

December 2, 2021

VIA ELECTRONIC MAIL

Luly E. Massaro, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

RE: Docket 5189 – 2022 Annual Energy Efficiency Program Plan Responses to EERMC Data Requests - Set 2 (Complete Set)

Dear Ms. Massaro:

On behalf of The Narragansett Electric Company d/b/a National Grid (“National Grid” or the “Company”), attached please find the electronic version of the complete set of responses to the Energy Efficiency Resource Management Council’s (“EERMCs”) Second Set of Data Requests in the above referenced docket.¹ Bates stamp has been applied to the attached electronic version.

Thank you for your attention to this filing. If you have any questions or concerns, please do not hesitate to contact me at 401-784-4263.

Sincerely,



Andrew S. Marcaccio

cc: Docket 5189 Service List
Margaret Hogan, Esq.
Jon Hagopian, Esq.
John Bell, Division

¹ Per the Commission’s request, the Company is providing one copy of this transmittal for the Commission’s docket file and six (6) copies, 3-hole punched for Commission.

Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate was electronically transmitted to the individuals listed below.

The paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.

Joanne M. Scanlon

December 2, 2021
Date

**Docket No. 5189 - National Grid – 2022 Annual Energy Efficiency Program
Service list updated 11/29/2021**

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EERMC 2-1
Portfolio-Level Planning

Request:

Please provide a detailed explanation of the decision-making process and supporting quantitative and qualitative analyses which resulted in the specific mix of program activities proposed in the 2022 Annual Energy Efficiency Plan (EE Plan). Please directly explain, by program, all differences between the proposed program activity levels in the 2022 EE Plan and the program activity levels conveyed in response to EERMC 1-1.

Response:

The planning process for the 2022 Annual Energy Efficiency Plan (2022 Plan) began with the planning of the second year of the Three-Year Plan. This Annual Plan reflects a refinement of that planning process. The planning process was guided by “principles of program design” in the LCP Standards in Docket 5015.¹

In the process of creating the 2022 Plan, there was extensive engagement with stakeholders. This includes monthly residential and C&I sector team meetings with the EERMC consultants, monthly residential and C&I EM&V meetings with the EERMC consultants, discussions at monthly EERMC meetings, and additional ad-hoc discussions on topics such as bill and rate impacts and equity. The Company’s sector strategy teams collaborated with the EERMC consultants for “Deep Dive” meetings on identifying measures from the Market Potential Study for further focus. The Company also engaged with the Energy Efficiency Technical Working Group (EETWG) to identify and focus on stakeholder priorities. The 2022 Plan also incorporated suggestions from Equity Working Group, weaving a focus on equity into the Plan. Please see Section 2.1 of the Annual Plan for more detail on how each of these informed the planning process.

¹ Please see Section 2.1.1 of the 2022 Energy Efficiency Annual Plan (Bates page 56) for further discussion on the Principles of Program Design.

EERMC 2-1, page 2
Portfolio-Level Planning

The Company conducted the following series of quantitative analyses to develop the cost and savings resulting in the specific mix of program activities proposed in the 2022 Plan.

- As a starting point, the Company applied the 2022 incentive levels and gross savings quantities from the January 2021 compliance filing of the Three-Year Plan.²
- Applied updated values from the 2022 Technical Reference Manual.³
- Incorporated the latest Evaluation, Measurement, and Verification (EM&V) studies by updating impact factors.
- Applied the 2021 AESC study to update avoided costs.⁴
- Used historic program activity to review gross savings and costs from recent years (primarily 2018 to 2020) to account for recent trends in program participation.
- Further adjusted gross savings and incentives to account for planned activities.
- Throughout the process, adjusted planned quantities and incentives based on stakeholder feedback.

After completing program-level planning, the Company aggregated program budgets and savings and holistically reviewed the portfolio-level costs and savings, using lenses of prudence, equity (distributional equity), and cost-effectiveness and made adjustments to arrive at the selected optimum set of program activities.

Tables 1 and 2 below show the differences in proposed program activity, by measure, between EERMC 1-1 and the 2022 Plan. For all but one measure, quantities and/or incentives were higher in EERMC 1-1 than in the 2022 Plan due to the removal of the budget constraint in the EERMC 1-1 scenario.⁵

² Docket 5076 – 2021-2303 Energy Efficiency Program Plan & 2021 Energy Efficiency Plan Compliance Filing Pursuant to December 22, 2020 Open Meeting. [http://www.ripuc.ri.gov/eventsactions/docket/5076-NGrid-ComplianceFiling%20\(PUC%201-29-2021\).pdf](http://www.ripuc.ri.gov/eventsactions/docket/5076-NGrid-ComplianceFiling%20(PUC%201-29-2021).pdf)

³ 2022 RI Technical Reference Manual.
<http://www.ripuc.ri.gov/eventsactions/docket/1%20PY2022%20RI%20TRM.pdf>

⁴ See PUC 1-21 (Bates page 33) for a summary of the major changes in 2021 AESC and the impact on relevant avoided cost estimates.

⁵ The incentive per unit increased by \$0.18 for the gas measure “COOKING-COMBO OVEN 1 – Upstream” in the Large Commercial New Construction program.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 5189
In Re: 2022 Annual Energy Efficiency Plan
Responses to EERMC's Second Set of Data Requests
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EERMC 2-1, page 3
Portfolio-Level Planning

Table 1. Electric Portfolio

Program	Measure Name	Difference
Large Commercial New Construction	D2 HVAC Prescriptive	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial New Construction	D2 Lights	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial New Construction	Comprehensive Design - Custom	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial New Construction	Lighting - Custom	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial New Construction	Motors & VFD - Custom	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial New Construction	Process - Custom	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial New Construction	Refrigeration - Custom	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial New Construction	Other - Custom	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial Retrofit	EI HVAC	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial Retrofit	Custom: Street Lighting	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial Retrofit	EI Light: Prescriptive	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial Retrofit	EI Light: Upstream G24, G23, MR Lamps, PAR lamps	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial Retrofit	EI Light: Upstream High/Low Bay	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial Retrofit	EI Light: Upstream Linear Fixture w/ Controls	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial Retrofit	EI Light: Upstream Retrofit Kits	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial Retrofit	EI Light: Upstream TLEDs	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial Retrofit	HVAC - Custom	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial Retrofit	Lighting - Custom	EERMC 1-1 quantities higher than 2022 Plan
Small Business Direct Install	Lighting	EERMC 1-1 quantities higher than 2022 Plan
Small Business Direct Install	Lighting controls	EERMC 1-1 quantities higher than 2022 Plan
Small Business Direct Install	Non-Lighting	EERMC 1-1 incentives higher than in 2022 Plan
Income Eligible Multifamily	Participant (NEB)	EERMC 1-1 quantities higher than 2022 Plan
Income Eligible Multifamily	Custom	EERMC 1-1 quantities higher than 2022 Plan
Income Eligible Multifamily	Common Ext LED Bulbs	EERMC 1-1 quantities higher than 2022 Plan
Income Eligible Multifamily	Common Ext LED Fixture	EERMC 1-1 quantities higher than 2022 Plan

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Portfolio-Level Planning

Program	Measure Name	Difference
Income Eligible Multifamily	Dwelling Int LED Bulbs	EERMC 1-1 quantities higher than 2022 Plan
Income Eligible Multifamily	Smart Strip	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	AMPEDUC - TLC	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	AMPWx DelFuel	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	AMPWx Elec	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	AMPWATERBED	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	Early Retirement CW Elec DHW & Elec Dryer	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	Early Retirement CW Elec DHW & Gas Dryer	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	AMPACREPLACE	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	AMPHEATSYSTEM	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	AMPMinisplit Heat Pumps - Electric Resistance	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	AMPProgrammable Thermostat, Gas	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	AMPProgrammable Thermostat, Oil	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	AMPProgrammable Thermostat, Other	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	AMP THERMOSTAT, Electric	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	AMPDehumidifier Rebate	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	AMP Smart Strip	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	Early Retirement CW Gas DHW & Elec Dryer	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	Early Retirement CW Gas DHW & Gas Dryer	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	Early Retirement CW Oil DHW & Elec Dryer	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	Early Retirement CW Propane DHW & Elec Dryer	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	AMP FREEZER	EERMC 1-1 quantities higher than 2022 Plan

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Portfolio-Level Planning

Program	Measure Name	Difference
Single Family - Income Eligible Services	AMPRefrig rebate	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	Participant	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	Custom	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	THERMOSTAT Elec with AC	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	Common Ext LED Bulbs	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	Common Ext LED Fixture	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	Common Ext Reflector	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	Common Int EISA Exempt	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	Common Int LED Bulbs	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	Common Int LED Fixture	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	Common Int Reflector	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	Dwelling Ext LED Fixture	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	Dwelling Ext Reflector	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	Dwelling Int EISA Exempt	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	Dwelling Int LED Bulbs	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	Dwelling Int Reflector	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Participant	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Air Sealing Kit - Oil	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Pipe Insulation - Electric	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Pipe Insulation - Oil	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Pipe Insulation - Others	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Pre-Wx	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Wx - OIL	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Wx Elec - Elec Heat only	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Programmable thermostat - Electric	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Programmable thermostat - Oil	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Programmable thermostat - Other	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Wifi thermostat - Oil	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Wifi thermostat - Others	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Smart Strip	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Refrigerator Brush	EERMC 1-1 quantities higher than 2022 Plan

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Portfolio-Level Planning

Program	Measure Name	Difference
ENERGY STAR® HVAC	ACQIVES	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	ACS16SEER13EER	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	Central Heat Pump	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	DOWNSIZE	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	ECM Pumps	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	HP Mini-split QIV	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	HPQIVES	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	HPTUNE	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	HPWH < 55 gallon UEF 2.7	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	HPWH >=55 gallon UEF 2.0	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	Mini-Split Heat Pump	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	WiFi Tstat-heat and cool,Gas	EERMC 1-1 quantities higher than 2022 Plan
Residential ConnectedSolutions	Battery Daily (savings)	EERMC 1-1 quantities higher than 2022 Plan
Commercial ConnectedSolutions	C&I Targeted Dispatch	EERMC 1-1 incentives higher than 2022 Plan

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Portfolio-Level Planning

Table 2. Gas Portfolio

Program	Measure Name	Difference
C&I Multifamily	WiFi thermostat gas_MF	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial New Construction	Boilers	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial New Construction	COND WATER HEATER 94%MIN 75-300 and above	EERMC 1-1 incentives higher than 2022 Plan
Large Commercial New Construction	COOKING-COMBO OVEN 1	EERMC 1-1 quantities and incentives higher than 2022 Plan
Large Commercial New Construction	COOKING-CONVECTION OVEN 1	EERMC 1-1 quantities and incentives higher than 2022 Plan
Large Commercial New Construction	COOKING-CONVEYOR OVEN 1	EERMC 1-1 quantities and incentives higher than 2022 Plan
Large Commercial New Construction	COOKING-FRYER-1000	EERMC 1-1 quantities and incentives higher than 2022 Plan
Large Commercial New Construction	COOKING-COMBO OVEN 1 - Upstream	2022 Plan incentives higher than EERMC 1-1
Large Commercial New Construction	COOKING-CONVECTION OVEN 1- Upstream	EERMC 1-1 incentives higher than 2022 Plan
Large Commercial New Construction	COOKING-FRYER-1000- Upstream	EERMC 1-1 incentives higher than 2022 Plan
Large Commercial New Construction	COOKING-STEAMER-1000- Upstream	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial New Construction	WATER HEATER - Indirect Upstream	EERMC 1-1 quantities higher than 2022 Plan
Large Commercial New Construction	Water Heaters 94 and above	EERMC 1-1 incentives higher than 2022 Plan
Large Commercial New Construction	Custom	EERMC 1-1 incentives higher than 2022 Plan
Large Commercial New Construction	Water Heating Boiler - 94% TE	EERMC 1-1 incentives higher than 2022 Plan
Large C&I Retrofit	Controls	EERMC 1-1 quantities higher than 2022 Plan
Large C&I Retrofit	Prescriptive Steam Traps	EERMC 1-1 quantities higher than 2022 Plan
Large C&I Retrofit	Custom: General	EERMC 1-1 quantities higher than 2022 Plan
C&I Small Business Direct Install	Small Business Gas	EERMC 1-1 quantities higher than 2022 Plan
Low Income Multifamily	Air Sealing_LI	EERMC 1-1 quantities higher than 2022 Plan
Low Income Multifamily	BOILER Commercial_LI	EERMC 1-1 quantities higher than 2022 Plan
Low Income Multifamily	BOILER_LI	EERMC 1-1 quantities higher than 2022 Plan
Low Income Multifamily	Participant (NEB)_LI	EERMC 1-1 quantities higher than 2022 Plan

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Portfolio-Level Planning

Program	Measure Name	Difference
Low Income Multifamily	TSV Showerhead_LI	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	HEATSYSTEM	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	WEATHER	EERMC 1-1 quantities higher than 2022 Plan
Single Family - Income Eligible Services	Participants	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	Faucet Aerator_MF	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	TSV Showerhead_MF	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise Multifamily	WiFi thermostat gas_MF	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Weatherization	EERMC 1-1 quantities and incentives higher than 2022 Plan
EnergyWise	Air Sealing Kit (Gas)	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	Pipe Wrap	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	THERMOSTAT	EERMC 1-1 quantities higher than 2022 Plan
EnergyWise	WiFi THERMOSTAT	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	BOILER RESET	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	Boiler90	EERMC 1-1 quantities and incentives higher than 2022 Plan
ENERGY STAR® HVAC	Boiler95	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	COMBO CONDENSING	EERMC 1-1 quantities and incentives higher than 2022 Plan
ENERGY STAR® HVAC	COMBO CONDENSING 95	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	ENERGY STAR COND WATER HEATER 0.80 UEF	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	Furnace95ECM	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	HEAT RECOVERY VENT	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	ENERGY STAR STORAGE WATER HEATER .64 UEF (med draw)	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	ENERGY STAR STORAGE WATER HEATER .68 UEF (high draw)	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	ENERGY STAR ON DEMAND WATER HEATER 0.87 UEF	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	TSV	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	TSV_SHOWERHEAD	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	WiFi Thermostat - cooling and htg	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	WiFi Thermostat - gas ht only	EERMC 1-1 quantities higher than 2022 Plan
ENERGY STAR® HVAC	Programmable Thermostat	EERMC 1-1 quantities higher than 2022 Plan

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Portfolio-Level Planning

Program	Measure Name	Difference
Residential New Construction	RR Tier 1	EERMC 1-1 quantities higher than 2022 Plan
Residential New Construction	RR Tier 1 - DHW	EERMC 1-1 quantities higher than 2022 Plan
Residential New Construction	RR Tier 2	EERMC 1-1 quantities higher than 2022 Plan
Residential New Construction	RR Tier 2 - DHW	EERMC 1-1 quantities higher than 2022 Plan
Residential New Construction	RR Tier 3	EERMC 1-1 incentives higher than 2022 Plan
Residential New Construction	Tier 3	EERMC 1-1 incentives higher than 2022 Plan
Residential New Construction	Adaptive Reuse	EERMC 1-1 quantities and incentives higher than 2022 Plan

EERMC 2-2
Program Planning

Request:

Following up on National Grid’s response to EERMC 1-5, please provide the analysis used to estimate the 110 new participants served by reallocating planned incentives for the RI Grows CHP project to other measures. Based on 2020 dollar spending per participant rates and National Grid’s response to DPUC 2-9, these proposed reallocations would result in approximately 54 additional Large Commercial Retrofit participants, 363 additional Large Commercial New Construction participants and 53 additional Small Business Direct Install participants.

Response:

The following table provides a breakdown of additional unique participants by source (i.e. by plan element). Below that are estimates for each source.

Source of New Participants	Additional Participants
HVAC Accelerated Retirements	49
Large Commercial & Industrial (New Construction + Retrofit)	30
Small Business ASHP's	25
Small Business Other	6
Total	110

HVAC Accelerated Retirements

Assumptions:

- 74 Units (as shown in vendor proposal – see EERMC 1-8)
- 1.5 HVAC units per participant

$74 / 1.5 = 49$

Large Commercial & Industrial (New Construction + Retrofit)

The Company estimates there will be 30 additional unique participants in the Large Commercial & Industrial (C&I) programs (New Construction and Retrofit). To estimate the number of unique incremental large C&I participants in the New Construction and Retrofit programs, the Company first determined the number of unique customers participating in the large C&I program in 2020 (367), excluding Upstream participants. This number was then multiplied by the estimated percentage increase in annual savings (8%) resulting from the Provisional Plan (which is more

EERMC 2-2, page 2
Program Planning

closely correlated with the program volume than spend, in part due to the higher average unit cost to achieve these savings).

It should be noted that the Upstream programs have more participants per dollar of spend and per unit of savings than the remainder of the large C&I portfolio. Upstream participants were excluded from this calculation because no additional funds were allocated to Upstream, except as described below. This is because the Company does not believe doing so would result in significant additional savings.

The Company has proposed an increase in budget and savings from the Upstream HVAC pathways to accounts for additional participants in the HVAC Accelerated Retirements initiative. However, these 49 participants are already accounted for, as described above.

$$367 * 8\% = 30$$

# of unique LCI customers (excl Upstream)	367
% increase in annual MWh	8%
Δ participants (excl early retirements)	30

Small Business Direct Install

The Company and its Small Business Direct Install (SBDI) vendor estimate that the Company can support 25 participants in the electric-resistance to air-source heat pump (ASHP) conversion effort. Assumptions:

- Budget: \$512,500
- Incentive cost per ton¹ of capacity: \$3,500
- Average tons per customer: 6

$$\$512,500 / (\$3,500 * 6) = 25$$

The Company estimates that the slight additional increase in the SBDI budget will result in 6 additional customers.

¹ 1 ton = 12,000 BTU/hr.

EERMC 2-3
Program Planning

Request:

National Grid's response to EERMC 1-7 indicates that they are proposing to use a private company to provide the income verification services for the moderate income offering. How does National Grid plan to select the private company to provide these services (e.g. competitive bid via RFP, sole source, other)?

- a. If competitive bid via RFP, please provide National Grid's anticipated timeline for developing the RFP, distributing it to the market, receiving responses, selecting a bidder, and beginning implementation of the service. If some or all of this timeline is dependent on approval to implement, please indicate timeline from date of approval.
- b. If sole source, please describe National Grid's process and timeline for identifying and selecting the private company, and the timeline for implementation of the service. If some or all of this timeline is depending on approval to implement, please indicate timeline from date of approval.
- c. If other, please describe.

Response:

The Company does not plan to directly select the private company for income verification services. Rather, the Company intends to amend the existing EnergyWise Lead Vendor contract in order to incorporate this responsibility into the Lead Vendor's existing scope of work. Doing so, the Company believes, will provide for a more streamlined moderate-income verification service, and provide participating customers with a single point of contact.

The Company's current understanding is that the EnergyWise Lead Vendor will most likely sole source its outsourcing of these income verification services to a third-party with specialized capabilities in this area.

The Company and its Lead Vendor have already discussed the process and timing with an external service provider, and expect that the process of selecting and sub-contracting with this vendor will begin within one month of Plan approval by the PUC, and that these income verification services will begin to be offered to participating customers early in calendar quarter 2 of 2022.

EERMC 2-4
Program Planning

Request:

Following up on National Grid's response to EERMC 1-8, the Company indicates their vendor's revised proposal from September 27, 2021 substantially reduced proposed incentive costs to better align with C&I portfolio-wide averages in the 2022 EE Plan. Did this proposal also reduce STAT costs for this offering? If so, please indicate the amount of the reduction.

Response:

No, the vendor's revised proposal did not reduce STAT costs.

EERMC 2-5
Program Planning

Request:

Following up on National Grid's response to EERMC 1-9, please provide the underlying analysis that was used to develop the costs associated with the "Participant" measure for each of the following items:

- a. EnergyWise Multifamily Electric (Measure ID E21RESEWMF0002)
- b. Income Eligible Multifamily Electric (Measure ID E21IEMF0001)
- c. EnergyWise Multifamily Gas (Measure ID G21RESEWMF0003)
- d. Income Eligible Multifamily Gas (Measure ID G21IEMF0013)

For example, for item 2-1.a, please demonstrate using mathematical equations how the TRC of \$860 and the Incentive of \$712 were developed.

Response:

Traditionally, the costs associated with the "Participant" measure are developed from the total program activity incurred during the most recent 18 months of activity. The Company looks at all costs incurred, total incentives, and total participants for each program.

In the specific case of 2022 planning, the data used during this year's planning cycle also included 2019 data, as the multifamily sector is still recovering from COVID and the most recent program data may not be representative of 2022 anticipated activity.

Adjustments were then made to account for the transformation of residential lighting (resulting in the reduction of planned costs and savings from direct install lighting measures through the multifamily programs) and planned increases in custom measures. Each of these programs used the following formulas to derive the Participant costs.

In total, nearly 150 different measures across the electric and gas programs are evaluated to arrive at Participant Costs

Total Resource Costs = \sum Adjusted Measure Costs / \sum Total Building Units

Incentive = \sum Adjusted Incentive Costs / \sum Total Building Units

For part d of this information request, the TRC of \$860 and Incentive of \$712 are for the multifamily electric program. The Income Eligible Multifamily Gas program has a TRC of \$786 and Incentive of \$786.

EERMC 2-6
Program Planning

Request:

Following up on National Grid's response to EERMC 1-10, please provide the underlying analysis that was used to develop the costs associated with the "Custom" measure for each of the following items:

- a. EnergyWise Multifamily Electric (Measure ID E21RESEWMF0002)
- b. Income Eligible Multifamily Electric (Measure ID E21IEMF0002)
- c. EnergyWise Multifamily Gas (Measure ID G21RESEWMF0002)
- d. Income Eligible Multifamily Gas (Measure ID G21IEMF0004)

For example, for item 2-2.a, please demonstrate using mathematical equations how the Gross Annual kWh Saved of 31,363.33 were developed.

Response:

The "Custom" measure savings is an average savings value, developed using historical program savings in the custom measure category divided by the total number of custom measures installed.

As discussed in EERMC 2-5, 2.5 years of data were used for this analysis, in order to account for what the Company believes to be anomalous, non-persistent impacts from COVID in 2020 and 2021.

Similarly, additional savings quantities and associated incentive budgets were included for 2022 in anticipation of additional custom activity. This approach was used for all four programs listed above. The mathematical equation to arrive at savings is shown below.

Average Custom Gross Annual kWh = $\frac{\sum \text{Adjusted Custom Gross Annual kWh Measure Savings}}{\sum \text{Total Custom Measures Installed}}$

EERMC 2-7
Program Planning

Request:

Following up on National Grid's response to EERMC 1-11, please provide the underlying analysis that was used to develop the planning assumption of 78% of TRC being covered by customer incentives for the items listed below. We calculated the 78% by dividing the Incentive of \$3,319 by the TRC of \$4,255.

- a. EnergyWise Single Family Electric - Wx-Oil (E21RESEWSF0009)
- b. EnergyWise Single Family Electric - Wx Elec - Elec Heat Only
- c. EnergyWise Single Family Gas - Weatherization (G21RESEWSF0002)

Response:

For the 2022 Annual Energy Efficiency Plan, the Company based 2022 cost assumptions from the 2021-2023 Energy Efficiency Program Plan¹ to develop planning assumptions for the EnergyWise program.

The Company believes that EnergyWise saw an unprecedented response to weatherization service offers in late 2020 through 2021 due to lifestyle changes and program changes in response to the COVID-19 pandemic. The enhanced incentives offered during 2020 resulted in increased project costs and incentive costs.

When reviewing project costs for 2022, the Company felt the more appropriate course of action was to use the costs developed for the program in 2020, using the 2019 historical project costs.

In 2020, total project costs divided by the number of participants were used to arrive at Total Resource Costs (TRC). Incentives were calculated from Total incentives divided by number of participants.

Incentives are at 78% of TRC for a number of reasons, including up to eight hours of no-cost air sealing for each weatherization project, \$250 pre-weatherization certification incentives, landlord/renter incentives of 100% of project costs and qualifying moderate-income customer incentives of 100% of project costs. Reducing the ratio of incentives to total resource costs are total project costs that exceed the incentive cap of \$4,000, thereby reducing the overall incentive on a percentage basis.

¹ Note that 2022 and 2023 costs reflected a small escalation over 2021 costs to account for increasing weatherization material pricing.

EERMC 2-8
Program Planning

Request:

National Grid's response to EERMC 1-17 indicated that "the Company still finds value in providing customers with assessments as an education opportunity, and believes that there is value in documenting the age of heating, water heating, cooling equipment and appliances as a tool for creating and providing leads for other residential energy efficiency program offerings." Please clarify whether or not National Grid is able to document the age of heating, water heating, cooling equipment and appliances via the virtual home energy assessment in order to provide leads for other residential energy efficiency program offerings.

Response:

Yes, the Company is still capturing the age of heating, water heating, and cooling equipment and appliances during virtual home energy assessments. The estimates for age can sometimes be off by a decade since customers may have limited knowledge about the age of their systems and video and pictures are blurry and/or systems are frequently located in dark areas of the home.

EERMC 2-9
Active Demand Management

Request:

Following up on National Grid's response to EERMC 1-20, the EERMC does request that National Grid work with their curtailment service providers (CSPs) who have enrolled customers in the Rhode Island Targeted and Daily Dispatch measures to provide estimated curtailment breakouts by technology for 2021 C&I curtailment participants.

Response:

The Company will send this request to the participating CSPs. Based on previous experience, it will take about 3 weeks to get the data back from all the CSPs. This time may be extended due to the holidays.

EERMC 2-10
Active Demand Management

Request:

Following up on National Grid's response to EERMC 1-21, the Company indicates that 1.5% of Direct Load Control Wi-Fi Thermostat participants in the Connected Solutions Active Demand Management program are on the A60 rate (Low Income Rate). Can National Grid confirm whether these 1.5% of customers, who qualify as Income Eligible, received their WiFi Thermostats for free?

Response:

None of the current customers on the A60 rate enrolled in Connected Solutions received a free Wi-Fi thermostat through the Company's energy efficiency programs. Customers in multifamily residences on the A60 rate are eligible for free Wi-Fi thermostats through the Income Eligible Services Multifamily (IES MF) program. Customers in non-multifamily residences are not eligible for free Wi-Fi thermostats in the Company's energy efficiency programs.

EERMC 2-11
Equity, Income Eligible, and Multifamily

Request:

National Grid's response to EERMC 1-22 indicates the use of the existing 3rd Party Support system would be just one element of the opportunities to improve the overall income eligible program implementation model. Please describe other elements that National Grid and the CAP Agencies and/or Executive Directors have discussed as ways to improve the implementation model for this program.

Response:

Please refer to the Company's response to EERMC 1-25 for the other elements that National Grid and the CAP Executive Directors have discussed as opportunities to continue to evolve the IES Program. The Company's response to EERMC 1-25 outlines the following opportunities:

- IES Program Implementation Opportunities
- Increasing weatherization completions
- Workforce Development

EERMC 2-12
Equity, Income Eligible, and Multifamily

Request:

Following up on National Grid's responses to EERMC 1-22a and EERMC 1-22b, please provide a timeline for when National Grid and the CAP Executive Directors anticipate completion of the fully designed implementation model and associated performance indicators.

Response:

Currently, the Company is continuing to work with the CAP Executive Directors in order to establish a process for moving forward with program implementation opportunities. The Company does not currently have a timeline as there are still many aspects in consideration for modifying the implementation model, but does expect that necessary changes will be implemented in time for the Company to achieve planned 2022 savings and benefits from the IES sector.

The impact of implementation model changes is being considered from the perspectives of the multiple parties (the Lead Vendor, the CAP Agencies and Company implementation staff) that will need to coordinate and stay aligned around the multiple levers that can impact program success - the need to seamlessly serve customers, ensuring and supporting appropriate staffing levels, ensuring access to leveraged funding, and the potential disruptions associated with changes to existing processes and tools.

The Company remains committed to driving continuous improvement in all energy efficiency programs, including IES. The Company is also mindful, however, of the need to be thoughtful around implementing significant changes to the IES Program implementation model too quickly, given the potential impacts on partners and customers at a time when the programs are still emerging from the outsized recent impacts of the COVID pandemic on these programs.

EERMC 2-13
Equity, Income Eligible, and Multifamily

Request:

Following up on National Grid's response to EERMC 1-24, please provide the total number of discount rate customers by town that was used to develop CAP agency budgets for 2022. For each town listed, please also include what CAP Service Territory that town is allocated towards.

Response:

The following total numbers of 2021 electric/gas discount rate customers included in this response were used as a proxy to develop the budgets for the IES Program. Note that the number of customers on the discount rate changes daily, resulting in variance if numbers are pulled on different days/times.

Agency	City/Town	2021 # of A60 Electric Customers	2021 # of 1301 Gas Customers
Blackstone Valley	Central Falls	804	1,035
Blackstone Valley	Cumberland	545	459
Blackstone Valley	Lincoln	406	357
Blackstone Valley	North Smithfield	174	83
Blackstone Valley	Pawtucket	2,965	3,325
Blackstone Valley	Woonsocket	2,137	1,624
CAP of Providence	Providence	9,244	8,800
Comprehensive Community Action	Cranston	2,784	2,335
Comprehensive Community Action	Foster	91	0
Comprehensive Community Action	Scituate	194	8
East Bay	Barrington	182	123
East Bay	Bristol	477	306
East Bay	East Providence	972	988
East Bay	Jamestown	42	0
East Bay	Little Compton	66	0
East Bay	Middletown	197	73
East Bay	Newport	589	285
East Bay	Portsmouth	239	35
East Bay	Riverside	503	271
East Bay	Tiverton	476	87

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 5189
In Re: 2022 Annual Energy Efficiency Plan
Responses to EERMC's Second Set of Data Requests
Issued on November 22, 2021

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Equity, Income Eligible, and Multifamily

Agency	City/Town	2021 # of A60 Electric Customers	2021 # of 1301 Gas Customers
East Bay	Warren	388	270
TriCounty	Burrillville	138	48
TriCounty	Charlestown	219	0
TriCounty	Exeter	107	6
TriCounty	Foster	95	0
TriCounty	Glocester	204	0
TriCounty	Hopkinton	204	2
TriCounty	Johnston	1,078	657
TriCounty	Narragansett	236	75
TriCounty	North Kingstown	667	0
TriCounty	North Providence	1,172	778
TriCounty	Richmond	70	0
TriCounty	Smithfield	326	111
TriCounty	South Kingstown	487	50
TriCounty	West Greenwich	88	5
TriCounty	Westerly	772	372
Westbay	Coventry	891	219
Westbay	East Greenwich	220	75
Westbay	Warwick	2,338	1,579
Westbay	West Warwick	1,311	486
	Total	34,098	24,927

EERMC 2-14
Planning Process and Timeline

Request:

National Grid's energy efficiency programs typically operate during the course of a full calendar year, January 1 through December 31, with budgets, implementation strategies, system benefit charge (SBC) rates, performance incentive earning opportunity, and other components fixed and known as the new program year starts. With the regulatory schedule for the 2022 EE Plan extending into at least January of 2022, please identify any impacts this schedule may have on the proposed 2022 energy efficiency plan, specifically:

- a. The SBC and its impact on customers' monthly bills
- b. The 2022 EE Plan budget
- c. 2022 EE Plan program implementation timelines
- d. Achievement of proposed 2022 energy savings goals
- e. Continuity of service for 2021 programming
- f. Specific vendor contracts that are set to expire in 2022
- g. Other impacts or concerns National Grid has identified

Response:

The Company notes that its preference would be to continue the currently effective 2021 electric and gas SBCs applicable for usage during the month of January 2022 and that revised electric and gas SBCs (reflecting the results of this proceeding) would become effective for usage on and after February 1, 2022. As a result, the approved 2022 energy efficiency budget minus an estimate of an amount billed in January 2022 (based upon the 2021 SBCs and January 2022 forecasted volumes) be the basis for the 2022 electric and gas SBCs, designed to recover the remaining amount over 11 months (February through December 2022). When answering the below questions, the Company has assumed that the preference described above would be the model that would ultimately be approved and implemented. Assuming the approved 2022 energy efficiency budget aligns with the proposed budget, the longer the change in the SBCs is delayed beyond February 1, 2022, the greater the SBC increase to customers would be during the remaining months of 2022.

- a. The SBC and its impact on customers' monthly bills

Assuming that the PUC approves the proposed SBCs based on the 2022 Gas EE Plan and 2022 Electric Provisional Plan before the end of January 2022, the revised gas and electric SBCs would become effective for usage on and after February 1, 2022. Since the currently effective SBCs were proposed to be in effect for a 12-month period, the

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Planning Process and Timeline

Company would request the PUC to approve an extension of the currently effective SBCs through January 31, 2022. However, the proposed SBCs are higher than the current SBCs that are in effect for 2021. Therefore, as discussed above, to ensure adequate funding by the end of 2022, the Company would propose a revision to the proposed SBCs that would be effective February 1, 2022, resulting in higher 2022 SBCs than what was filed in the 2022 Plans due to the one month delay in implementing the proposed changes to the SBCs, making up the funding that would have been provided through the originally-proposed SBCs over the remaining 11 months of 2022. See Attachment EERMC 2-14 for a quantitative analysis of the impact to the SBCs and incremental impact on residential customer bills.

b. The 2022 EE Plan budget

The proposed 2022 EE budgets would stay the same as what was filed in the Provisional Plan.

c. 2022 EE Plan program implementation timelines

2022 EE Plan program implementation timelines would largely not be impacted if the plan and SBC are approved by February 1, 2022. In this scenario, the Company would anticipate continuing to implement currently approved programs for the 2021 Program Year during January 2022. The Company would delay any implementation efforts associated with newly proposed measures, in this scenario, until explicit plan approval, but believes that sufficient room exists in the planned implementation schedules for these initiatives that, assuming January approval of the 2022 plan, the impact to 2022 EE Plan implementation timelines would be minimal.

d. Achievement of proposed 2022 energy savings goals

The proposed 2022 EE energy savings goals would stay the same as what was filed in the Provisional Plan. Assuming the goals are not increased from what was filed in the Provisional Plan, this would not impact achievement of these goals.

e. Continuity of service for 2021 programming

Assuming the currently effective 2021 SBC charges are extending through January 31, 2022 the EE service for currently approved programs will continue as normal.

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Planning Process and Timeline

- f. Specific vendor contracts that are set to expire in 2022

Assuming the 2022 plan is approved, and the SBCs finalized by February 1, 2022, no impacts to vendor contracts are anticipated.

- g. Other impacts or concerns National Grid has identified

National Grid has identified no other impacts or concerns associated with a late January approval of the 2022 Annual Plan.

Impact of a 1 Month Delay in Changing Electric SBC

(1)	Amount Needed from Customer Funding	\$103,330,926
(2)	CY 2022 kWh Delivery Forecast	<u>7,339,258,798</u>
(3)	Base SBC	\$0.01407
(4)	Uncollectible Rate	<u>1.30%</u>
(5)	SBC Grossed Up for Uncollectibles	<u>\$0.01425</u>
(6)	January 2022 kWh Deliveries	628,396,744
(7)	Base SBC at Proposed Rate	<u>\$0.01407</u>
(8)	Proposed January SBC Revenue	\$8,841,542
(9)	Base SBC at Current Rate	<u>\$0.01099</u>
(10)	SBC Revenue at Current Rate	<u>\$6,906,080</u>
(11)	Shortfall in January 2022 SBC Revenue	<u>(\$1,935,462)</u>
(12)	CY 2022 Customer Funding Needed	\$103,330,926
(13)	January SBC Revenue at Current Rate	<u>\$6,906,080</u>
(14)	February-December 2022 Customer Funding Needed	\$96,424,846
(15)	February-December 2022 kWh Delivery Forecast	6,710,862,054
(16)	SBC effective February 1, 2022	\$0.01436
(17)	Uncollectible Rate	<u>1.30%</u>
(18)	SBC Grossed Up for Uncollectibles	<u>\$0.01454</u>
(19)	Increase in Proposed SBC	\$0.00029
(20)	% Increase in Proposed SBC	2.0%
(21)	Monthly A-15 kWh	500
(22)	Monthly Impact	\$0.15
(23)	Monthly Bill based on December 1, 2021 Rates	\$125.64
(24)	Incremental Increase	0.1%

Impact of a 1 Month Delay in Changing Gas SBC

	<u>Residential</u> (a)	<u>C&I</u> (b)	<u>Total</u> (c)
(1) Amount Needed from Customer Funding	\$24,645,629	\$17,153,871	\$41,799,500
(2) CY 2022 Dkth Delivery Forecast	<u>20,561,811</u>	<u>20,877,896</u>	41,439,707
(3) Base SBC	\$1.199	\$0.822	
(4) Uncollectible Rate	<u>1.91%</u>	<u>1.91%</u>	
(5) SBC Grossed Up for Uncollectibles	<u>\$1.221</u>	<u>\$0.837</u>	
(6) January 2022 Dkth Deliveries	3,486,313	2,858,807	6,345,120
(7) Base SBC at Proposed Rate	<u>\$1.199</u>	<u>\$0.822</u>	
(8) Proposed January SBC Revenue	\$4,178,736	\$2,348,877	\$6,527,613
(9) Base SBC at Current Rate	<u>\$0.854</u>	<u>\$0.584</u>	
(10) January SBC Revenue at Current Rate	<u>\$2,977,311</u>	<u>\$1,669,543</u>	<u>\$4,646,854</u>
(11) Shortfall in January 2022 SBC Revenue	<u>(\$1,201,425)</u>	<u>(\$679,334)</u>	<u>(\$1,880,759)</u>
(12) CY 2022 Customer Funding Needed	\$24,645,629	\$17,153,871	\$41,799,500
(13) January SBC Revenue at Current Rate	<u>\$2,977,311</u>	<u>\$1,669,543</u>	<u>\$4,646,854</u>
(14) February-December 2022 Customer Funding Needed	\$21,668,318	\$15,484,328	\$37,152,646
(15) February-December 2022 Dkth Delivery Forecast	17,075,498	18,019,086	35,094,584
(16) SBC effective February 1, 2022	\$1.2689	\$0.8593	
(17) Uncollectible Rate	<u>1.91%</u>	<u>1.91%</u>	
(18) SBC Grossed Up for Uncollectibles	<u>\$1.293</u>	<u>\$0.876</u>	
(19) Increase in Proposed SBC	\$0.072	\$0.039	
(20) % Increase in Proposed SBC	5.9%	4.7%	
(21) Annual Rate 10 Therms	865		
(22) Annual Impact	\$6.23		
(23) Annual Bill based on December 1, 2021 Rates	\$1,461.74		
(24) Incremental Increase	0.4%		