

2022 Annual Energy Efficiency Plan – Interim Update

EERMC

August 19, 2021

nationalgrid



2022 Annual Plan Update – Context

- 2022 Annual Plan is a binding plan document, builds off the planning done for 2022 in the Three-Year plan and incorporates new information, priorities, and study results
- From draft plan to final plan, work continues as budgets, energy savings targets, and strategies are reviewed to maximize cost-effectiveness and optimize strategies taking into account the feedback received from stakeholders.
- The Plan moves key priorities forward to make advances for customers in 2022, building from the 3YP priorities
 - Equity focus
 - Workforce development

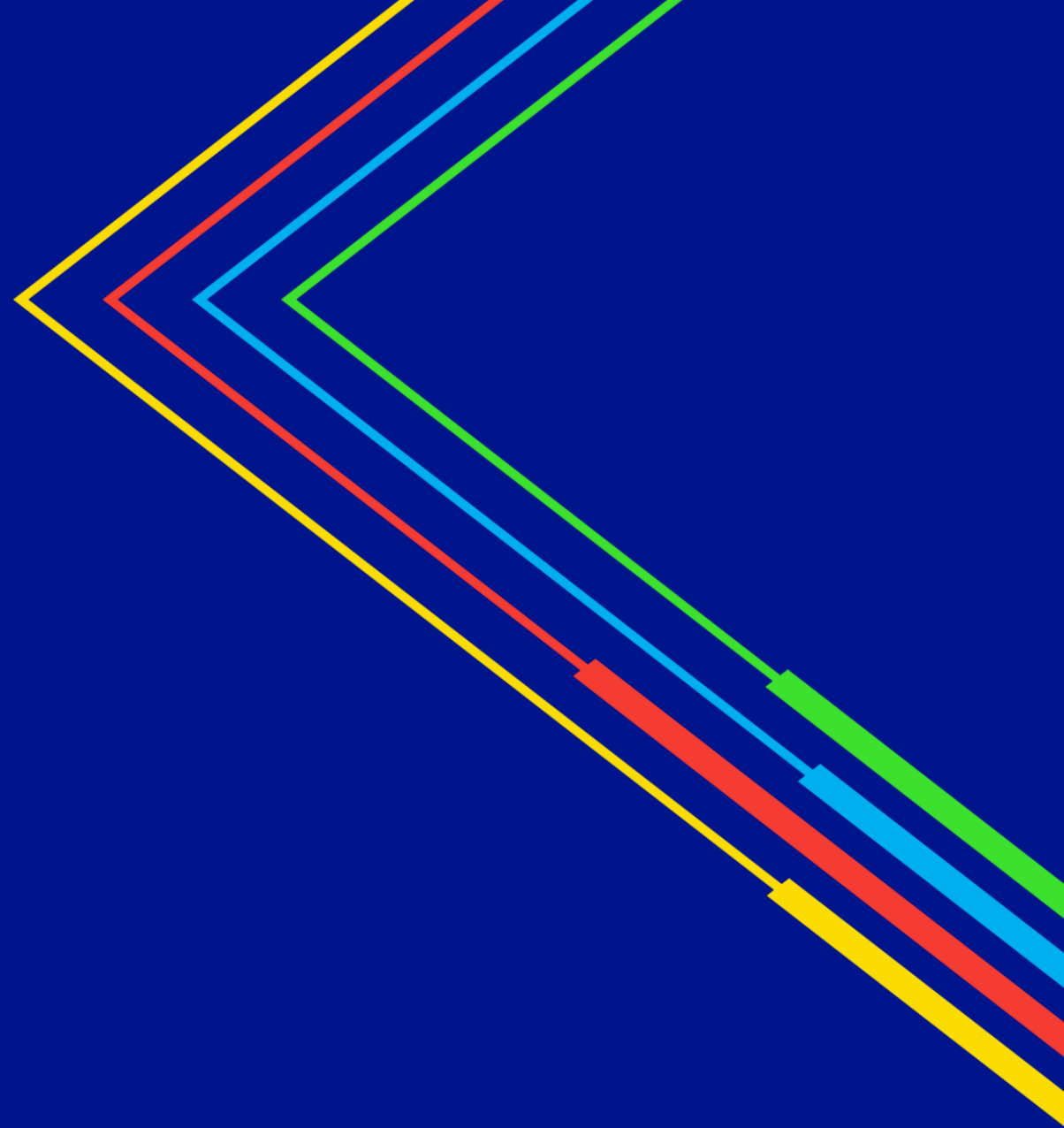
2022 Annual Plan – Top Line Numbers

- Electric EE and DR:
 - Annual savings: 124,257 MWh, lifetime savings: 1,068,749 MWh, DR: 39.5 MW
- Gas EE:
 - Annual Savings: 385,163 MMBtu, lifetime savings: 4,002,876 MMBtu
- \$338M present value of lifetime benefits from gas EE, electric EE, and active demand response
 - \$308M added to Rhode Island's state gross domestic product
- 6,953,871 MMBtu lifetime reduction in all fuel consumption (electric, gas, oil, propane)
- 794,869 lifetime tons of carbon emissions avoided
 - Equivalent of removing 156,823 passenger vehicles from the road for one year
- 2020 Year-End Report found 827 FTE associated with National Grid programs
 - Across over 1,000 companies

2022 Annual Plan 1st Draft to Now Updates

- **Input from stakeholders**
 - Acadia Center, the Division, the EERMC, and OER have provided hundreds of comments on the first draft of the 2022 annual plan. The Company is reviewing these comments to make additional edits/modifications to the plan prior to the final draft on September 8th
- **Refining Measure-Level Planning and Savings Goals**
 - The Company is working to review budgets, program approaches, areas to improve cost efficiencies, and measure-level planning in consultation with stakeholders to finalize program allocations
- **Continued incorporation of final EM&V updates that impact claimable savings**
 - Finalizing EM&V studies that impacted claimable savings
 - Studies typically have a negative effect on claimable savings

Responding to Stakeholder Input



Cross-Cutting High Level Comments on the Plan

- Incorporate Equity WG recommendations to Workforce Development proposal
 - Equity was a high priority for all stakeholder groups
- Justify the energy savings goal targets
 - Potential study, targets setting, and three-year plan processes thoroughly assessed. Annual plan driven primarily on the three-year plan compliance filing
- Design plan based on LCP standards
 - Considering all elements of the LCP Standards in the planning process
- Rate and bill impact analysis – not included in draft plan
 - Draft analysis results provided in this presentation

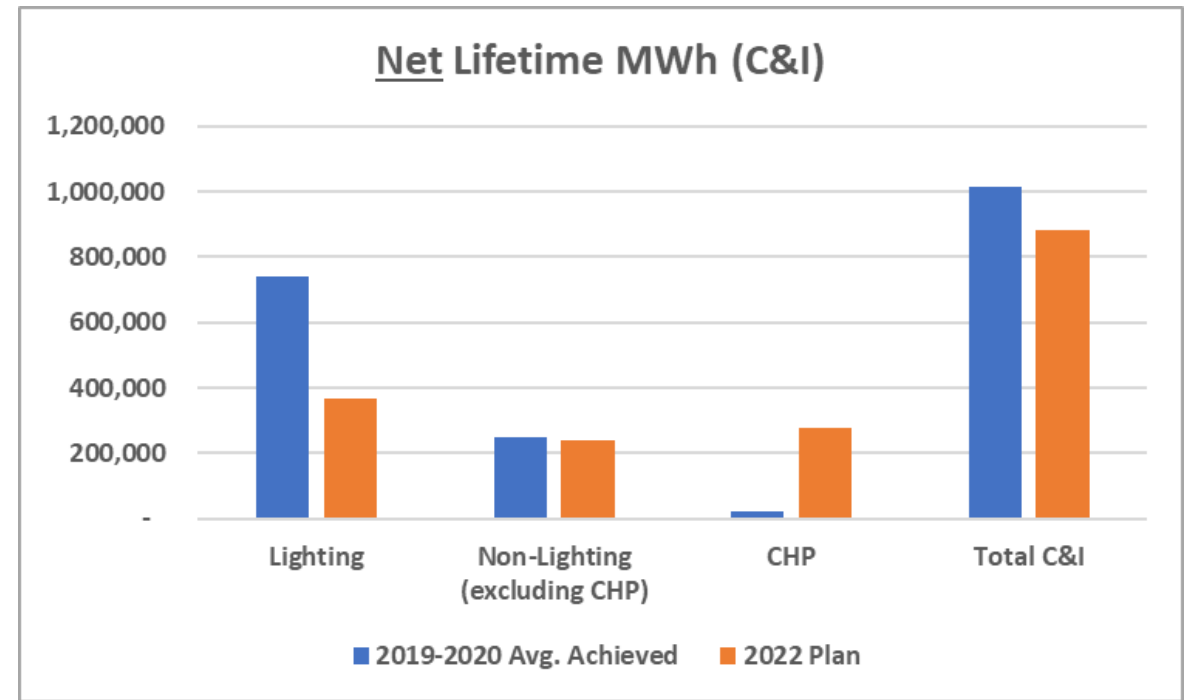
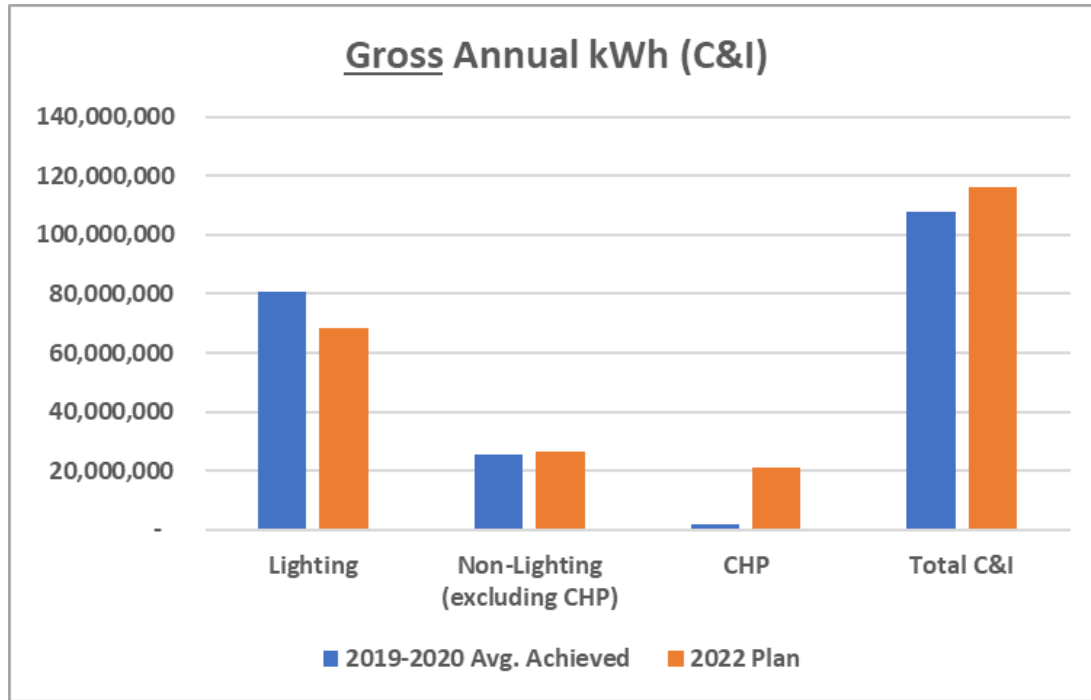
Cross-Cutting High Level Comments on the Plan, cont.

- Update the approach to the macroeconomic impact results and BCA
 - Revising methodology per Division comments to show total macroeconomic benefits from EE program spend. This would be a standalone analysis (economic impact analysis), rather than component of the BCA

Residential & Income Eligible Focus

| Program | Stakeholder Comment | Response |
|-------------|--|---|
| Multifamily | Address moderate income customers. | The program is able to capture moderate income customers through the IE services. |
| | How does the company track satisfaction after work is complete? | The Company is updating the program brochure to include information on the EPA Portfolio Manager to help customers assess energy performance. |
| | Could virtual assessments be leveraged for renters in the Multifamily program? | The Company can include language about cross-coordination in the residential sector and will review the EW online questionnaire for MF renters. |
| Equity | Incorporate additional Equity Working Group Recommendations. | Equity Working Group recommendations will be incorporated into the main text, residential sections, and C&I as appropriate. |
| EnergyWise | Opposition to differing incentive levels based on heating fuel type. | The Company will keep incentives aligned in 2022. |

Commercial & Industrial Goals (Electric)

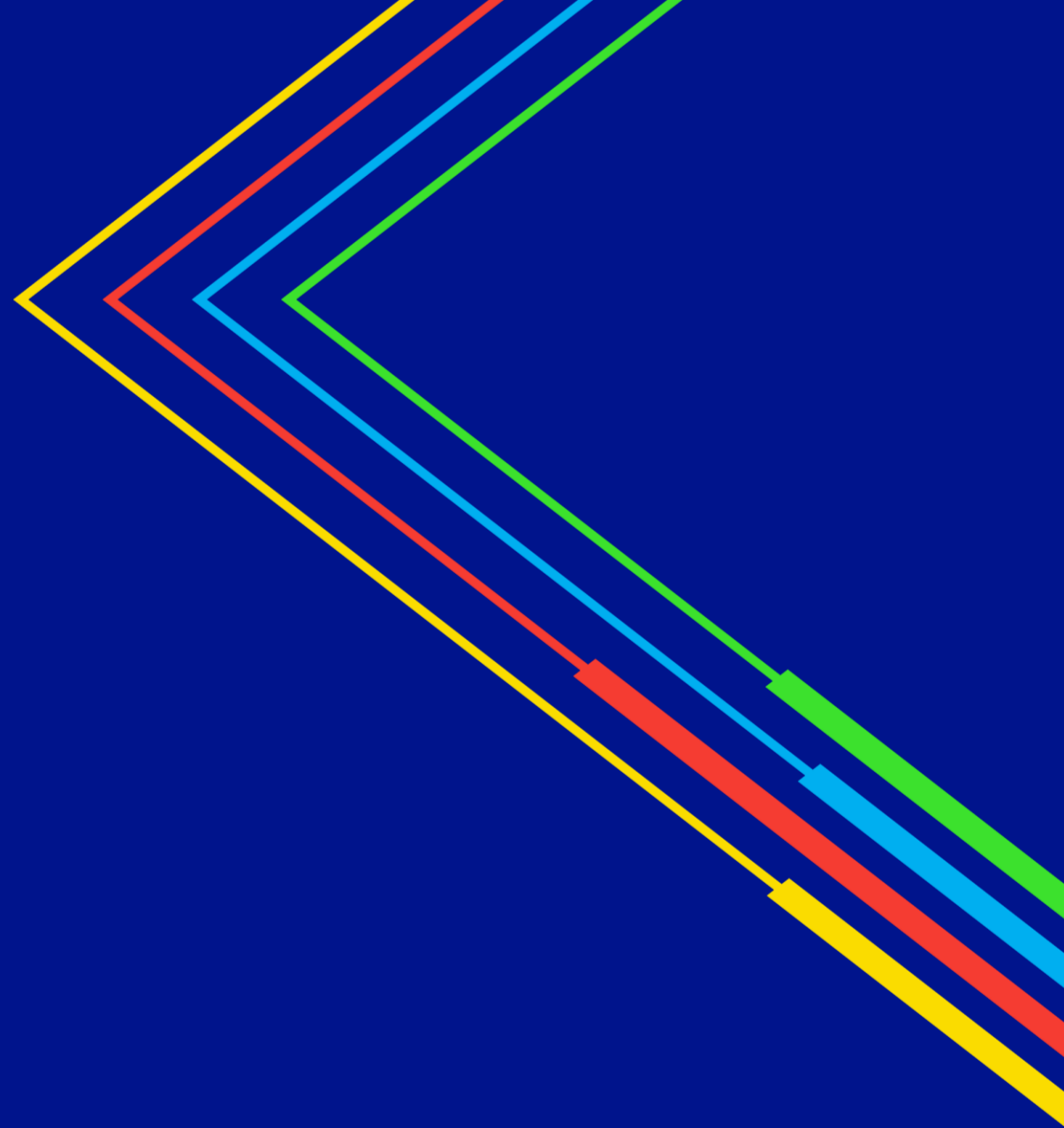


- **Gross savings** is representative of project volume. **Net savings** adjusts for evaluation impacts.
- **Lighting**: gross savings decreasing 15%; net savings decreasing by 50%.
- **Non-lighting**: Savings essentially flat; could increase moderately in final plan to better account for proposed/evolving initiatives.

Commercial & Industrial Focus

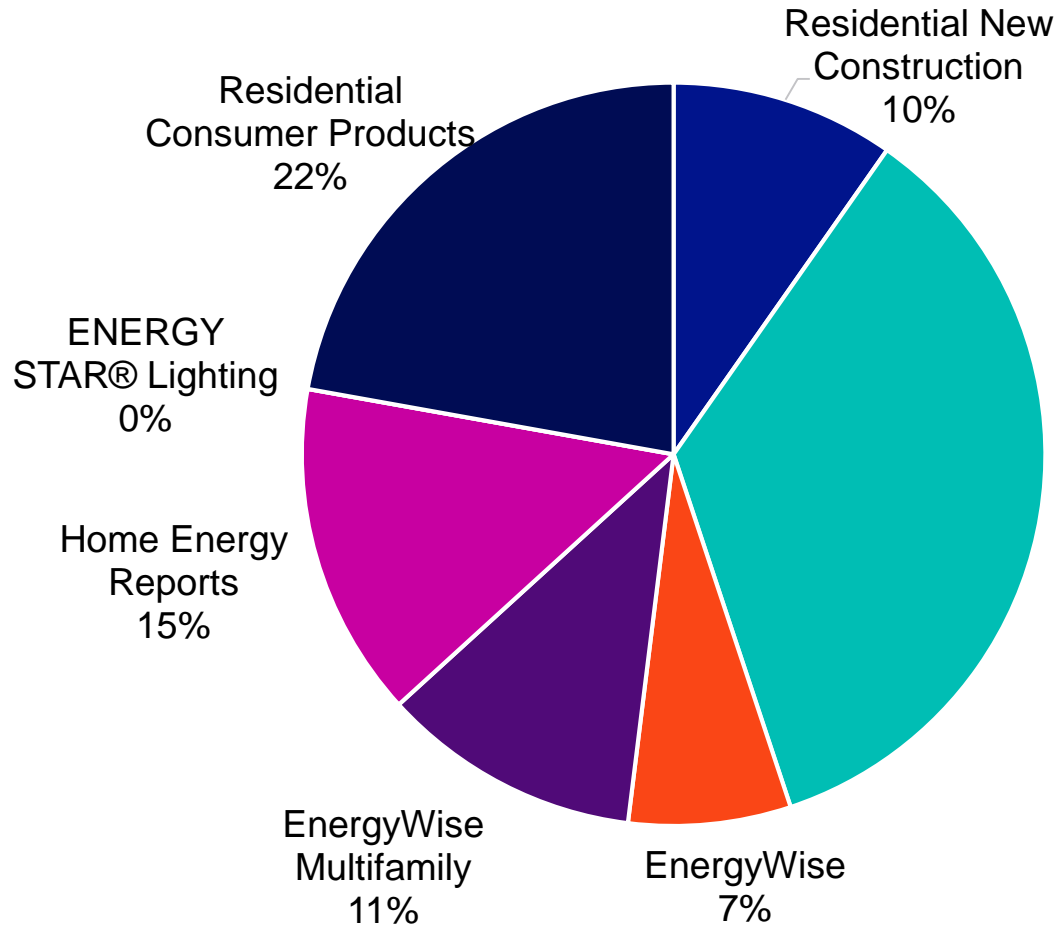
- Improve feedback loops (industry, customers, program vendors, stakeholders, internal staff)
- Increase HVAC and controls adoption
- Demand Response for Small Business

**Plan Savings Goals:
Electric Energy Efficiency
(EE) and Combined Heat
and Power (CHP)**

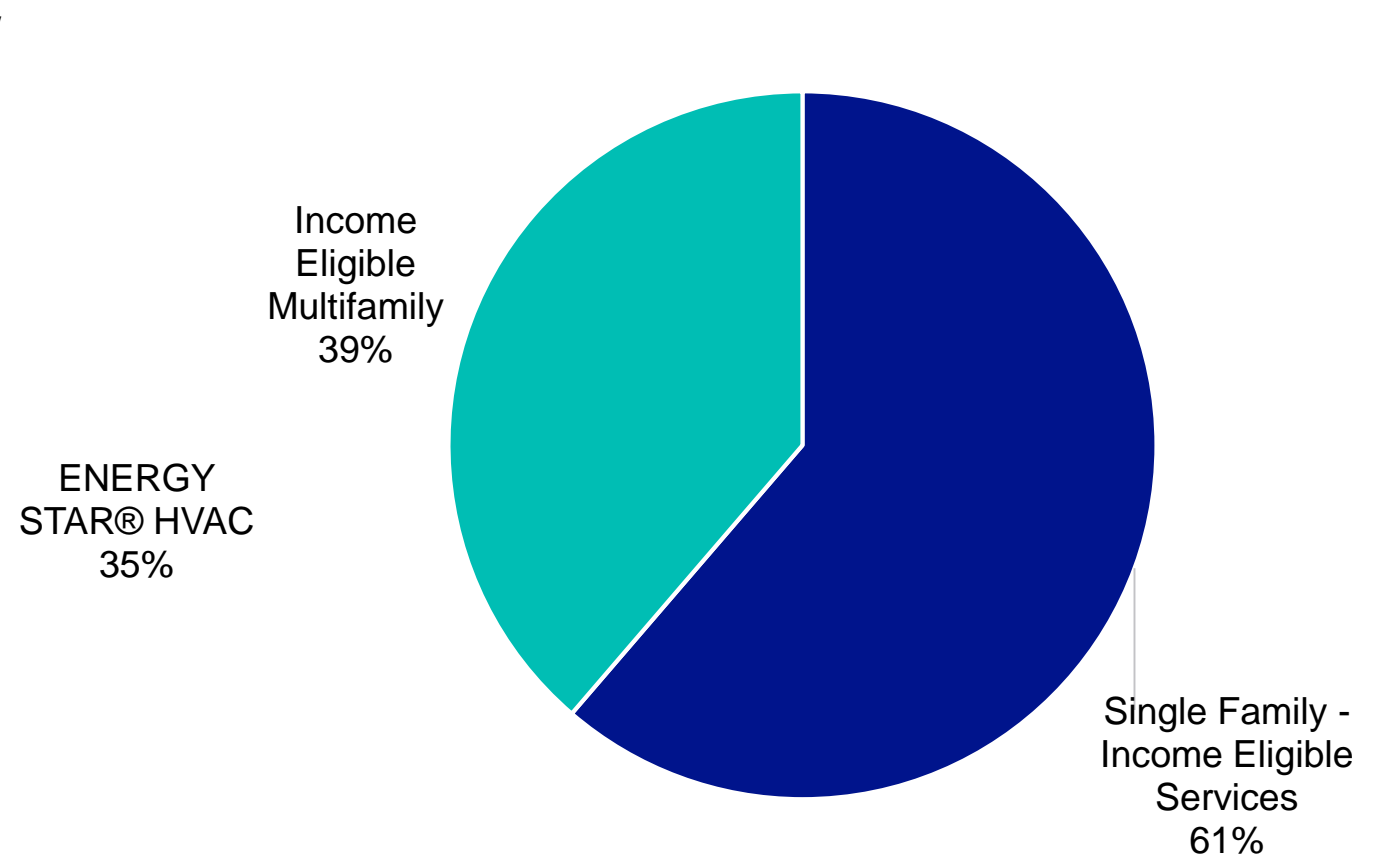


Sector Composition – Electric Residential and Income Eligible

2022 Planned Lifetime MWh Goals for Residential Electric Sector

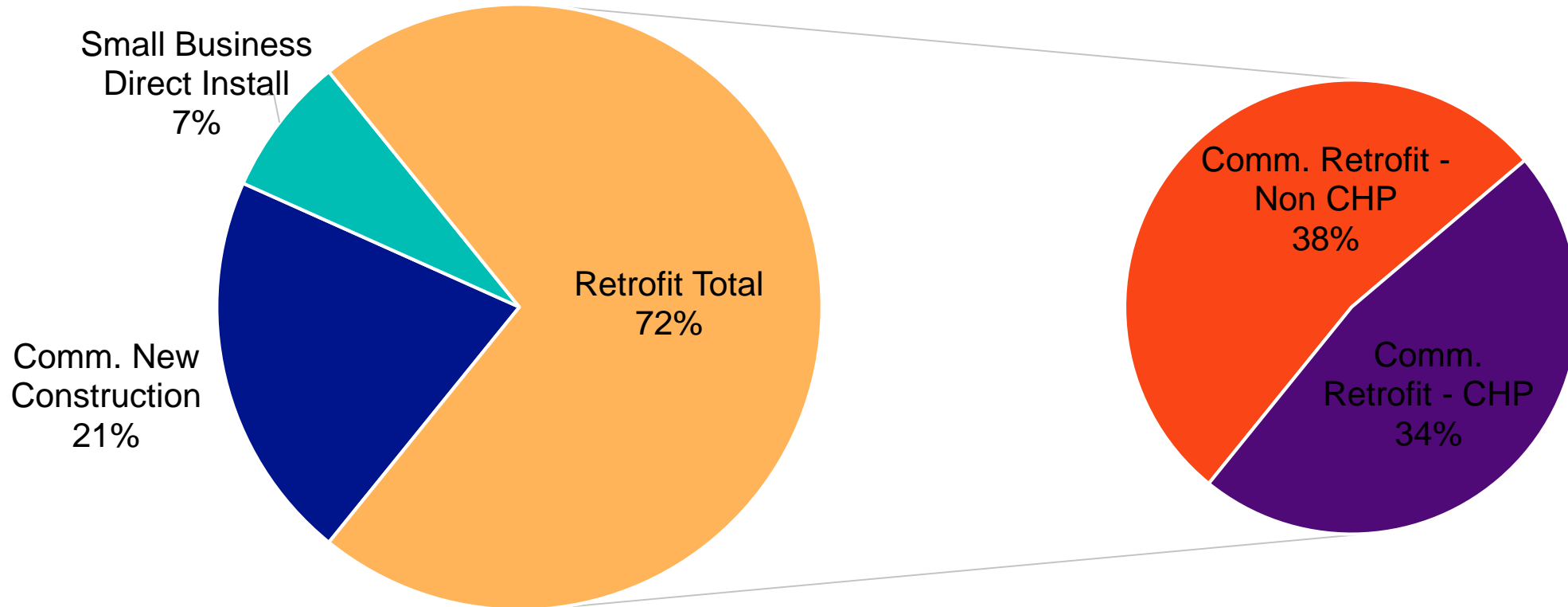


2022 Planned Lifetime MWh Goals for Income Eligible Electric Sector

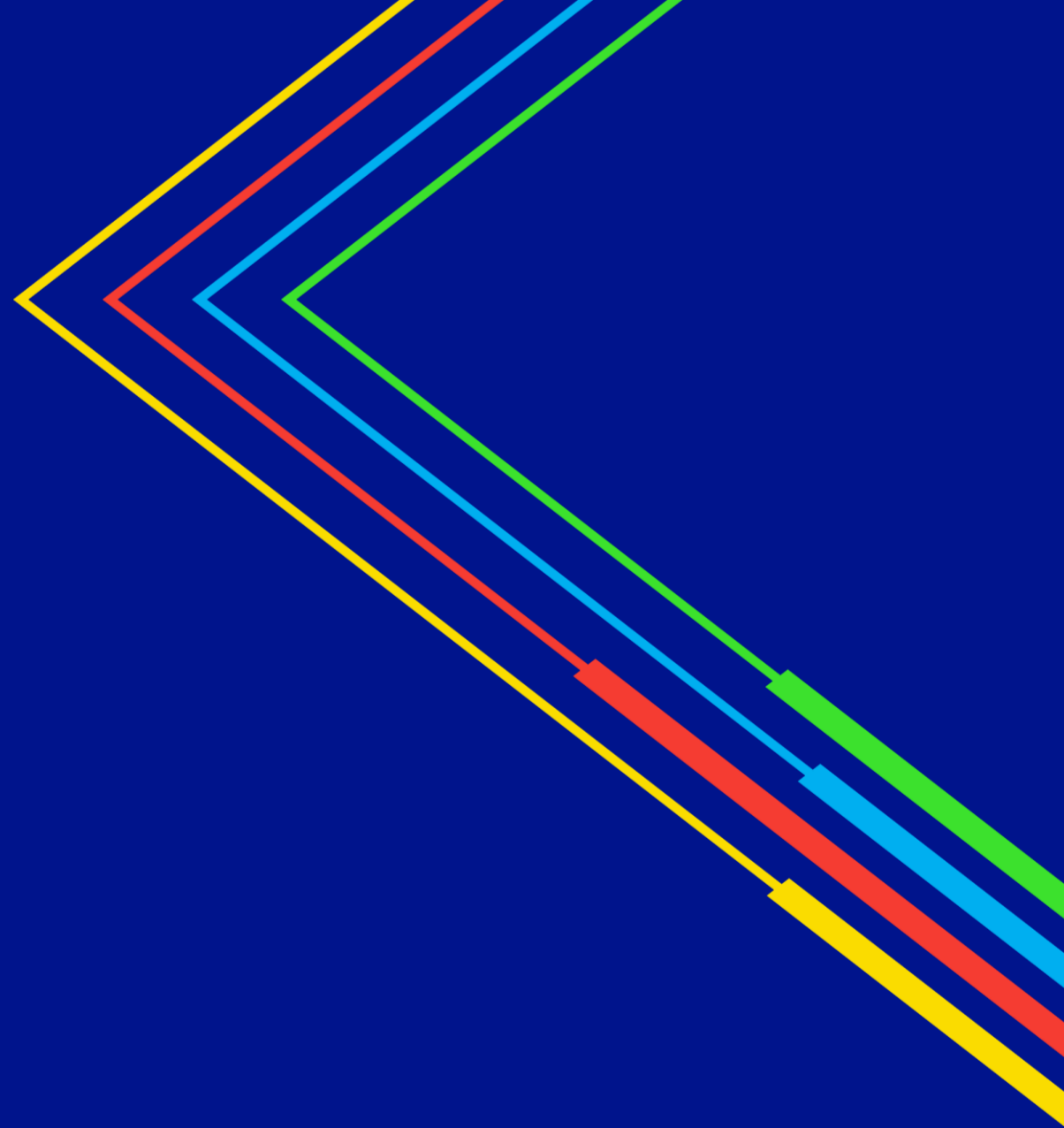


Sector Composition – Electric C&I

2022 Planned Lifetime MWh Goals for C&I Electric Sector

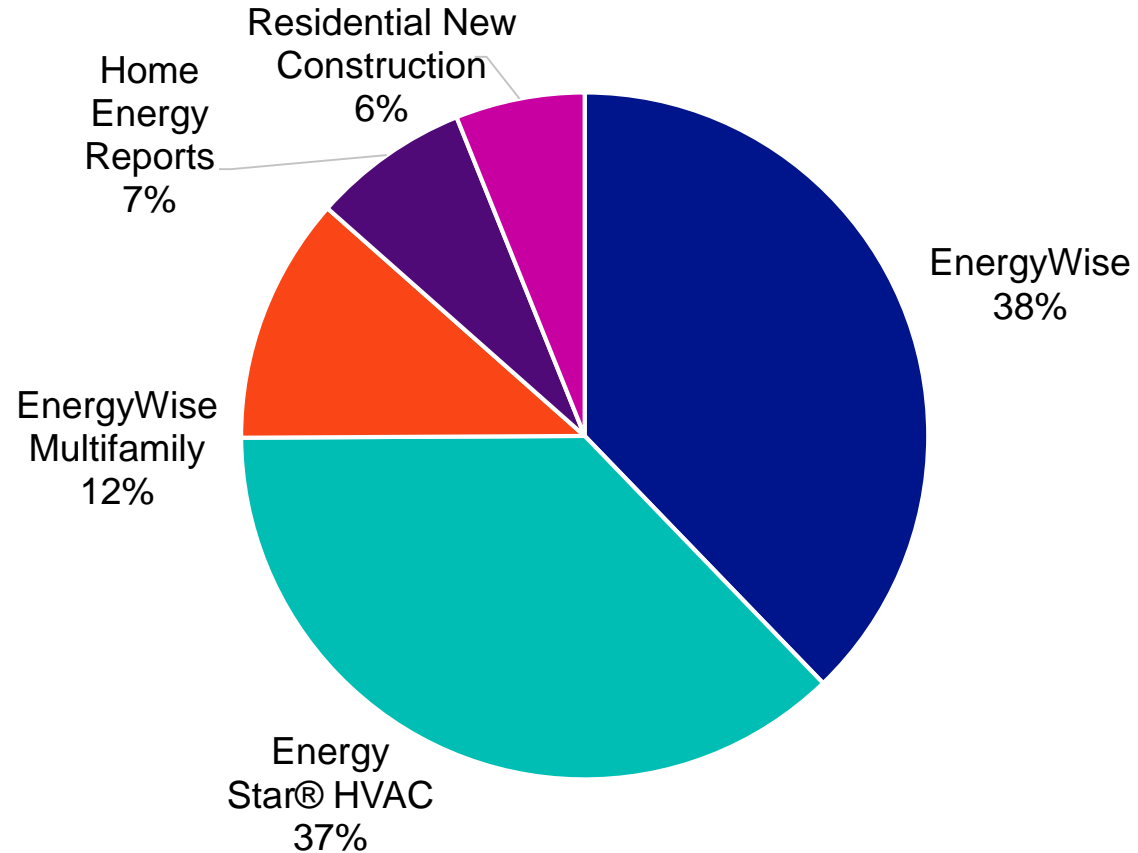


Plan Savings Goals: Natural Gas Energy Efficiency (EE)

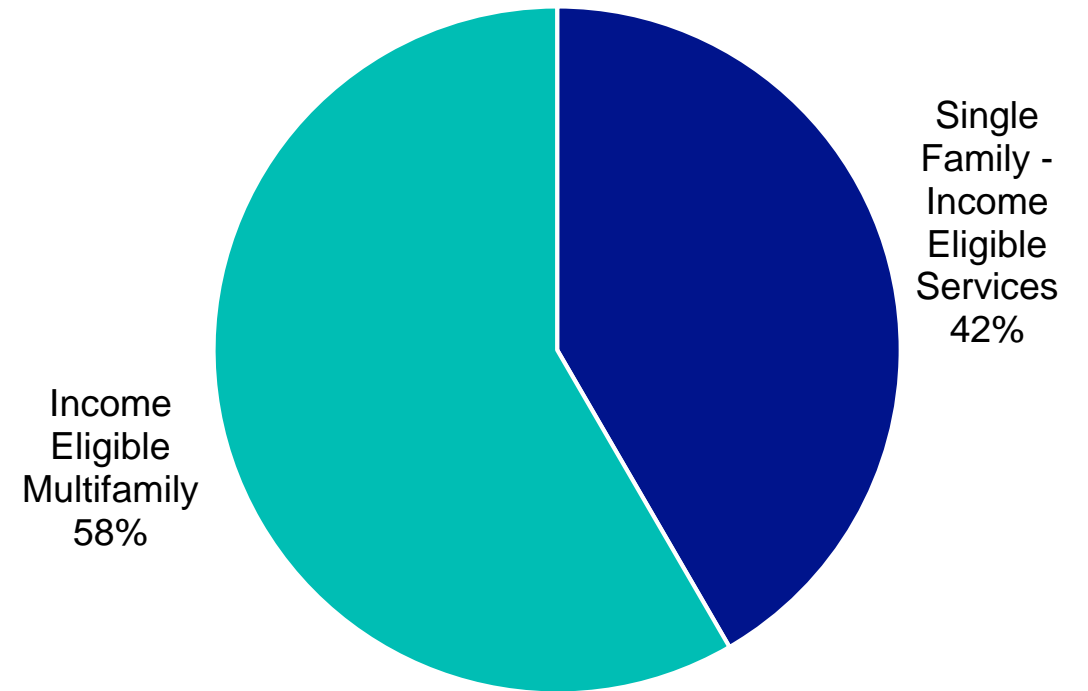


Sector Composition – Gas Residential and Income Eligible

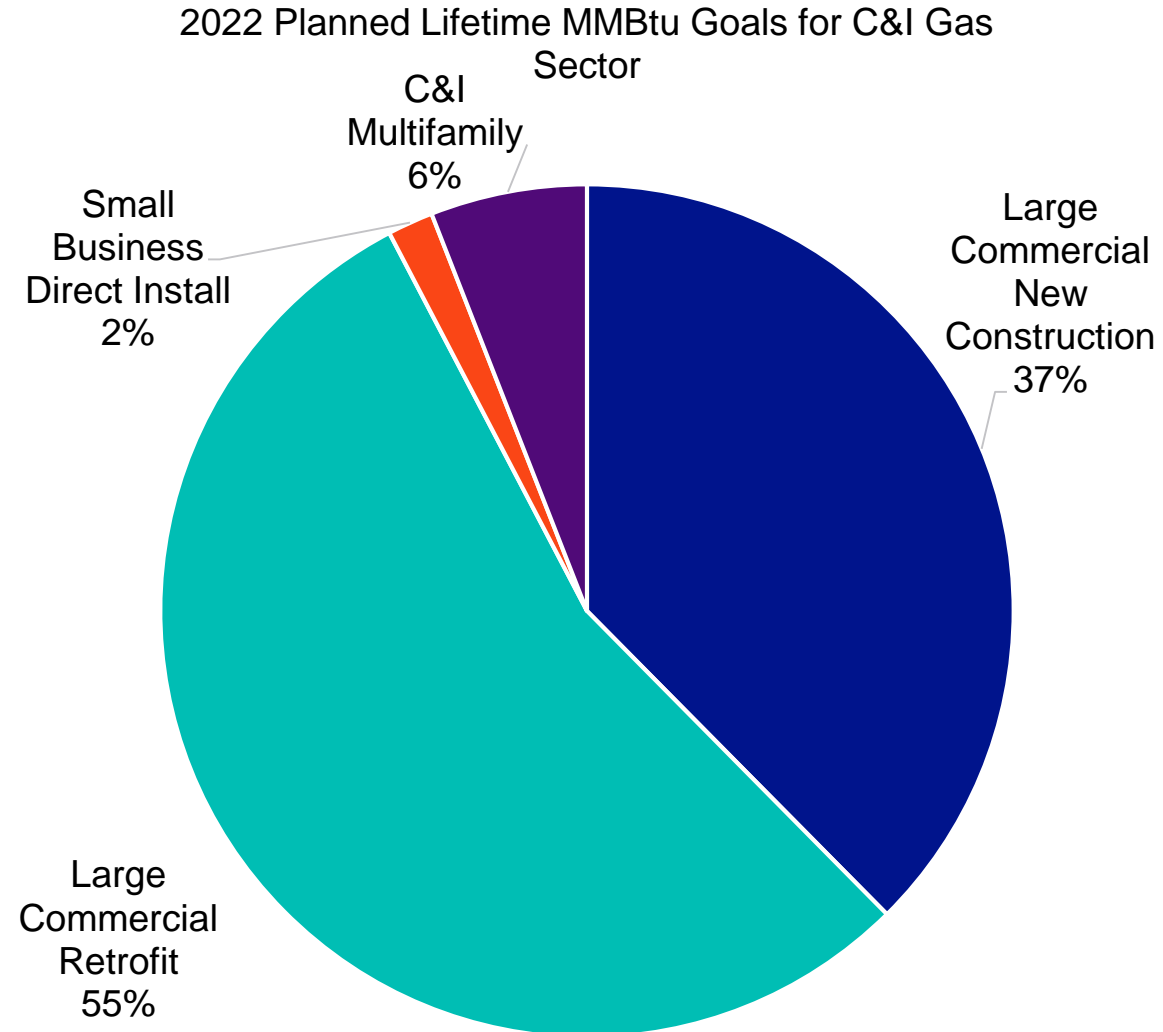
2022 Planned Lifetime MMBtu Goals for Residential Gas Sector



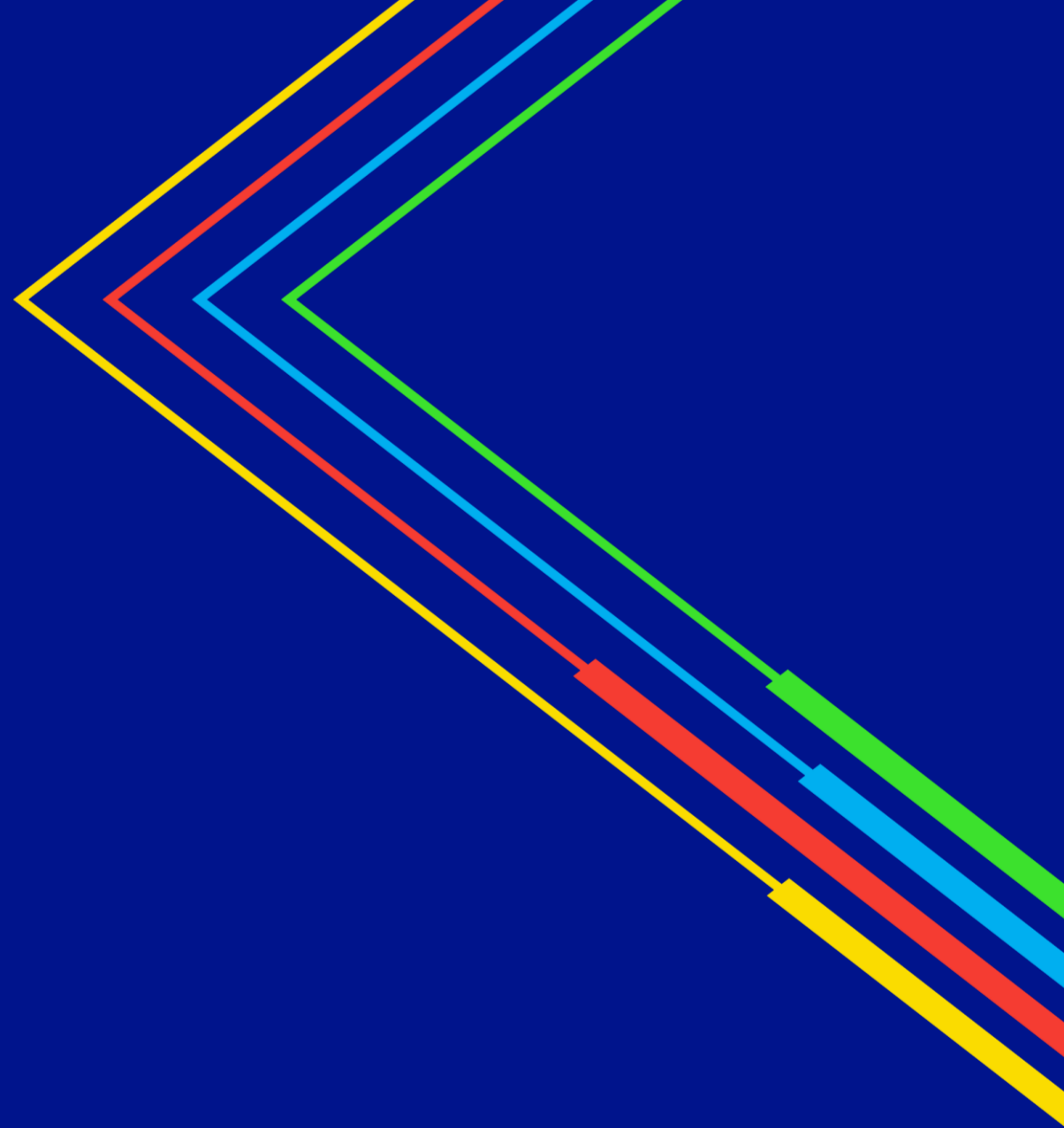
2022 Planned Lifetime MMBtu Goals for Income Eligible Gas Sector



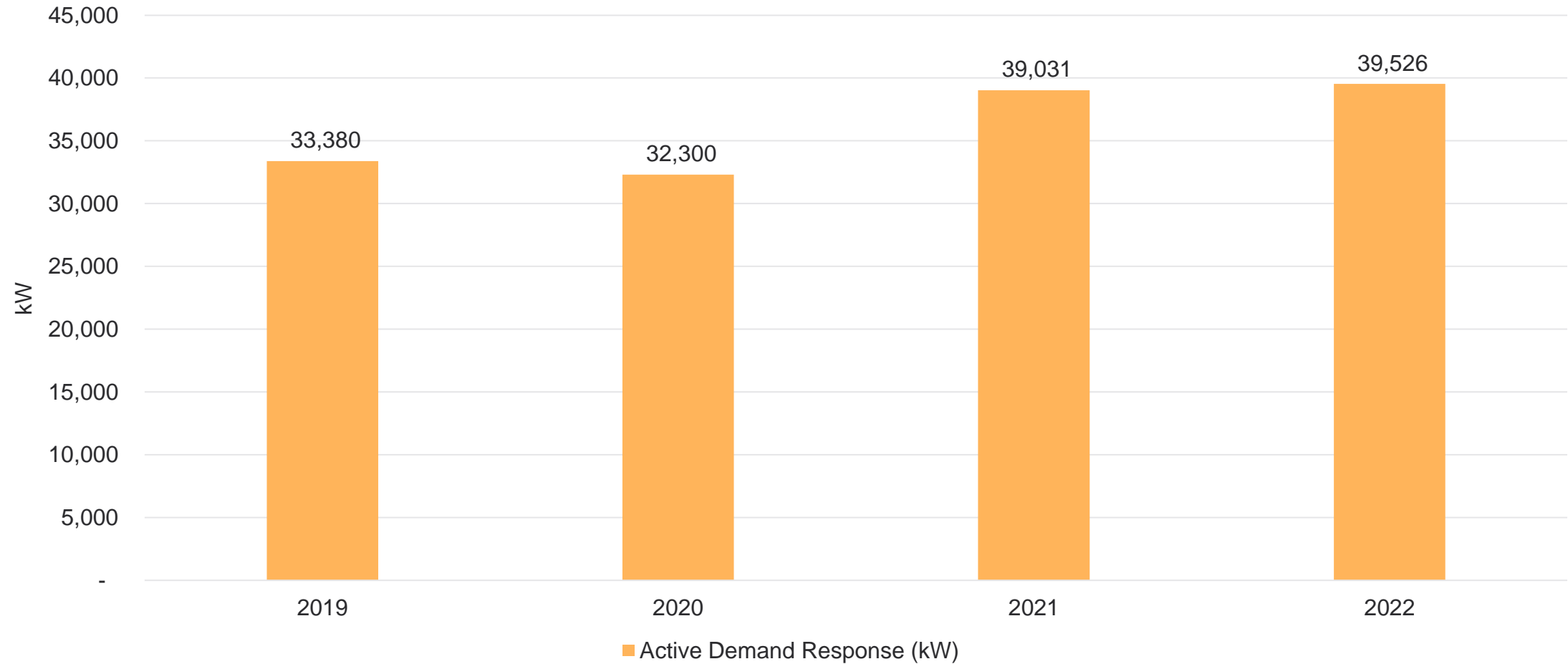
Sector Composition – Gas C&I



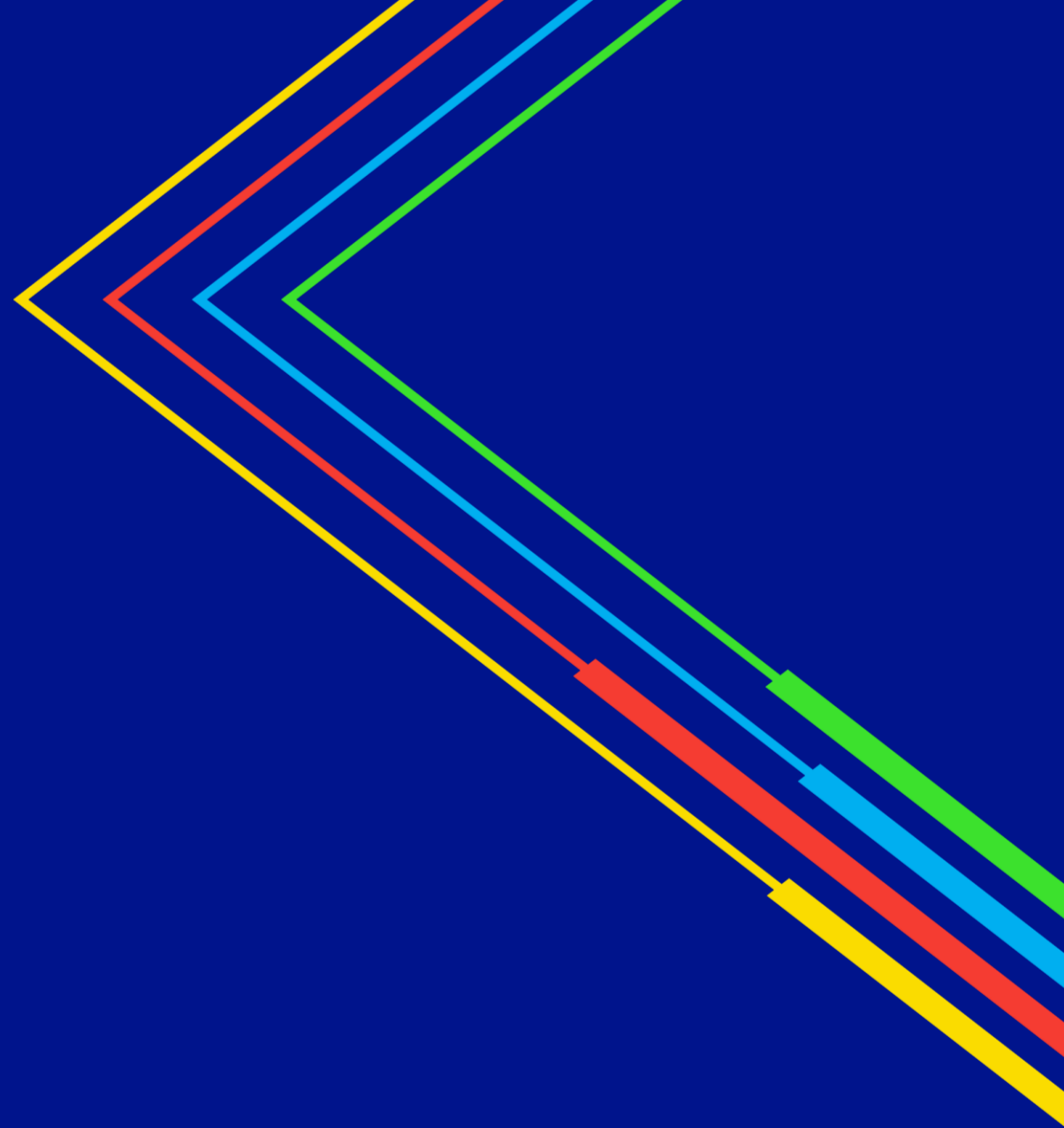
Plan Savings Goals: Electric Demand Response (DR)



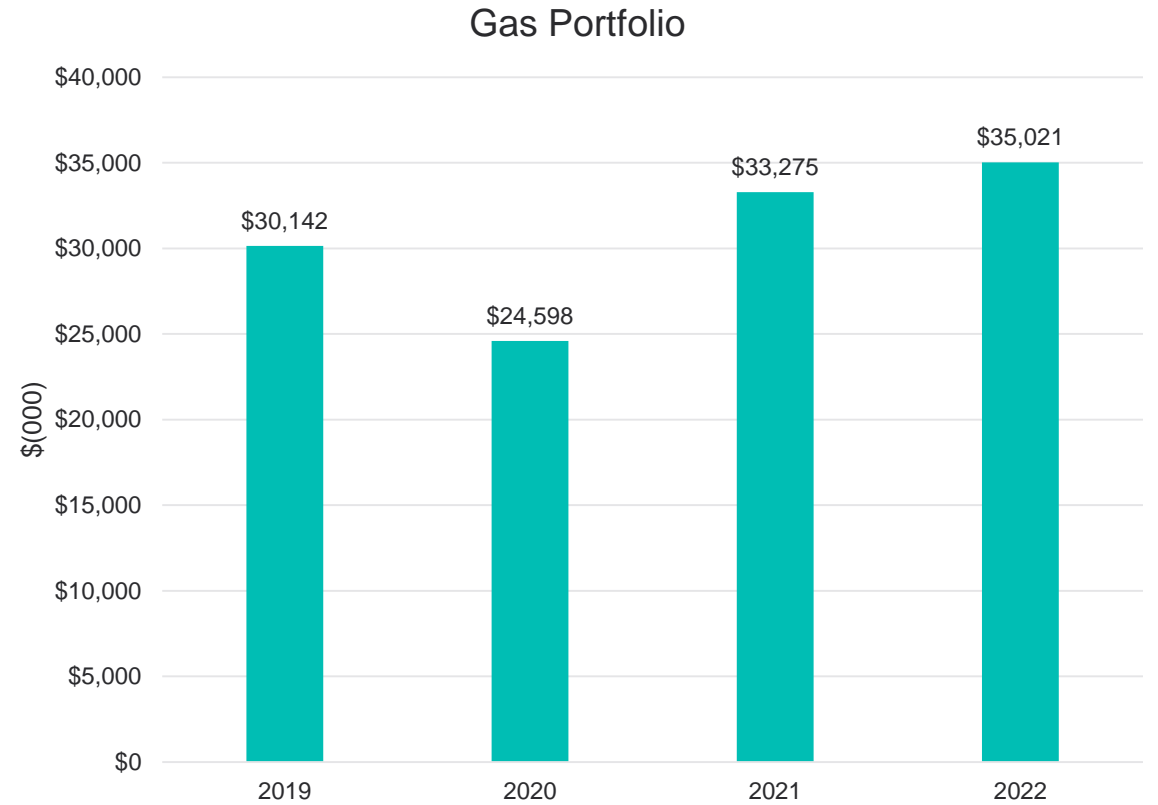
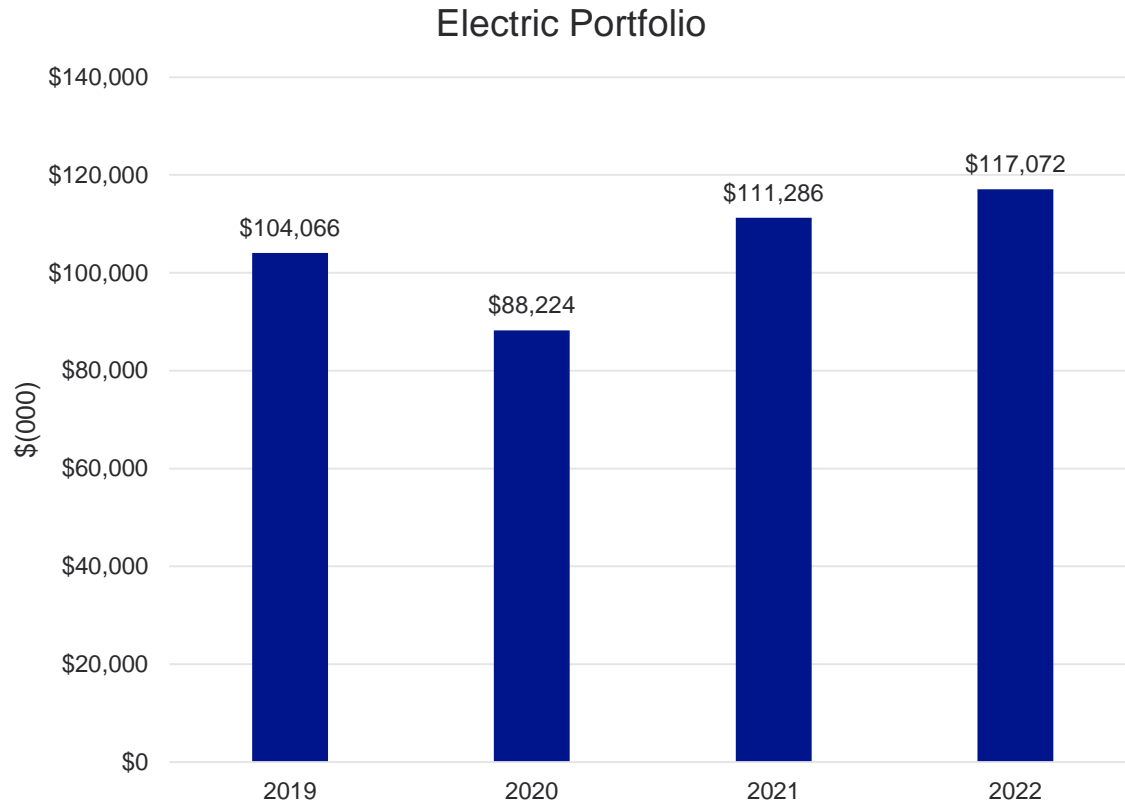
Electric Demand Response



Plan Budget, Surcharge, Rate and Bill Impacts, and Benefits



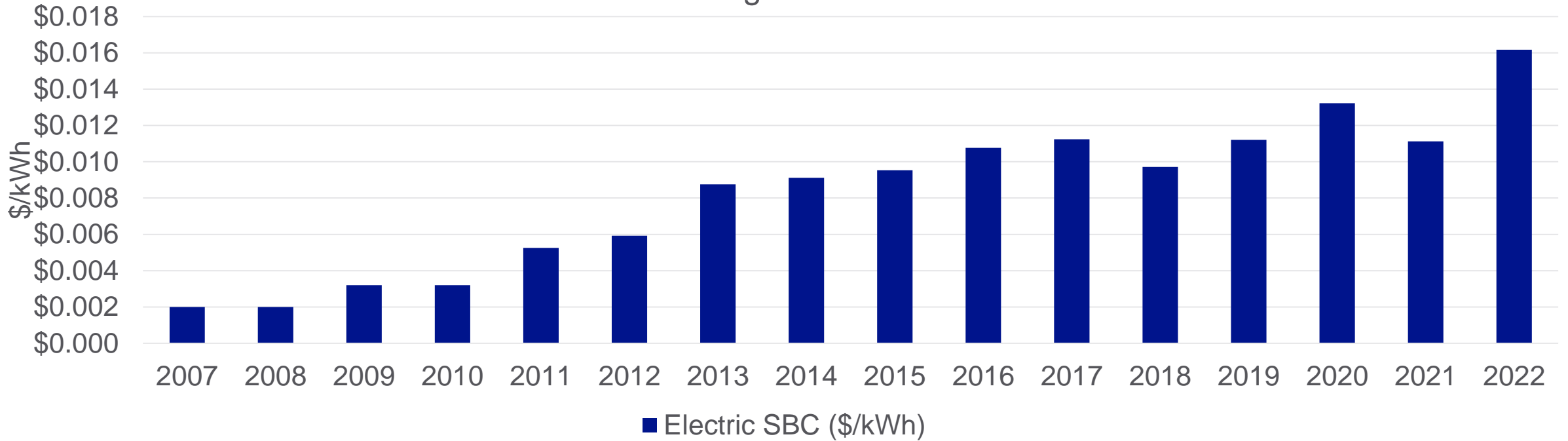
Budget Trend – Implementation Costs



2020 actual program implementation expenses lower due to impacts of COVID-19 Pandemic. 2022 budget represents approximately 5% YoY growth from 2021 approved budgets.

Electric EE Charge History

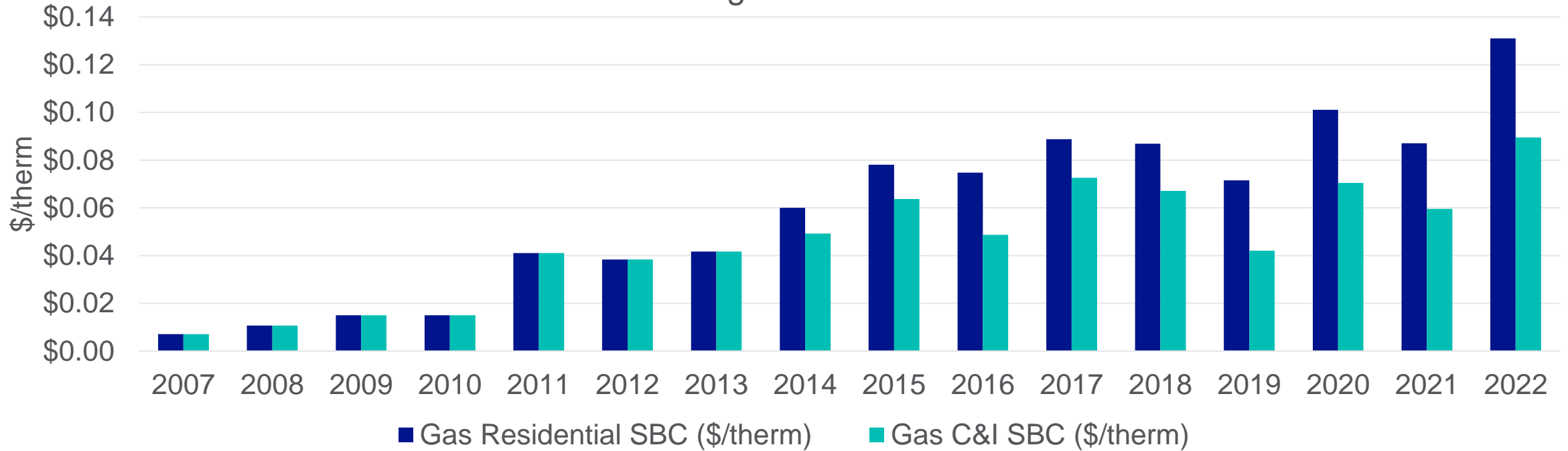
Electric EE Charge Trend 2007 - 2022



| Year | Electric SBC (\$/kWh) |
|--------------------|-----------------------|
| 2021 | 0.01113 |
| 2022 | 0.01618 |
| 2021 - 2022 Growth | 45% |

Gas EE Charge History

Gas EE Charge Trend 2007 - 2022



| Year | Gas Residential SBC (\$/therm) | Gas C&I SBC (\$/therm) |
|--------------------|--------------------------------|------------------------|
| 2021 | 0.0871 | 0.0596 |
| 2022 | 0.131 | 0.0895 |
| 2021 - 2022 Growth | 50% | 50% |

Rate and Bill Impacts

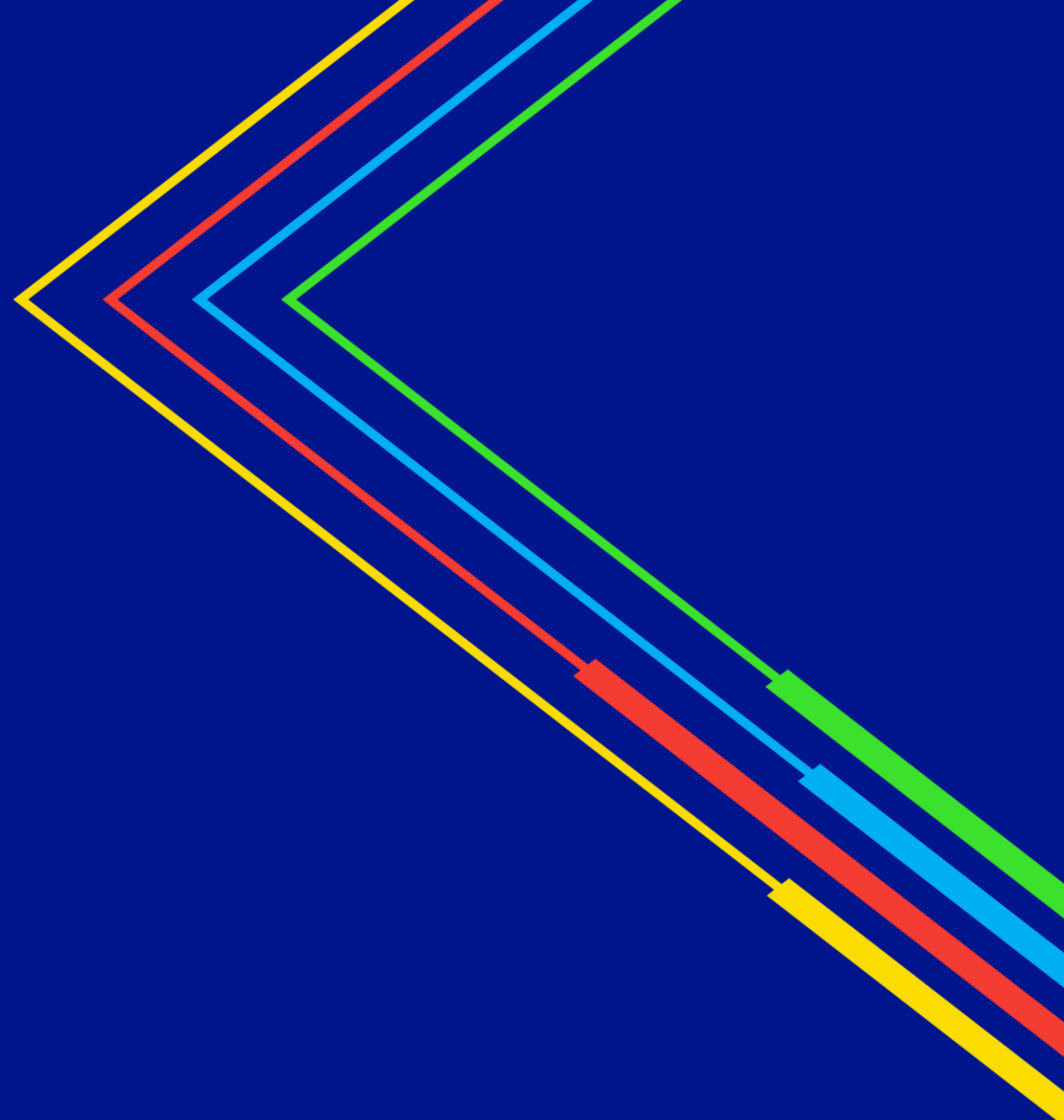
- Analyses assess the long-term impact to rates and average bills due to the 2022 draft plan compared to a counterfactual of no EE programs.
- Electric:** Impact of reductions in lighting savings in the portfolio seen in bill changes. Electric analysis doesn't account for delivered fuel savings. HERs to be split out.
- Gas:** average participants save on bills, with all customer groups seeing increase in rates, reflecting year-over-year change in surcharge

| Electric Sector | Long-term change in rates due to 2022 Programs | Long-Term Average Change in Bills | | |
|--|--|-----------------------------------|------------------|---------------------|
| | | Non-Participants | Average Customer | Average Participant |
| Residential | 0.69% | 0.69% | 0.03% | 0.02% |
| Income eligible | 0.93% | 0.93% | -0.54% | -0.55% |
| Small C&I | 0.84% | 0.84% | -0.17% | -10.58% |
| Medium C&I | 0.52% | 0.52% | -1.16% | -10.30% |
| Large C&I | 0.41% | 0.41% | -1.79% | -4.68% |
| Natural Gas Sector | Long-term change in rates due to 2022 Programs | Long-Term Average Change in Bills | | |
| | | Non-Participants | Average Customer | Average Participant |
| Residential (Model 1: HERs only) | 0.1% | 0.06% | 0.00% | 0.00% |
| Residential (Model 2: All Programs Ex. HERs) | 1.0% | 1.04% | 0.40% | -6.18% |
| Residential (Model 3: All Programs) | 1.1% | 1.09% | 0.37% | 0.57% |
| Income eligible | 1.8% | 1.89% | -0.46% | -4.18% |
| Small C&I | 0.7% | 0.66% | 0.35% | -15.46% |
| Large C&I | 1.2% | 1.17% | -0.40% | -4.36% |

Benefits, BC Ratios, and Cost of Supply

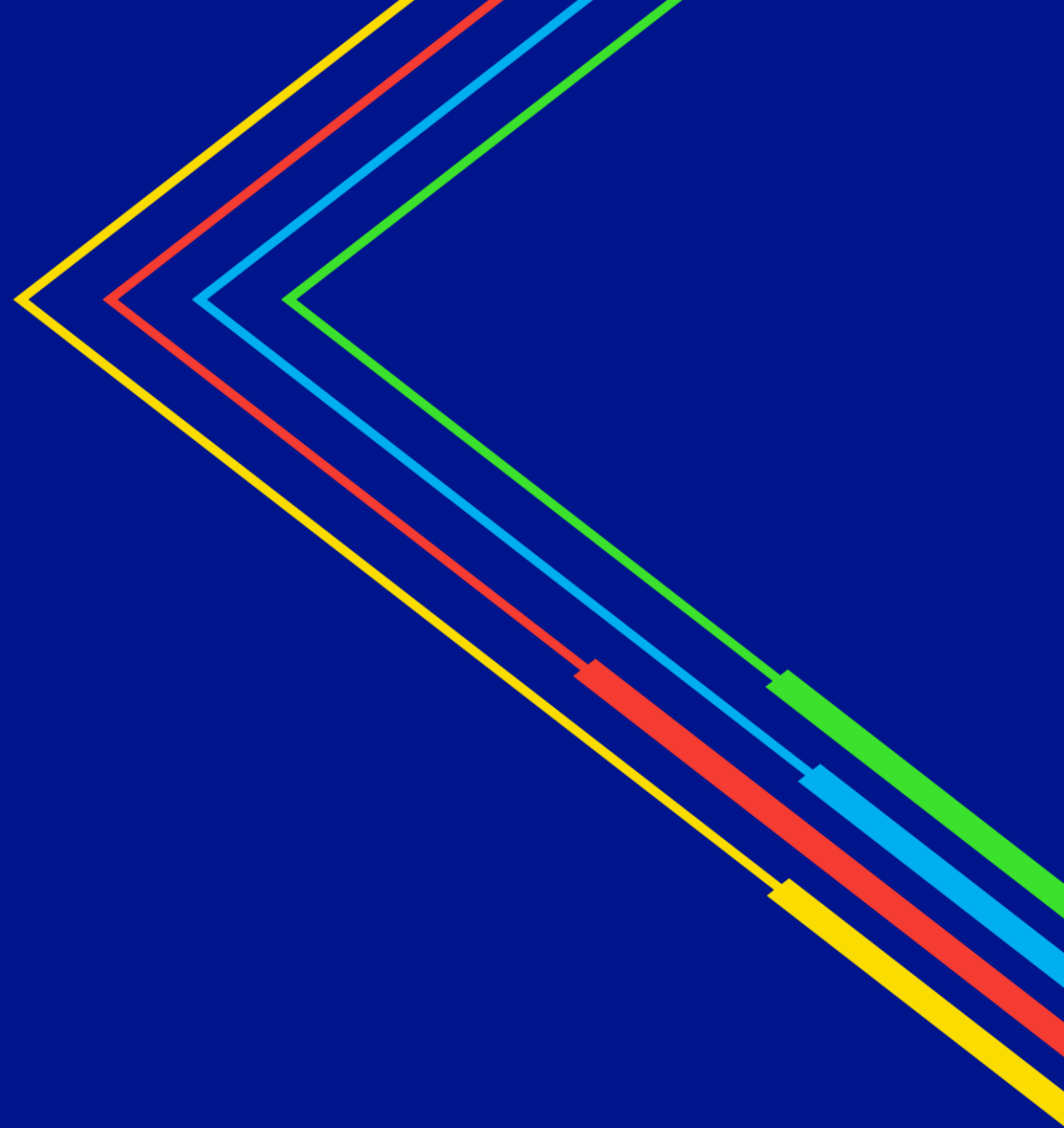
- Energy efficiency is also less than the cost of supply in 2022
 - Electric EE is \$63.2M less than the alternative supply
 - Gas EE is \$15.4M less than the alternative supply
- Electric portfolio will generate approximately \$130M in lifetime benefits. RI Test ratio of 1.63, indicating for every dollar spent \$1.63 in benefits are generated. Total Resource Cost (TRC) test ratio of 1.31 for the electric portfolio
- Gas portfolio will generate approximately \$107M in lifetime benefits. RI Test ratio of 2.26, indicating for every dollar spent \$2.26 in benefits are generated. TRC test ratio of 1.71 for the portfolio
- Three programs are not above 1.00 based on the RI Test

Appendix



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Sector Team Areas of Focus in the 2022 Annual Plan



Key Areas of Focus for National Grid Commercial and Industrial Programs

Small Business Program

- **Weatherization expansion with assistance of RGGI funds**
- HVAC & controls
- Lighting w/ controls
- **Formal customer satisfaction survey**
- Continued outreach to WME and micro-businesses
- Multi-lingual auditing and increasing amount of in person canvassing

CHP

- 13.3 MW system
- Currently in the notification process with the Division
- Carbon capture for horticulture reuse
- Among the lowest cost of savings in the portfolio

Training and Upskilling

- Controls best practices (HVAC and lighting)
- Arrange manufacturer-led training events and incentivize certifications to improve HVAC / building performance

Retro-commissioning

- Clarify processes
- Add new tuning measures
- Expand MBCx offering

Additional prescriptive measures

- Non-lighting
- Based on Slipstream research
- Transparency for customers and contractors

Upstream Pathways

- Increased Upstream HVAC goals
- Increased Food Service Goals (E&G)
- Increased goals for Upstream fixture w/ controls

Lodging

- Increased focus on PTHP and GREMS
- More holistic marketing

Commercial Real Estate

- Best practices working group

Claimable C&I lighting savings will decline substantially as a result of Evaluation impacts.

Key Areas of Focus for National Grid Residential Programs

Marketing & outreach

- All programs: Utilize Non-participant Study and Multifamily Census studies to drive customers – particularly nonparticipants – to implement comprehensive energy efficient measures
- MF: Utilize a Content Hub
 - showcase the MF industry expertise
 - segment content based on specific audiences
 - personalize user experiences

Customer Financing

- MF: Explore financing options for landlords and property managers to help reduce participation barriers pertaining to upfront co-payments.
- HVAC: Align within the HVAC program

Training and Upskilling

- Continue to offer program-specific contractor trainings
- Increase customer outreach to promote trained contractors

Equity

- All programs: Incorporate Equity Working Group (EWG) recommendations as feasible and as funds allow

Weatherization Emphasis

- EW, HVAC: increase optimal weatherization and sizing of equipment
- Cross-promotion
- Best practice from air source heat pump process

IES Emergency Oil/Propane Heating System Replacements

- Develop process to reduce the number of O/P emergency heating system replacements
- Identifying financing opportunities

Non-Energy Impacts (NEIs)

- Focus on NEI benefits of health & safety & quantitative savings
- Leverage the MA Non-Energy Impact Study to quantify/monetize NEIs in RI MF

Claimable Residential lighting savings will decline substantially as a result of evaluation impacts.