



STATE OF RHODE ISLAND
**ENERGY EFFICIENCY &
RESOURCE MANAGEMENT COUNCIL**

CONSULTANT TEAM

2024-2026 Three-Year Plan & Market Potential Study Overview

Presented By: EERMC C-Team

Date: November 28, 2022





Outline

Three-Year Plan Development

Market Potential Studies

2021-2026 Rhode Island Market Potential Study

Energy Efficiency Targets

Council Discussion



THREE-YEAR PLAN DEVELOPMENT





Three-Year Plan – Overview

Three-Year Plans are **high-level plans meant to describe strategies** the three covered years.

They are **due triennially with the date depending on the filing strategy**, which the Company must determine by July 1st

- Separate Three-Year Plan and Annual Plan filing: September 1st
- Combined Three-Year Plan and Annual Plan filing: October 15th

Three-Year **Plans can be informed by:**

- Market Potential Study results
- Council-recommended Targets
- Recent program performance and evaluation
- State policy objectives
- Economic conditions
- LCP Standards and regulatory guidance



Three-Year Plan Targets

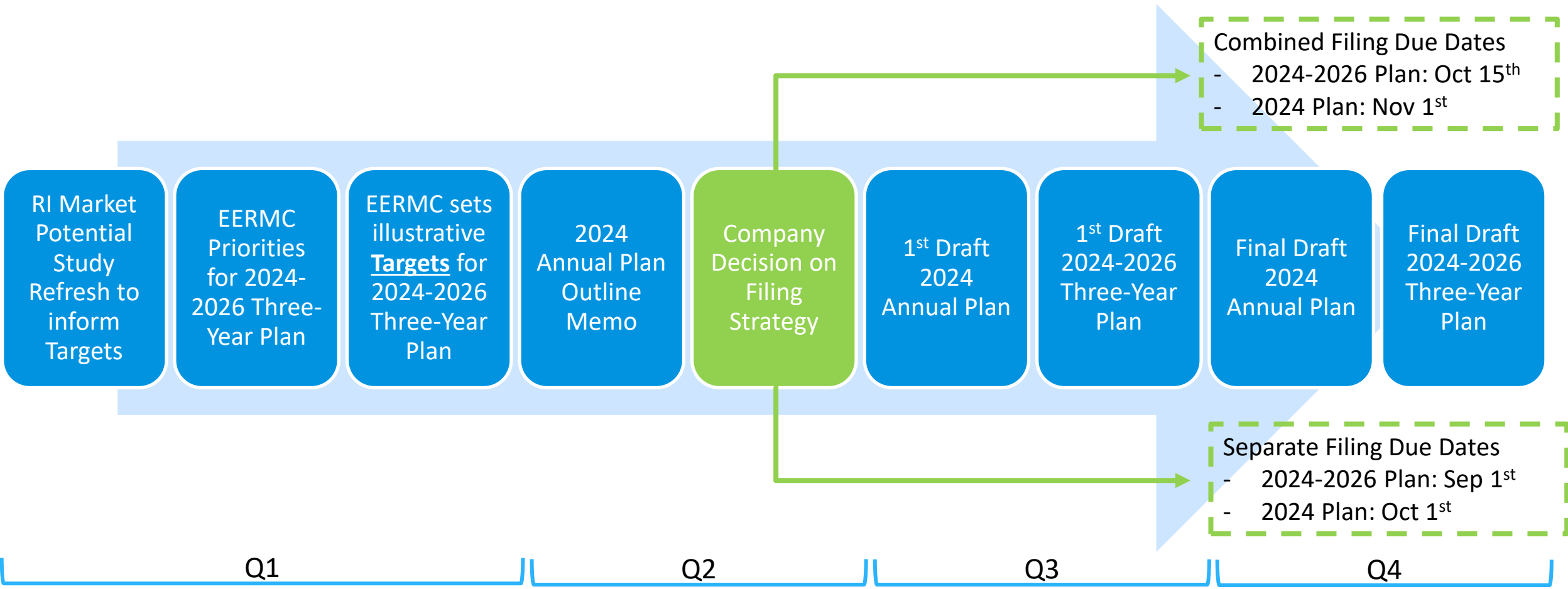
Council submits EE Targets to PUC for review and approval by March 1, 2023 to support 2024-2026 Three-Year Plan development

Only Annual Plan savings goals are binding; neither Targets nor savings goals included in Three-Year Plans are binding

The Targets and Three-Year Plan goals are aspirational, illustrative, and set to serve as a guidepost for Annual Plan goals

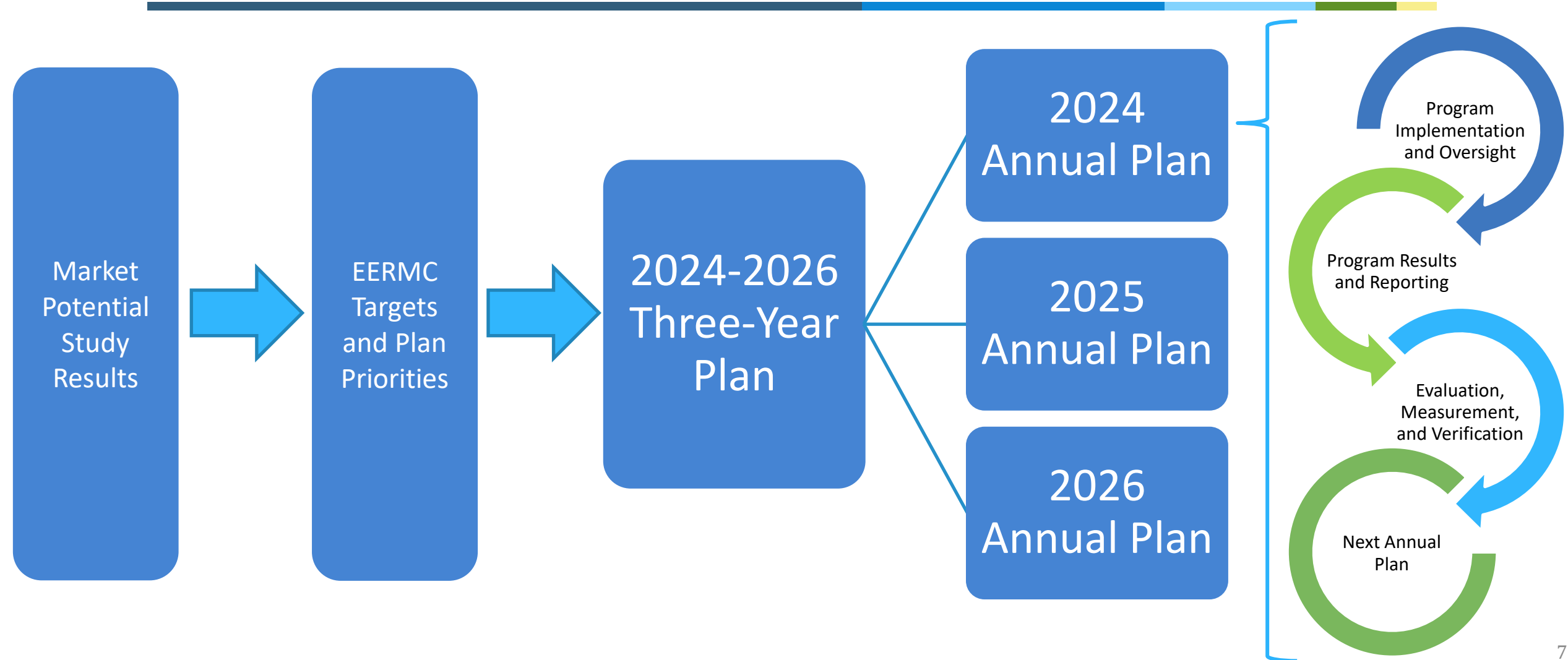


Three-Year Plan Development Process





Three-Year Plan Development Process





Three-Year Plan and LCP Standards

Least-Cost Procurement Standards Requirements for Three-Year Plan Content

- Compliance with Least-Cost Procurement Standards
- Strategies & Approaches to Planning
- Cost-Effectiveness
- Prudence & Reliability
- Funding Plan and Savings Targets
- Performance Incentive Plan
- Multi-year Strategies



MARKET POTENTIAL STUDIES





Market Potential Studies – Overview

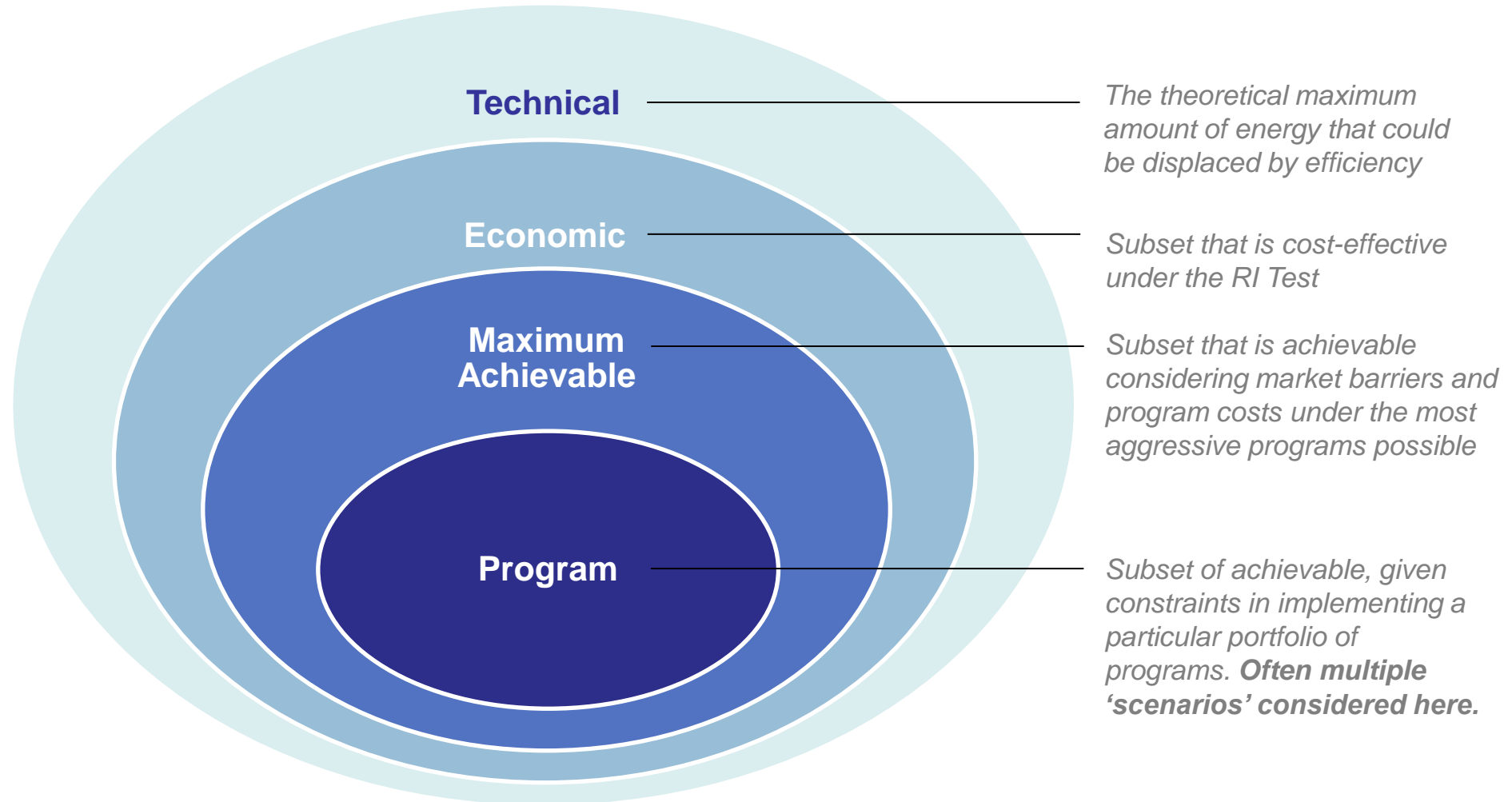
Potential studies are quantitative estimates of available energy savings through efficiency and other clean energy measures

Potential studies are used for many applications:

- Setting program savings targets
- Estimating funding required to deliver programs
- Informing program design
- Quantifying the amount/cost of EE for long-term grid planning
- Reassessing EE as markets, technologies, and codes change



Market Potential Study Scenarios





Limitations of Potential Studies

Though useful for estimating available energy savings, potential studies have limitations

- Uncertainty in predicting future costs, technologies, and codes & standards
- Difficulty in accounting for comprehensive projects
- Disagreements on modeling inputs or assumptions
- Modeling and/or data constraints
 - E.g. how to quantitatively capture participation barriers or estimate minimum necessary incentives for different customer groups



2021-2026 RHODE ISLAND MARKET POTENTIAL STUDY





2021-2026 RI Potential Study – Overview

A comprehensive analysis of the technical, economic & achievable savings potential in RI for the period of 2021-2026, covering:

- Electric
- Natural gas
- Delivered fuels (oil & propane)
- Demand response
- Combined heat & power
- Behind-the-meter renewables





2021-2026 RI Potential Study Scenarios

Three program scenarios were included in the Study:

Maximum Achievable

Max

Completely eliminated customer costs and further reduced customer adoption barriers to estimate max achievable potential

Program Achievable

Mid

*Increased incentives and **enabling activities** above and beyond levels within the 2020 EE Plan*

Low

Applied incentives and enabling activities in line with the 2020 EE Plan to simulate business as usual



2021-2026 RI Potential Study Results

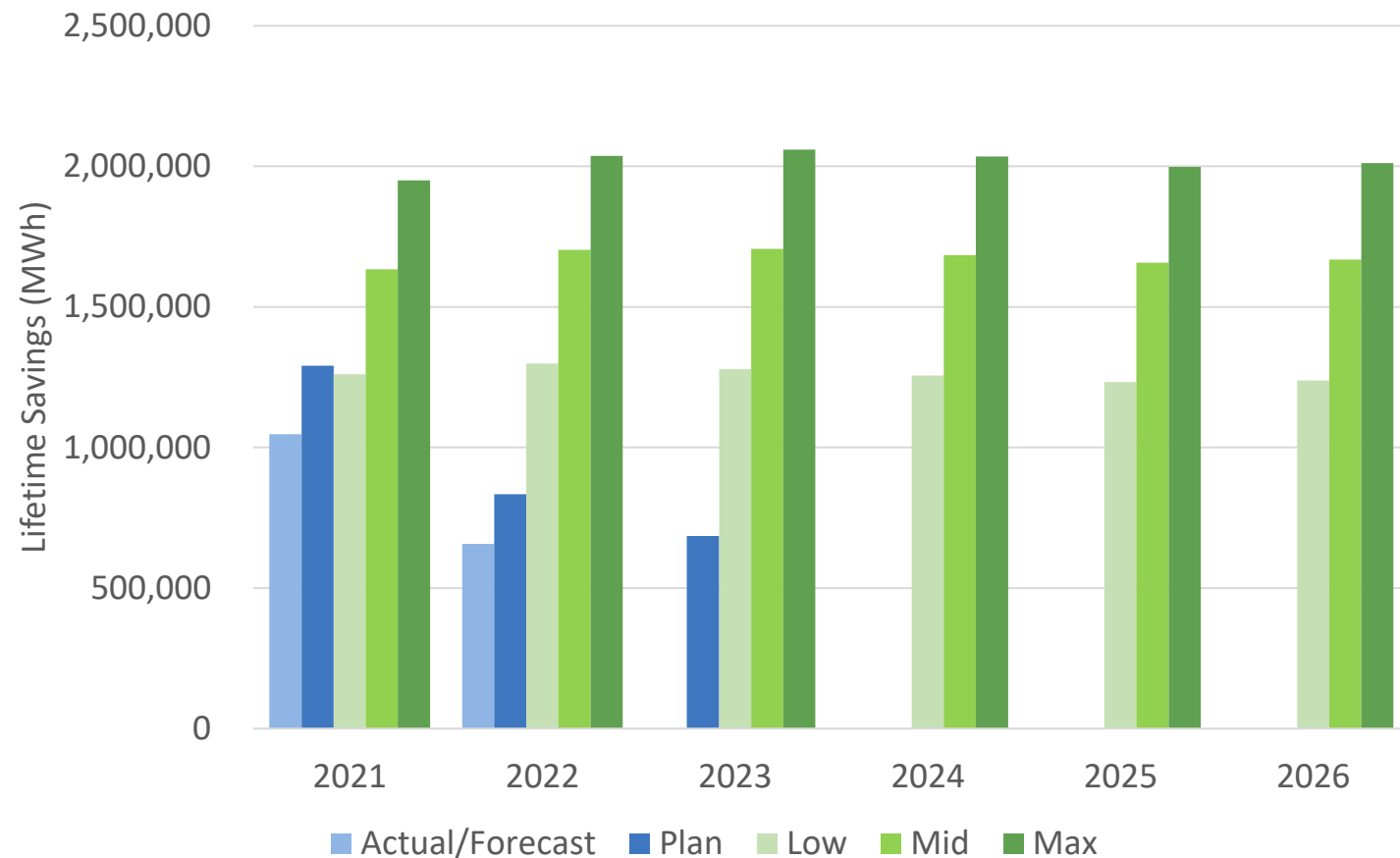
2021-2023 Three-Year Plan Targets were based on Max Scenario

Overall potential consistent across modeled years

Planned and actual savings trending down, below all scenarios in 2022 and 2023

Drivers include EM&V impacts and budget levels

Electric Portfolio Lifetime Savings (2021-2026)





2021-2026 RI Potential Study Results

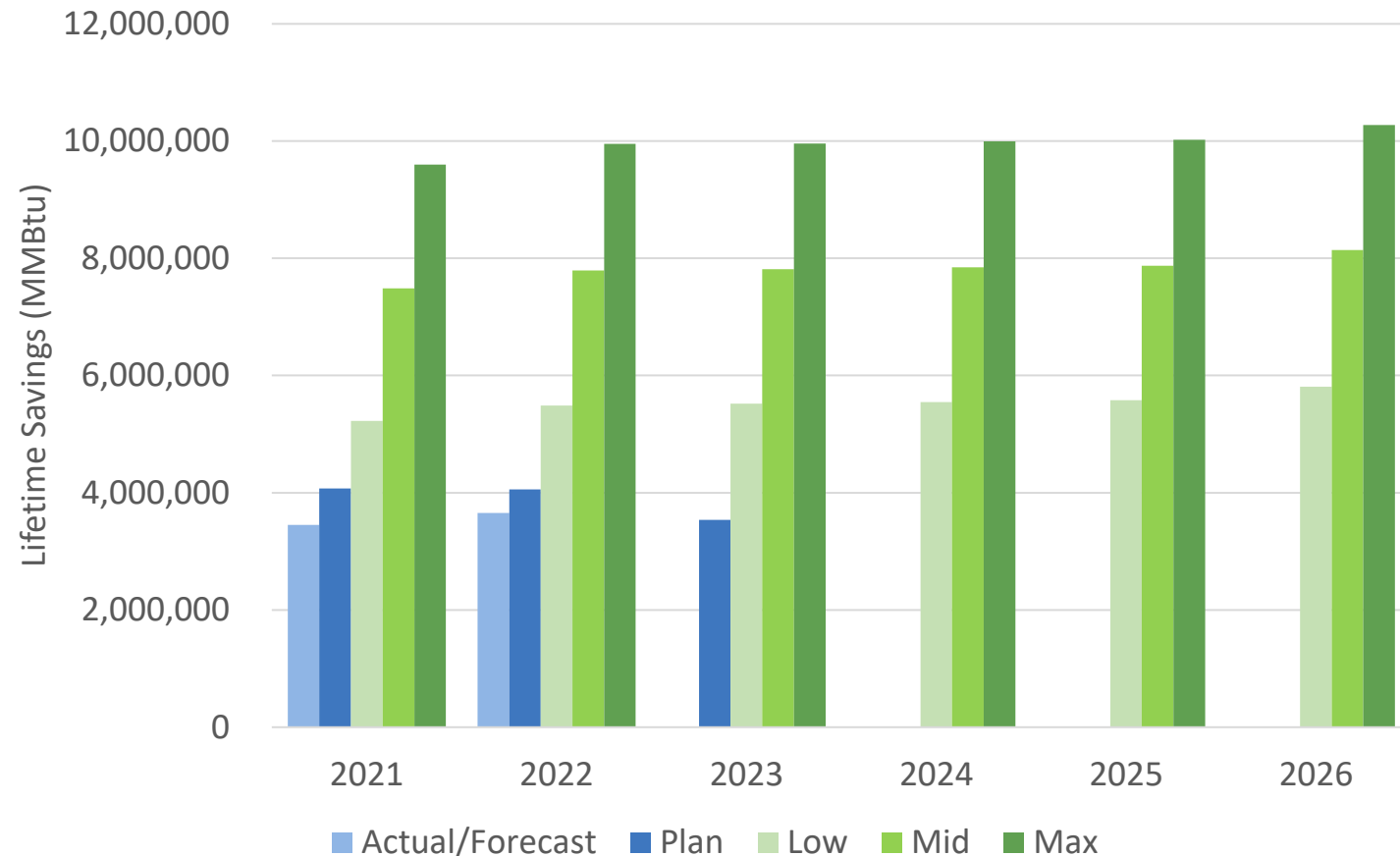
2021-2023 Three-Year Plan Targets were based on Max Scenario.

Overall potential consistent across modeled years

Gas plans declining less in recent years

Includes efficient gas appliances, does not include electrification

Gas Portfolio Lifetime Savings (2021-2026)





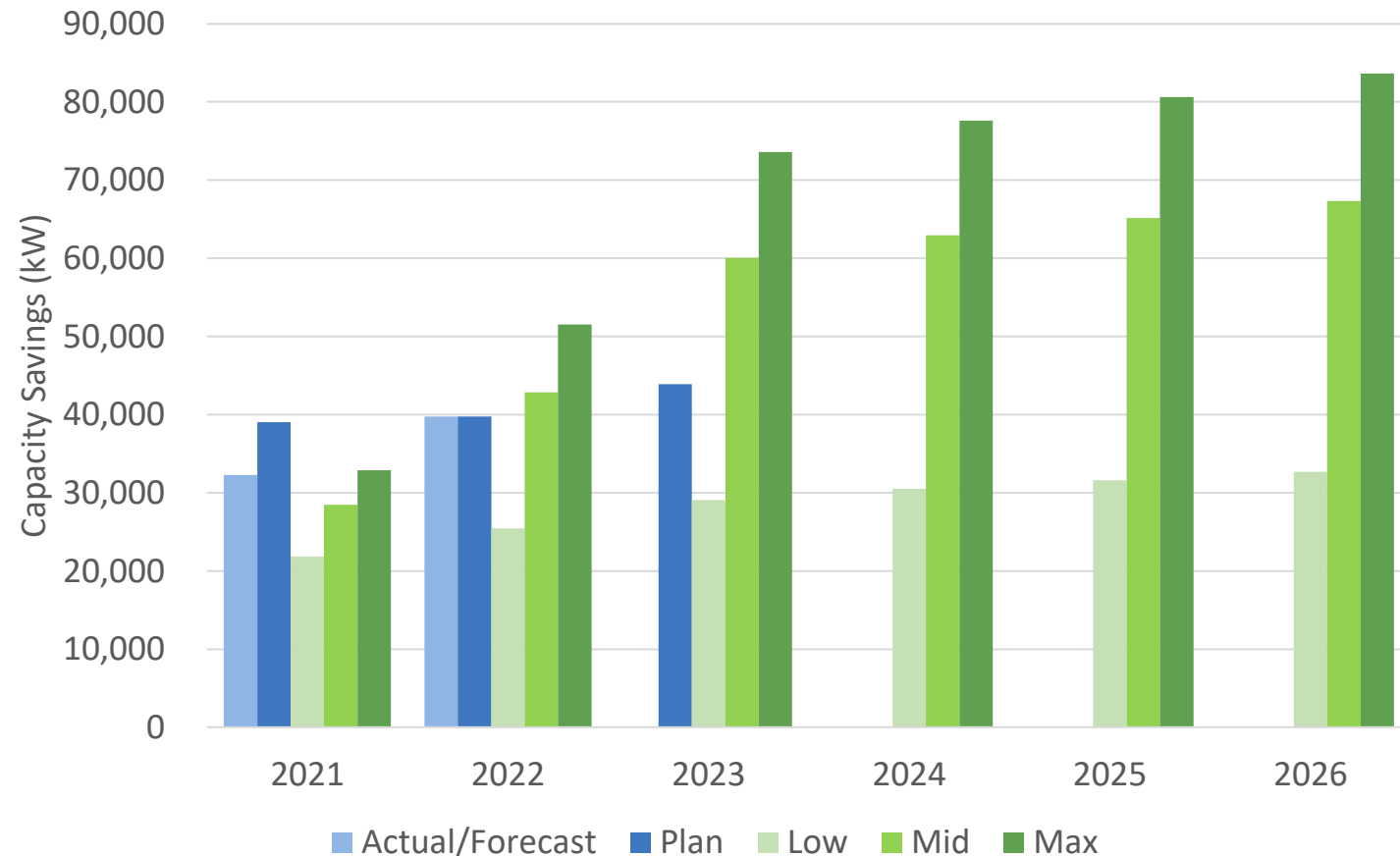
2021-2026 RI Potential Study Results

Notable upward trend in DR potential reaching steady levels in 2024-2026

Reporting methodology in MPS didn't align with how RI measures DR

Data refresh may be able to resolve this

Active Demand Electric Capacity Savings (2021-2026)





ENERGY EFFICIENCY TARGETS





2024-2026 MPS Data Refresh

Updating data from the 2021-2026 study for 2024-2026, focused on max and/or program achievable, and covering:

- Electric
- Natural gas
- ~~– Delivered fuels (oil & propane)~~
- Demand response
- ~~– Combined heat & power~~
- ~~– Behind the meter renewables~~





2024-2026 Savings Targets

Council will develop Targets Recommendations Memo to be filed March 1, 2023

The previous RI Market Potential Study was conducted in early 2020 but includes potential savings estimates for 2024-2026.

- 2024-2026 results are still a valuable reference point for overall potential

The MPS refresh will allow for updated assumptions around

- **Evaluation, Measurement, and Verification (EM&V) study results**
- New measures and technologies
- Recent program performance
- Policy considerations
- Changes in market conditions, such as costs



Scenario Differences in Setting Targets

Program Achievable (Low/Mid MPS Scenarios)

- Constrained by historical program savings
- Implicitly constrained by historical budget levels
- The “art-science” balance more towards “art” in this scenario

Maximum Achievable (Max MPS Scenario)

- Significantly higher savings than Program Achievable
- Most closely aligned with Least-Cost Procurement
- Still subject to realistic modeling constraints
- May take time to ramp programs toward this level

Council Discussion

Which scenario sounds most appropriate to use?



2021-2023 Target Setting Logic

Max achievable is the most conceptually consistent with the target-setting process

- Captures all possible cost-effective savings
- Defers questions of prudence and reliability to 3-year plan process
- Program constraints (e.g. workforce) can be built further into annual plans
- Meets requirements of law to pursue all cost-effective savings less than the cost of supply

The Council voted on targets consistent with Max scenario in 2020 to inform the 2021-2023 Three-Year Plan

Council Discussion

Does this process make sense? Are new target-setting approaches needed?



Council Member Discussion Prompts

What aspects of the 2024-2026 Three-Year Plan and 2024 Annual Plan development process are unclear?

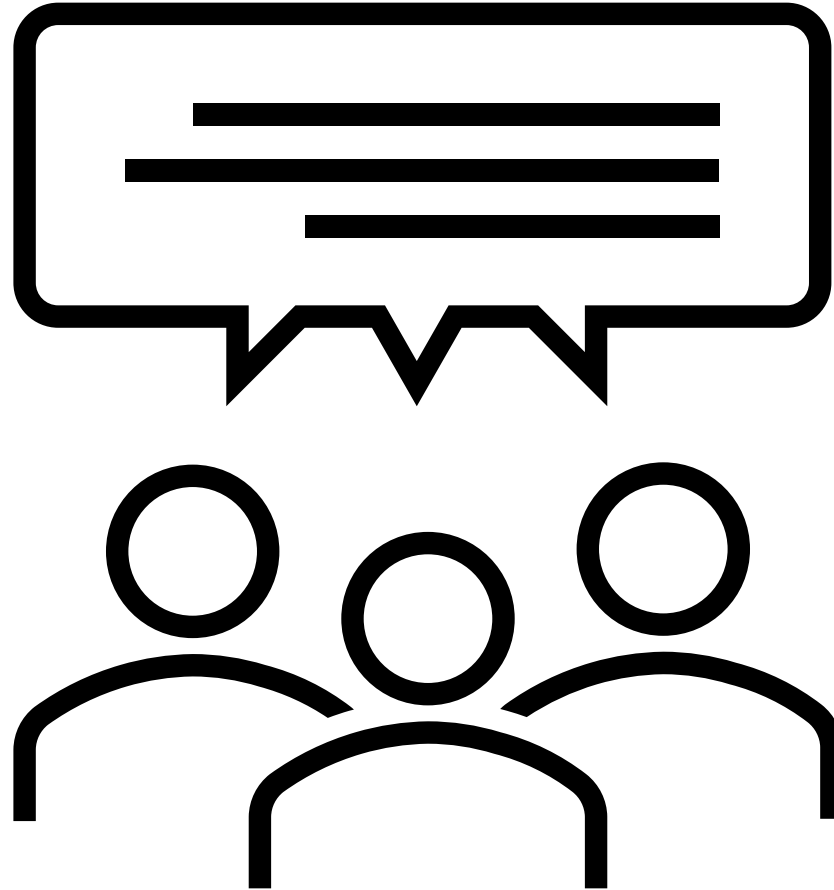
What additional detail can be provided on how the 2020 Market Potential Study informed 2021-2023 Targets?

What are next steps for developing Council priorities on the 2024-2026 Three-Year Plan?

Questions on potential study methodology, applications, or other limitations?



Council Member Discussion





APPENDIX





Recent EERMC Plan Priorities

Align with the 2021-2023 Three-Year Plan and reference 'High' savings scenarios included in the Three-Year Plan

Comply with Least-Cost Procurement Standards

Incorporate stakeholder input and priorities

Support equity and access

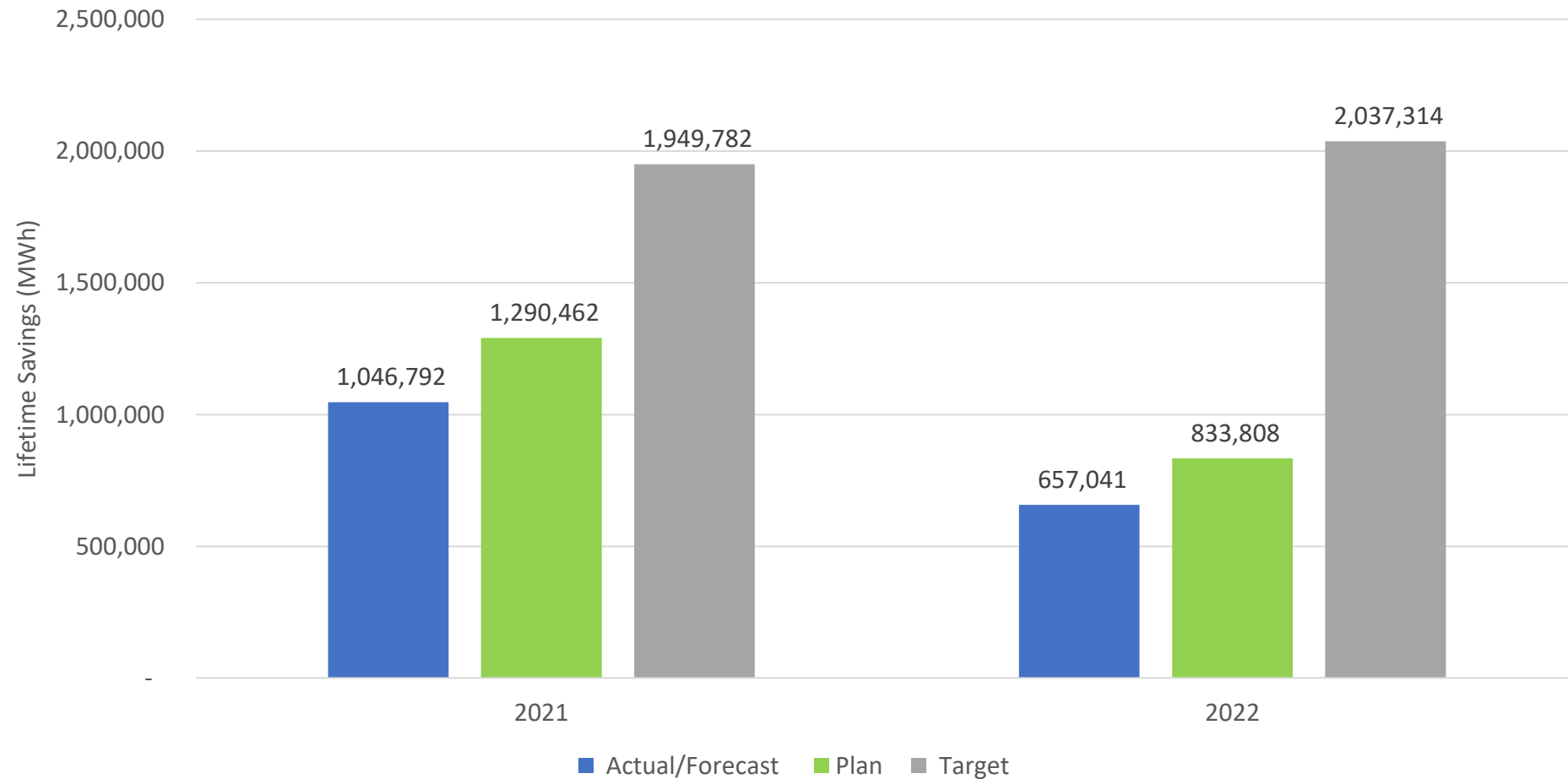
Ensure effective and efficient development and review process

Give due consideration to Act on Climate mandates



Electric Savings Comparisons

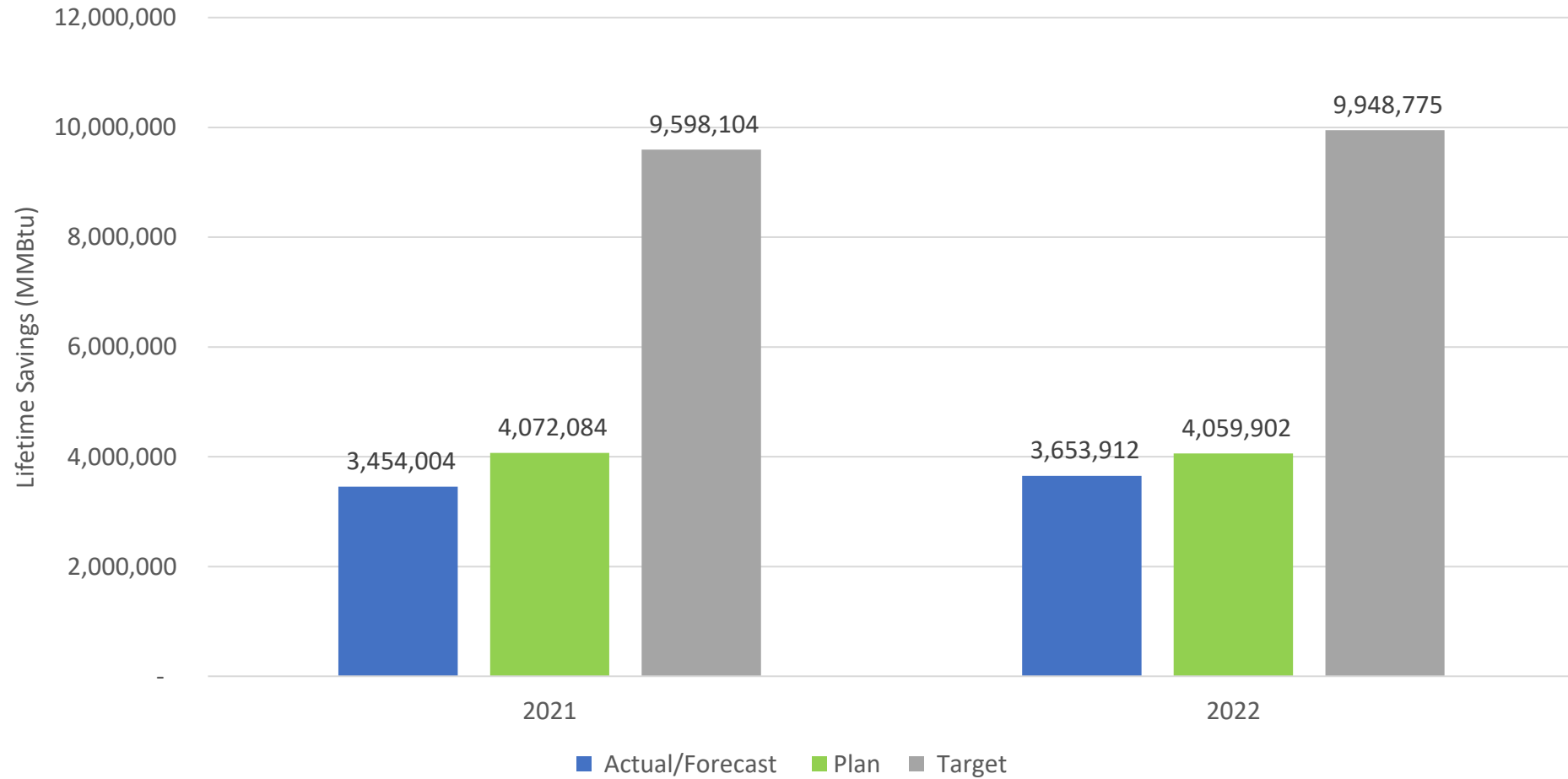
Electric Portfolio Lifetime Savings (2021-2022)





Gas Savings Comparisons

Gas Portfolio Lifetime Savings (2021-2022)





Additional Resources

RI 2020 Market Potential Study Report

- [Results Chapters](#)
- [Methodology](#)
- [Data Results \(Excel File\)](#)
- [Graphical Summary](#)
- [Slide Deck](#)

[2021-2023 EERMC Recommended Targets](#)

[2021-2023 Three-Year Plan and 2021 Annual Plan \(Combined Filing\)](#)

[Least Cost Procurement Legislation](#)

[Least Cost Procurement Standards – 2020 Revisions](#)