

# 2021-2023 Three-Year Energy Efficiency Plan

EERMC

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**nationalgrid**



# 2021-2023 Three-Year Plan Context

- Three-Year Plan (3YP) is the illustrative plan; 2021 Annual Plan includes binding savings goals, budgets, surcharge, performance incentive opportunity
  - PIM defined in 3YP and first application detailed in the 2021 Plan.
- 3YP demonstrates the key areas of focus, broad strategies, and illustrative savings goals and budgets
- In this plan, in contrast to past 3YPs, the Company included a range of savings goals between a “base case” and “high scenario” for years 2022 and 2023
  - 2021 matches to the 2021 Annual Plan; no range is provided.
- At present, the Company does not have a path to reaching the “high scenario” in years 2022 and 2023. Each subsequent annual planning process will examine the range of illustrative goals in the Three-Year Plan.

# 2021-2023 Three-Year Plan – Base Case and High Scenarios

- **Base Case:** Details the best information available at this time on the available savings and costs that are achievable in out years
  - Output of our detailed bottom-up planning process
- **High Scenario:** Escalates savings and budgets in 2022 and 2023 from the Base Case to achieve the “EM&V adjusted Mid” Market Potential Study Scenario in Year 2023.
  - Similar to the application of an "innovation adder" in the 2018-2020 Three-Year Plan
  - CHP and Behavioral efficiency offerings are not scaled in the “High Scenario” due to known market opportunities
  - DR in the “High Scenario” only scaled commercial DR

# Key Areas of Focus for the 2021 – 2023 Period

- The Company puts forward these six primary strategies across Commercial and Industrial, Residential, and Income Eligible sectors.

Deepen **customer relationships** and **increase participation** across all customer classes.

Drive **comprehensive measures**, tailoring programs to customer- and technology-based opportunities.

Expand **demand response offerings**

Explore **cutting-edge technologies**, including heat pumps, to the extent permissible.

- Cross-cutting all programs, the Company proposes to:

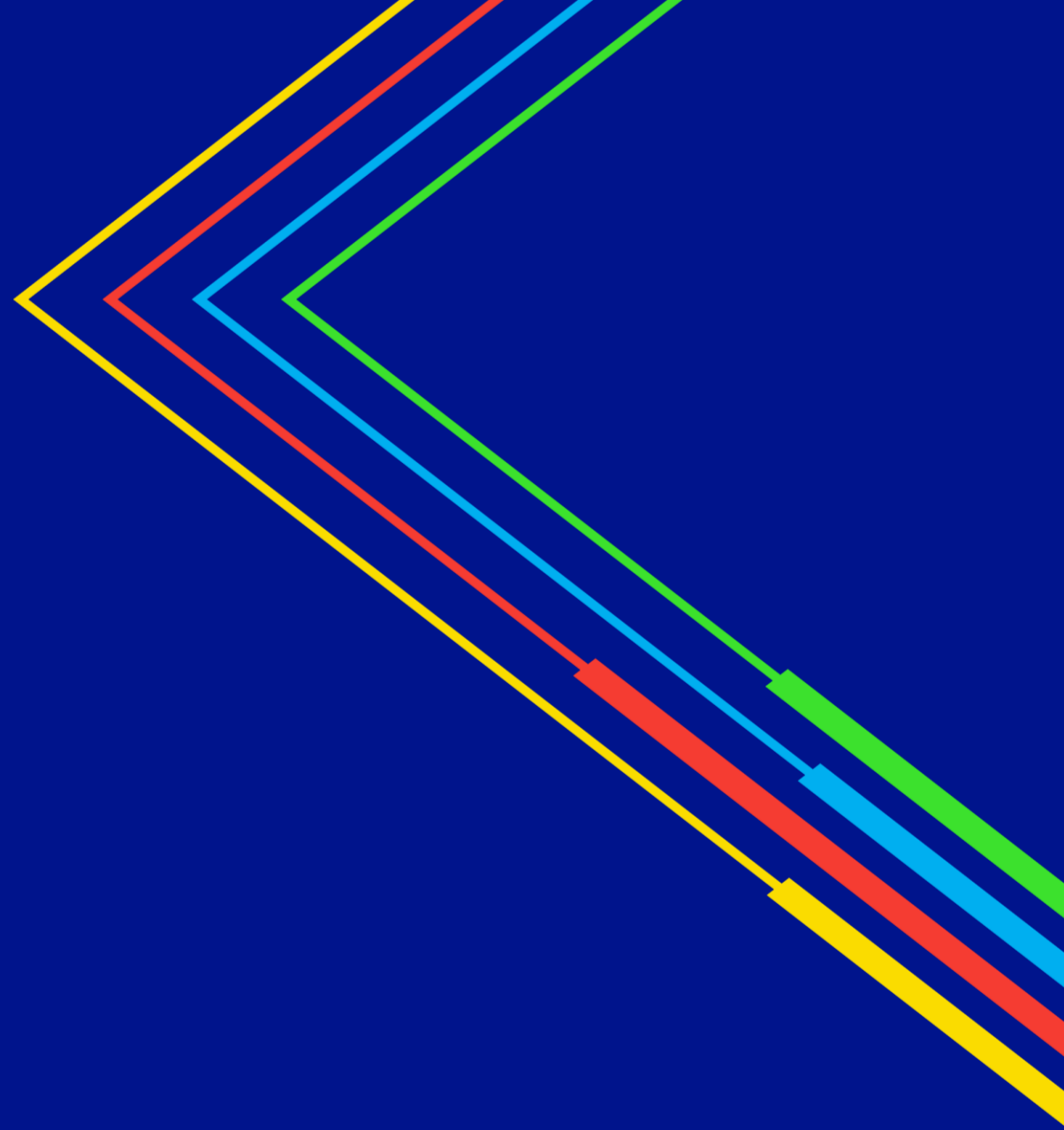
Restore and improve Rhode Island's efficiency industry in response to COVID-19 impacts through investments in workforce and program equity

Explore alternative financing and funding sources to support program development and customer adoption to maintain flat surcharges in 2021 and minimize surcharge impacts in 2022 and 2023

# Performance Incentive Mechanism (PIM)

- Per the Standards, PIM is proposed in the Three-Year Plan
  - Annual Plan provides the specific earning opportunity for the program year
  - PIM is the result of discussions among National Grid, OER, DPUC, and C-Team that have taken place throughout the planning process
- New PIM uses a net benefits framework: The Company is eligible to earn a portion of the benefits (excluding economic benefits) the programs generate, less the cost to achieve those benefits
- Performance continues to be measured at the sector level (resi, income eligible, C&I). Earning threshold begins at achievement of 75% of net benefits in sector, capped at 125% of net benefits in sector. Linear between threshold and cap.
- In each annual plan, specific components including the thresholds, earning opportunity and allocation to sectors will be revisited.
- In 2022 Annual Plan the Company also commits to allocate a portion of the earning opportunity to an equity metric, with data gathering to support that metric ongoing at present.

# Sector Focus Areas



# Commercial and Industrial - 3YP Objectives

- Create new market segment designs to engage new customers and improve comprehensive savings adoption
  - Telecommunication Initiative
- Design program enhancements to increase participation
  - Equipment and Systems Performance Optimization (ESPO), Small Business Direct Install
- Enable comprehensive measure adoption
  - New pathways for Zero Net Energy Ready, Whole Building Energy Use Intensity Reduction, and Whole Building Streamlined
- Evaluate and address energy efficiency barriers
  - Documented approach to addressing gap between goal and targets

# Commercial and Industrial - 3YP Enhancements and Innovations

- Invested in enabling strategies (e.g. Energy Management Framework Platform)
  - Catalog major equipment at the customers facility
  - Leverage database for energy action plans
  - Integration of financial mechanisms earlier in the process
- Created market strategies for newer technologies such as fuel cells, biofuels for CHP, and gas heat pumps
- Expanded market sector approach to include Telecomm Initiative
- Modified New Construction program design for easier participation and created Energy Use Intensity goal tier
- Mapped strategies to increase Active Demand Response
- Committed to studying bundled incentive tier for comprehensive energy measures
- Increased workforce development budget to expand the size and skillset of the efficiency professionals



# Multi-Year Strategies

- LCP Standards indicate that the Company should identify multi-year strategies.
- Company identified two in the C&I sector:
  - Combined Heat and Power (CHP)
  - Continued RIIB Efficient Building Fund (EBF) support
- CHP projects have long developmental timelines and a prospective pipeline into 2023. Identified estimated savings and incentives costs for these projects
  - Does not replace the separate screening and notification processes for CHP
- RIIB EBF transfer is intended to continue support to municipalities and quasi-state agencies borrowing funds to complete efficiency projects

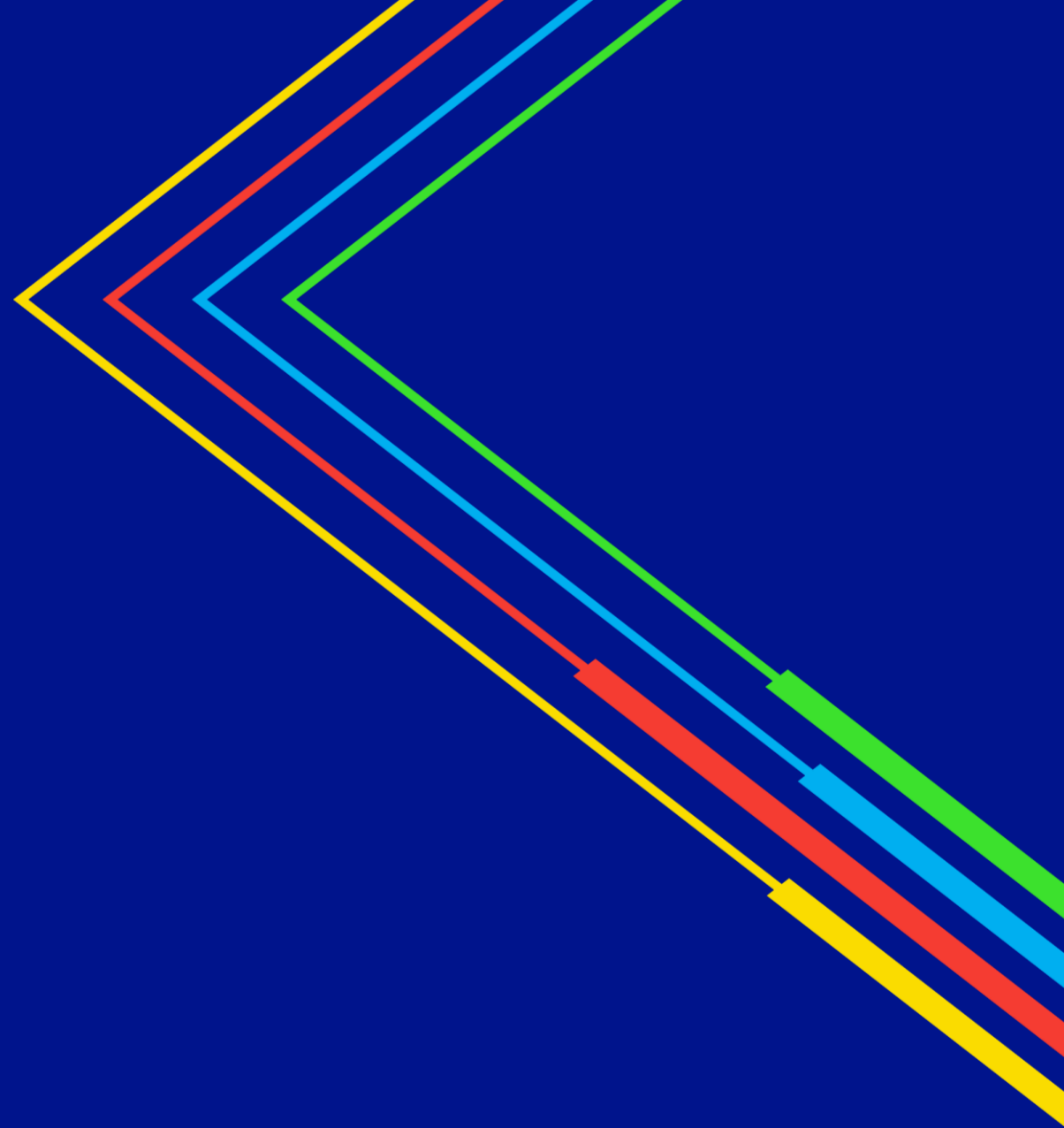
# Residential - 3YP Objectives

- Composition of residential sector savings is changing: transition from lighting to heating, cooling, hot water equipment, weatherization, and products
  - Bundled incentives approach
- Design program enhancements to increase participation
  - 100% weatherization incentive, Zero-Net Energy New Construction services, Income Eligible Services third-party support
- Enable comprehensive measure adoption
  - Cross-program promotion, bundled incentives, rebate design
- Evaluate and address energy efficiency barriers
  - Stakeholder feedback for mitigation of barriers

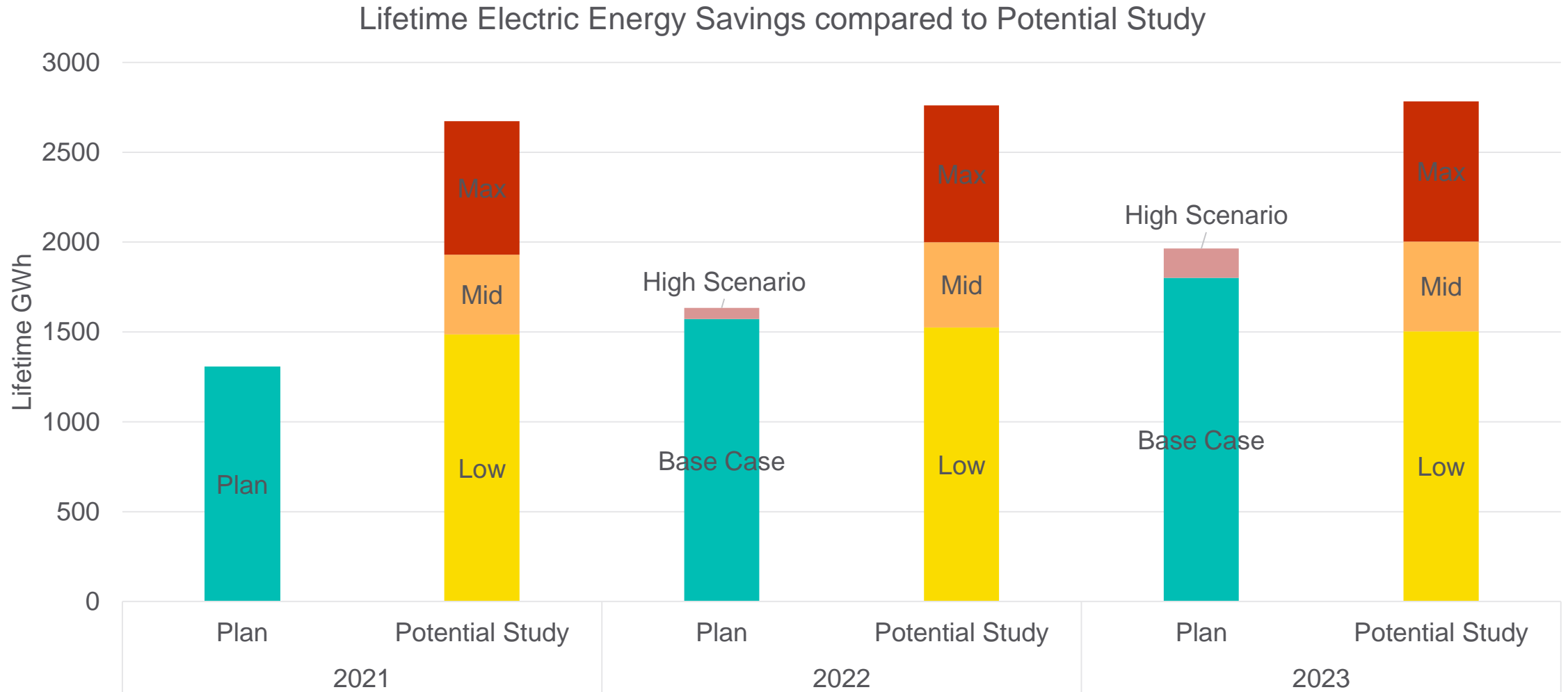
# Residential - 3YP Enhancements and Innovations

- Identified opportunities to increase equitable participation across all customer segments
  - Strategically target education, marketing, and follow-up
  - Workforce development to build capacity and expand skillset
  - Leverage insights from Non-participant Study and Multifamily Census
- Aimed for broader penetration of EE and DR to new participants
  - New financing opportunities
  - Collect renter data
  - Transition New Construction Program to a Zero Net Energy Program
- Secured deeper savings from more continuous and comprehensive engagement with existing program participants
  - Enhance incentives, education and marketing
- Built upon recent successes in reducing reliance on lighting savings
  - 100% landlord incentive for SF (1-4 units)

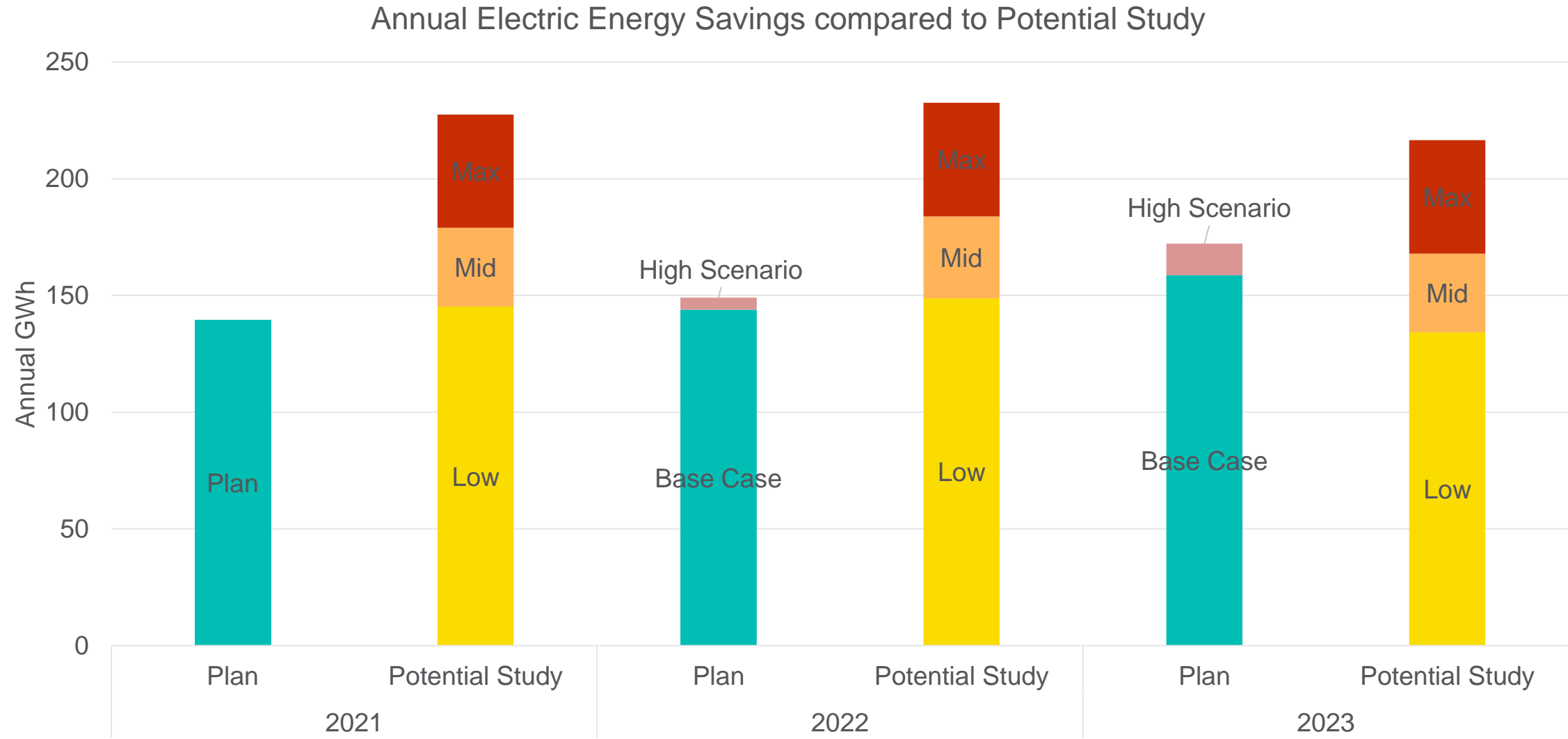
# Final Plan by the Numbers: Savings, Benefits, Budgets



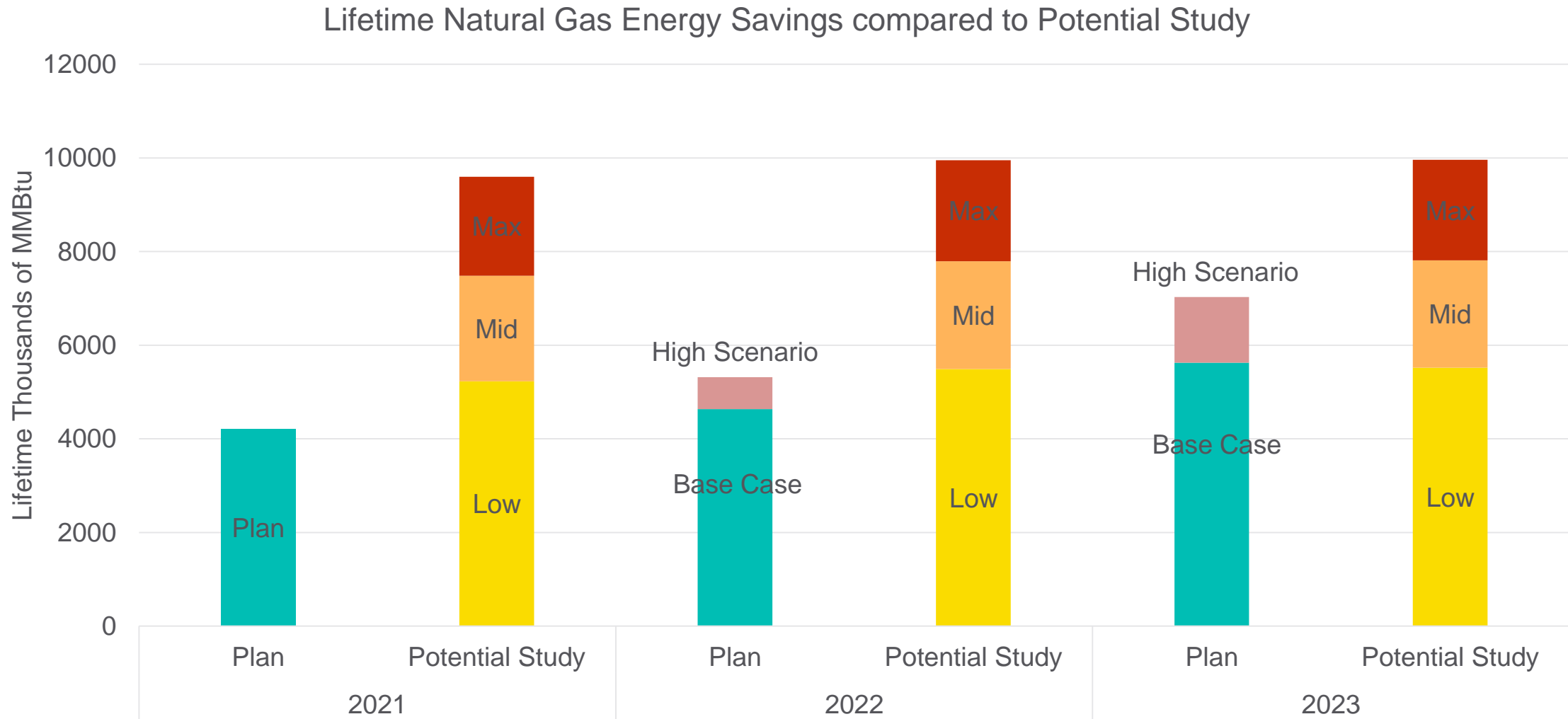
# Lifetime Electric Energy Savings Compared to Potential Study



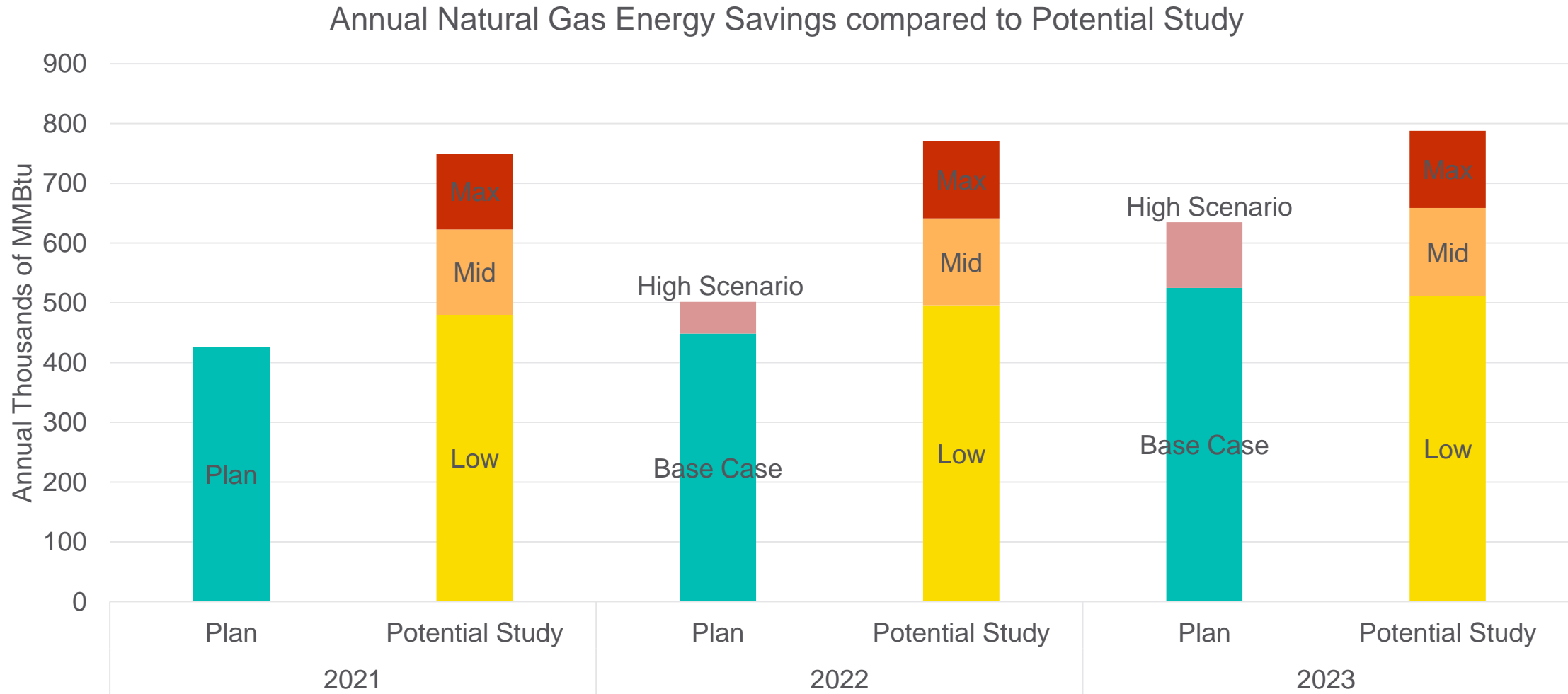
# Annual Electric Energy Savings Compared to Potential Study



# Lifetime Natural Gas Energy Savings Compared to Potential Study

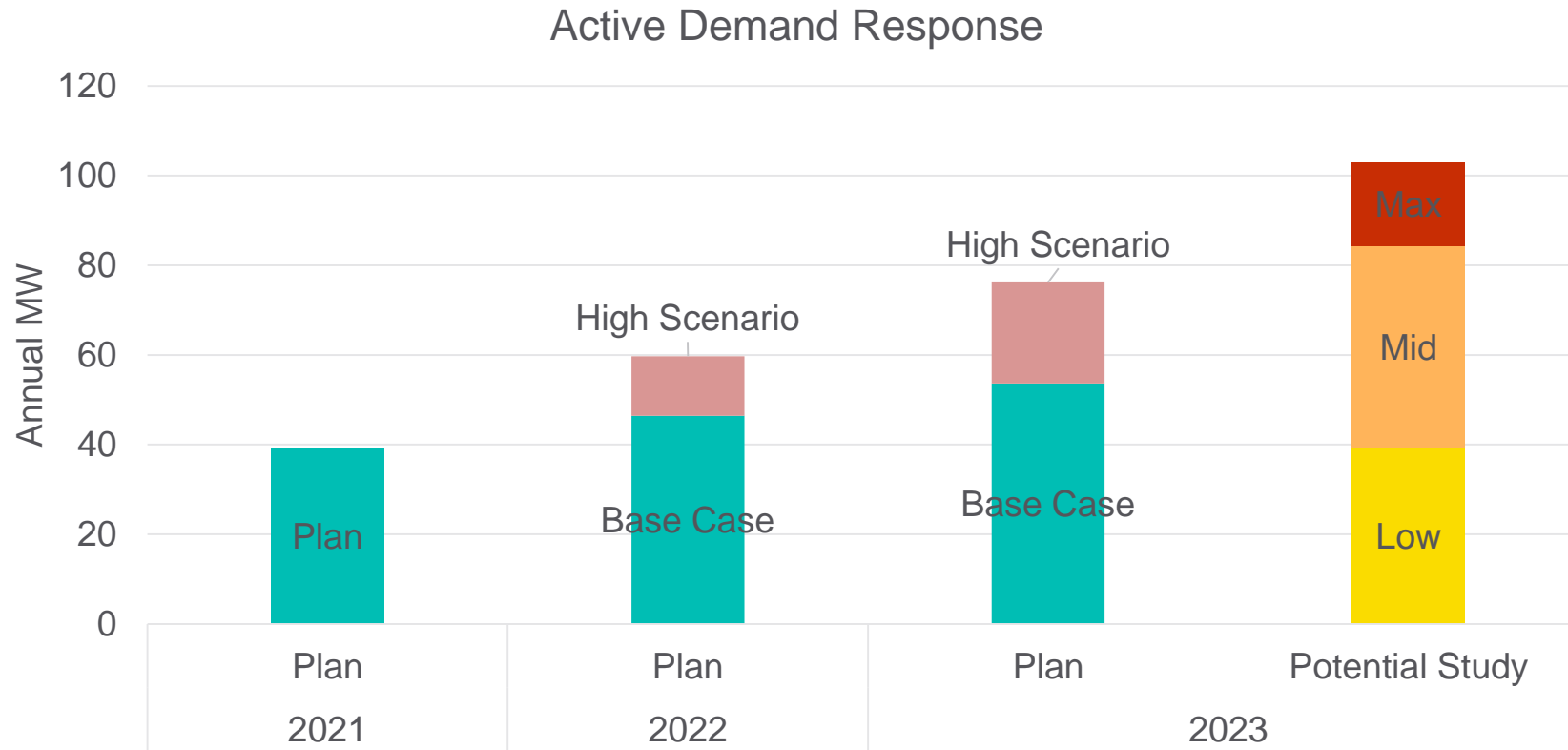


# Annual Natural Gas Energy Savings Compared to Potential Study



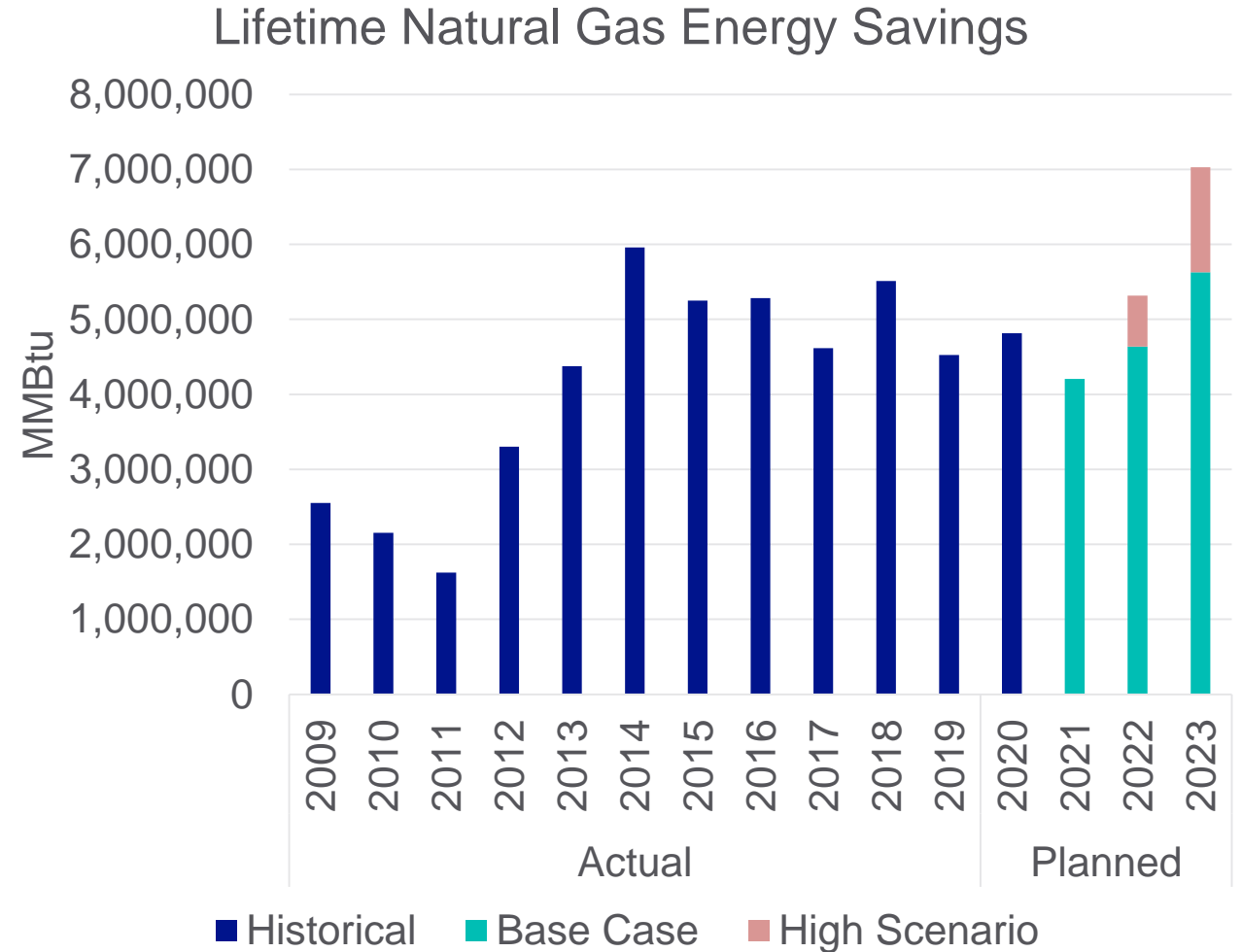
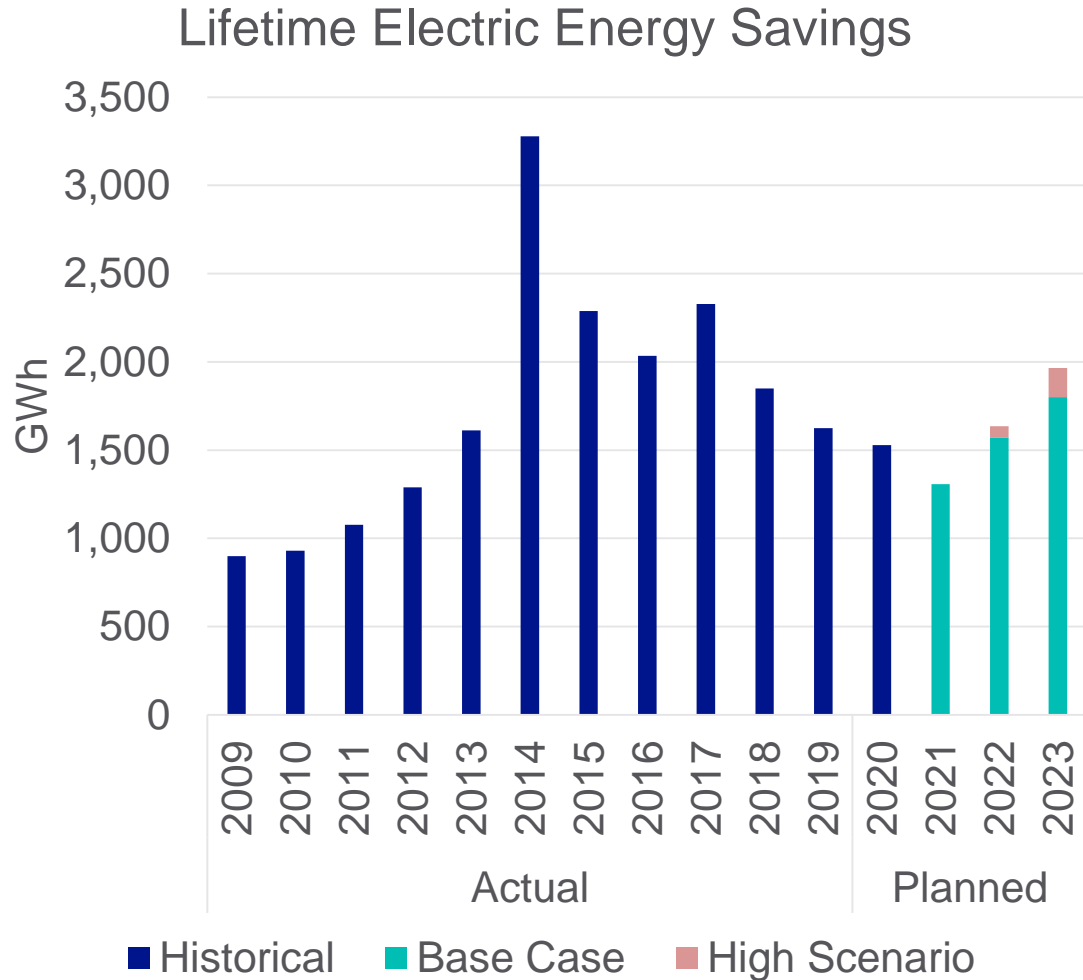


# Active Demand Response Compared to Targets and Potential Study

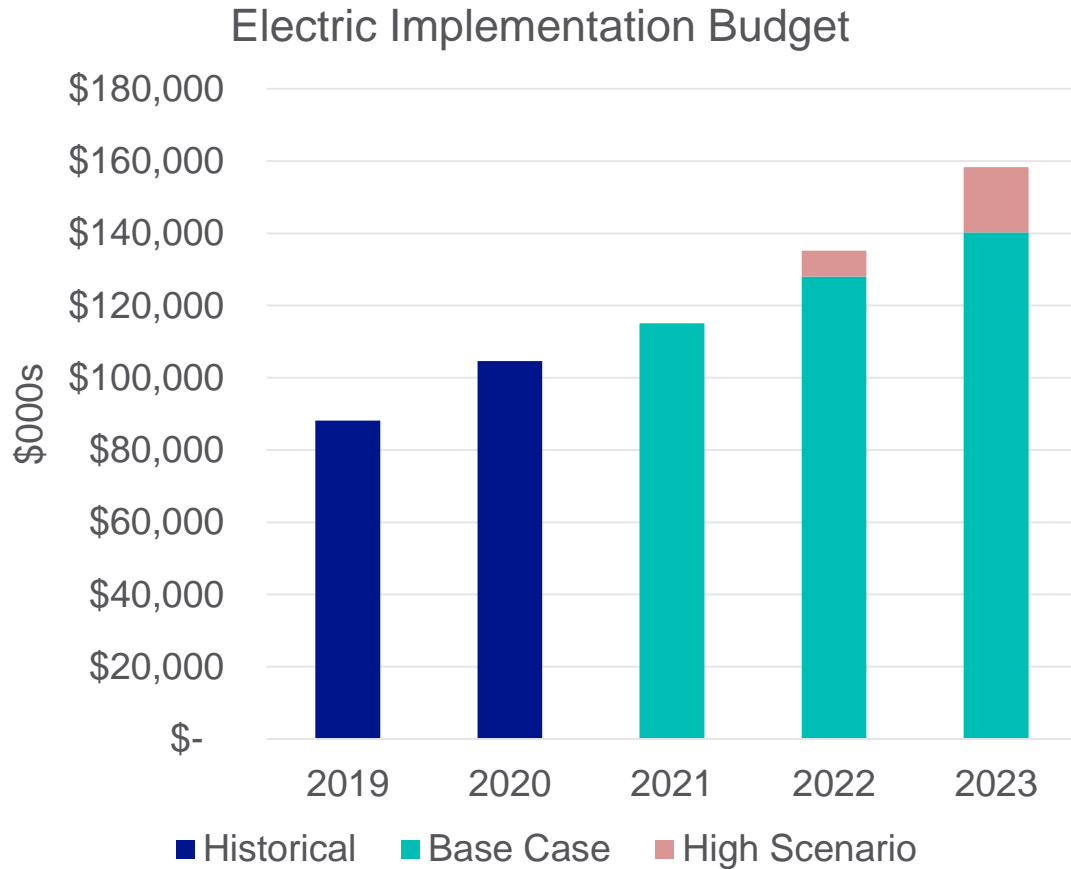


Active demand response shows opportunities for continued growth in each year of the plan; reaching “EM&V Adjusted Mid” MPS Scenario in 2023

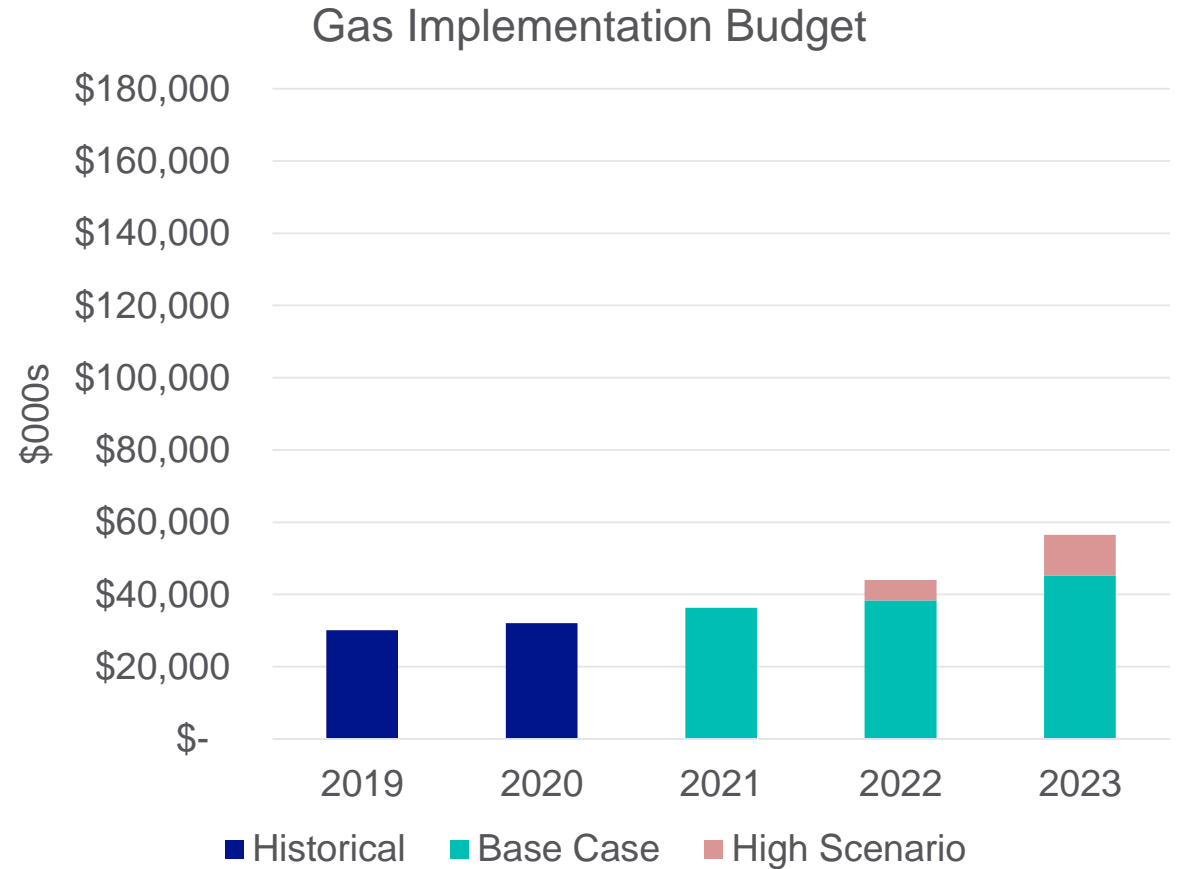
# Energy Savings Goals – Historical Perspective



# Electric Costs

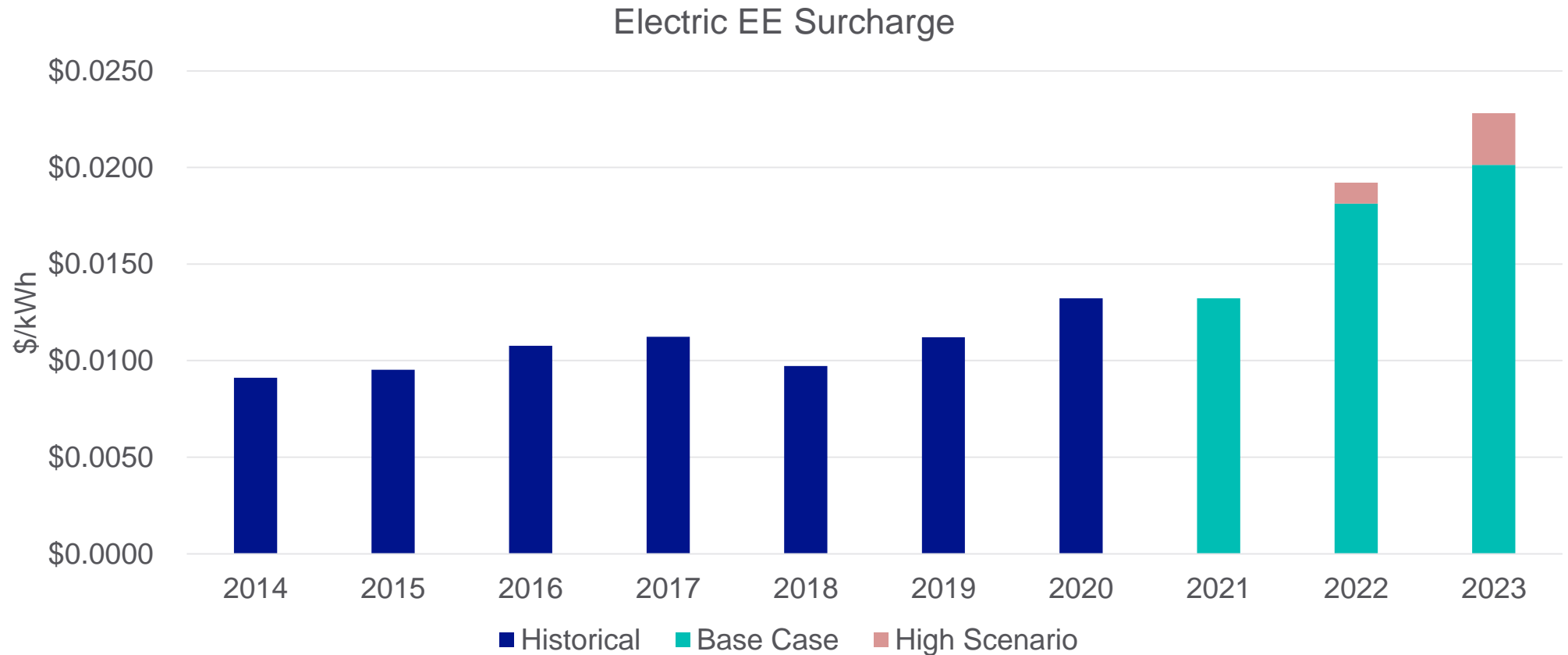


# Natural Gas Costs



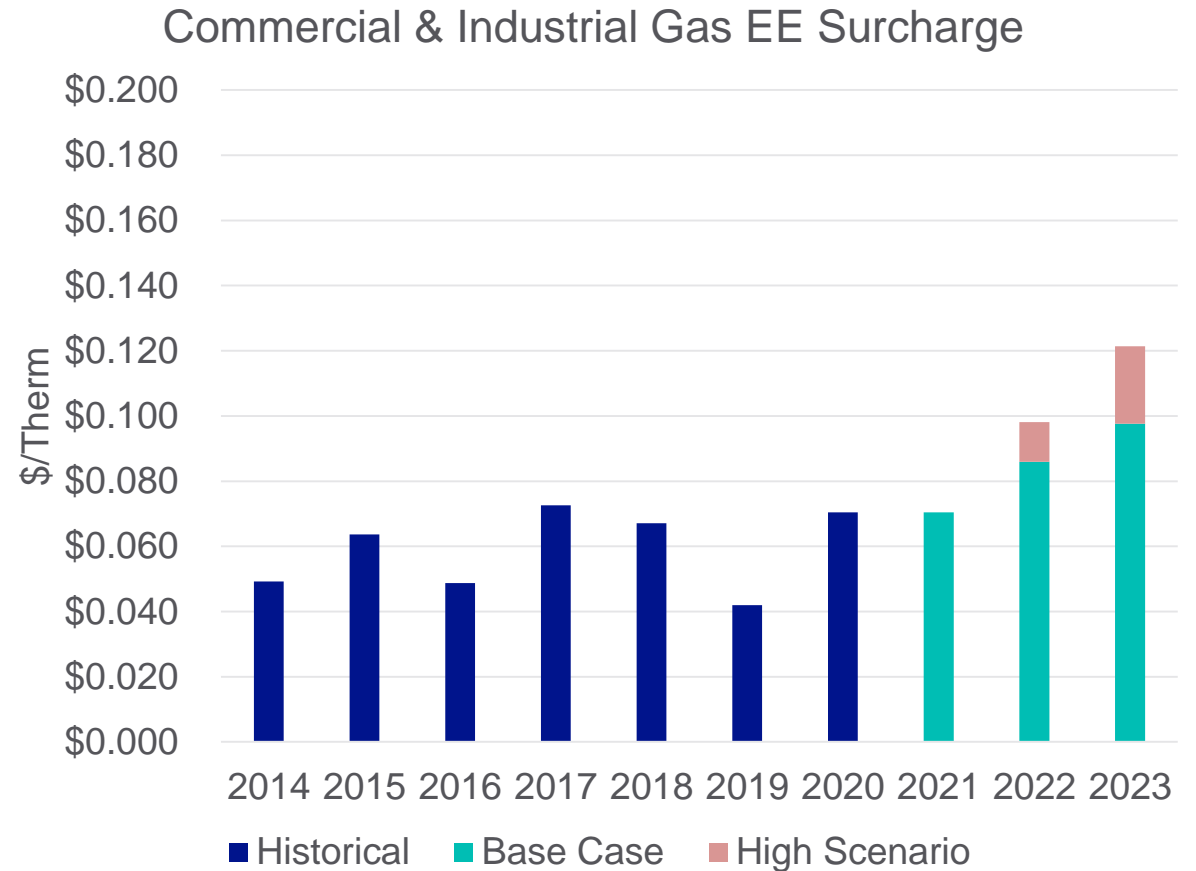
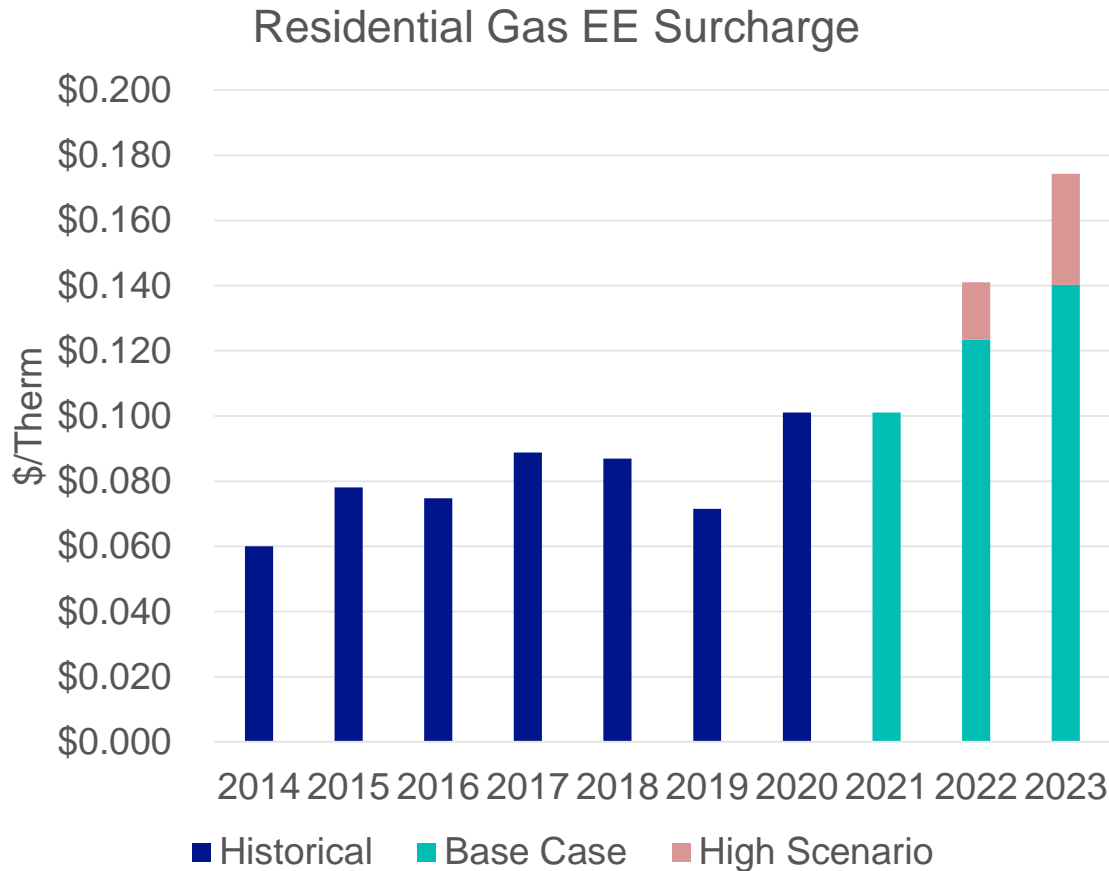
Note: These do not include any performance incentive earning opportunity

# Electric EE Surcharges



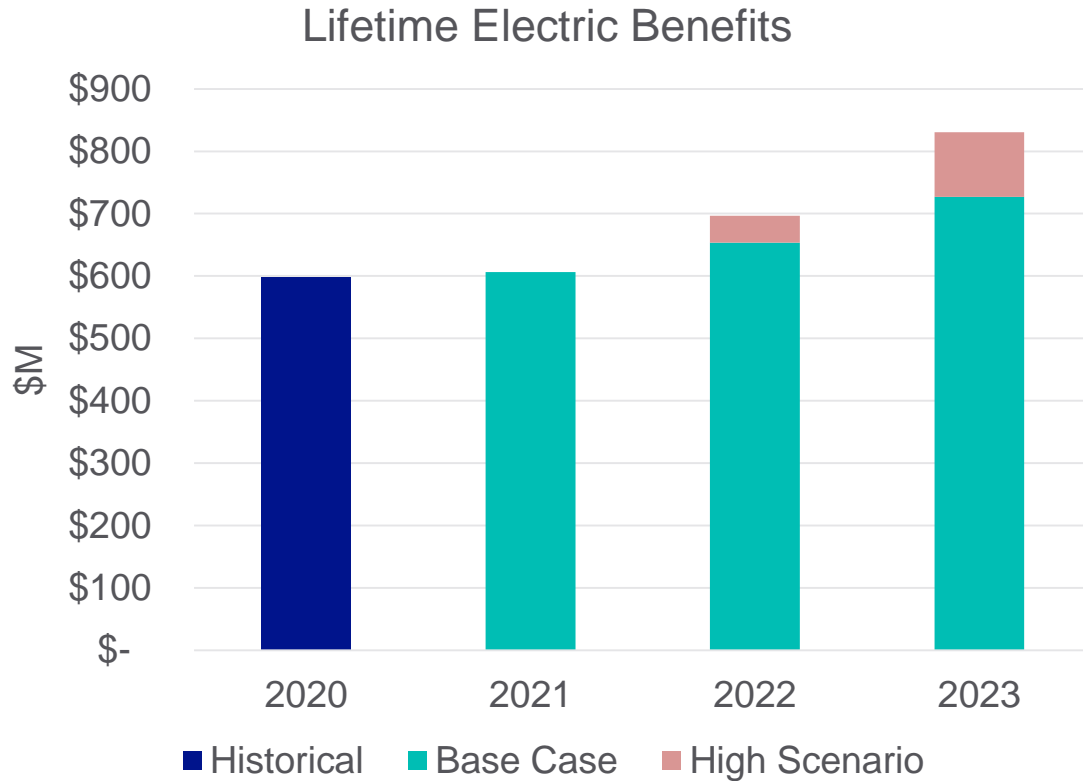
Additional Higher Scenario EE surcharges are a result of proposed budget increases in the high scenarios in 2022 and 2023 to achieve aggressive energy savings scenarios identified in earlier slides.

# Natural Gas EE Surcharges

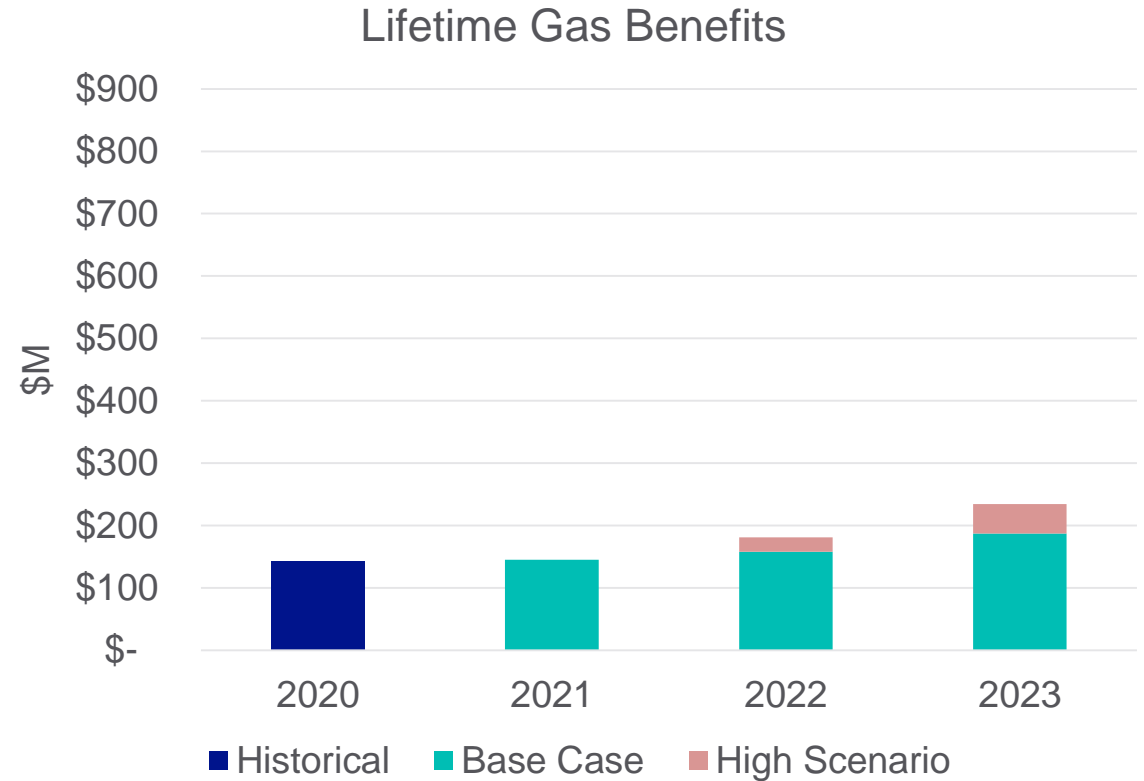


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# Electric Benefits



# Natural Gas Benefits



In terms of lifetime benefits, the Electric portfolio generates between **\$600 to >\$800** Million for each year of the plan, gas generates between **\$140 to >\$230** Million for each year of the plan

# Benefit Cost Ratios – Electric and Gas

Portfolio	Test (RI Test or TRC)	2021	2022 Base	2022 High	2023 Base	2023 High
Electric EE and DR	RI Test	4.31	4.02	4.08	4.13	4.20
	TRC	1.95	1.81	1.84	1.86	1.91
Gas EE	RI Test	3.00	3.03	3.04	3.04	3.06
	TRC	1.61	1.66	1.66	1.67	1.67

All proposed programs and portfolios are cost effective in all years and “base case” and “high scenarios” under the RI Test; each year energy efficiency is less than the cost of alternative supply

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