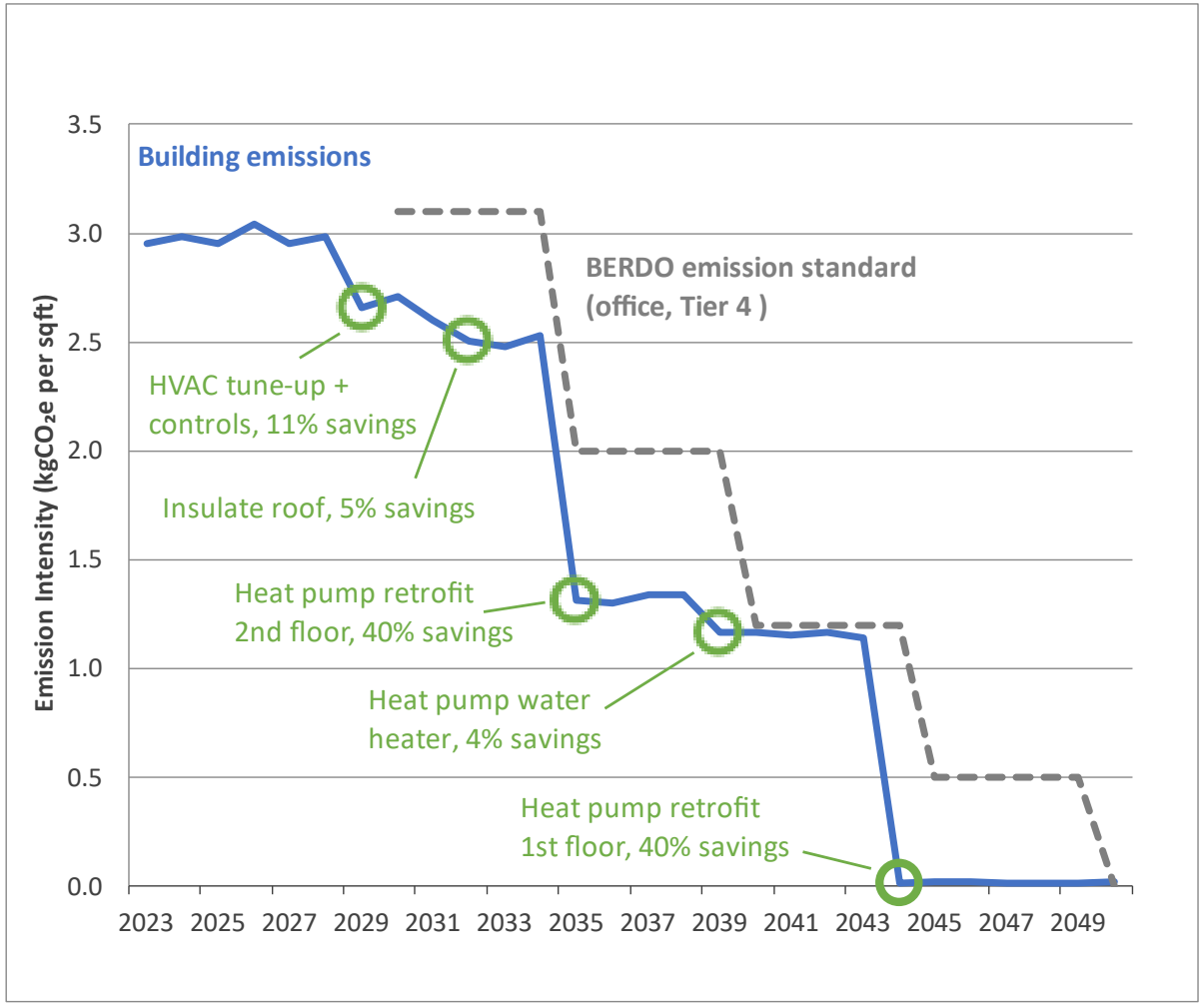
Table 1. Compliance periods by tier

Tier	Period 1	Period 2	Period 3	Period 4	Period 5
1	2027-2032	2033-2038	2039-2044	2045-2049	2050-
2	2028-2033	2034-2039	2040-2044	2045-2049	2050-
3	2029-2034	2035-2039	2040-2044	2045-2049	2050-
4	2030-2034	2035-2039	2040-2044	2045-2049	2050-

Proposed Compliance Flexibility

- **Phased implementation**: Tiers by building size phased in over time
- **Penalties delay**: Not levied prior to 3rd year of emissions requirement
- **Portfolios**: Combine emissions rating of 2 or more buildings
- **Individual Compliance Schedules**: Allows a change of schedule
  - Choose a base year from 2013 to now and follow percentage-based reduction schedule
  - Period 1: 95%, Period 2: 80%, Period 3: 60%, Period 4: 30%, Period 5: 0%
- **Hardship Plans**: Allows change of emissions
  - Accommodates unique circumstances or conditions
  - Considerations: financial hardship, historical designation, regulatory or contractual restriction, technical or operational constraint (e.g., utility service electrical capacity)
- **Multiple Compliance Pathways**: Energy efficiency, phased electrification, alternative compliance payment (ACP)

Compliance Pathway Example



Building profile:

- 30,000 sq. ft. office building
- Built 1980, 2-story
- Natural gas use
  - Space heating (95%)
  - Water heating (5%)
- New roof needed by 2032
- Separate heating systems for 1st and 2nd floors

Enforcement

- Non-compliance penalties begin the 3rd year after the effective date of emissions requirements
- Penalties are $300 per day (Boston maximum of $1,000 per day)
- Penalties for:
  - Failure to submit a report
  - Inaccurate report
  - Failure to meet emissions standard

Proposed Emissions Investment Fund

- Fines, fees, and penalties are placed in a special City fund
- Fund to be administered by the Climate/Sustainability Office and can be used for:
  - Projects that benefit environmental justice populations in Newton
  - Costs to the City to administer BERDO
  - Costs to the City to comply with BERDO
  - Costs to local non-profits (such as affordable housing providers) to comply
  - Education related to implementation of BERDO

07 PEX 2024 Goals and Progress

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PEX 2024 Goals and Progress

CY 2024 PEX Progress (As of 9/13/24)					
Key Performance Indicators	**Goal**	**Paid**	**P(%G)**	**Forecast**	**Fc(%G)**
Electric Savings (NLT MWH)	82,450	65,530	79%	127,000	154%
Gas Savings (NLT Therms)	1,674,970	457,579	27%	2,270,000	136%
Electric Electrification (NLT MMBTu)	49,510	12,417	25%	30,000	61%
Gas Electrification (NLT MMBTu)	64,490	19,767	31%	75,000	116%

08 Quick Hits/Reminders/2024 Meeting Dates

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nationalgrid

Save the Date: Energy Solutions Summit

Join us for the annual Energy Solutions Summit on Thursday, October 24th at Gillette Stadium!

- Attendees: The event brings together hundred of commercial and industrial rate-paying customers from Massachusetts.
- Activities: Interact with sponsoring vendors, attend educational sessions on various energy topics, listen to keynote speakers addressing the regulatory environment, enjoy delicious food, and network.
- Sponsorship: If you are interested in becoming a sponsor, please let us know.

Sponsorship Levels & Benefits

	GOLD $11,000	SILVER $9,000	BRONZE $5,000
EXHIBIT SPACE:	8' x 16' space	SOLD OUT	8' x 10' space
SUMMIT REGISTRATIONS:	Four (4)	Three (3)	Two (2)
EVENT WEBSITE RECOGNITION:	Company logo, URL & 150-word company description	Company logo, URL & 100-word description	Company name & URL
RECOGNITION ON EVENT SIGNAGE & MONITORS:	Company logo	Company logo	✕
HYPERLINK IN EVENT APP:	✓	✓	✓
COMPLIMENTARY ELECTRICITY FOR BOOTH:	✓	✓	✓
PRIORITY PLACEMENT:	✓	✓	✕
EXCLUSIVE SPONSORSHIP PACKAGES:	Select from Seven (7) exclusive sponsorship packages	Select from Five (5) exclusive sponsorship packages	✕

** See more information on exclusive sponsorship packages per sponsor level on the following pages.*

Quick Hits and Reminders:

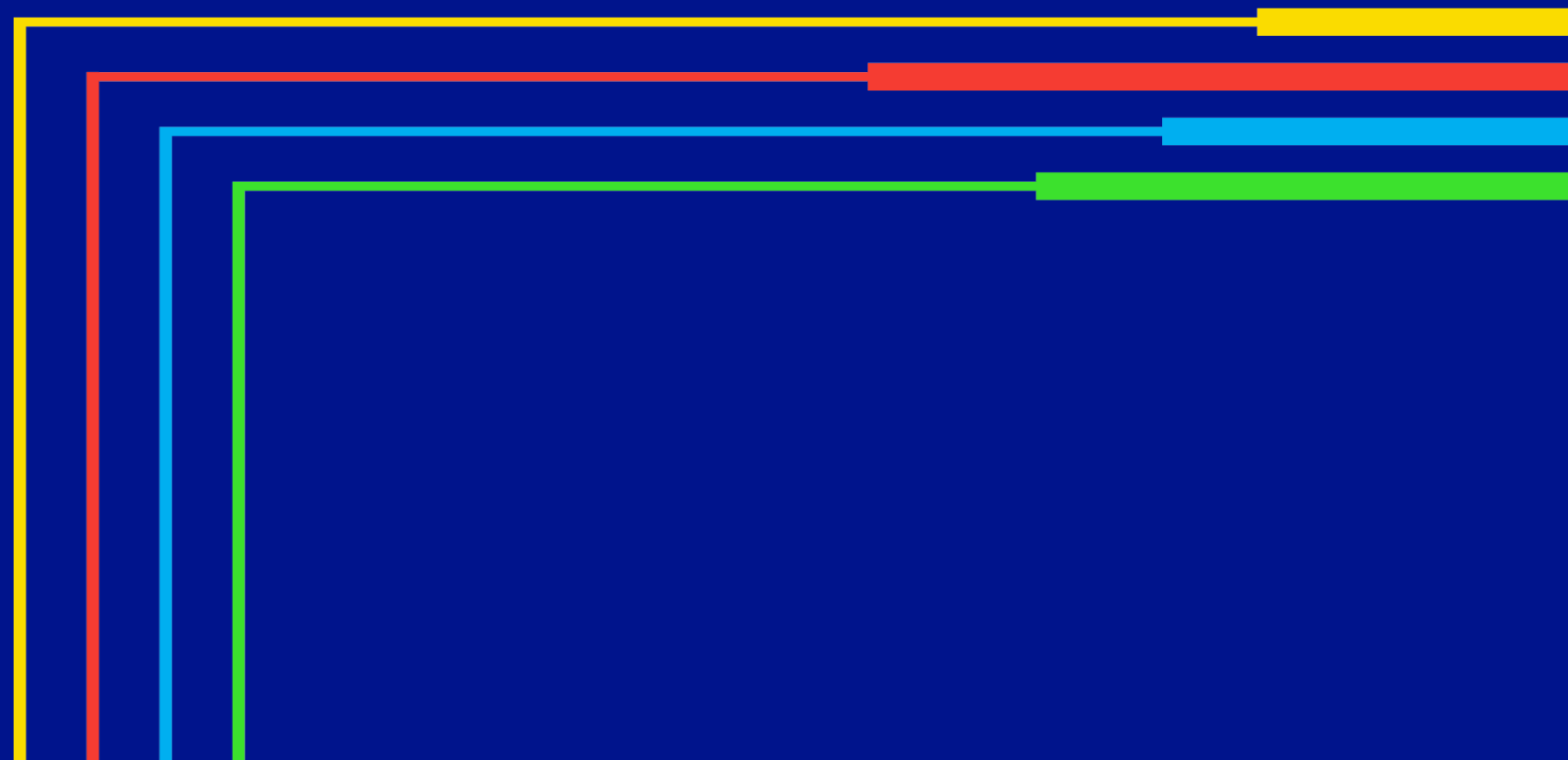
- **Upcoming Trainings:**
  - Mass Save events and trainings can be found on the Mass Save website here.
  - MAEEP Building Ventilation and Heat Recovery for HVAC Systems Training - Scheduled for Tuesday September 24 from 8:30am-4PM at Four Points Sheraton in Norwood
  - MAEEP VFD Training – Scheduled for October 9, 16, and 23 from 8:30-2:30PM in Canton.
  - BPI Training (BSP Cert) – Targeting October
  - MAEEP Lighting Controls – Targeting November
- **Individual PEX Goal Communication:**
  - Please review and provide feedback or raise any concerns regarding your assigned goals.
- **Co-Branding License Agreement Update:**
  - Ensure compliance with the co-branding guidelines and submit marketing materials for review and approval.
- **Commercial Heat Pump Application:**
  - All PEXs should use the National Grid specific heat pump application, available here.
  - Avoid processing PEX applications through third-party vendors. Work directly with your account representative.

2024 Meeting Dates

Meeting Schedule

- October 23, 2024
- November 20, 2024
- December 18, 2024

09 Lunch and Networking



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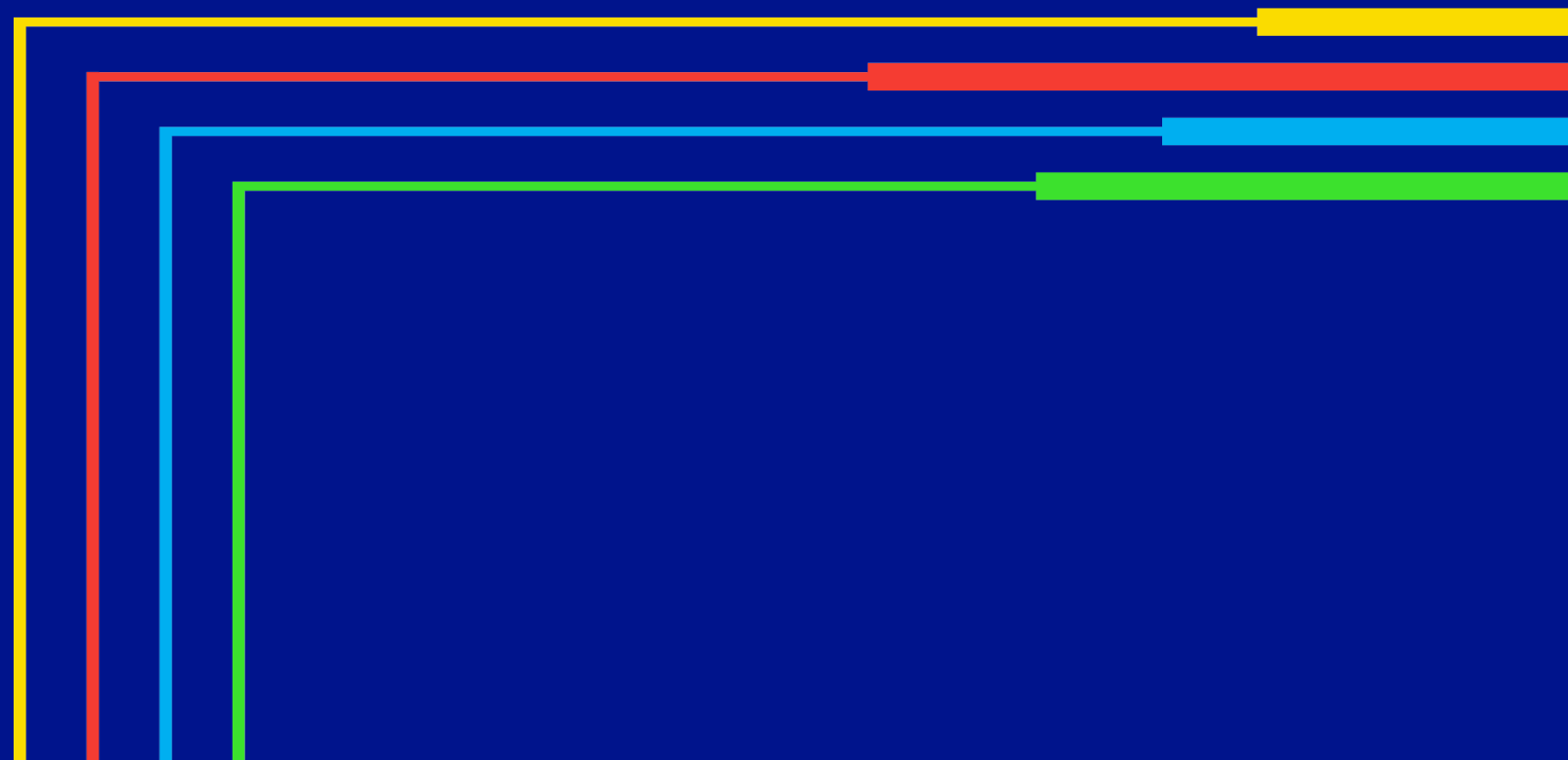
Thank You!

Be Safe



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