



STATE OF RHODE ISLAND

ENERGY EFFICIENCY & RESOURCE MANAGEMENT COUNCIL

CONSULTANT TEAM

Consultant Team Review Final Draft of the 2023 Annual Plan

Presented By: EERMC Consultant Team

Date: September 29, 2022



Outline

Update on Key Considerations

Summary of Recent Quantitative Changes to 2nd Draft 2023 EE Plan

Select Areas for Further Consideration

Council Responsibility and Vote Options



UPDATE ON KEY CONSIDERATIONS





Selected Key Considerations

Process Update

Measure Cost Assumptions

Equity

Potential Provisional Spending

2024-2026 Three-Year Plan Development



Process Update

As of September 22nd EERMC meeting, EE Plan updates responding to C-Team feedback were in process, final numbers expected 9/23

- Final updated BC Models not yet received at time slides finalized
 - Interim version shared 9/28

Key expected updates include:

- Removal of Fuel Cell project from C&I electric portfolio
- RI Energy considering additional Plan language indicating that measures not approved will not have associated budget reallocated
 - Open question whether Fuel Cell budget will be reallocated in final numbers



Measure Cost Assumptions

High measure cost assumptions relative to 2022 Plan levels were identified as a concern in the 2023 Plan

Increases in the cost to achieve savings were of particular concern

In response to C-Team feedback, RIE revised or justified cost assumptions in some areas of concern by benchmarking against actual installed costs or providing supporting analyses

Some areas were not addressed and may warrant further discussion



Equity

Equity section of the 2nd draft 2023 Plan now populated with new equity commitments, improving on limited first draft content

2023 commitments show modest change from 2022 and retain many concerns voiced in recent C-Team review of 2022 commitment updates, including acknowledgment of limited goal attainment in 2022

Level of detail, metrics for tracking performance, and specific, measurable goals still lacking for many equity commitments



Potential Provisional Spending

A fuel cell project comprising about 14% of total lifetime electric savings was added to the 2023 Plan 2nd Draft

At the EERMC's September 22nd meeting, Council members suggested RIE develop a provisional spending analysis to understand how these program funds would be allocated if the project does not move forward in 2023

Final draft removes fuel cell project (~\$1.7M in planned incentives) and does not propose to reallocate those funds to other initiatives



2024-2026 Three-Year Plan Development

Development of the 2024-2026 Three-Year Plan in 2023 represents an opportunity to reassess high-level program goals and implementation strategies

The EERMC will set EE and SRP priorities to guide the Company, C-Team, Technical Working Group, and other stakeholders in development and review of the 2024-2026 Three-Year Plan

Priorities are designed to be consistent with the EERMC's legislated role in supporting Least-Cost Procurement



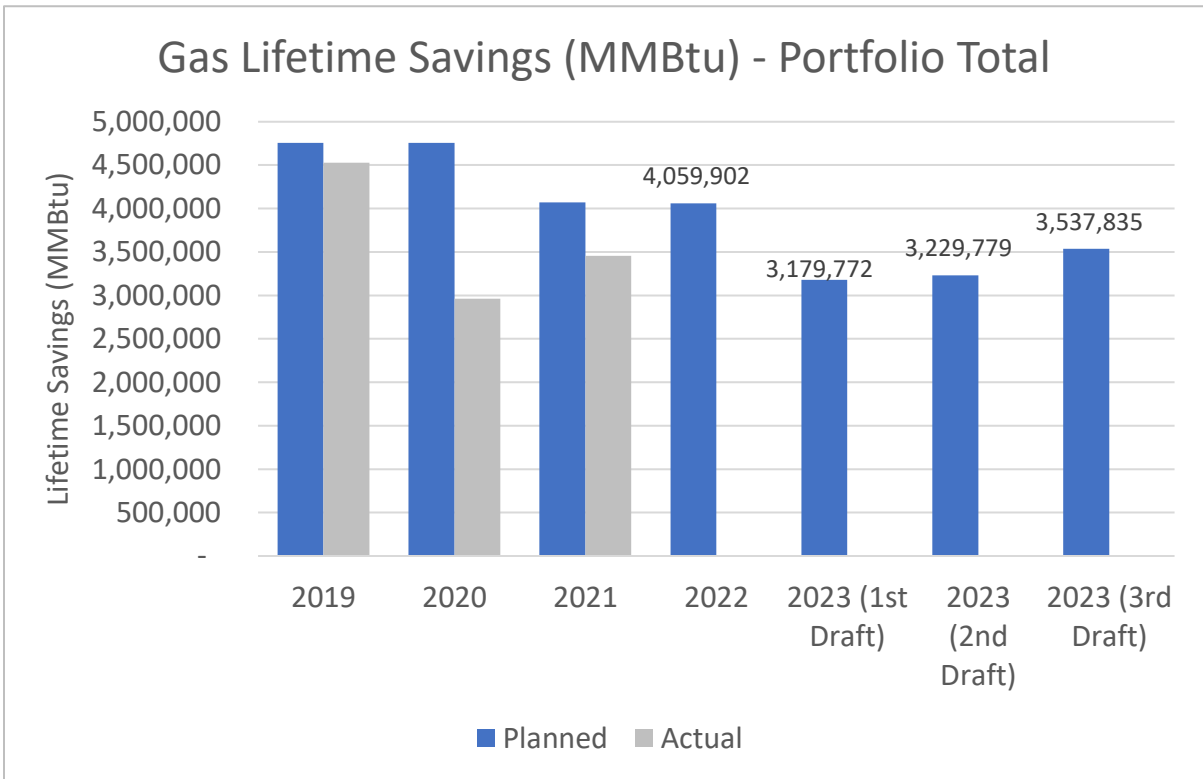
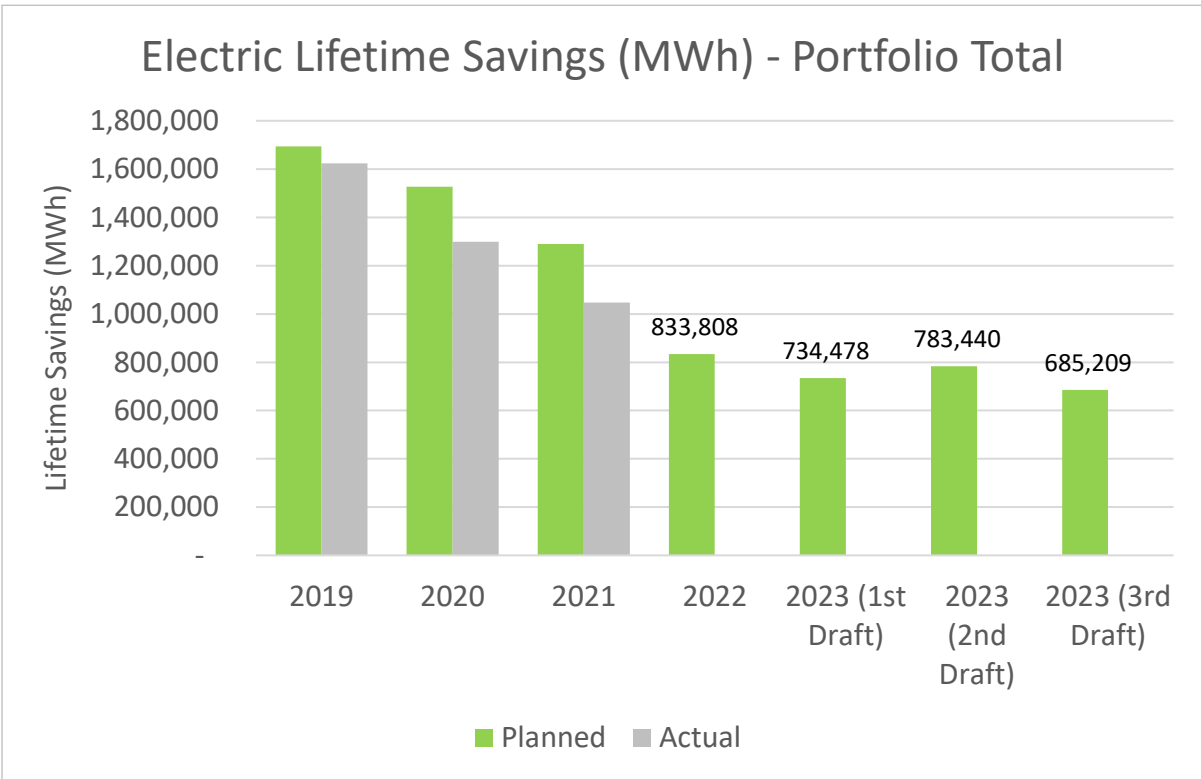
SUMMARY OF RECENT QUANTITATIVE CHANGES TO 2ND DRAFT 2023 EE PLAN





Portfolio Lifetime Savings

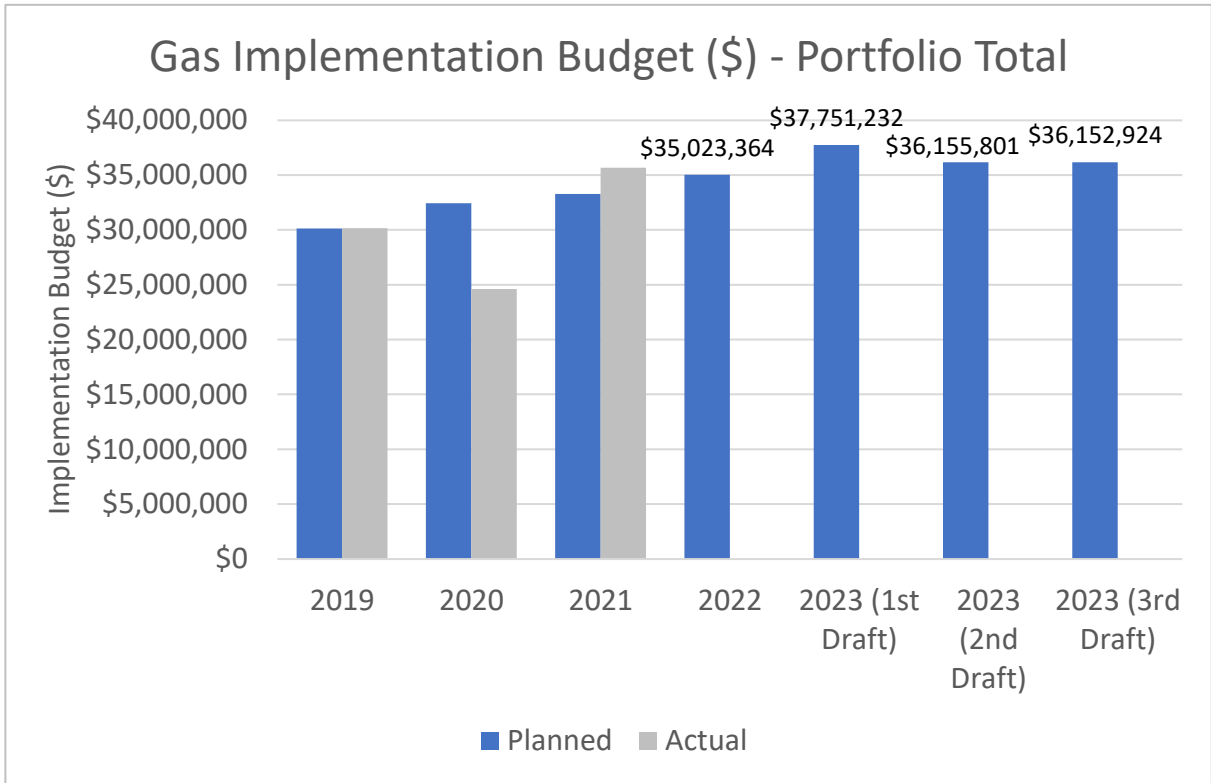
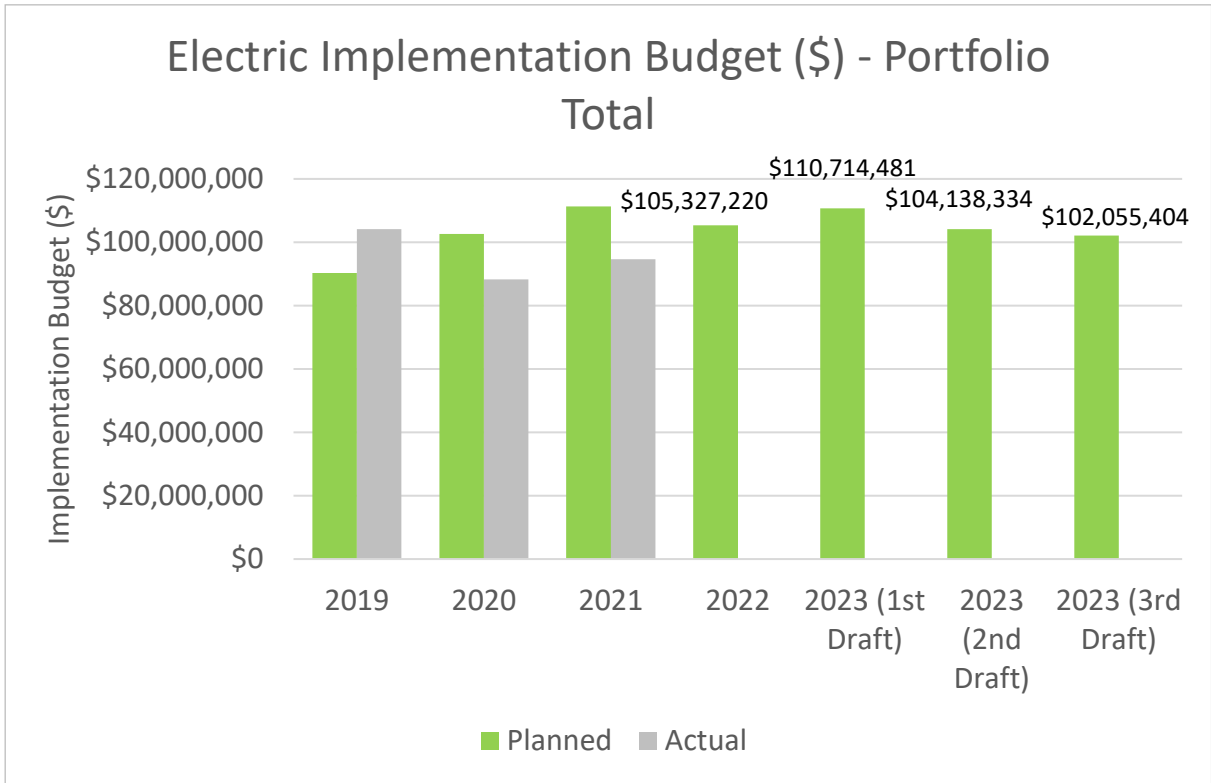
Key Takeaway Decreased lifetime electric (-7%) and increased lifetime gas (+11%) savings between first and final 2023 Plan drafts





Portfolio Implementation Budget

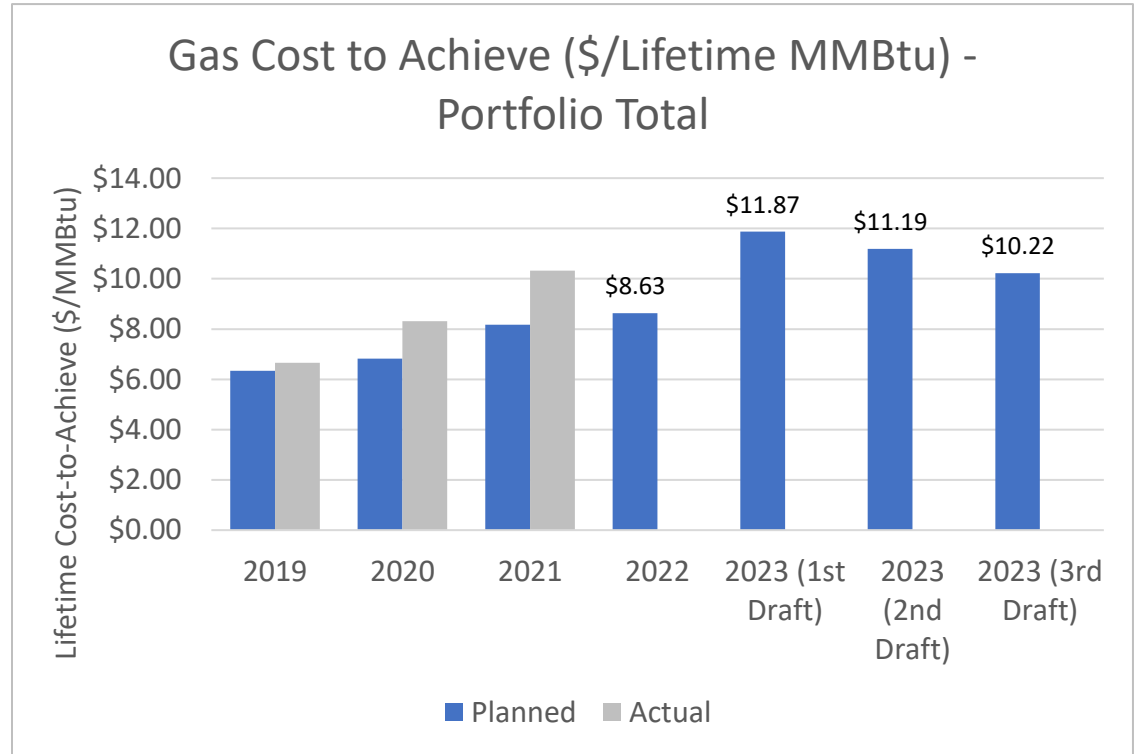
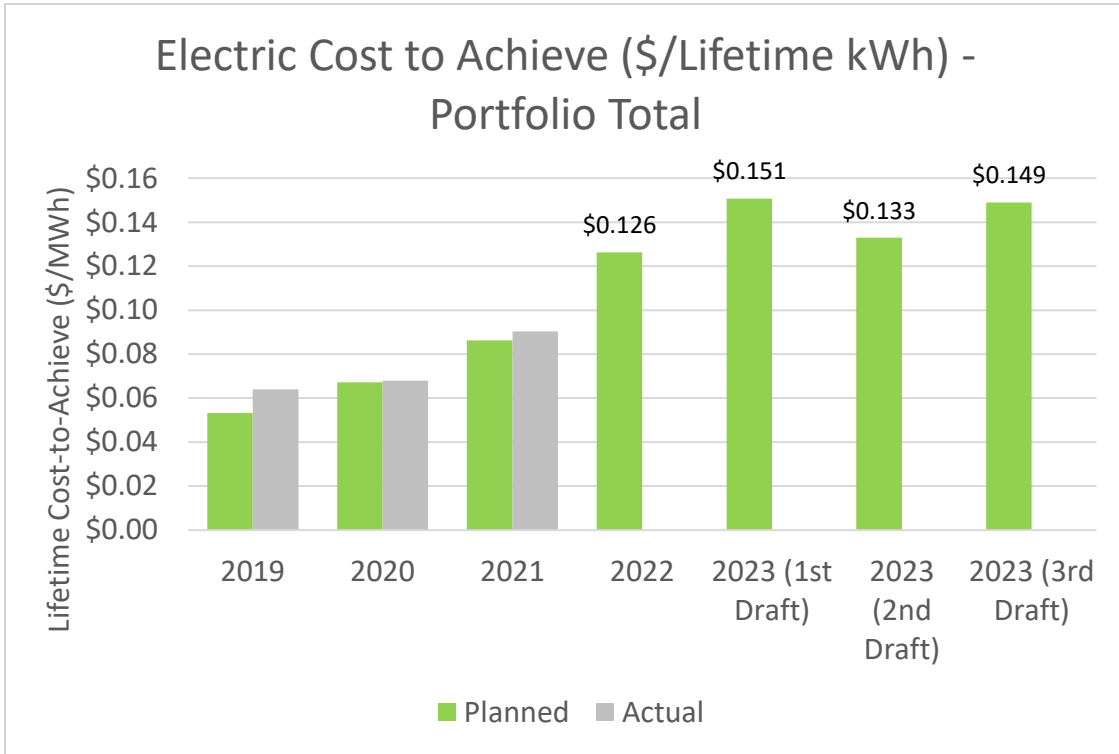
Key Takeaway Both electric and gas implementation budgets decreased by 8% and 4%, respectively, between first and final 2023 Plan drafts





Portfolio Cost to Achieve

Key Takeaway Overall cost to achieve decreased between first and final 2023 Plan drafts, but electric and gas cost to achieve both 18% above 2022 Plan





C&I Changes Since 2nd Draft Electric Portfolio

Largest single-measure change is the removal of the Fuel Cell project, which accounted for 23% of 3rd draft lifetime savings

- C&I lifetime electric savings without fuel cell: 477,396 MWh

Even with removal of Fuel Cell project, lifetime electric savings increased by 2.5% from 2nd Draft

- More investment in streetlights and lighting/building controls
- Revisited costs for several specific measure categories identified during 1st/2nd Draft 2023 Plan review
- Upstream lighting costs reduced



C&I Changes Since 2nd Draft Gas Portfolio

158,294 increase (+9%) in lifetime gas savings

- Increased planned activity for operation and maintenance, motors and drives, and some custom projects in large retrofit program
- New energy recovery ventilation measures added in new construction program

\$19,618 decrease (-0.2%) in budget between 2nd and 3rd draft

- 11% decrease in Retrofit lifetime cost to achieve
- 6% decrease for New Construction cost to achieve

Costs revised for select Retrofit measures previously flagged/mapped against MA 2022-2024 Plan BCR Models

- Heat Recovery, Custom – Other, Thermostats, Wi-Fi Thermostats, Ventilation Reduction, Motors & Drives



Residential Changes Since 2nd Draft Electric Portfolio

Income Eligible Single Family

- Total incentive decreased by \$1,265,000 as a result of correcting a double-counting issue on heating system replacements
- Minor decrease in associated electric savings, with net result of improved cost-to-achieve

Income Eligible Multifamily

- Net lifetime savings decreased by 903 MWh resulting from correction that ensures load building from delivered fuel switching of heat pumps is accounted for
- Updated inputs to reflect increased natural gas fuel consumption for micro-CHP projects

HVAC

- Total incentives decreased by \$54,750 as result of updating incentive coverage for heat pump water heaters

EnergyWise Multifamily

- Minor increase in total incentives by \$890 resulting from correction to a measure that previously had left cost inputs blank



Residential Changes Since 2nd Draft Gas Portfolio

Residential gas savings increased by 149,763 (+13%) lifetime MMBtu compared to 2nd Draft as a result of changes in measure lives for four measures

Program	Description of Change	C-Team Assessment	Summary of Impact
Residential HVAC (Gas)	Combination Condensing Boiler (95% AFUE) increased from 17 to 23 years.	Appropriate to increase, but only to 20 years.	Savings should be higher than 2 nd Draft, but not as high as Final Draft.
	Furnace (95% AFUE) and Furnace (97% AFUE) decreased from 20 to 17 years.	No issue with change.	Savings should be lower than 2 nd Draft.
Residential EnergyWise Single Family (Gas)	Weatherization increased from 20 to 25 years.	Should remain at 20 years to be consistent with weatherization measures in the electric portfolio	Savings for program should remain at levels proposed in 2 nd Draft



SELECT AREAS FOR FURTHER CONSIDERATION





Select Areas for Further Consideration

Commercial & Industrial

Cost benchmarking only conducted for C&I Retrofit programs

- Incentive spending per unit of lifetime savings in electric portfolio 10% higher than 2022 Plan
- Incentive spending per unit of lifetime savings in gas portfolio 18% higher than 2022 Plan

Some cost increases justified with supporting data, but other cost increases lack adequate supporting analysis

The “how” and “why” behind some program implementation enhancements not fully fleshed out



Select Areas for Further Consideration

Residential & Income Eligible

Outstanding concerns about plan detail for addressing:

- Non-participant Multifamily customers with low-propensity scores
- How planned adjustments to Income Eligible Single Family delivery model will lead to actual improvement in services to customers

Balancing measure mix in electric and gas HVAC programs

- Reduce emphasis on gas heating equipment in favor of weatherization
- Move towards favoring central heat pumps over central air conditioners wherever possible

Addressing planned increases in cost per participant in the Income Eligible Multifamily Gas program



COUNCIL RESPONSIBILITY AND VOTE OPTIONS





Council's Responsibility

EERMC role and responsibility in potentially endorsing the Plan as described in the LCP Standards:

“

The Council shall vote whether to endorse the Annual EE Plan prior to the prescribed filing date. If the Council does not endorse the Annual EE Plan, the Council shall document its reasons and submit comments on the Annual EE Plan to the PUC for its consideration in final review of the Annual Plan.

”



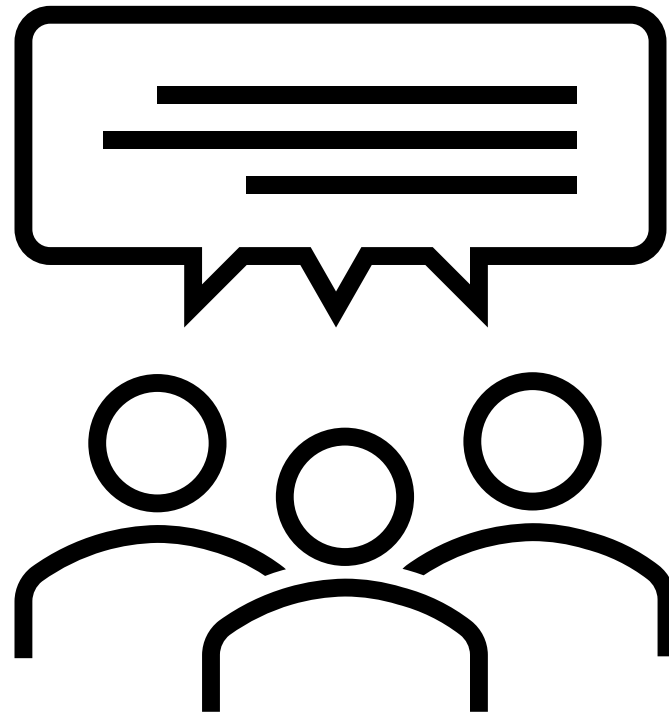
Summary of 2023 EE Plan Vote Options

Per the EERMC's legal counsel, the following options are available:

1. **Endorse the EE Plan.** Endorsement may also list Council's concerns that didn't prevent endorsement but warrant mentioning.
2. **Endorse the EE Plan,** but decline to join any Settlement of the Parties. Represents a strong statement of the EERMC's concerns.
3. **Not endorse the EE Plan,** but indicate that if specific condition(s) are met it would be endorsed.
4. **Not endorse the EE Plan,** and provide a list of reasons why it was not endorsed for PUC consideration in its final review of the EE Plan.



Council Member Discussion





APPENDICES



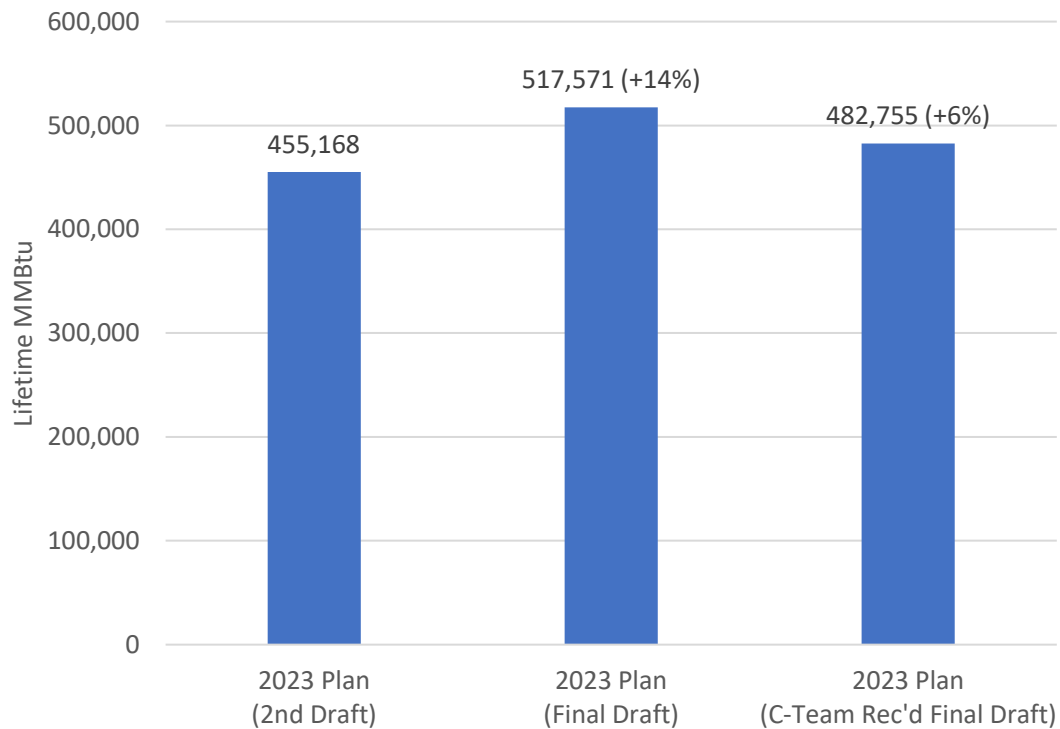


Measure Life Adjustments

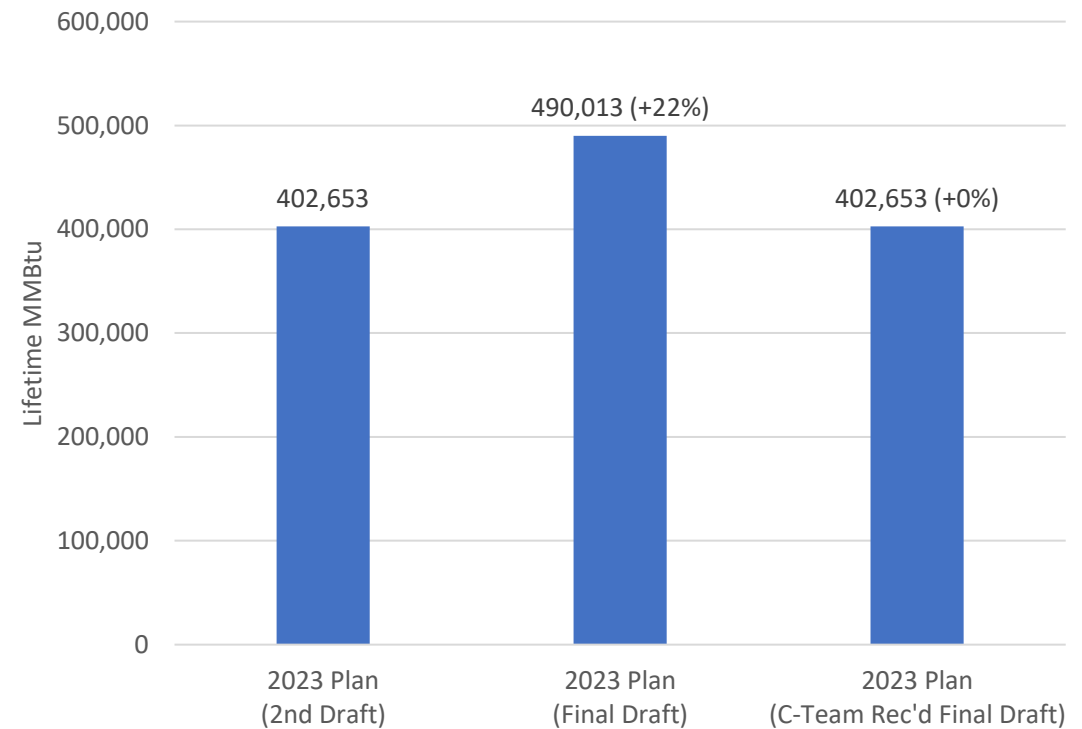
Key Takeaway

Lifetime savings for Gas HVAC should be higher than 2nd Draft but lower than Final Draft. Lifetime savings for the EnergyWise SF Gas should remain at 2nd Draft levels.

HVAC Gas Program Lifetime Savings



EnergyWise Single Family Gas Program Lifetime Savings

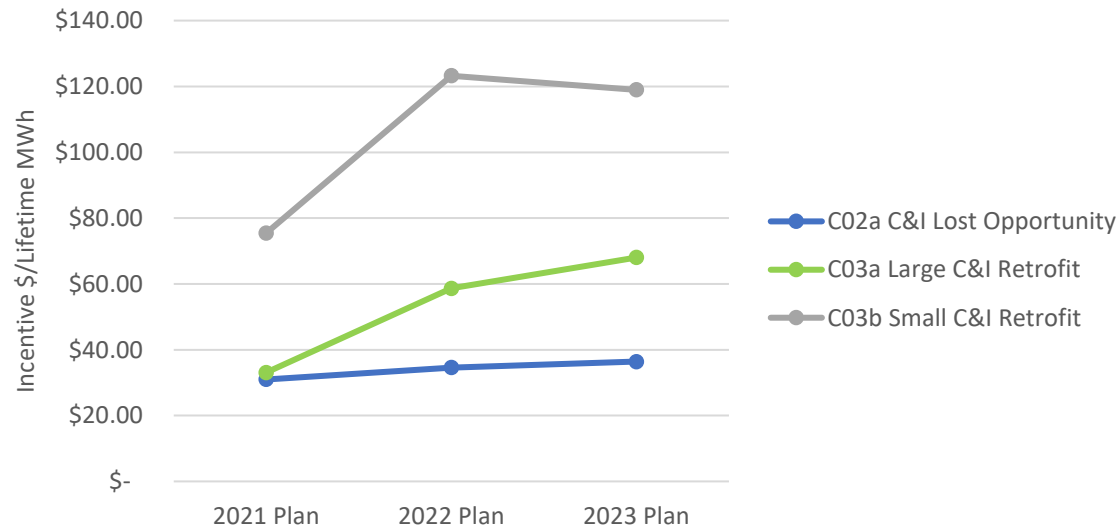




Select Areas for Further Consideration Commercial & Industrial

Planned 2023 Incentive spending per unit of lifetime savings 10% higher for electric portfolio and 18% higher for gas portfolio compared to 2022 Plan

Cost-to-Achieve by Program (\$/Net Lifetime MWh)



Cost-to-Achieve by Program (\$/Net Lifetime MMBtu)

