



STATE OF RHODE ISLAND

**ENERGY EFFICIENCY &
RESOURCE MANAGEMENT COUNCIL**

CONSULTANT TEAM

Consultant Team Initial Review First Draft of the 2024 Annual Plan

Presented By: EERMC Consultant Team

Date: August 17, 2023



Outline

Overview

C&I Highlights

Residential Highlights

Council Discussion



OVERVIEW





Areas of Focus

Responsiveness to Council Feedback

- Assessed degree to which First Draft 2024 Annual Plan Narrative incorporated Council input on the 2024-2026 Three-Year Plan Outline Memo and First Draft Narrative
- Other entities such as OER, Acadia Center, and the Division also provided feedback or asked questions on Three-Year Plan content received to date

Responsiveness to Council Priorities

- Council priorities place emphasis on several areas such as statewide climate goals, achieving equitable outcomes, and compliance with Least-Cost Procurement

Due to delayed delivery of Benefit-Cost Ratio Models and new details included in the First Draft Annual Plan, we **focus on Narrative review**



Plan Review Process

2024 Annual Plan Narrative and Attachments received evening of 8/4; comments due on 8/24

- Attachments included content on program design, evaluation studies, RI Cost Test, demonstrations, pilots & assessments, and definitions
- Benefit-Cost Ratio Models shared on 8/9

Plan Attachments and materials still in development or review include

- Attachment 7: Rate and Bill Impacts (expected 8/11)
- Updated Technical Reference Manual Database (expected 8/15)
- Final Evaluation Results – 3 studies remaining (expected week of 8/28)
- **Attachment 11: Equity Working Group Recommendations (TBD)**



Overarching Themes

2024 Annual Plan Narrative and Attachments generally include level of detail consistent with previous Plan Narratives

- Some specifics still require development or discussion with RI Energy including marketing strategies and how desired outcomes will be achieved

Many plan activities described in non-committal terms ('consider', 'explore', etc.), and lack specific goals, measurable outcomes, and clear timelines

- Equity commitments difficult to measure and assess, proposed pilots not yet developed with no stated timeline for doing so
- Workforce development efforts do not have expected impacts or outcomes associated with them

Formatting and aesthetic improvements implemented

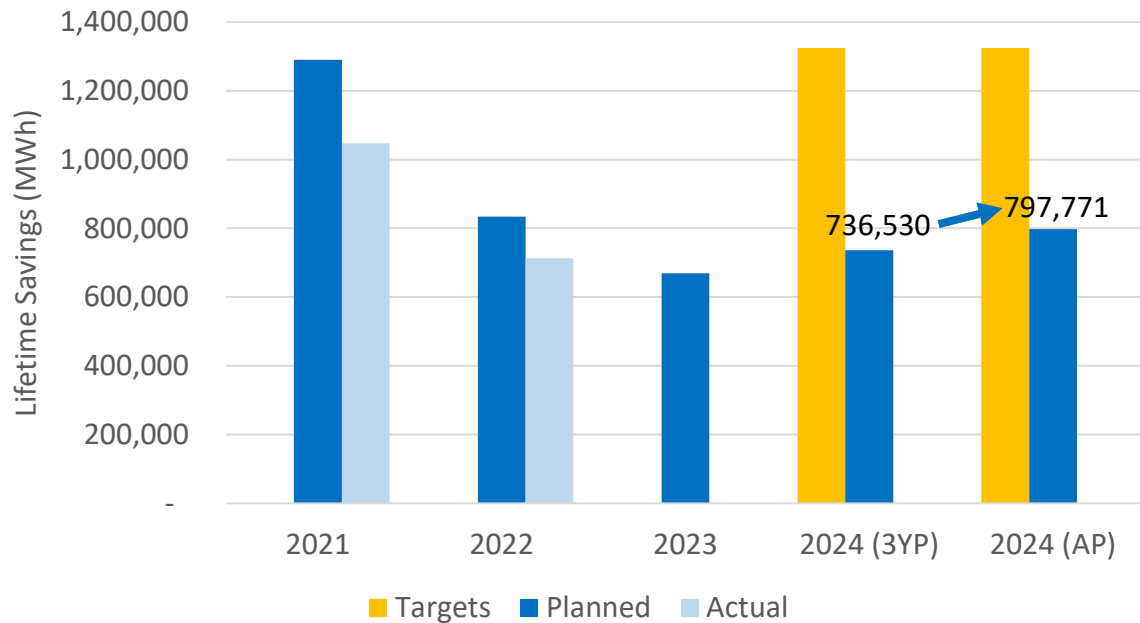
Modest growth in savings goals a highlight, though more would increase benefits to RI



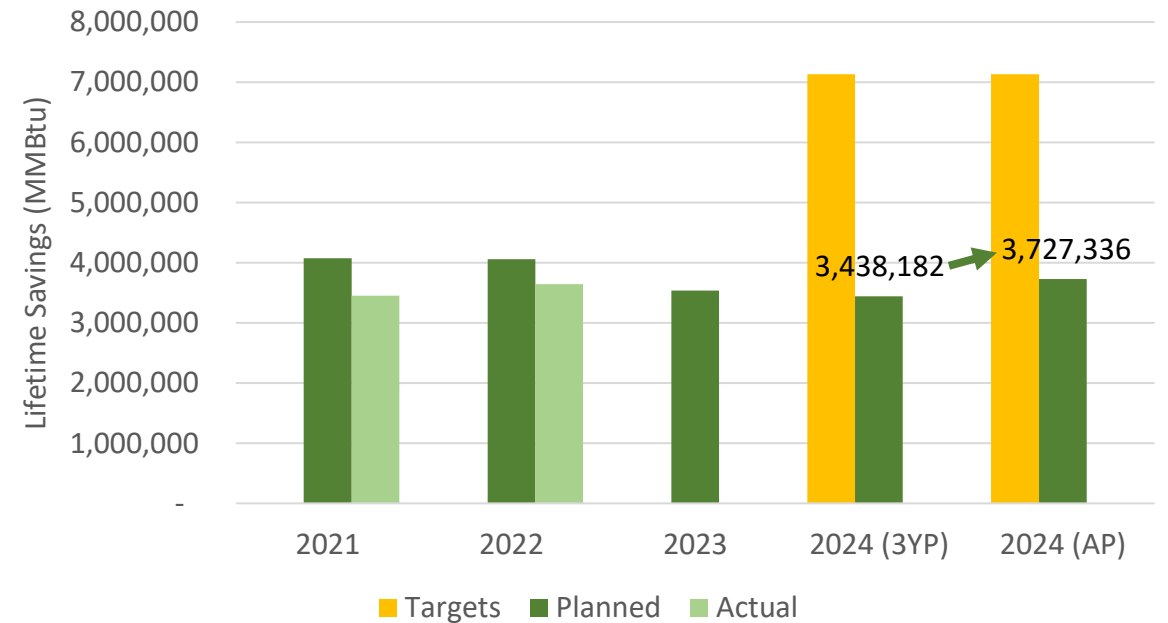
Portfolio Lifetime Savings

Key Takeaway 8% increase in planned lifetime electric and gas savings compared to Three-Year Plan

Electric Lifetime Savings (MWh) - Portfolio Total



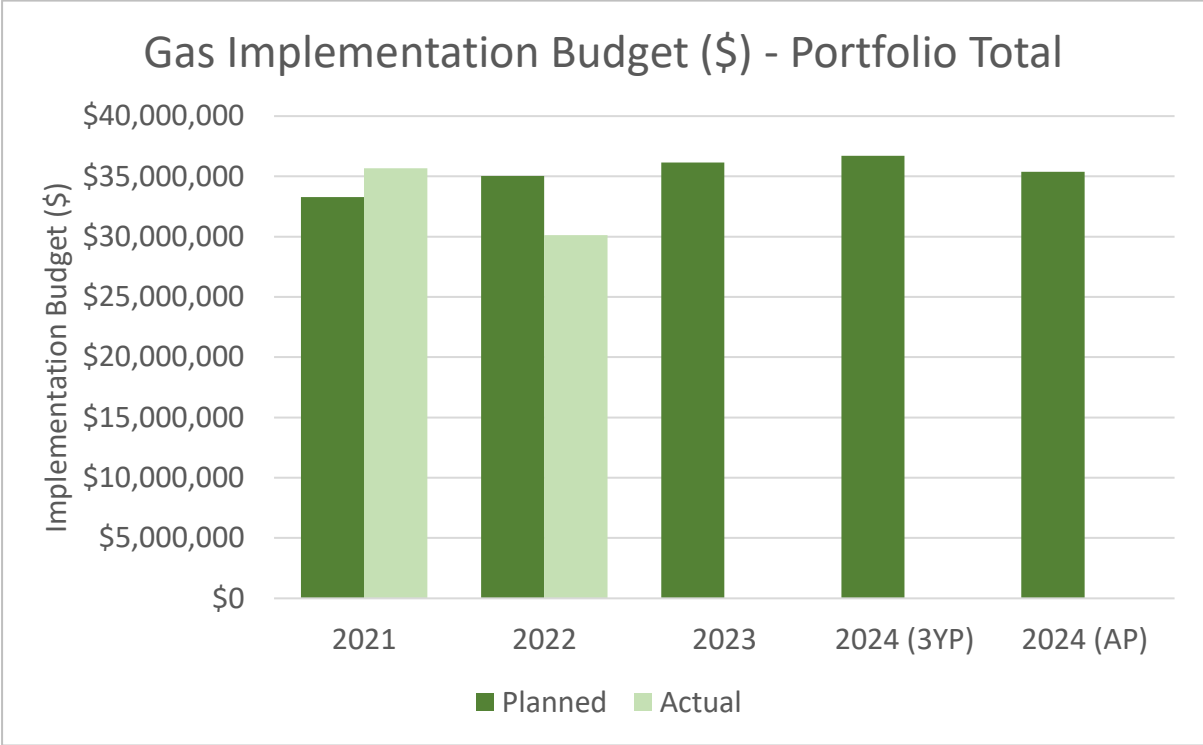
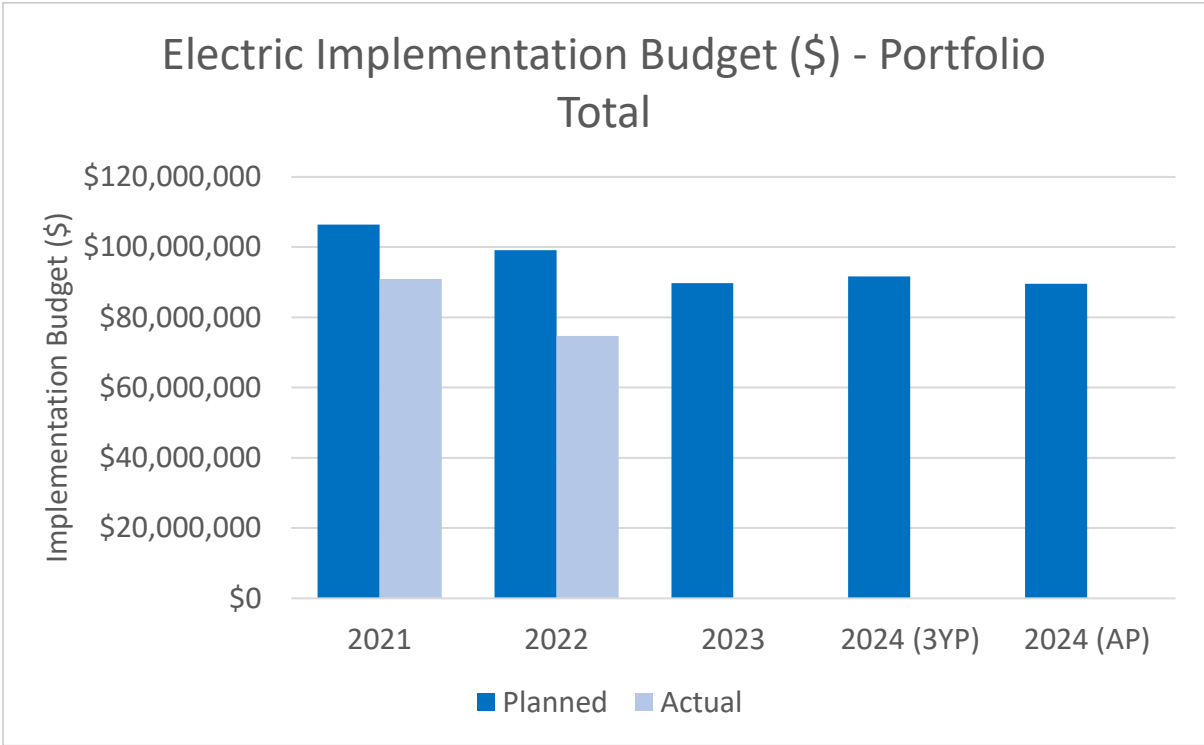
Gas Lifetime Savings (MMBtu) - Portfolio Total





Implementation Budget

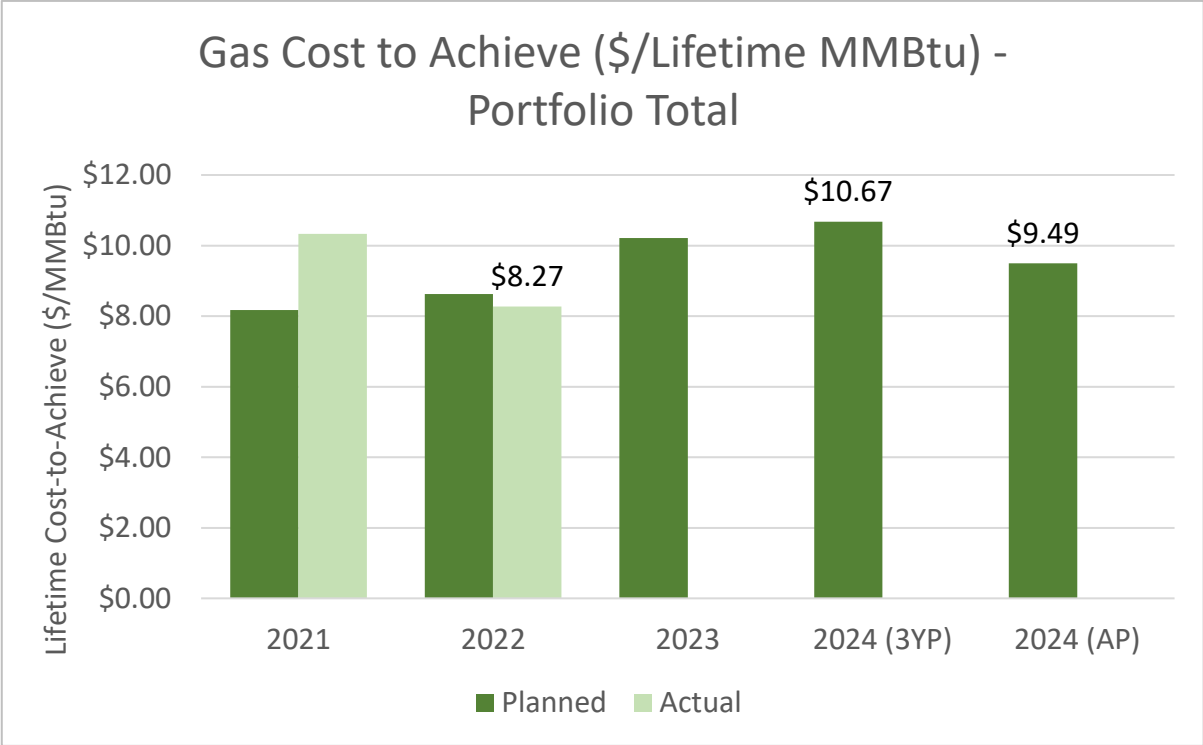
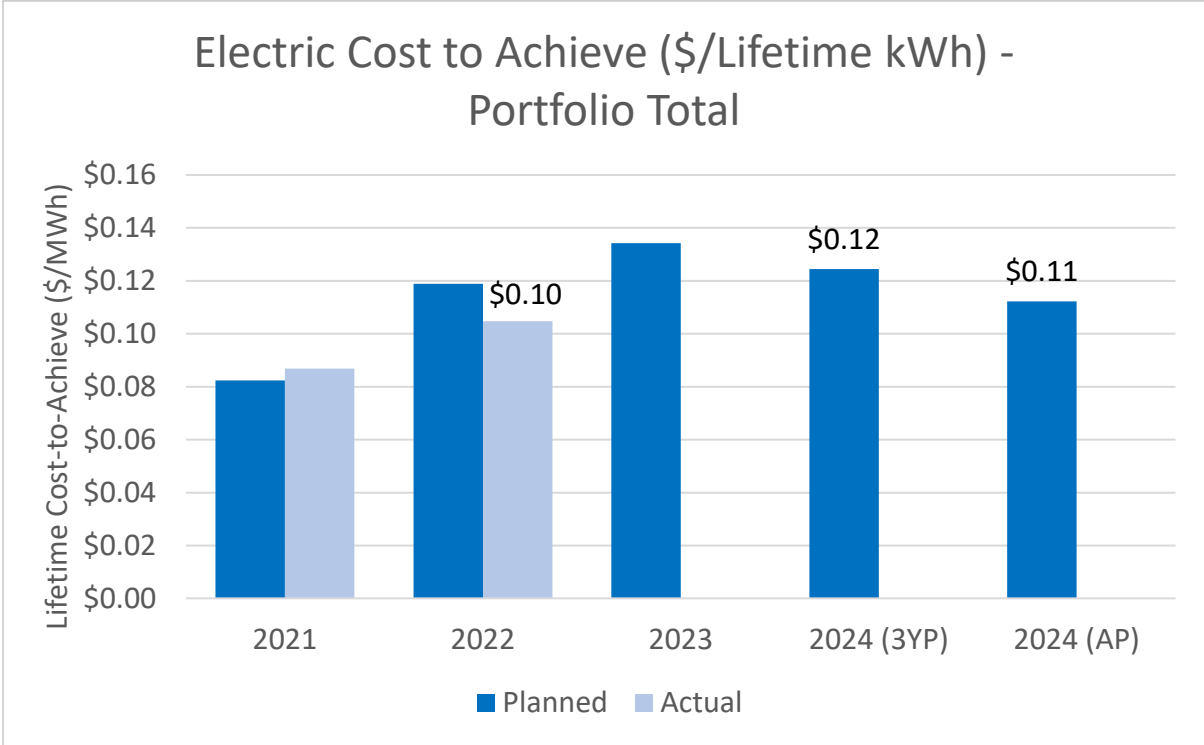
Key Takeaway Total 2024 Annual Plan EE budget is 3% lower than in the Three-Year Plan and 19% higher than 2022 Actual, a year when 80% of planned budget was spent





Portfolio Cost to Achieve

Key Takeaway Planned cost per unit of lifetime savings for both fuels about 10% lower in 2024 Annual Plan First Draft; Annual Plan numbers are also closer to most recent Actuals





COMMERCIAL & INDUSTRIAL SECTOR HIGHLIGHTS



Commercial & Industrial – Plan Highlights

Only two references to the Market Potential Study Refresh in detailed C&I program content.

- Energy Management Systems referenced as high-impact measure, but **other specific opportunities to increase savings not addressed** (e.g., displacement of Room Air Conditioners and Electric Resistance Space & Water Heating with Heat-Pump technology)

The Company **plans to leverage existing state entities that provide workforce training** services including the RI Builders Association and Residential Construction Workforce Partnership

- No specific emphasis on workforce diversification, but the Plan mentions desire to serve marginalized and underserved communities.
- No clear pathway to emphasizing importance of specific skills needed for key future EE program areas that need to be scaled up. No specific actions the Company is committed to taking to drive more rapid workforce development moving forward beyond creating a webpage listing existing resources.

Key themes of customer feedback are not summarized for each program. Most detailed C&I customer and vendor feedback regarding challenges to Combined Heat & Power is included in Narrative

Section on Marketing to C&I Customers “to be drafted”.



Commercial & Industrial – Plan Highlights

RI Energy mapped the MPS results, which informed the Targets, to the Plan BCR Models. However, the Plan does not include commentary on why gaps in savings exist or how gaps can be closed.

Electric Overall Results – Lifetime kWh Savings

MPS Measure	BCR Measure	MPS	BCR	% Difference	Delta
Advanced Network Lighting Controls	CNTRL-INTEGRATED, LGT-LEDHLUPSTREAMCTR, EXT-CNTRL,EXT-SLCNTRL, CNTRL-INTEGRATED, EXT-CNTRL, EXT-SLCNTRL	104,085,580	17,432,160	497.1%	86,653,420
Lighting Controls (Interior), Occupancy	CNTRL-SENSOR, OCCUPANCY SENSORS, CNTRL-SENSOR	78,772,192	2,491,987	3,061.0%	76,280,205
Linear LED Tube	LGT-DNSTR-LinearLED, LGT-UPSTR-LinearLED, LGT-UPSTR-LinearLED	42,968,429	15,195,223	182.8%	27,773,206
LED Luminaire	LGT-LEDDOWNSTREAM, LGT-LEDGENERAL, LGT-LEDREPLACEMENT, LGT-UpstreamSTRWLED, LEDES, LGT-LEDUPSTREAM, LGT-LEDGENERAL, LEDES, LGT-LEDUPSTREAM, LGT-UpstreamSTRWLED	40,014,757	73,784,779	-45.8%	(33,770,022)
Electric resistance and RAC blend to DMSHP (Partial)	NA – Does not exist as a measure	34,827,533	-	-	34,827,533
Heat Pump Water Heater (HPWH) < 55 gallons	NA – Does not exist as a measure	27,091,998	-	-	27,091,998
Retro-commissioning Strategic Energy Manager	SEM	23,245,431	-	-	23,245,431
Lighting Controls (Interior), Daylighting	CNTRL-DIMM, LGHT_CNTRLS, LGT-LEDCNTRLUPSTREAM, CNTRL-DIMM, LGHT_CNTRLS	23,106,274	14,034,979	64.6%	9,071,296
Net-Zero Ready_NEW	NA – Does not exist as a measure	22,044,312	-	-	22,044,312
Air Source Heat Pumps <65 kBtu/h CEE Tier 2	AirHPPkg_to5.4T	20,768,832	1,732,500	1,098.8%	19,036,332
HVAC VFD - Pump	MTVFD-BOIL FWTR PUMP, MTVFD-HEAT HW PUMP, MTVFD-PROC COOL PUMP, MTVFD-WATER/WST PUMP, MTVFD-WSHP PUMP, MTVFD-CHIL WATER PMP	19,265,805	2,802,180	587.5%	16,463,624
HVAC VFD - Fan	MTVFD-BLDG EXHST FAN, MTVFD-BOIL DRAFT FAN, MTVFD-CT FAN, MTVFD-HVAC RET FAN, MTVFD-HVAC SUP FAN, MTVFD-MK UP AIR FAN	18,311,045	2,802,180	553.5%	15,508,864
LED Pole Mounted (Exterior)	Strt lght + CNTRL, Street Lights	18,200,054	20,912,718	-13.0%	(2,712,664)
COMBINED: Demand Control Ventilation (DCV); Energy Management System (EMS)	DCV, EMS, EMS40k-80ksqft, EMS5k-40ksqft, EMS80k-200ksqft, EMS	29,309,740	30,303,679	-3.3%	(993,939)

Source: Guidehouse MPS-BCR Model Lifetime Savings Comparisons. June 22, 2023, RI EE Technical Working Group



Commercial & Industrial – Plan Highlights

Large Commercial Retrofit

- The Company will be considering ways to **modify vendor compensation models** in order to encourage greater emphasis on identifying and implementing non-lighting upgrades
- More stringent efficiency and carbon reduction requirements for CHP projects to better align with state objectives. Incentives still offered for combustion systems, often powered by gas

Large Commercial New Construction

- **Streamlined pathways** are producing some activity despite challenges noted in plan (supply chain impacts, costs)
- **IECC 2024 updates planned to impact baseline assumptions starting in 2025**
- Response to state energy code updates does not include discussion of how the Company can continue to pursue claimable savings (e.g., stretch codes)



Commercial & Industrial – Plan Highlights

Large Commercial New Construction (con't)

- Plan Narrative suggests that *IECC 2024* will be assumed baseline, but **industry standard practice should inform baseline if higher than code**

Small Business Direct Install

- Strategies to reach underserved microbusinesses such as **multilingual outreach and canvassing during Main Street campaigns**
- Customers under 250,000 annual kWh comprise largest share of C&I customer demographic profile and have lowest participation rates
- **SBDI eligibility threshold expanded from 1.0 to 1.5 million kWh annual consumption.** This should be coupled with an increase in savings goals and specific target for participation by microbusinesses to **avoid further inequity**
- Small Business Participation Data Dashboard to be developed in 2024



RESIDENTIAL & INCOME ELIGIBLE SECTOR HIGHLIGHTS



Equity

Company is considering a pilot partnership with community-based organization to promote EE in historically underserved communities

More detail needed in Plan:

- Why consider, and not just commit, to conducting a pilot?
- When will the Company make a decision on whether or not to conduct a pilot?
- Timeline for developing, implementing, and evaluating pilot needed



Income Eligible

Shifting programs to conduct comprehensive home assessments instead of separate assessments for appliances and weatherization/heating systems

- Step in the right direction that should over time improve program performance

Open questions:

- Will vendors be ready to make this shift by start of 2024?
- If any assessments are conducted separately, will the Company collect and report on how many are combined vs. separate?



Multifamily

The Company is exploring a pilot that would provide new financing options to Multifamily properties

- The Plan requires more detail on what financing options are currently being considered
- If details aren't yet available, the Plan should describe the Company's approach – including process and timeline – to research, implement, and evaluate financing options

Beyond the potential for a pilot of financing options, there is very little information in the Plan about how recent underperformance will be addressed

- Add performance metrics to vendor contract for goal achievement
- Comprehensive strategy for leveraging Multifamily Census Study data
- Dedicated program strategies for wide-variety of Multifamily building types



Pre-Weatherization Barriers

Plan proposes continued collection and analysis of Pre-Weatherization (Pre-Wx) barrier data

- Data collection and ongoing analysis is good

Company is considering using EE funds to address Pre-Wx barriers on a project-by-project or program-by-program basis

- Plan would benefit from additional detail on process for determining whether or not to move forward with this consideration

Open questions for the Company:

- What is the current data collection process?
- What, if any, changes is it planning to make to its data collection processes?
- What data does the Company need - that it doesn't currently have – in order to make a decision on providing fundings for Pre-Wx barrier remediation?



HVAC & Products

Heat Pumps

- Unclear what standards the Company is planning to use for eligible products
- MA and CT have already transitioned to ENERGY STAR v6.1 and are using this year as a transition period, with full switch starting in 2024
- State HP program is likely taking similar approach starting in 2024, so recommendation is that RI Energy plans align for State and regional consistency

Recommend the Company consider adding induction cooktops to its list of incentivized measures

Other program enhancements or ideas to consider researching in 2024:

- Determine the feasibility of a combined HVAC and Products program, which could have administrative savings given similar delivery channels
- Enhanced incentive offering on select measures for low- and moderate-income customers



Gas Incentives

Plan states that there *“may be a slight reduction in natural gas incentives”*

- Would like to see a stronger commitment to phasing out gas equipment incentives – **Priority of Council and Stakeholders**
- Over 85% of incentives in Gas HVAC program are tied to gas heating and hot water equipment with BCRs <1.0
- Funding associated with these measures should be re-allocated towards those that generate gas savings for existing equipment and position gas customers for possible future electrification



New Construction

Company indicates a plan to continue consideration of a gradual transition to an all-electric new construction offering

More detail needed in Plan:

- Detail on results of its current research
- What additional research it needs to complete
- More specificity around what a “gradual transition” looks like (e.g. if the goal is to get to all-electric by 2025, what needs to happen in 2024?)



Council Member Discussion

