STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

In Re: The Narragansett Electric Company d/b/a National Grid Annual Energy Efficiency Plan for 2019	**Docket No. _____**

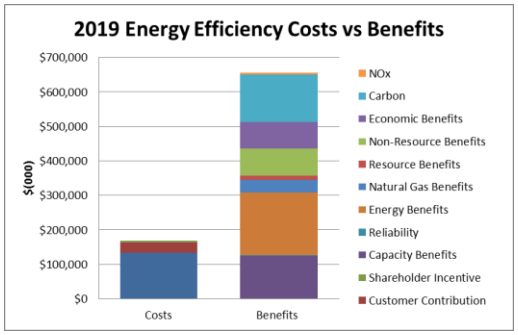
ANNUAL ENERGY EFFICIENCY PLAN FOR 2019

SETTLEMENT OF THE PARTIES

October 15, 2018

Executive Summary

National Grid's 2019 Annual Energy Efficiency Plan (2019 Plan or Plan) includes a suite of services to provide all customers with the tools needed to take control of their energy usage and lower their bills. In addition to lowering costs to customers that participate in the Company's energy efficiency programs, energy savings from the Plan will help to displace fossil fuel based electricity generation and avoid investments in the installation, upgrade, or replacement of transmission and distribution infrastructure, which in turn provides cost savings to all customers, even those that do not directly participate in these programs. The 2019 Bill Impact analysis included in Attachment 7 of this Plan finds that over the lifetime of the 2019 programs, the average Rhode Island customer's bill will be less than if there were no energy efficiency programs.



The Plan will create significant benefits to Rhode Island. The Plan will save 194,677 MWh over the lifetime of installed energy efficiency measures and 432,708 MMBtu over the lifetime of the natural gas measures. Investments made in energy efficiency to achieve these savings will add $85.6 million to Rhode Island's state gross domestic product (GDP) and create more than 1,257 job-years of employment.

The projected lifetime energy savings from this Plan will also avoid 1.1 million tons of carbon, the equivalent of removing 216,118 passenger vehicles from the road for one year. In total the 2019 Plan is expected to create over $656 million in benefits over the life of the installed electric and natural gas energy efficiency measures. Energy savings and benefits are measured and verified by third party evaluation firms.

The Plan represents the second year of the 2018-2020 Three-Year Plan. In this context the 2019 Plan includes several enhancements over previous years, while also continuing proven, nation-leading customer services.

One enhancement in the 2019 Plan is the increased opportunity for customer and stakeholder feedback and public comment in the 2019 planning process. As the facilitator of the Energy Efficiency Collaborative (Collaborative), the Company began soliciting Collaborative member feedback early in the planning process. Beginning in March 2018, members of the Collaborative gave presentations on their priorities for the 2019 Plan and the Company provided a preliminary Plan outlook in June. In addition, the Company hosted a Customer Listening Forum on August 1, 2018 to obtain feedback

from residential customers, businesses, community representatives, and other members of the public to help inform deployment of current programs and the 2019 Plan. The Company believes that its commitment to stakeholder engagement in 2018 has aided in the creation of a holistic and innovative 2019 Plan that is responsive to customer needs.

The Plan also offers new ways for customers to manage their energy usage through its new ConnectedSolutions Demand Response programs for residential and commercial customers. These programs incent customers to reduce their energy use during peak periods in the summer that will in turn help lower infrastructure costs and utility prices to all electric customers in Rhode Island.

The Company has also increased its commitment to beneficial electrification of heat in 2019 by increasing the number of cold climate mini-split heat pumps offered to customers heating with delivered fuels in its electric HVAC program and expanding the offering to income-eligible and multifamily programs consistent with Power Sector Transformation as detailed in the Docket Nos. 4770/4780 Amended Settlement Agreement.

Specific to the residential sector, the Plan addresses market barriers to renters by providing landlords with 100% incentives, provides incentive parity for delivered fuels customers, and increases investments in Rhode Island income eligible community.

The commercial and industrial sector includes expansion of the Industrial Initiative, improving barriers to entry for small business customers and increasing program participation, Commercial Property Assessed Clean Energy (C-PACE) for commercial real estate owners and developers, and Strategic Energy Management (SEM) for business energy management.

The last enhancement is a proposal to begin testing how to best track and report on additional attributes of energy efficiency programs including, carbon emission reductions, cost of saved energy, lifetime savings, and customer satisfaction. These new metrics will provide additional insight regarding how energy efficiency is aligned with the energy policy goals of Rhode Island.

The Plan demonstrates National Grid's commitment to energy efficiency and customer energy management and has sought to balance pursuing energy and cost savings from current technologies and programs while also seeking to identify new technologies and programs to continue delivering savings to Rhode Island customers for years to come.

Table of Contents

ATTACHMENTS

1. 2019 Residential Energy Efficiency Solutions and Programs
2. 2019 Commercial and Industrial (C&I) Energy Efficiency Solutions and Programs
3. 2019 Measurement and Verification Plan
4. Rhode Island Benefit Cost Test Description
5. 2019 Electric Energy Efficiency Program Tables
6. 2019 Gas Energy Efficiency Program Tables
7. 2019 Energy Efficiency Program Plan Bill Impacts
8. 2019 Energy Efficiency Pilots Summary
9. National Grid Customer Listening Forum Summary Report

1. Introduction and Summary

The Narragansett Electric Company d/b/a National Grid (National Grid or Company) is pleased to submit this 2019 Annual Energy Efficiency Plan (Annual Plan or Plan) to the Rhode Island Public Utilities Commission (PUC). This Plan has been developed by National Grid in collaboration with the Energy Efficiency Collaborative (Collaborative) and has been endorsed by the Energy Efficiency and Resource Management Council (EERMC).[1]

Comment [CL1]: Will be updated after vote.

This Plan is submitted in accordance with the Least Cost Procurement law, R.I. Gen. Laws § 39-1-27.7, the basis for which is the Comprehensive Energy Conservation, Efficiency, and Affordability Act of 2006, R.I. Gen. Laws § 39-2-1.2, and the Least Cost Procurement Standards (Standards), as ~~revised by the EERMC and~~ approved by the PUC at an Open Meeting on ~~April 27, 2017~~September 6, 2018 in Docket 4684. This Plan is being jointly submitted as a Stipulation and Settlement, entered into by the Rhode Island Division of Public Utilities and Carriers (Division), the Office of Energy Resources (OER), the EERMC, TEC-RI, Acadia Center, Green Energy Consumers Alliance~~People's Power & Light (PP&L)~~, and National Grid (collectively, the Parties), and addresses issues raised by members of the public, members of the Collaborative, and the EERMC concerning the Company's electric and natural gas energy efficiency (EE) programs for calendar year 2019.

Comment [CL2]: To be updated

The Plan satisfies the statutory requirements for Least Cost Procurement and is consistent with the~~. The gas annual savings are higher than the~~ Three-Year Energy Efficiency Procurement Plan (Three-Year Plan) for 2018-2020~~ and the electric savings are slightly lower due to factors described in Section 2 below~~.[2] The Annual Plan is cost-effective and has a cost that is lower than the cost of ~~acquisition of additional~~energy supply for both electricity and natural gas, satisfying the requirements prescribed in R.I. Gen. Laws § 39-1-27.7 (a)(2) and the Standards. The Plan also satisfies PUC Order No. 22851 by demonstrating how it advances the Docket 4600 principles and goals for the electric system detailed in Section 11.[3]

---

[1] Since 1991, a collaborative group (Collaborative) has been meeting regularly to analyze and inform the Company's electric and gas energy efficiency programs. Presently, members of the Collaborative include: the Company, the Division and the Division's consultant, Synapse Energy Economics (Synapse), Green Energy Consumers Alliance~~PP&L~~, TEC-RI, ~~RI Housing,~~ and Acadia Center. In addition, the OER, the Rhode Island Infrastructure Bank (RIIB), the City of Providence, and several EERMC members and representatives from the EERMC's Consulting Team participate in the Collaborative. Since 1991, membership in the Collaborative has varied because some organizations have withdrawn and others have joined. Further information available at: https://rieermc.ri.gov/thecollaborative/

[2] The Company submitted the Three-Year Plan to the PUC on August 30, 2017 in Docket 4684.

[3] PUC Report and Order No. 22851 accepting the Stakeholder Report. Written Order issued July 31, 2017.

The primary goal of the Annual Plan is to create energy and economic cost savings for Rhode Island consumers through energy efficiency, as required by R.I. Gen. Laws § 39-1-27.7. To that end, the Plan will create annual savings of 194,677 MWh and 432,708 MMBtu and lifetime savings of 1,694,194 MWh and 4,426,644 MMBtu. The Plan will generate benefits of more than $656 million over the life of the measures (with $541 million in benefits coming from electric efficiency and $115 million in benefits from natural gas efficiency), which represents a large and urgently needed benefit for Rhode Island's residential, commercial, industrial, and income eligible energy customers. Table 1 provides a high level summary of the Plan.

Table 1: 2019 Energy Efficiency Program Plan Summary

Electric Programs by Sector	Implementation Spending ($000)	Customer Contribution ($000)	Annual Savings (MWh)	Lifetime Savings (MWh)	¢/lifetime kWh	Summer Annual Demand Savings (kW)	Demand Response (kW)	Total Benefits ($000)	RI Test B/C Ratio	Participants
Non-Income Eligible Residential	$43,383	$4,138	91,677	429,965	11.1	13,898	1,564	$156,590	3.15	558,305
Income Eligible Residential	$15,078	$0	6,961	73,530	20.5	1,039		$43,910	2.77	8,000
Commercial and Industrial	$42,368	$14,616	96,038	1,190,699	4.8	15,180	34,300	$340,688	5.78	3,311
Regulatory	$1,829									
Subtotal	**$102,657**	**$18,754**	**194,677**	**1,694,194**	**7.2**	**30,117**	**35,864**	**$541,188**	**4.28**	**569,615**
Gas Programs by Sector	**Implementation Spending ($000)**	**Customer Contribution ($000)**	**Annual Savings (MMBtu)**	**Lifetime Savings (MMBtu)**	**$/lifetime MMBtu**			**Total Benefits ($000)**	**RI Test B/C Ratio**	**Participants**
Non-Income Eligible Residential	$13,607	$6,397	192,069	1,612,528	12.41			$43,426	2.10	115,858
Income Eligible Residential	$7,946	$0	29,665	543,171	14.63			$26,043	3.12	4,320
Commercial and Industrial	$8,040	$4,593	210,974	2,270,945	5.56			$45,372	3.49	2,611
Regulatory	$540									
Subtotal	**$30,132**	**$10,990**	**432,708**	**4,426,644**	**9.29**			**$114,841**	**2.70**	**122,789**
Total for Plan	**$132,789**	**$29,744**						**$656,029**	**3.92**	**692,404**

(1) Implementation spending does not include customer contributions, shareholder incentive, or commitments.
(2) Regulatory Includes contributions to OER and EERMC

The energy savings that will result from this Plan will provide a meaningful contribution to the Resilient Rhode Island Act (the Act). Under the Act, the State of Rhode Island set forth the goal to reduce greenhouse gas (GHG) emissions to 80% below 1990 levels by 2050.[4] The Rhode Island Greenhouse Gas Emissions Reduction Plan (GHG Plan) identifies energy efficiency as an important component for achieving the GHG targets set forth in the Act.[5] The electric, gas, and oil energy efficiency measures proposed in this Plan will

[4] R.I. Gen. Laws § 42-6.2.
[5] Rhode Island Greenhouse Gas Emissions Reduction Plan, December 2016.

avoid over 1.1 million tons of carbon over the lifetime of the installed measures.[6] This is the equivalent of removing 216,118 passenger vehicles from the road for one year.[7]

In addition to providing customers with cost-savings and contributing to the state's carbon reduction goals, the Plan will also create significant economic benefits in Rhode Island. The Company expects that investments made in energy efficiency under this Plan will add $85.6 million to Rhode Island's state gross domestic product (GDP) and ~~create~~ support more than 1,257 job-years of employment.[8] The vast majority of jobs created as a result of energy efficiency investments are local because they are tied to the installation of equipment and other materials. An analysis of National Grid's 2017 energy efficiency programs found that 79% of companies involved in the Company's energy efficiency programs were located in Rhode Island.[9] These findings confirm that job creation is an additional significant benefit that National Grid's investments in energy efficiency contribute to Rhode Island's economy overall and directly to the business owners and their employees who deliver these programs and services.

The savings in the Plan meet the requirements for cost-effectiveness. As defined by the Standards in Docket 4684, the Plan's RI Test benefit-cost ratio - the ratio of Total Benefits to Total Costs – must be greater than 1.0.[10] The overall electric EE Program RI Test ratio is 4.28, and the overall natural gas EE Program RI Test ratio is 2.70. This means that for each $1 spent on energy efficiency~~invested~~, electric programs will create $4.28 of benefits over the lifetime of the investment, and natural gas ~~efficiency investments~~programs will create $2.70 in benefits over the lifetime of the investments.

The Standards further require the Company to show a comparison between the RI Test and the Total Resource Cost (TRC) Test. The overall electric EE Program TRC Test ratio is 2.94, and the overall natural gas EE Program TRC Test ratio is 1.53. The TRC Test comparison is included in Table E-5A and G-5A. Graph 1 details the 2019 costs and benefits for the electric and gas portfolios. A detailed summary of the benefits and costs included in the RI Test is included in Attachment 4.

---

[6] Takes into account the net impact of EE measures on carbon emissions. The marginal carbon emission rates are from ""Avoided Energy Supply Components in New England: 2018 Report" Appendix K. pages 368-370.

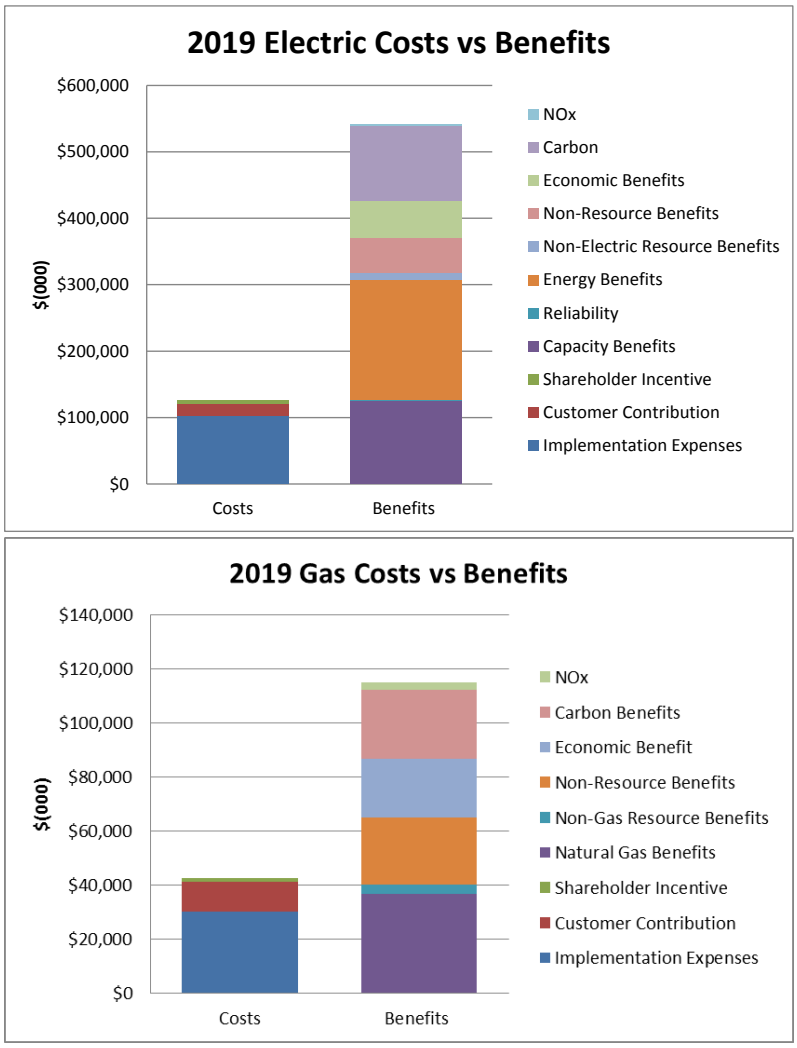
[7] https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator

[8] Macroeconomic multipliers for the economic growth and job creation benefits of investing in cost-effective energy efficiency from National Grid's 2014 Regional Economic Model (REMI) Analysis as presented by the Company to the Collaborative on May 29, 2014. Job-year is the equivalent of a full-time job for 12 months. To maintain consistency with RI Test economic benefits multiplier, the Company is only including construction phase impacts to GDP and job-years to account for only direct and indirect impacts.

[9] Peregrine Energy, "Analysis of Job Creation from 2017 Expenditures for Energy Efficiency in Rhode Island by National Grid", April 25, 2017 (filed as part of National Grid's 2017 Year-End Report).

[10] Standards, Section 1.4(C).

Graph 1. Annual Plan Total Benefits and Total Costs (RI Test)



In addition to satisfying the primary statutory requirement of cost-effectiveness, the Plan satisfies the additional requirement that the cost of energy efficiency procured be less expensive than the cost of supply as detailed in Section 3. The cost of procuring 1,694,194 MWh lifetime electric energy efficiency savings through the Plan is $397.4 million less than if that electric load was met by purchasing additional electric supply. The cost of procuring 4,426,644 MMBtu lifetime natural gas energy efficiency savings through the Plan is $47.5 million less than if that natural gas load was met by purchasing additional natural gas supply.

Over time, the benefits of procuring energy efficiency at a cost less than supply accrue to customers. ~~Graph 3 shows~~ From 2009 to projected year-end 2018, electric energy efficiency programs will have saved an estimated 7.25 million MWh. This number represents the cumulative energy savings for just those energy efficiency measures installed since 2009 (the first year of programs implemented under Least Cost Procurement). Because the average measure life of energy efficiency measures is 10 years, the Company expects that measures installed in 2009 are still providing the same level of energy savings through 2018. This is also true for those measures installed ~~in and~~ after 2009.[11] The only exception is the savings from Home Energy Reports. This program only has a one-year measure life, and is counted as such, ~~in the graph below~~ because it connects with customers annually to prompt them to continue taking energy saving actions. ~~In Graph 3 below, the area between the blue and red lines represents the cumulative annual MWh savings for measures installed since 2009. All these MWh savings were obtained at a cost lower than the cost of supply. From 2009 to projected year-end 2018, electric energy efficiency programs will have saved an estimated~~ The cumulative 7.25 million MWh in savings were procured at a cost lower than the cost of supply. Without these energy savings, Rhode Island customers would have had to purchase 17% more energy at a higher cost.

This cost-effective Plan includes an investment of $110.4 million for the electric energy efficiency portfolio in 2019. If approved, this will be funded by proceeds from the ISO New England (ISO-NE) Forward Capacity Market (FCM), the existing energy efficiency program charge of $0.00972 per kWh, plus a fully reconciling mechanism of $0.00183 per kWh pursuant to R.I. Gen. Laws § 39-1-27.7(c)(5)~~and additional funding sources including ISO-NE Forward Capacity Market (FCM) proceeds. Pursuant to R.I. Gen. Laws § 39-1-27.7(c)(5), a fully reconciling mechanism of $0.00196 per kWh is needed~~ to fully fund the cost-effective electric energy efficiency programs for 2019.[12]

This Plan also includes a $31.6 million investment in cost-effective natural gas energy efficiency. If approved, this investment will be funded by the existing energy efficiency program charge of $0.869 per dekatherm for residential customers and $0.671 per dekatherm for non-residential customers minus ~~Pursuant to R.I. Gen. Laws § 39-1-27.7(c)(5),~~ a fully reconciling mechanism of ~~negative~~ $0.141 per dekatherm for residential customers and minus~~negative~~ $0.177 per dekatherm for non-residential

[11] Actual lifetime varies by measure but is not included in Graph 3 for ease of illustration. When the Company report s out on savings to ISO-NE it takes into account impact of each measure's life.

[12] See Attachment 5, Table E-1 for list of funding sources and calculation of the charge.

customers pursuant to R.I. Gen. Laws § 39-1-27.7(c)(5) ~~will be needed~~ to fully fund the cost-effective natural gas energy efficiency programs for 2019.[13]

All Rhode Island electric and gas customers will benefit from lower costs due to investments in energy efficiency whether they participate or not. The Company determines these savings through the Bill Impact analysis that is detailed in Attachment 7. The savings that customers will realize from participating in the energy efficiency programs will offset the energy efficiency program charge. The Bill Impact analyses of the gas and electric programs show that the average participant will save more than they invest in the energy efficiency program charge. As detailed in Attachment 7, the average participant will see the following annual reductions in their combined electric and gas bills over the lifetime of the installed measures when compared to not having the 2019 energy efficiency program charge: Residential (1.20%, $30.36); Low Income (2.57%, $62.30); Small C&I (17.55%, $1,433.52); Medium C&I; (10.59%, $2,532.31); Large C&I (3.29%, $18,441.21). In addition to environmental and economic benefits not reflected on customers' bills, ~~N~~non-participants also benefit from ~~benefit~~ energy efficiency due to ~~from power market effects~~reductions in capacity demand and avoided investment in infrastructure ~~due to energy efficiency~~ that is ~~also~~ reflected in rates. When the impacts on both participants and non-participants are averaged, the analysis shows that, on average, the ~~average~~ typical Rhode Island customer sees bill savings from energy efficiency. One of National Grid's objectives is to reach as many customers as possible to increase the participant and overall bill savings in Rhode Island.

2. Cost of Annual Plan Compared to the Cost of Energy Supply

In accordance with the Standards approved by the PUC at the Open Meeting on September 6, 2018, the Company has made a good faith effort to assess the cost of energy supply and the cost of energy efficiency using all applicable costs enumerated in the Rhode Island Benefit Cost Framework (Framework) approved by the PUC in Docket No. 4600A and the Rhode Island Test as described in Attachment 4 of the Plan.

The RI Test is an appropriate starting point to determine which costs to include in this assessment. The RI Test, as detailed in Attachment 4, captures the aspects of the Framework that pertain to energy efficiency programs. The source for many of these values is the "Avoided Energy Supply Components in New England: 2018 Report" (2018 AESC Study) prepared by Synapse Energy Economics for the AESC 2018 Study Group, June 1, 2018. The benefits in the RI Test are associated with the cost savings to Rhode Island from investing in energy efficiency instead of investing in additional energy

[13] See Attachment 6, Table G-1 for list of funding sources and calculation of the charge.

supply. For the purpose of the RI Test, these values are described as a benefit of energy efficiency in the form of avoided costs. It is reasonable to assume that these avoided cost values can also be applied as the costs of procuring additional energy supply for the purpose of this assessment. The RI Test also details what is considered a cost of energy efficiency. These are costs incurred by the utility to implement the Plan and the expense borne by the customer for its share of the energy efficiency measure cost.

The Company proposes to use the costs described in Table 2 to compare the cost of energy efficiency to the cost of energy supply. The categories listed in this table are all used in the RI Test, as proposed in Attachment 4 of the Plan. As directed by the Standards, the Company provides an explanation for why cost categories are either appropriate or not appropriate for inclusion in the assessment of the cost of energy supply compared to the cost of energy efficiency.

Table 2. List of the Costs of Energy Efficiency and Costs of Energy Supply

Cost of Energy Efficiency		
Cost	**Included**	**Explanation**
Utility Costs	Yes	These costs are incurred to achieve implementation of energy efficiency measures and programs. Includes all costs in Tables E-2 and G-2.
Participant Costs	Yes	Customer contribution to the installation cost of the efficient measure. Customer costs included in Tables E-5 and G-5.
Cost of Energy Supply		
Cost	**Included**	**Explanation**
Electric Energy Costs	Yes	Represents the cost of purchasing electric energy supply.
Electric Generation Costs	Yes	Represents cost of generation capacity in ISO-NE.
Electric Transmission Capacity Costs	Yes	Represents Pool Transmission Facilities (PTF) cost.
Electric Distribution Capacity Costs	Yes	Represents the cost of distribution capacity related to increased load.
Natural Gas Costs	Yes	Represents the cost of purchasing

		natural gas supply.
Fuel Costs	Yes	Non-regulated delivered fuels are an energy supply cost to customers that utilize these fuels for heating. The fuel costs in this category are separate from those embedded in the cost of the electric market. While not a direct cost of electric energy supply, National Grid includes incentives for delivered fuel energy efficiency measures in its electric portfolio. Therefore, to achieve symmetry with costs associated with electric energy efficiency, delivered fuels costs should be included in this comparison.
Water and Sewer Costs	No	While avoided water and sewer costs are a benefit of installing certain energy efficiency measures, they are not a direct cost of energy supply.
Non-Energy Impact Costs	No*	*Unless listed below. While non-energy impacts are a benefit of installing certain energy efficiency measures, they are not a direct cost of energy supply.
a) Income Eligible Rate Discount	Yes	Costs associated with energy being sold at the low income rate.
b) Arrearages	Yes	Costs associated with arrearage carrying costs as a result of customers not being able to pay their energy bills.
Price Effects	Yes	Represents costs associated with the impact of demand reduction on ISO-NE energy and capacity markets.
Non-embedded Greenhouse Gas Reduction Costs	Yes	Represents the social cost of carbon. The social cost of carbon is the cost associated with meeting the Resilient Rhode Island Act. Carbon emissions come from the production of energy and should be considered a cost of supplying

		that energy.
Economic Development	No	While economic development is a benefit of investment in energy efficiency measures it is not a direct cost of energy supply.
Non-embedded NOx Costs	Yes	NOx emissions come from the production of energy and therefore the health impacts of NOx emissions should be considered part of the cost of supplying that energy.
Reliability Costs	Yes	Increased energy demand can lead to declining reserve margins and decrease reliability so should be associated with the cost of energy.

For the assessment, the Company applies the above costs of supply to the lifetime energy, demand, and natural gas savings for each measure included in the Plan in present value terms. The costs of energy efficiency occur in the first year of the Plan and are therefore not discounted.

Applying this methodology, based on the Company's calculation, the total cost of energy efficiency for the electric portfolio is $126.3 million and the total cost of electric supply is $523.7 million. This is a total savings of $397.4 over the life of the installed energy efficiency measures from investing in energy efficiency instead of electric supply. The total cost of energy efficiency for the natural gas portfolio is $42.6 million and the total cost of natural gas supply is $90.1. This is a total savings of $47.5 million over the life of the installed energy efficiency measures from investing in energy efficiency instead of natural gas supply.

3. Annual Plan Compared to Three-Year Plan for Year 2019

The ~~ambitious~~ energy and cost savings for the 2019 program year are consistent with the objectives and requirements of Least Cost Procurement and meet the savings targets proposed in the Three-Year Plan in Docket 4684. The electric savings goal proposed for 2019 is 194,677 MWh, or 2.60% of the referenced 2015 load. The natural gas savings goal for 2018 is 432,708 MMBtu, or 1.05% of 2015 natural gas load. Proposing electric savings equal to the Three-Year Plan goal and a higher natural gas goal ~~in the Annual Plan,~~ compared to the Three-Year Plan, demonstrates National Grid's continued commitment to a data-driven process whereby goals will be set at the most

aggressive and nation-leading levels that are achievable in practice, a principle described in the Three-Year Plan.

The following table compares the Annual Plan components to the Three-Year Plan.

Table ~~2~~3: Annual Plan compared to Three-Year Plan for Year 2019

Electric Programs	2019 3 Year Plan	2019 Annual Plan	% Change
Annual Savings (MWh)	194,677	194,677	0%
Lifetime Savings (MWh)	1,904,592	1,694,194	-11%
Annual Summer Demand Savings (kW)	35,188	30,117	-14%
Total Benefits	$ 438,942,301	$ 541,187,969	23%
Total Spending	$ 124,932,991	$ 110,362,010	-12%
Benefit Cost Ratio (RI Test)	2.88	4.28	49%
Cost/Lifetime kWh	$ 0.077	$ 0.072	-7%
EE Program Charge per kWh	$ 0.01390	$ 0.01155	-17%

Gas Programs	2019 3 Year Plan	2019 Annual Plan	% Change
Annual Savings (MMBtu)	408,100	432,708	6%
Lifetime Savings (MMBtu)	4,709,195	4,426,644	-6%
Cost/Lifetime MMBtu	$ 8.33	$ 9.29	12%
Total Benefits	$ 101,369,221	$ 114,841,151	13%
Total Spending	$ 30,776,029	$ 31,592,799	3%
Benefit Cost Ratio (RI Test)	2.49	2.70	8%
C&I EE Program Charge per Dth	$ 0.739	$ 0.494	-33%
Residential EE Program Charge per Dth	$ 0.903	$ 0.728	-19%

~~Each year, the Company creates an Annual Plan that attempts to meet the savings targets set out in the Three-Year Plan while meeting the requirements of the law that the Plan must be cost-effective and less than the cost of supply. However, as~~As noted in previous PUC dockets, Annual Plans may contain budgets and energy efficiency program charges that vary from those contained in the Three-Year Plan.[14] The Three-Year Plan creates savings targets and illustrative budgets to guide the Company in the development and long-term strategy of its Annual Plans over the upcoming three-year period. After the Company files the Three-Year Plan, there are numerous factors that

[14] PUC Order No. 21781 approving National Grid's September 2, 2014 Energy Efficiency and System Reliability Procurement Plan for three-year period 2015-2017. Written Order issued 12/19/14.

may lead to changes in funding needs and savings availability. These factors include: updates to the avoided cost study, electric and gas sales, available fund balance, ~~Regional Greenhouse Gas Inc. (RGGI) auction revenue,~~ ISO-NE's FCM auction proceeds, evaluation results, market conditions, customer preferences, and changes in legislation.

For the Annual Plan, the electric and natural gas energy efficiency portfolio savings, benefits, budgets, and energy efficiency program charges differ compared to the illustration presented in the Three-Year Plan. There are several factors contributing to this difference.

A. Evaluation Results

Evaluation results impact the portion of gross savings that the Company can claim as attributable to its energy efficiency programs.

The evaluation of several programs (i.e. C&I Upstream HVAC and C&I Upstream Lighting impact and net-to-gross studies, Residential Lighting and Products net-to-gross studies, and Income Eligible Services Single Family Program Impact Evaluation) showed that programs generated lower electric savings for participants than initially anticipated. The application of these evaluation findings results in lowered annual and lifetime electric savings that can be attributed to the energy efficiency programs in the Annual Plan compared to the Three-Year Plan. ~~This is due in part to several evaluations that reduced claimable savings~~ the portion of gross savings programs. ~~These studies include the C&I Upstream HVAC and the C&I Upstream Lighting impact and net-to-gross studies, the Residential Lighting and Products net-to-gross studies, and the Income Eligible Services Single Family program~~ Program Impact Evaluation. ~~-~~ As a result of these studies, the Company estimates it will claim 38,061 annual MWh less in 2019 than it would have in 2018 and 264,760 lifetime MWh less in 2019 than it would have in 2018.

For gas, ~~The evaluations include~~ C&I Custom ~~Realization Rate~~ impact studies ~~studies,~~ and the C&I Free Ridership and Spillover Study showed that programs generated higher gas savings for participants than originally estimated. The application of these evaluation findings resulted in the Company setting higher annual and lifetime gas savings goals in the Annual Plan than in the Three-Year Plan. ~~- This is due to the completion of several evaluations after the Three-Year Plan was filed that increased the portion of gross savings attributed to the programs~~claimable savings. ~~The evaluations include C&I Custom Realization Rate studies, and the C&I Free Ridership and Spillover Study.~~

~~Moreover, L~~lifetime benefits from gas savings increased as compared to the Three-Year Plan. This is due to the increased energy savings experienced by program participants based on findings from the evaluation studies described above.

B. Future Innovation

The Company included an adder of approximately 25,500 Annual MWh for future innovation and additional program enhancements in the Three-Year Plan to demonstrate its commitment to achieving the approved 2019 electric targets in Docket 4684. The ~~MWh~~ electric savings associated with future innovation was equal to the difference between what the Company thought was achievable in 2019 at the time of the Three-Year Plan filing and the approved 2019 electric targets.

Since the Company filed the Three-Year Plan with the PUC, there have been developments that have led to the Company being able to close the gap between its original savings projections and the approved 2019 electric targets.

Since the Three-Year Plan was filed, evaluations resulted in some programs claiming higher electric savings for participants than originally estimated.[15] The application of these evaluation findings contributes to the Company claiming more savings to help meet the 25,500 MWh adder in 2019. In contrast, since the Three-Year Plan filing, other recent evaluation studies indicate that the net-to-gross ratio for EnergyStar Lighting is lower in 2019 than estimated previously and that makes meeting the savings targets for 2019 that much more difficult.

In addition, the 2018 budget cap requirement set forth in House Bill 5175 Sub A contributed to creating a pent up demand in the residential lighting sector in 2018. This in turn creates an opportunity in 2019 to serve the additional customer demand and achieve more savings. The EnergyStar Lighting program plans to incent over 1.6 million lighting products by year-end 2018, and based on unserved customer demand, will incent over 3.0 million in 2019, an 88% increase. Even with a lower net-to-gross ratio than predicted, an increase in the volume of lighting products will lead to higher projected savings in 2019 compared to the Three Year Plan (see Attachment 1, pg.23).

[15] The evaluations include C&I Custom Realization Rate studies, C&I Free Ridership and Spillover Study, and the C&I Upstream Lighting Study. See pg 10 of the Main Text of the Annual Energy Efficiency Plan for 2018 for reference.

In other areas the Company has challenged and stretched itself by adding new measures, broadening existing programs to serve more customers, and increasing volumes where feasible. The 25,500 MWh gap has not been met by any specific technological innovation but instead this has been addressed by expanding program access, additional demand for lighting, and offering new measures and services to customers when data pointed to tangible savings opportunities.

For example, additional contributions to the savings gap include the new 4th Tier in the Residential New Construction program for High Efficiency Homes (see Attachment 1, pg. 21) and an increase in planned quantities for power strips in 2019 due to the strong success of this offering in 2018 (see Attachment 1, pg. 28).

The Company also identified enhancements to the C&I Sector. The Company updated the requirements for who can participate in the small business program from under 200 kW to under 1,000,000 MWh, which will expand the number of eligible customers (see Attachment 2, pg 80). For mid-size customers, the Company is expanding the industrial initiative to serve 200-400 kW customers (see Attachment 2, pg. 16). The Company also expects additional savings to come from increased awareness surrounding the Commercial Property Assessed Clean Energy (C-PACE) finance mechanism (see Attachment 2, pg 28). Lastly, additional savings will be achieved through the new Strategic Energy Management (SEM) initiative for business energy management (see Attachment 2, pg. 59).

Table 4 below broadly identifies the areas which contribute to meeting the 25,500 adder in the 2019 Annual Plan.

Table 4: Future Innovation

Three-Year Plan (2019)	**Electric Savings (MWh)**
Future Innovation	25,500
Annual Plan 2019	**Electric Savings (MWh)**
Increasing planned quantities for EnergyStar Lighting	15,680
Increasing planned quantities of power strips	1,100
Adding a 4th tier for High Efficiency Homes	120
Expanding the C&I Small Business program to serve customers under 1,000,000 kWh	4,500

Expanding the Industrial Initiative to serve 200-400kW customers	1,500
Increasing marketing surrounding the C-PACE initiative	1,000
Offering a new Strategic Energy Management initiative	1,600
Total	25,500

~~In addition, several evaluations completed after the Company filed filing of the Three-Year Plan led to an increase in the portion of gross savings attributed to the programs in claimable savings in the C&I sector for 2018, and consequently 2019. The evaluations include C&I Custom Realization RateImpact studies, C&I Free Ridership and Spillover Study, and the C&I Upstream Lighting Study.~~

C. Updated Sales and Fund Balance Projections

The energy efficiency program charge for electric and gas customers varies from the Three-Year Plan to the Annual Plan for several reasons, including updates to the sales projections, fund balance projections, and program budgets, which are all factors in the calculation of the charge. These values could change further when the Company files an updated fund balance on December 1, 2018 as proposed in Section 6(a).

The natural gas energy efficiency program charge decreased from $0.903 per Dth in the Three-Year Plan to $0.728 per Dth in the Annual Plan for residential customers and from $0.739 per Dth to $0.494 per Dth for C&I customers. The reduction in these charges is primarily driven by a positive projected 2018 year-end fund balance of $7.4 million.

Although the electric sector sales forecast decreased since the Three-Year Plan was filed, the lower electric budget, higher revenue from the ISO-NE Forward Capacity Market, and a positive projected year-end 2018 fund balance of $3.9 million have reduced the electric energy efficiency program charge from $0.01390 per kWh in the Three-Year Plan to $0.01155 per kWh in the Annual Plan.

D. Lifetime Savings and Benefits

Electric lifetime savings are lower than in the Three-Year Plan due to the reduction of the portion of gross savings attributed to the programs ~~application of evaluation results~~ as detailed in section A above. In addition, more of the annual electric savings are coming from the residential sector, specifically EnergyStar lighting, than was anticipated at the time of the Three-Year Plan filing.

This shift was necessary to meet the 2019 savings goals. Residential measures on average have fewer lifetime savings than C&I measures and lighting lifetimes savings across all residential programs are impacted due to the federal Energy Independence and Security Act (EISA) lighting standards. Gas lifetime savings are lower due to changes in measure mix, principally driven by an increase in savings coming from residential measures compared to C&I measures in order to meet the annual savings targets. Residential measures on average have fewer lifetime savings than C&I measures.

Total benefits increased in the electric and gas sectors due to the application of updated avoided cost values from the "Avoided Energy Supply Components in New England: 2018 Report" (2018 AESC Study). The 2018 AESC Study found higher avoided costs for fuel oil and values for electric capacity demand reduction induced price effect (DRIPE) and oil DRIPE, ~~where these~~which were estimated to be non-existent or were not calculated in AESC 2015 Study shown in Table 5 below shown in 2018 dollars.

Table 5. 2018 AESC Study DRIPE Values Relative to 2015 AESC Study[16]

	AESC 2015 cents/kWh	AESC 2018 cents/kWh	% Difference
Capacity DRIPE	0.00	0.91	-
Energy DRIPE	1.24	1.91	54%
Subtotal: DRIPE	**1.24**	**2.81**	**128%**

The study also quantified new benefits for non-embedded NOx reduction benefits, value of improved reliability, and avoided pool transmission facilities (PTF) costs. Due to all these factors the avoided costs benefits have increased in 2019 compared to 2018.

4. Strategies to Achieve Goals

The primary goal of the Annual Plan is to create cost-effective energy savings for Rhode Island electric and gas customers through energy efficiency. This Plan has sought to balance pursuing energy and financial savings from current technologies and programs while also seeking to identify new technologies, finance channels, and programs to

[16] Values from 2018 Avoided Cost Study ES-Table 1.

continue delivering savings to Rhode Island customers for years to come. The Plan achieves the goals laid out above by implementing the following key priorities, introduced in Docket 4684:

1. **Customers** - Deliver comprehensive services that encompass all market segments and customers. Such services will enable customers to control their energy use, manage their peak energy use, reduce their bills, and help support their financial well-being.
2. **Least Cost** - Deliver energy efficiency services as cost-effectively as possible through optimizing finance and promoting upstream initiatives. Continuing to deliver cost-effective energy savings under Least-Cost Procurement will create cost savings to all customers, while creating economic benefits that create and maintain local jobs and businesses.
3. **Environment** - Provide solutions that minimize greenhouse gas emissions and contribute to Rhode Island's clean energy policy goals, including the Resilient Rhode Island Act.
4. **Future** - Innovate to capture savings from new technologies and strategies to position energy efficiency programs for the future including the integration of energy efficiency with demand response, renewable energy, and smart grid technologies. This includes incorporating outcomes from the Rhode Island Power Sector Transformation Initiative and Docket 4600.

The application of these priorities is more fully described in the detailed program and marketing descriptions in Attachments 1 and 2.

5. Delivering 2019 Goals

National Grid will build on its almost thirty years of experience to deliver the energy and cost savings goals in this Plan.[17]

i. Innovating for a Sustainable and Efficient Energy Future - A Rhode Island Customer Listening Forum

On August 1, 2018, National Grid convened a customer outreach event "Innovating for a Sustainable and Efficient Energy Future, A Customer Listening Forum" in Providence,

[17] Throughout the program year, the Parties may consider additional enhancements beyond those identified in this Plan as more information becomes available to support an informed review of those potential changes. As part of this process of identifying additional enhancements, in addition to continuing to meet with the Collaborative, the Company will continue its work sessions with the EERMC's consultants.

Rhode Island that was independently facilitated by the Lighthouse Consulting Group. The goal of the workshop was to create an environment to solicit feedback from Rhode Island electric and natural gas customers and stakeholders regarding energy efficiency, electric vehicles, and renewable energy programs. Several themes for how National Grid can improve its services to its customers were identified from the feedback of Forum participants. The Company is working to incorporate this feedback into its programs. A summary report prepared by the Lighthouse Consulting Group is included in Appendix 9 of the Plan.

~~i.~~ii. Residential Programs

In 2019, the Parties agree to continue the residential programs offered in 2018. The Parties also agree to offer new programs and demonstrate the development of new technologies for potential inclusion in programs in future years. The programs are summarized below and described in further detail in Attachment 1. The description of each program includes proposed changes from 2018 that are intended to help meet the savings targets for 2019.

Table ~~3~~6. Residential Energy Efficiency Programs	
EnergyWise Program (Funded by Electric and Gas)	Energy*Wise* offers single-family customers home energy assessments and information regarding their actual energy usage. Participants in this program receive recommendations and technical assistance as well as financial incentives to replace inefficient lighting fixtures, appliances, thermostats, and insulation levels with models that are more energy efficient. The program addresses base load electric use and heating and cooling energy loads in all residential buildings. The program recommends efficient products that are delivered through National Grid's various programs as well as solar opportunities provided through statewide solar initiatives. The program will continue to deliver finance opportunities to customers such as the Heat Loan and the Rhode Island Infrastructure Bank's residential financing opportunities, when available. Starting in 2019, EnergyWise will implement an online home energy assessment to educate customers on where household opportunities for greater comfort and energy savings exist. In addition, a 100% landlord incentive will be offered to address the split incentive barrier.
Multifamily Programs Income Eligible, Residential and	Comprehensive energy services for multifamily customers include energy assessments, incentives for heating and domestic hot water systems, cooling equipment, lighting, and appliances. Coordinated services will be offered for all types of multifamily

Commercial sectors (Funded by Electric and Gas)	properties. An approach tailored for multifamily properties designates a primary point-of-contact to manage and coordinate services offered through the Company's existing portfolio, including EnergyWise, C&I Retrofit, Residential New Construction, Income Eligible, and the ENERGY STAR® HVAC programs. Beginning in 2019, the Company's lead vendor for the multifamily retrofit program will begin serving individual condo-unit owners and utilize the time on-site as an opportunity for face-to-face recruitment of the other units at the facility. Additionally, increased coordination with Rhode Island's Community Development Corporations (CDC) and alignment with 15 year refinance cycles will be a focus for the program in 2019.
Income Eligible Single Family (Funded by Electric and Gas)	Income Eligible Single (IES) Family Services~~, also known as the Single Family Low Income Services,~~ are delivered by local Community Action Program (CAP) agencies with oversight provided by a Lead Industry Partner. Three levels of home energy assessments ~~will~~ are ~~be~~ offered: (1) lighting and appliance ~~focus~~, (2) heating and weatherization ~~focus~~, and (3) comprehensive ~~focus~~. Customers who qualify for LIHEAP are eligible ~~and~~ to receive all services and equipment upgrades at no cost. In 2019, National Grid will begin to offer cold-climate mini-split heat pumps through the IES Program. This new offering will provide clarity on up-front "installed cost" as well as customer satisfaction and ease of use.
Residential New Construction (Funded by Electric and Gas)	The Residential New ~~Construction~~ Construction (RNC) program promotes the construction of high-performing energy efficient single family, multifamily, and low income homes, as well as the education of builders, tradesmen, designers, and code officials. In 2019, the ~~residential new construction~~RNC program will launch ~~utilize~~ a new energy efficiency incentive ~~mechanism~~ called the "Path to Zero Energy Ready", which will include additional incentives for areas including: project certification, RI Residential Stretch Code, PV and EV ready, ~~buildings~~ and fossil fuel free.~~home electrification, and compliance with the RI Residential Stretch Code.~~
Residential Home Energy Report Program (Funded by Electric and Gas)	The Home Energy Reports (HER) program is the Company's key program to achieve energy savings through changes in customer behavior by presenting personalized energy usage data and encouraging desired behaviors to reduce energy consumption. The Company will continue to deliver Home Energy Reports that offer enhanced feedback tools to inspire customers to take actions that reduce their energy consumption and also increase their participation in other energy efficiency programs. In 2019, emails the Company will send to customers will begin to include

	annual or bill-level disaggregation pie charts of customers' individual energy usage, which will help customers identify drivers of high bills. The Company will also continue sending High Bill Alerts to customers who are trending to exceed the prior month's usage by a predetermined amount.
ENERGY STAR® Lighting (Funded by Electric Only)	This initiative is implemented jointly with other regional utilities. It provides discounts to customers for the purchase of ENERGY STAR® lighting through instant rebates, special promotions at retail stores, pop-up retailer, and social marketing campaigns. In 2019, the EnergyStar Lighting program will continue to drive market transformation and reach new retailers that have not yet participated in the program.
Residential Consumer Products (Funded by Electric Only)	This program is run in collaboration with other regional utilities to promote the purchase of high efficiency household appliances, including kitchen appliances and electronics. These appliances carry an ENERGY STAR® label. The program also offers refrigerator recycling, which promotes more efficient refrigerators while removing non-efficient units from the market. In 2019, the Residential Consumer Products program will add an additional customer offering of low-e storm windows to provide an additional 50% energy savings over traditional windows.
ENERGY STAR® HVAC Program (Funded by Electric and Gas)	This program promotes the installation of high efficiency central air conditioners for electric customers and new energy efficient natural gas related equipment including boilers, furnaces, water heating equipment, thermostats, boiler reset controls, and furnaces equipped with high efficiency fans. The program provides training of contractors to increase accurate~~in~~ installation practices, testing of the high efficiency systems, tiered rebates for new ENERGY STAR® systems, and incentives for checking new and existing systems. The program also includes oil and propane heating equipment rebates. In 2019, the HVAC program will include several new offerings including: cold climate mini-split heat pumps, replacement of central air conditioners, and the reintroduction of indirect hot water heaters.
Community Based Initiatives (C&I and Residential, Funded by Electric and Gas)	The initiative is designed to leverage trusted community partnerships and develop targeted marketing strategies in order to promote all energy efficiency programs, residential and commercial, in specific targeted communities or businesses. In 2019 the Company will focus on promoting expanded technology offerings within communities such as mini-split heat pumps, Wi-Fi Thermostats, and demand response offerings.

Residential ConnectedSolutions (Demand Response) (Funded by Electric)	Residential ConnectedSolutions will move from a pilot in 2017 and 2018 to a program in 2019. The focus of the program will continue to be reducing peak load through the use of wi-fi thermostats and other eligible technologies which may include batteries, lighting, water heaters, pool pumps, electric vehicles, and other devices.
Residential Pilots (Funded by Electric and Gas)	In 2019, the Company will continue the Zero Energy Home pilot to help accelerate the zero energy home market in Rhode Island. In 2019 the pilot will focus on four main areas: Education and Awareness, Workforce Development, Project Incentives, and Marketing.
Education Programs (Funded by Electric Only)	The Company promotes energy education to private and public schools and youth groups through the National Energy Education Development (N.E.E.D) Program. This program provides curriculum materials and training to students and teachers in grades K-12.

~~ii.~~iii. Residential Income Eligible Programs

The Company and the Parties want customers who have a high energy burden and/or difficulty paying their electric bills to participate in, and benefit from, the Company's energy efficiency programs~~, especially in these difficult economic times~~. Therefore, this segment of the customer base is designated as a unique sector, and funding for this sector will be subsidized by both non-low-income residential customers and commercial and industrial customers using 14% of total implementation funding for the electric programs, and 26% for natural gas programs.

In addition to the Income Eligible Single Family and Multifamily programs, the Residential New Construction Program also works with housing authorities and developers to build energy-efficient multifamily properties. Additional details about the services offered to economically disadvantaged customers are described in the residential programs in Attachment 1.

~~iii.~~iv. Commercial and Industrial Programs

In 2019, the Parties agree to continue the commercial and industrial programs offered in 2018 and assess new technologies for potential inclusion in programs in future years. These programs are summarized in Table 4 below.

Table 7. Commercial and Industrial Energy Efficiency Programs	
Large Commercial New Construction and	This program promotes energy efficient design and construction practices in new and renovated commercial, industrial, and institutional buildings. The program promotes and incentivizes

Building Energy Code and Appliance Standards (Funded by Electric and Gas)	the installation of high efficiency equipment in existing facilities during building remodeling and at the time of equipment failure and replacement. Large Commercial New Construction aims to prevent or mitigate lost opportunities because a customer who does not install energy efficient equipment at the time of new construction or equipment replacement will likely never make the investment for that equipment or will make the investment at a much greater cost at a later time. The program also promotes energy efficient building design for new construction projects and for major renovations. The program provides both technical and design assistance to help customers identify efficiency opportunities in their new building designs and to help them refine their designs to pursue these opportunities. Incentives are also offered to owner's design teams for their time and effort to meet program requirements. Operations Verification or quality assurance is also offered to ensure that the equipment and systems operate as intended. The program also promotes compliance with the building energy code and increased use of the Stretch Code to support the State's goals and objectives. In addition, it provides technical assistance in advancing the development and adoption of minimum efficiency standards for appliances and equipment. ~~The program promotes building code compliance and provides technical assistance in promoting new and improved appliance standards regulations. Support the development and adoption of the Stretch Building Code to support the States goals and objectives.~~ Finally, the program supports the States Zero Energy Building (ZEB) goals through engagement and development of ZEB programs in the future.
Large Commercial Retrofit (Funded by Electric and Gas)	Large Commercial Retrofit is a comprehensive retrofit program designed to promote the installation of energy efficient equipment such as lighting, motors, and heating, ventilation and air conditioning (HVAC) systems, thermal envelope measures, and custom measures in existing buildings. All commercial, industrial, and institutional customers are eligible to participate. The Company offers technical assistance to customers to help them identify cost-effective efficiency opportunities, and pays incentives to assist in defraying part of the material and labor costs associated with the energy efficient measures. The Company also offers education and training, such as the building operator certification (BOC) training, to support the implementation and adoption of energy efficiency.

Small Business Direct Install (Funded by Electric and Gas)	The Small Business Direct Install Program provides direct installation of energy efficient lighting, non-lighting retrofit measures, and gas efficiency measures. Electric customers who consume less than 1,000,000 kWh per year are eligible to participate. There is no eligibility criterion for gas consumption. The program's lighting and non-refrigeration measures are delivered through one labor and one product vendor selected through a competitive bidding process. The Customer share of the total project cost of a retrofit is discounted 15% for a lump sum payment or the customer has the option of spreading the payments over a two-year period, interest free.
Commercial Pilots (Funded by Electric and Gas)	In 2019, the Company will continue the Commercial and Industrial Demand Response gas pilot to address grid constraints and help provide reliable service to our customers. In addition, the Company will continue the Pathway to Zero Energy Buildings pilot in 2019 and focus on such areas as: training and education for the building industry, benchmarking and building energy labeling effort. The Company will also look to partner with building owners and developers on potential Zero Energy Building projects in 2019.
C&I ConnectedSolutions (Demand Response) (Funded by Electric)	C&I Connected Solutions will move from a pilot in 2017 and 2018 to a program in 2019. The program is technology agnostic and provides an incentive to C&I customers for verifiable shedding of load in response to a signal or communication from the Company. In 2019 the program has a goal of enrolling 34 MW.

Attachment 2 includes descriptions of these programs. Included in the description of each program are proposed changes from 2018 that are intended to help meet the savings targets for 2019.

~~iv.~~v. Participation

Each program described in this Plan seeks to drive customer participation to deliver the benefits of energy efficiency to customers throughout Rhode Island. The Plan is designed to provide equitable access to savings and programs across sectors and market segments. For 2019, the Company will continue to plan and report participation in 'net' terms, which takes into account free-ridership and spillover, which are commonly referred to as net-to-gross factors. This method of accounting for participants aligns participation numbers with energy savings numbers, which are already recorded in net terms. This approach provides a more accurate connection between energy savings and the number of customers who benefit from efficiency programs. Planned participation estimates are included in Attachment 5, Table E-7 and Attachment 6, Table G-7.

The following table describes the definitions for how National Grid projects, tracks, and reports participation in the efficiency programs.

Table ~~5~~8: Participation Definitions

Fuel	Sector	Program	Participation Unit
Gas	Commercial & Industrial	Large Commercial New Construction	Unique Billing Account
		Large Commercial Retrofit	Unique Billing Account
		Small Business Direct Install	Unique Billing Account
		C&I Multifamily	Housing Units
	Income Eligible Residential	Single Family – Income Eligible Services	Unique Billing Account
		Income Eligible Multifamily	Housing Units
	Residential	Energy Star® HVAC	Unique Billing Account
		EnergyWise	Unique Billing Account
		EnergyWise Multifamily	Housing Units
		Home Energy Reports	Adjusted* Unique Billing Account
		Residential New Construction	Housing Units
Electric	Commercial & Industrial	Large Commercial New Construction	Unique Billing Account
		Large Commercial Retrofit	Unique Billing Account + Unique Customer names from Upstream Lighting
		Small Business Direct Install	Unique Billing Account
	Income Eligible Residential	Single Family – Income Eligible Services	Unique Billing Account
		Income Eligible Multifamily	Housing Units
	Residential	Energy Star® HVAC	Unique Billing Account
		EnergyWise	Unique Billing Account
		EnergyWise Multifamily	Housing Units
		Home Energy Reports	Adjusted* Unique

Fuel	Sector	Program	Participation Unit
			Billing Account
		Residential New Construction	Housing Units
		ENERGY STAR® Lighting	Estimated Housing Units
		ENERGY STAR® Products	Number of Rebates

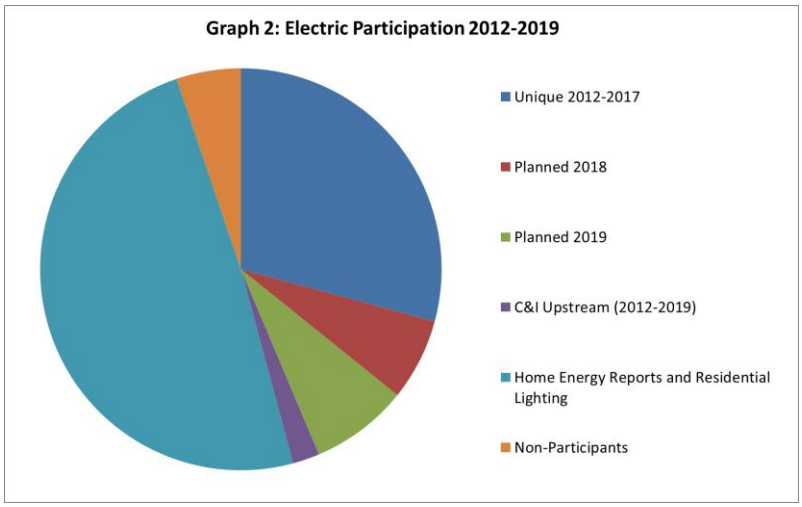
The Company ~~also aims to~~will estimate the number of unique participants for each program. For some programs such as ENERGY STAR® Lighting and ENERGY STAR® HVAC, one measure does not necessarily equal one participant. This is because a customer can purchase more than one measure. Therefore, the Company also considers the previous year's unique accounts to savings ratio in order to estimate the planned unique participants in 2019. This method allows for a better estimation of unique participants but can make it more difficult to compare planned numbers across years.

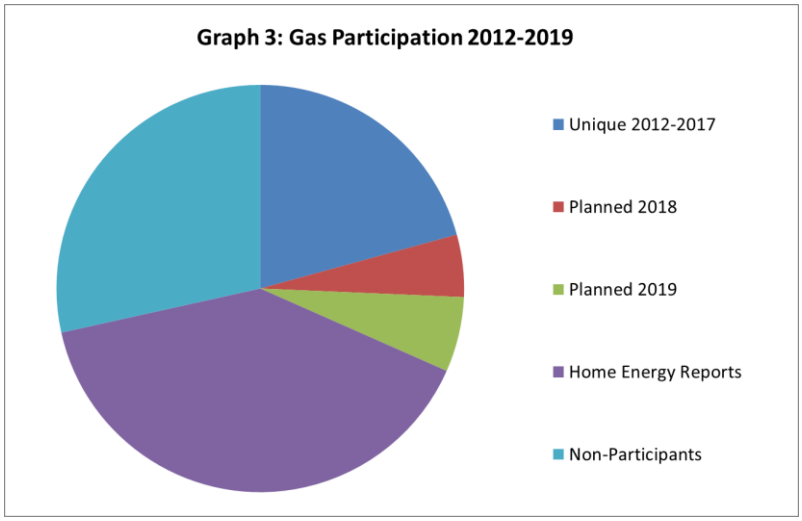
In 2019, the Company will continue to drive participation through two main pathways – targeted programs and broad based programs. Targeted programs include the Company's retrofit, new construction, product rebate, and direct install initiatives. These programs serve to drive deeper savings to targeted customer segments and offer a wide array of energy efficiency measures. The Company also reaches broad participation by promoting products upstream and Home Energy Reports. These broader based programs provide value by reaching a wide and diverse set of customers, helping to provide more customers with access to energy savings, as well as acting as a gateway to drive participation in other National Grid energy efficiency programs.

An ~~recent~~ analysis of unique participation since 2012 is detailed in Graphs ~~4~~ 2 and ~~5~~ 3 below. These graphs highlight that the Company has made steady progress with reaching new participants each year. From 2012-2017 the Company served approximately ~~30~~29% of its electric customers and 21% of its gas customers from its targeted programs at least once (these graphs have removed duplicate participation across programs and across years from 2012-2017). When Home Energy Reports and C&I upstream lighting participation are added to these counts, a total of ~~82~~80% of electric customers and ~~69~~61% of gas customers participated over this period.[18] Home Energy Reports are included here because the program offers significant savings and benefits to customers as well as drives customers to participate in other energy

[18] It is not possible to track residential lighting participation by customer account but it is assumed that there is overlap between Home Energy Report participants and residential lighting participants. Therefore, for the purpose of estimating unique participation for illustration in these graphs, only include Home Energy Report participation is included in the 80%.

efficiency programs.[19] Planned 2018 and 2019 participants are also included in these graphs for illustrative purposes. Importantly, planned participants in 2018 and 2019 may have participated in prior years. In the 2018 Year-End report, the Company will remove any participation overlap to report unique 2018 participants.





In 2019, the Company will continue its efforts ~~work~~ to reach ~~even more unique customers, or those~~ customers that have never participated in its energy efficiency programs, and customers that have previously participated that can still benefit from

[19] The full participation analysis can be found in Docket ~~4580~~ 4654 - National Grid Electric and Gas Energy Efficiency Programs ~~2016~~ 2017 Year-End Report, filed May 1, ~~2017~~2018.

the installation of additional energy efficiency measures. Many of the unique participants captured above are still eligible for additional programs, for example a participant in the EnergyWise Single Family program may participate in the HVAC program. In 2019, the Company will enhance the Customer Call Service experience to promote energy efficiency programs to customers.

The Company will continue to deliver innovative strategies to increase customer participation and reach customer segments that are historically underrepresented. The Plan highlights some changes to program delivery to remove barriers that preclude customers from participating in the energy efficiency programs. Each program section in Attachments 1 and 2 of the Plan provides details on strategies to reach customers. The Company will continue to track participation trends and will again provide a detailed analysis in its 2018 Year-End Report showing additive and cumulative portfolio participation.

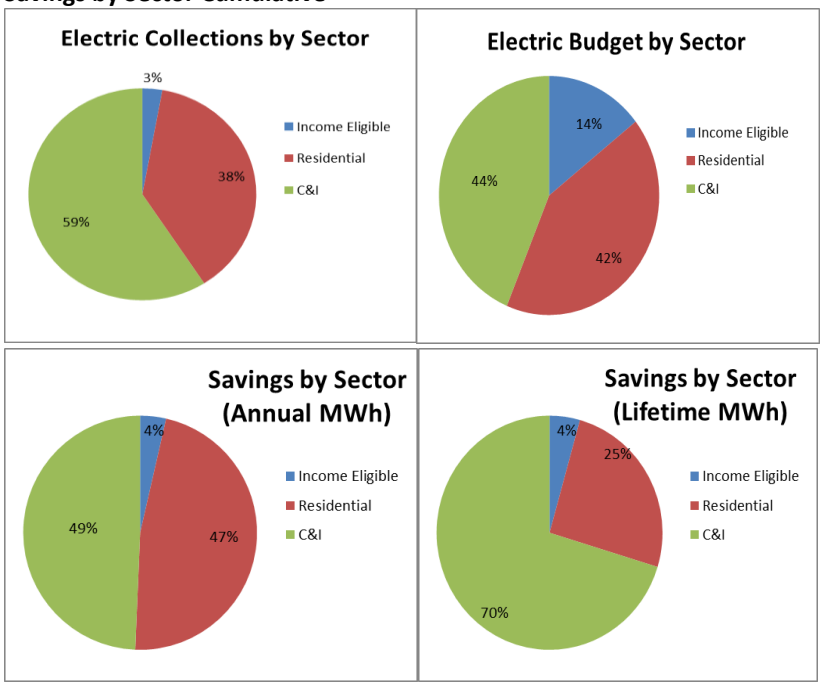
~~v.~~vi. Equity

The Annual Plan is designed to reach as many customers as possible and to provide energy efficiency services to all customer classes. Since each customer pays into the energy efficiency programs, the Company designs programs to allow for all customers to participate and receive benefits. All customers, regardless of participation, benefit from energy efficiency ~~financially~~ because of lower future costs of energy, as ~~– this is~~ demonstrated through the bill impact analysis ~~and~~ as described in detail in ~~other sections of this Plan~~Attachment 7.

The pie charts below are a graphical representation of Attachments 5 and 6, Tables E-1 and G-1. The Company first provided these charts at the 2017 Annual Plan hearing and has since included them ~~again in this~~in Annual Plans to better display the difference between customer class rates, budgets, and savings.

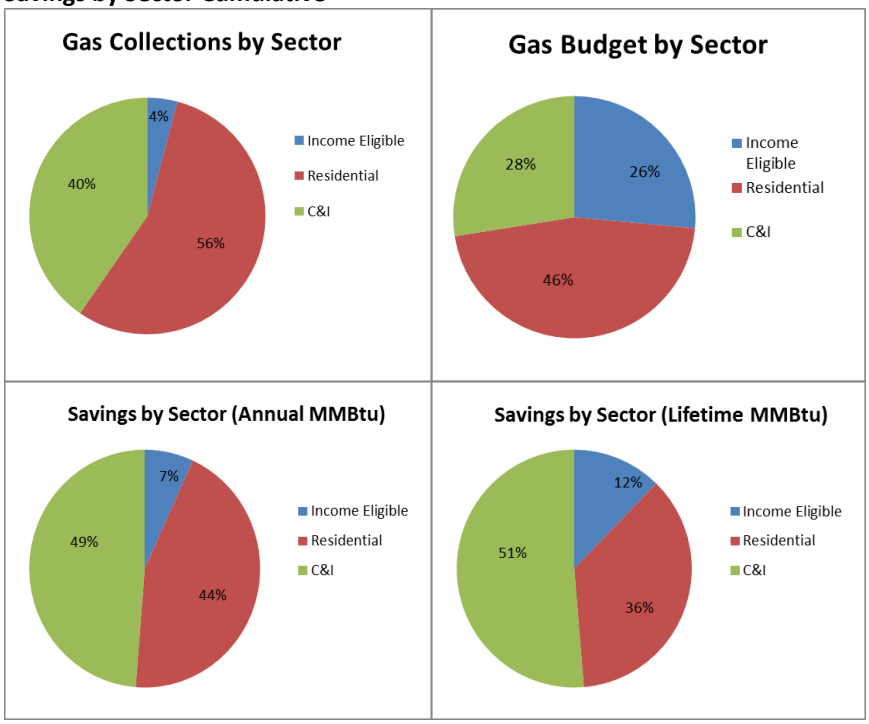
As shown in Graph ~~6~~4, there is approximate parity between the collections by a customer class and its resulting budget and savings in the electric portfolio. The only exception is the income-eligible sector where there is an established agreement amongst the Parties that the residential and C&I customer classes use part of its collections to help cover the income-eligible sector funding needs. The income-eligible budget is higher compared to its savings due to several factors: incentives are 100% of the cost, the programs are more expensive because they are delivered in-home (compared to at retail sites or via rebates) which requires more labor and management, and the programs ~~also~~ have fewer economies of scale (compared to C&I).

Graph ~~64~~: Graphical representation of Attachment 5 Table E-1 and total Electric Savings by Sector Cumulative



For the gas portfolio, there is also parity between the collections by a customer class and the resulting savings. There is less parity between budgets and savings. This is due to several factors. First, the energy efficiency program charge varies by customer segment, which changes collections. Second, C&I projects tend to create more savings per dollar. This~~at~~ is due to larger economies of scale, larger projects, different delivery channels that require less labor or management and are more cost-effective, evaluation factors such as free-ridership and spillover, and different customer opportunities.

Graph ~~7~~5: Graphical representation of Attachment 6 Table G-1 and total Electric Savings by Sector Cumulative



~~vi.~~vii. Creating and Sustaining Energy Jobs

~~Delivery of energy efficiency savings is a large effort, involving a large number of people.~~One of the most evident economic benefits that energy efficiency creates in Rhode Island is the number of jobs created or sustained in the energy sector. Each year, National Grid reports on the number of jobs supported by its energy efficiency programs in ~~the state~~Rhode Island. The report is included in National Grid's Year-End Report, which is submitted to the PUC, and available on the Council's website. The 2017 report found that the energy efficiency programs supported 726 full-time equivalent (FTE) workers across 917 different firms, 79% of which were located in Rhode Island.

National Grid has conducted a number of workforce development activities throughout the state that it will continue in 2019. In order to help our contractors develop the skills needed to effectively deliver our programs, the Company conducts code training for residential new construction; in-field technical training for residential new construction; weatherization training for our Community Action Partners and their weatherization staff; and technical training for HVAC contractors. Additionally, the Company offers professional certifications for facility managers through ~~its~~ a Building Operator

Certification course, which teaches energy efficient techniques for optimizing energy management. Additional details of these offerings is included in Attachments 1 and 2.

~~vii.~~viii. System Reliability Procurement

In a contemporaneous filing, the Company is submitting its System Reliability Procurement (SRP) Annual Report for 2019 for the PUC's review and consideration. The SRP Annual Report describes the strategies, goals, and funding request for SRP in 2019. The SRP Factor is included as part of the total energy efficiency program charge shown on line 14 of Table E-1 in Attachment 5. For 2019, the charge is negative $0.00001 due to a positive SRP fund balance.

The Company recognizes the need for coordination between the SRP Report and the Annual Plan and will continue efforts to coordinate internally and externally during the year. Specifically, the Company will coordinate energy efficiency and demand response marketing with the SRP Marketing and Engagement Plan to ensure that customer messaging is harmonized and leveraged across the multiple platforms. In addition, the Company will apply any lessons learned from the proposed SRP Customer-Facing Program Enhancement Study to improve future energy efficiency and demand response offerings.

~~viii.~~ix. Pilots

In accordance with Docket No. 4600-A PUC Guidance Document, the Plan includes a description of pilots in Attachment 9. The Company is proposing the following new definitions to provide clarity around the terms pilot, demonstration, and assessment~~, and initiatives~~ used in this Plan.

Pilot: As defined in the Docket 4600-A Guidance Document, "A pilot is a small scale, targeted program that is limited in scope, time, and spending and is designed to test the feasibility of a future program or rate design. It is incumbent upon the proponent of a pilot to define these limits in a proposal for PUC review. Ideally, a pilot can provide net benefits and achieve goals, but the primary design and value of a pilot is to test rather than to achieve."[20]

For actions in the Plan that do not fall under the Docket 4600-A definition of pilots, the Company proposes the following definitions for demonstrations and~~,~~ assessments ~~and initiatives~~.

- Demonstration: A demonstration tests a new technology or solution that is delivered as part of an existing program~~,~~ where a technical assessment ~~can~~ has

[20] Docket No. 4600-A PUC Guidance Document, October 27, 2017. Section V. Pilots.

estimated the savings and determined that the measure is ~~they are~~ likely to be cost effective. An example of a demonstration was beneficial electrification of heat in the HVAC program in 2018.

- Assessment: An assessment tests a measure, a bundle of measures, or a solution, that can be delivered as part of existing program~~,~~ where the savings are not known ~~and~~ but will be explored as part of the assessment. An example of an assessment is automated window shades in the C&I retrofit program.
- ~~Initiative: An initiative tests new go-to market strategy for a known measure that is cost effective (known savings)~~

The Company expects that demonstrations and assessments will contribute savings to the programs in which they are offered. These categories are therefore included as part of a program's total planned costs, benefits, and savings. These categories are included in the overall cost-benefit ratio of the Plan and they are included in the calculation of the shareholder incentive.

Names for pilots and~~,~~ demonstrations ~~, and initiatives~~ may differ from prior Annual Plans in order to adhere to the new definitions to provide more clarity around different actions and their anticipated outcomes.

6. Funding and Budgets

Funding, budgets, goals, and cost-effectiveness information is provided in Attachment 5 for the proposed electric energy efficiency programs and in Attachment 6 for the proposed natural gas energy efficiency programs.

i. Annual Plan Funding Sources

The sources of funding and the amounts of the funding proposed for the cost-effective 2019 EE Programs are shown in Table E-1 for electric programs and Table G-1 for natural gas programs.

The sources of funding for the 2019 electric programs are shown in Attachment 5, Table E-1. To collect these funding sources for the 2019 cost-effective programs, the Company proposes: (1) one line on the customers' bill labeled "Energy Efficiency Charge" at $0.01155 per kWh, as calculated in Attachment 5, Table E-1 (composed of the existing energy efficiency program charge of $0.00972 per kWh plus a fully reconciling funding mechanism charge of $0.00183 per kWh in accordance with the requirements of R.I. Gen. Laws § 39-1-27.7); (2) projected Large C&I commitments from 2018, if any; (3) projected carryover of the year-end 2018 fund balance, as applicable, including interest at the rate in effect for customer deposits; (4) forecast revenue generated by ISO-NE's

Forward Capacity Market (FCM); and (5) anticipated revenues generated through RGGI permit auctions. Funding sources do not include revolving loan funds.

The sources of funding for the 2019 natural gas programs are shown in Attachment 6, Table G-1. The Company proposes that the 2019 budget should be funded from the following sources: (1) one line on the customers' bill labeled "Energy Efficiency Charge" at $0.728 per dekatherm for residential customers and $0.494 per dekatherm for non-residential customers as calculated in Attachment 6, Table G-1 (composed of the existing energy efficiency program charge of $0.869 per dekatherm minus a fully reconciling funding mechanism of $0.141 per dekatherm for residential customers and the existing energy efficiency program charge of $0.671 per dekatherm minus a fully reconciling funding mechanism of $0.177 for non-residential customers in accordance with the requirements of R.I. Gen. Laws § 39-1-27.7); (2) projected carryovers or under-recoveries of the year-end 2018 fund balance, including interest at the rate in effect for customer deposits; and (3) low income weatherization funding in base rates. Funding sources do not include revolving loan funds.

The 2019 budgets for cost-effective electric and natural gas efficiency investments are dependent on a number of projections that inform the amount of funding, including projections of ~~kWh or therm sales of~~ electricity and natural gas sales, year-end 2018 large C&I program commitments, capacity payments received from ISO-NE (electric only), and year-end 2018 spending. The Company estimates that the electric projected fund balance at year-end 2018 will be $3.9 million, as shown in Attachment 5, Table E-1; the gas fund balance at year-end 2018 is estimated to be $7.4 million, as shown in Attachment 6, Table G-1.

~~As detailed in Section 5.b, it~~It is likely that the actual year-end 2018 fund balance will be higher or lower ~~more or less~~ than the dollar amounts projected in this Plan. To ensure that the 2019 Energy Efficiency Charge reflects the most current fund balance projections possible, the Company proposes to submit revised Tables E-1 and G-1 on December 1, 2018 to include ~~that will include~~ several additional months of actual expenses and revenues in the calculation of the Charge. ~~to provide an updated Energy Efficiency Charge.~~ The Company proposes to submit revised tables on December 1, 2018 and not at the end of the year to provide the PUC with ~~enough~~ time to review the Company's proposed charges in advance of the Annual Plan hearing. This would allow the charges, if approved, to have ~~since the proposed charges, if approved, would have~~ an effective date of January 1, 2019. This will allow the Company to begin collecting the most accurate charge possible at the start of the program year and avoid any market confusion surrounding the status and implementation of the 2019 energy efficiency programs ~~and delivery~~. If the actual year-end 2018 fund balance as filed in the Year-End

Report on May 1, 2019 is higher or lower than that amount projected in the December 1, 2018 revised Tables E-1 and G-1, any deviation will be fully reconciled in the next program year in accordance with the requirements of R.I. Gen. Laws § 39-1-27.7.

Other considerations regarding funding sources include:

i. ISO-NE Capacity Market Revenue

Consistent with the PUC's Standards, Annual Plan, and PUC decisions regarding Annual Plans since 2008, the Company and the Parties agree that kW-demand savings achieved via the electric energy efficiency and Combined Heat and Power programs continue to participate in the FCM as Passive On-Peak Demand Resources. The Company will manage and direct the revenues by bidding the demand savings attributed to energy efficiency measures and Combined Heat and Power facilities in the FCM and managing the associated capacity resources to maximize the resulting FCM revenue. The revenues from measures installed through this Plan, as well as all previous Plans, will continue to be reinvested in energy savings for the life of the measure.

The Parties fully agree that the Company should recover all prudently incurred FCM expenses from ISO-NE capacity-payment revenue generated by the demand savings from efficiency programs represented by the Company. The Company expects that capacity payments received from the ISO-NE will exceed its administrative and Measurement and Verification (M&V) compliance costs of participation in the FCM, and will result in additional funds being made available to fund efficiency programs for customers. If these participation costs exceed the capacity payments, the Parties agree that the Company may recover its prudently incurred costs from the energy efficiency program fund. The Parties reserve the right to examine the actions and expenses of the Company to ensure that only prudently incurred expenses are deducted from ISO-NE capacity payments or the energy efficiency program fund.

In addition, as part of the FCM, all qualified auction participants are required to post Financial Assurance to provide security that the promised resource will deliver the promised MW at the promised time. If, as a result of circumstances beyond the Company's control,[21] the Company is unable to provide all or a portion of the megawatts of capacity proposed in its qualification packages and capacity auction bids, some or all of the financial assurance monies would be forfeited.

[21] Such circumstances may include legislative action to alter the EE Program Charge or discontinue the Company's authority to implement the energy efficiency programs underlying the Qualifications Package or a PUC decision limiting the Company's role in bidding the demand savings acquired through program efforts into the FCM.

ii. Exceptions to the Natural Gas Energy Efficiency Program Charge

All natural gas used for distributed generation projects approved since 2014 will be subject to the natural gas energy efficiency surcharge.[22]

The 2006 Act allows the PUC to exempt natural gas used for manufacturing processes from the energy efficiency surcharge where the customer has established a self-directed program to invest in and achieve best effective energy efficiency in accordance with a plan approved by the PUC and subject to periodic review and approval by the PUC. Consistent with prior PUC decisions, the Parties have developed recommendations for a process under which a manufacturer may submit its self-directed program and the required annual reports for approval. The Parties recognize that this process may need to be reviewed and modified after the PUC has accumulated sufficient experience with these programs. Any customer that receives this exemption from the natural gas energy efficiency program charge will not be eligible to receive natural gas energy efficiency program services.

b. Budgets

The Parties agree that the portfolio of energy efficiency programs and services for 2019 will have an overall budget of approximately $110.4 million for electric programs and $31.6 million for natural gas programs. The Parties agree to segment the budget into three sectors: residential income eligible, residential non-income eligible, and commercial and industrial (C&I). Proposed sector and program budgets are provided in Attachment 5, Table E-2 and Attachment 6, Table G-2. The derivations of the spending budget and implementation expenses are illustrated in Attachment 5, Table E-3 and Attachment 6, Table G-3. A comparison of these proposed budgets to the 2018 budget is provided in Attachment 5, Table E-4 and Attachment 6, Table G-4.

~~The Parties agree that the Company should make every attempt to spend or commit all the funds available for energy efficiency during the program year, including any increases in the fund balance due to increased sales or other factors. Although this Plan includes a projection of the fund balance expected at year-end 2018 as a funding source (or deficit) to carry into 2019, it is likely that the actual year-end 2018 fund balance will be more or less than that amount. Within 30 days after the filing of the 2018 Year-End Report, the Company will calculate the difference between the actual year-end fund~~

[22] Natural gas used for distributed generation (excluding natural gas used by emergency generators) for distributed generation projects approved under the energy efficiency programs in 2013 and prior years - independent of the date those facilities become commercially operable – are not subject to the energy efficiency surcharge when natural gas used for that purpose can be clearly identified through uniquely metered use and when so requested in writing by the customer.

~~balance and the projected year-end fund balance included in this Plan. If excess funds are available, the Company is permitted to move the excess funds into financing mechanisms for the sectors in which the excess occurs, support possible overspending during the year, reduce the energy efficiency program charge, or carry the excess funds over into the next program year. The Company will include a description and reflect the application of excess funds in quarterly reports, annual reports, and Annual Plans as applicable. If the use of the funds supports overspending of current year program budgets, then, in addition to the above requirements, the Company will follow the provisions for overspending in Section D, below. Use of excess funds for financing mechanisms will not be considered as overspending.~~

The Parties ~~also~~ agree to review the status of budgets regularly to assess whether they are likely to come to a successful completion. If not, the Parties agree to review the advisability of transferring funds to other programs where the money could be more effectively used. Fund transfer guidelines are presented in Section C, below.

The Company proposes to continue the practice of funding commitments that were established in the 2014 Plan, Docket 4451. Namely, the Company will continue to make commitments for projects with a projected incentive in excess of $3 million.[23] For all other projects, except those with incentives greater than $3 million, there would be no commitment budget and the Company will fund and pay all incentives in the year in which they are completed. Specifically, in 2019, the Company proposes to make a commitment to BQ Energy for a large-scale combined heat and power (CHP) installation at Naval Station Newport that is planned to be operable in 2020 and commissioned in 2021. The Company notified the ~~Commission~~ PUC of the project in May 2018 in Docket 4755. The Company proposes to commit~~ment~~ $~~3~~ 2.8 million from the 2019 budget for the incentive, which the Company anticipates will ~~is anticipated to~~ be paid in 2020. The Company has precedence for commitments for large projects such as the large CHP project at Toray Industries in 201~~32~~ where a $7 million commitment was made. This commitments serves several purposes: it ensures adequate funding for the project will be available in 2020, diminishes fluctuations in the customer charge by collecting the funding over multiple years instead of in one year, and ensures adequate funding for all other C&I customers should unanticipated challenges to funding occur in 2020, including legislative changes. ~~such as state legislated caps on least cost procurement.~~ Additionally, in 2019, the Company will examine the CHP process for customers, the

[23] As noted below in Section D, the Company will be required to notify the PUC of all incentive offers in excess of $3 million. Such notifications will also include a description of how the Company intends to fund the incentive.

notification process and incentive levels for large projects with the OER, EERMC, Division and all members of the Collaborative with a focus on enhancements for 2020.

c. Transferring Funds

The Parties will regularly review the amount of funds needed and available for each program (as well as any changes to the overall fund balance, as discussed in Section III.A above) and will transfer monies as needed. Transfers during the program year may occur as follows:

1. Transfers within a Sector: For transfers of less than 20% of the originating program's budget, the Company can transfer funds from one program to another program in the same sector. For transfers of 20% or more of the originating program's budget, the Company can transfer funds from one program to another program in the same sector with the Division's prior approval. Upon seeking the Division's approval, the Company shall simultaneously notify the EERMC and OER. For all transfers in a sector, the Company will reflect changes in the quarterly report(s) following the transfer and the year-end report.

2. Transfers between Sectors. The Company can transfer funds from one sector to another sector with the Division's prior approval. Upon seeking the Division's approval, the Company shall simultaneously notify the EERMC and OER. If a transfer reduces the originating sector's budget by more than 20% in aggregate over the course of the program year, the transfer will also require PUC approval. For all transfers between sectors, the Company will reflect changes in the quarterly report(s) following the transfer and the year-end report.

3. Transfers among residential retrofit programs. The Company can transfer among EnergyWise, EnergyWise Multifamily, Income Eligible Multifamily, and C&I Multifamily (which are in different sectors) programs in order to achieve the overall savings goals of all programs. Although these are listed as separate lines in the program tables, they are essentially one program from an implementation standpoint. For all transfers between residential retrofit programs, the Company will reflect changes in the quarterly report(s) following the transfer and the year-end report.

4. For transfers requiring Division and/or EERMC, but not PUC approval, the Parties will inform the PUC of the transfers, both between sectors and within sectors, in a timely fashion.

5. The Company will not be permitted to adjust its goals or incentive target calculations as a result of any transfers between sector budgets. However, after any budget transfers between sectors are made, the sector spending budgets will be recalculated for the purposes of the shareholder incentive calculation.

d. Budget Management

It is possible that there could be deviations from the planned budget for 2019 that could occur during the program year. The Parties contemplate three scenarios, and have agreed to address them as follows:

1. The Company's expenditures and commitments for 2019 may exceed the total budget by up to 15% so long as a written explanation is provided to the EERMC and the PUC for any deviation and the expenditures and commitments are reasonably consistent with the original Annual Plan.

2. The Company agrees that, during 2019, if the Company anticipates that continued operation of its programs is likely to result in actual expenditures and commitments exceeding the total budget by more than 15%, the Company will seek a vote of approval from the EERMC at its next meeting. Following EERMC action, the Company will be required to obtain approval from the PUC for expenditures in excess of 15% higher than the total budget, which would be collected through reconciliation in the next year's energy efficiency program charge.

3. During a program year, if the Company did not anticipate that its actual expenditures and commitments would exceed the total budget by more than 15%, but actual expenditures and commitments do exceed such threshold, the Company will bear the burden of demonstrating the reasonableness of its actions, including an explanation of why the over-spending occurred and how the expenditures and commitments are reasonably consistent with the original plan. Such demonstration would be required to be part of the 2019 Year-End Report, if not sooner.

In each of these three instances, the PUC retains its traditional ratemaking authority to review the prudency and reasonableness of the Company's actions.

In addition, the Company will file a written notification with the PUC of any energy efficiency incentive annual offer in excess of $3 million. The notification will occur after the cost benefit screening and may occur before the offer letter is finalized. The project, the incentive, and any other related proposals will be authorized to proceed after thirty days from the notice filing unless the PUC

suspends the filing and/or issues an order within such 30-day period to extend the time for purposes of further review.

If the dollar value of a proposed incentive for a single project is such that it would cause a program to exceed the overall energy efficiency plan budget for the current program year, the Company will follow the provisions related to overspending, per the rules established above.

7. Goals and Cost-Effectiveness

The Company has projected cost-effectiveness for the proposed 2019 programs using the RI Test as required by the Standards. ~~The use of the RI Test was required by the Standards, as revised by the EERMC, and approved by the PUC at the Open Meeting on April 27, 2017 in Docket 4684.~~ The RI Test requires that the total lifetime savings from the efficiency measures will exceed the total costs of the measures (i.e., program and customers' costs).

As provided for under the Standards, benefits include primary fuel energy savings (electricity and natural gas), the value of other resource (fuel and water) benefits, price effects, non-embedded greenhouse gas reduction benefits, economic development benefits, non-embedded NO_x reduction benefits, value of improved reliability and non-energy impacts (NEIs). Costs include all projects costs, program planning and administration, sales, technical assistance and training, evaluation, and the shareholder incentive. To illustrate the detailed components of the RI Test as well as the sources of the values, the Company has provided Attachment 4.

Two key supporting documents for cost effectiveness are the Technical Reference Manual and the Avoided Cost Study. For the Annual Plan, the Company developed the 2019 Rhode Island Technical Reference Manual (TRM), which documents the savings or savings algorithms and costs for measures proposed to be offered through its programs in 2019. The TRM identifies the sources for the savings estimates: evaluation studies, engineering analyses, and/or other research. This TRM is a public document and was provided to the EERMC and its consultants to support and facilitate the determination of the Plan's cost-effectiveness. The TRM is reviewed and updated annually to reflect changes in technology, baselines, and evaluation results.

The cost-effectiveness analyses of the proposed programs use avoided energy supply costs that were developed by Synapse Energy Economics as part of the "Avoided Energy Supply Components in New England: 2018 Report" (2018 AESC Study) that was

sponsored by all the electric and gas efficiency program administrators in New England and was designed to be used for cost effectiveness screening in 2019 through 2021.[24] The avoided costs reflect current and expected market conditions and are highly influenced by the cost of fossil fuels and expectations about ISO-NE's forward capacity market. Company-specific transmission and distribution capacity values are also included. The avoided costs from the report used for 2019 are shown in Attachment 5, Table E-8 and Attachment 6, Table G-8. There were several noted changes to the avoided costs in the 2018 AESC Study (Study).

The Study found lower avoided costs of energy due to sustained low natural gas prices at national hubs and lower estimated costs of complying with the Regional Greenhouse Gas Initiative (RGGI). Avoided capacity costs were also lower due to changes in market rules and a lower estimate for the cost of new entry. Avoided costs of natural gas were lower based on shale gas breakeven prices. Avoided costs for fuel oil and other fuels increased. There was also an increase in the values for electric capacity demand reduction induced price effects (DRIPE) and oil DRIPE, where these were estimated to be non-existent or were not calculated in AESC 2015 Study. The Study also quantified new benefits for non-embedded NO_x reduction benefits, value of improved reliability, and avoided pool transmission facilities (PTF) costs. Due to all these factors, the avoided costs benefits have increased in 2019 compared to 2018.

Attachment 5, Table E-5 and Attachment 6, Table G-5 provide the calculations of 2019 program year cost-effectiveness. Attachment 5, Table E-6 and Attachment 6, Table G-6 show the energy savings goals based on the proposed budgets. Attachment 5, Table E-7 and Attachment 6, Table G-7 show a comparison of the goals with the approved program goals from 2018. Attachment 5, Table E-5 shows that the proposed portfolio of electric programs is expected to have a benefit/cost ratio of 4.28, which means that approximately $4.28 in benefits is expected to be created for each $1 ~~invested in~~spent on the programs. Attachment 6, Table G-5 shows that the proposed portfolio of gas programs is expected to have a benefit/cost ratio of 2.70, which means that $2.70 in benefits is expected to be created for each $1 ~~invested in~~spent on the programs. This increase in efficiency investment continues the progress of acquiring all energy efficiency resources that are cost-effective and lower cost than supply.

[24] The report is available online at: http://ma-eeac.org/studies/special-cross-sector-studies/. This study forecasts avoided costs for three years, compared to prior studies which developed avoided costs applicable to a two-year period.

8. Bill Impacts

In addition to energy efficiency being a cost effective investment for Rhode Island, an analysis of bill impacts from the proposed investment in energy efficiency indicates that the average Rhode Islander who participates in the electric programs will realize an annual bill reduction of 1.67% to 22.83% over the lifetime of the measure mix, depending on rate class. The ~~participant~~ average Rhode Islander who participates in the gas programs will ~~see~~ realize a bill reduction of 1.50% to 21.81% over the lifetime of the measure mix depending on rate class.[25] The average Rhode Island consumer (blending participants and non-participants) will see ~~reduced bills~~annual bill reductions of 1.57% to 3.40% for electricity over the lifetime of the installed energy efficiency measures, compared to no investment. For gas bills, the average Rhode Island consumer will ~~see~~ realize a 0.02% to 4.73% bill reduction over the lifetime of the measure mix, depending on rate class. The bill impacts analysis uses models that were first used in the 2015 Plan and considers bill savings to participants compared to the incremental cost to all consumers of investing in energy efficiency in 2019. It also factors in that non-participants will benefit through avoided infrastructure investments as well as market effects. The full bill impacts analyses for electric and gas programs may be found in Attachment 7.

9. Measurement and Verification Plan

To verify the impacts that programs are having on energy savings, the Company hires independent consulting firms to regularly conduct ~~program evaluations~~evaluation studies as part of its measurement and verification process. These evaluations ~~include~~ incorporate industry standard methods such as engineering analysis, metering analysis, billing analysis, site visits, surveys, and market studies to realize the actual energy savings that particular measures are having. Every year, the results of the surveys are used to update the benefit-cost calculations during planning. Attachment 3 lists the evaluations that have occurred since 2007, that are still being used, and their influence on program planning.[26] The executive summaries of recently completed evaluations are submitted electronically to the PUC; executive summaries of evaluations completed in prior years are available in the dockets for previous years, or upon request.

[25] Due to differences in the electric and gas Bill Impacts models, electric bill reductions indicate annual bill savings over the lifetime of the measure mix, while gas bill reductions are the overall lifetime bill savings as a percentage of the 2019 bill.

[26] The information in the Attachment is also intended to meet the specific requirement from the 2016 EE Program Plan to provide "a summary of evaluation results obtained since October 1, 2015, together with an attachment summarizing the impact of those results in planning the Company's 2019 programs."

Additionally, the M&V Plan for 2019 is presented in Attachment 3, and includes brief descriptions of each of the proposed studies. The areas proposed for study in 2019 have been chosen based on a number of factors: the relative amount of savings in that program or end use, the vintage of the most recent evaluation study, the relative precision of the recent evaluation study, and the available evaluation budget. In addition, some new program areas are designated for both impact and process evaluations. This list may be added to as the year progresses and different evaluation priorities are identified. In particular, the parties will consider the value of using evaluations from other jurisdictions as well as adding Rhode Island-specific impact or process evaluations, as appropriate, that will help inform the Company's efforts towards achieving the goals of least cost procurement.

The M&V Plan includes funding for a study ~~of energy efficiency measures that will review and confirm energy savings to be~~ conducted by the Office of Energy Resources to review and confirm reported energy savings. This study was legislated in Senate Bill 2500, enacted in June 2018.[27] The purpose of this study is to independently verify the energy savings of National Grid's energy efficiency programs and to review the evaluation, measurement, and verification (EM&V) process to ensure quality data, rigorous methods, and appropriate assumptions are being used. The legislation states that "The office of energy resources [*sic*], in consultation with the electric and gas distribution company and representatives referenced in §39-1-27.7(f)(2) shall be authorized to hire an energy consulting company or firm to carry out the energy efficiency verification study. The costs associated with this study, including, but not limited to, those associated with the consultant or firm contract and reasonable administrative costs incurred by the office in the execution of subsection (f) of this section, shall be recoverable through the system benefit charge subject to commission approval. Funding shall be transferred from the electric and gas distribution utility to the office of energy resources upon request by the office."[28]

10. Coordination with Power Sector Transformation

There will be coordination between the Plan and the Company's Power Sector Transformation (PST) Vision and Implementation Plan (PST Plan), as detailed in the Docket Nos. 4770/4780 Amended Settlement Agreement, ~~filed August 10, 2018~~approved by the PUC at its August 24, 2018 Open Meeting (the Amended Settlement Agreement). The Company is committed to coordination across dockets to

[27] http://webserver.rilin.state.ri.us/PublicLaws/law18/law18079.htm
[28] http://webserver.rilin.state.ri.us/PublicLaws/law18/law18079.htm

ensure transparency and to create streamlined programs to its customers. Areas that will involve such coordination include the following:

i. Demand Response

The Plan includes residential and C&I Demand Response programs. The Amended Settlement Agreement includes Demand Response as one of the ~~an~~ eligible resources with which to meet ~~in meeting~~ the System Efficiency: Annual MW Capacity Savings metric.

The Company will ~~pay for and~~ implement and fund Demand Response programs through~~in~~ its Annual Plan. All associated budgets, benefits, and savings are detailed in Attachment 5, 2019 Electric Energy Efficiency Program Tables.

The Company will report progress on this metric in its energy efficiency quarterly and Annual Reports, as well as in the ~~mid-year and~~ annual March 1 performance incentive report~~s~~ and the September 1 mid-year update required under the Amended Settlement Agreement. In accordance with the Amended Settlement Agreement, the Annual MW capacity savings from Demand Response Programs will be tracked and reported as follows:

a. Residential Demand Response:
   The number of participating customers (Wi-Fi thermostats) in Demand Response events multiplied by the approved deemed kW savings value per thermostat.
b. Commercial Demand Response:
   The average observed ~~MW~~ demand savings ~~over~~ during called Demand Response events.

As described in Section 11, the Company will not earn a shareholder incentive on Demand Response through the Plan. The shareholder incentive will be earned through the Annual MW Capacity Savings Performance-Based Incentive Mechanism in Docket Nos. 4770/4780.

ii. Electric Heat

At the Open Meeting on August 3, 2018 regarding Docket Nos. 4770/4780, the PUC directed the Company to include the heat pump rebates proposed in these dockets to be funded through the Company's energy efficiency programs.

In accordance with this directive, the Company increased the amount of beneficial electrification of heating to be funded through the Plan. This includes increasing the number of cold climate mini-split heat pumps offered to customers heating with delivered fuels in its electric HVAC program, and expanding this offering to income-eligible and multifamily programs. Further details of these program offerings are included in Attachment 1.

The Company will continue coordination between its energy efficiency programs and PST Plan through internal processes and as part of the PST Advisory Group, established through the Amended Settlement Agreement.

11. Advancing Docket 4600 Principles and Goals

Along with the quantitative benefits detailed in the Plan, as measured by the RI Test, the energy efficiency investments and innovation planned for 2019 also advance the Docket 4600 principles and goals.[29]

The Docket 4600-A Guidance Document directed that "the proposing party must provide accompanying evidence that addresses how the proposal advances, detracts from, or is neutral to each of the stated goals of the electric system."[30]

To meet this directive, the Company describes how the Plan either advances, detracts, or remains neutral on achieving the Docket 4600 goals for the electric system in Table 9.

Table 9: Docket 4600 Goals for the Electric System

4600 Goals for Electric System	Advances/Detracts/Neutral
Provide reliable, safe, clean, and affordable energy to Rhode Island customers over the long term.	Advances: The Plan gives customers tools to reduce their energy consumption. The safest, most reliable, most affordable energy, is energy that is never used. Lowering energy consumption avoids investments in the installation, upgrade, or replacement of transmission and distribution infrastructure, and reduces strain on the system.
Strengthen the Rhode Island economy, support economic competitiveness, retain and create jobs by optimizing the benefits of a modern grid and attaining appropriate rate design structures.	Advances: The Plan will create significant economic benefits in Rhode Island. The Company expects that investments made in energy efficiency under this Plan will add $85.6 million to Rhode Island's state

[29] PUC Report and Order No. 22851 accepting the Stakeholder Report. Written Order issued July 31, 2017.
[30] Approved final clean version of Guidance Document 10/27/17.

	gross domestic product (GDP) and support more than 1,257 job-years of employment.
Address the challenge of climate change and other forms of pollution.	Advances: The Plan will avoid over 1.1 million tons of carbon over the lifetime of the installed measures as well as reduce other pollutants associated with the generation and combustion of electricity, natural gas, and delivered fuels.
Prioritize and facilitate increasing customer investment in their facilities (efficiency, distributed generation, storage, responsive demand, and the electrification of vehicles and heating) where that investment provides recognizable net benefits.	Advances: The Plan provides incentives for customers to invest in cost-effective energy efficiency measures in their facilities and participate in demand response programs.
Appropriately compensate distributed energy resources for the value they provide to the electricity system, customers, and society.	Neutral
Appropriately charge customers for the cost they impose on the grid.	Neutral
Appropriately compensate the distribution utility for the services it provides.	Advances: The shareholder incentive contained in this Plan compensates the Company for achieving the energy savings goals through delivering cost-effective energy efficiency programs to customers.
Align distribution utility, customer, and policy objectives and interests through the regulatory framework, including rate design, cost recovery, and incentive.	Advances: The Plan aligns Company, customer, and policy objectives and interests by incentivizing energy savings measures that enable customers to manage and reduce their energy consumption, which in turn contributes to the greenhouse gas reduction goals of the Resilient Rhode Island Act of 2014, and Power Sector Transformation goals, while allowing the Company to earn a shareholder incentive.

~~11.~~12. Reporting Obligations

i. In 2019, the Company will provide quarterly reports to the EERMC, the Division, OER, the Collaborative, and the PUC on the most currently available program

performance for both natural gas and electric efficiency programs. These reports will include a comparison of budgets and goals by program to actual expenses and savings on a year-to-date basis, and a status report on revolving loan funds. The Company will also coordinate reporting of loan funds with the Rhode Island Infrastructure Bank. The reports will also include a brief summary of program progress and will highlight issues by sector for EERMC, Division, OER, and Collaborative attention. Within the C&I sector, there will be separate highlighting of large and small customer program progress and issues. Beginning in the second quarter, the quarterly reports also include a forecast of expected results.

ii. In 2019, for months during which quarterly reports are not produced, the Company will provide to the EERMC, the Division, and the Collaborative monthly summaries of year-to-date spending and savings and results by sector.

iii. The Company will provide to the Parties and file with the PUC its 2019 Year-End Report no later than May 1, 2020. This report will include achieved natural gas and electric energy savings in 2019 and earned incentives for 2019.

iv. The Company will provide the Parties with a summary of evaluation results obtained since October 1, 2016, including a description of the impact of those results in planning the Company's 2019 programs, in the Plan to be filed by October 15, 2018.

~~12.~~13. Incentive

Consistent with the Three-Year Plan, the proposed shareholder incentive mechanism for 2018 will be based on the same metric applicable to the 2018 Plan. Under the current incentive structure, the Company can earn a target based-incentive rate equal to 5.0% of the eligible spending budget in a program year for achieving electric and gas energy savings goals.

- For electric savings, the Company can earn a target-based incentive rate equal to 3.5% of the eligible annual spending budget for achieving MWh savings goals and 1.5% of the annual spending budget for achieving MW savings goals.
- For gas, where there is no demand savings component, the Company can earn a target-based incentive rate equal to 5.0% of the eligible annual spending budget for achieving MMBtu savings goals.

As in 2018, the proposed incentive mechanism establishes an incentive of 1.25% of the annual spending budget for achieving 75% of the savings goals in a sector. This would

increase linearly to 5% of the annual spending budget for achieving 100% and increase linearly from that point to 6.25% of the annual spending budget for achieving 125% of the savings goals.

Expressed mathematically, the shareholder incentive would be calculated as follows for both energy and demand savings, where SB is the Annual Spending Budget in the sector:

- From 75% of savings to 100% of savings:
    - Incentive = SB x (0.15 x % of savings achieved – 0.10)
        - x 0.7 for electric energy savings
        - x 0.3 for electric demand savings
        - x 1.0 for natural gas savings
- From 100% of savings to 125% of savings:
    - Incentive = SB x (0.05 x % of savings achieved)

The Company believes that this structure will incent the Company to achieve savings that approach or exceed 100% of the annual goals. It does so by setting the threshold for savings required to earn an incentive at 75% of the annual savings goals, by creating a steep slope to earn a greater incentive in the range of 75% of savings to 100% of savings, by establishing the target incentive at 5.0% of the annual spending budget, and by offering a higher incentive for exceeding 100% of the annual goals.

The threshold performance level for energy savings by sector will be set at 75% of the annual energy and demand savings goal for the sector. The Company must attain at least this threshold level of savings in the sector before it can earn an incentive. The Company will have the ability to earn an incentive for each MWh, MW or MMBtu saved, once threshold savings for the sector are achieved. The cap for the target incentive amount of energy savings will remain at 125%.

The ability to earn up to 125% of the target incentive is worthwhile because Rhode Island customers will realize additional energy and cost savings if the Company achieves a high level of energy savings performance. Given budget control requirements, this feature will provide the Company with an incentive to improve the efficiency of its program implementation efforts while providing Rhode Island customers with value in excess of the incremental incentive that may be earned by the Company. That is, the Company will have an incentive to increase customers' savings and customers will realize an overwhelming majority of the savings.

The savings goals are based on a set of assumptions of savings per measure and other impact factors in each program as well as the proposed budget. The determination of achieved savings will be based on the same set of savings and impact assumptions as is

used to develop the savings goal in this Annual Plan. These assumptions have been reviewed and accepted by the Parties.

Attachment 5, Tables E-3 and Attachment 6, Table G-3 provide the derivations of the eligible electric spending budget that are used to determine the incentive amounts that the Company may earn if it is successful in achieving its goals for energy savings. Attachment 5, Table E-9 and Attachment 6, Table G-9 provide a summary of the incentives related to annual energy-savings goals by sector. These goals by sector reflect the expected cost of savings in each sector informed by evaluation studies, and these goals have been adjusted to take into account changing rebate policies and the changing market being served. As described above, these goals have been carefully reviewed by the Collaborative and EERMC representatives to ensure that they represent reasonable and challenging goals for the year.

For electric energy efficiency programs, the proposed target base-incentive rate in 2019 is equal to 5.0% of the eligible spending budget for 2019. In accordance with the PUC order at the Open Meeting on December 20, 2017, Pilot budgets are excluded from the eligible spending budget. The projected electric eligible spending budget for 2019 is approximately $98.1 million (see Attachment 5, Table E-3). The total electric target incentive for 2019 is 5.0% of the proposed spending budget, or approximately $4.91 million (see Attachment 5, Table E-9). In accordance with the Amended Settlement Agreement in Docket Nos. 4770 and 4780 filed with the PUC on August 10, 2018, the Company is not eligible to earn an energy efficiency incentive on its Energy Efficiency Demand Response Programs. To comply with this requirement, t~~T~~he Company excluded spending on Demand Response Programs ~~spend~~ from the eligible spending budget as shown in Table E-3.

For natural gas efficiency programs, the proposed target base incentive is equal to 5.0% of the eligible budget. The projected natural gas eligible spending budget for 2019 is approximately $29.2 million (see Attachment 6, Table G-3). The total natural gas target incentive for 2019 is 5.0% of the proposed spending budget, or approximately $1.46 million (see Attachment 6, Table G-9).

In addition, to promote cost efficiency in spending in the achievement of the energy savings goals, an adjustment will be made under certain circumstances to MWh and MMBtu savings goals in the shareholder incentive calculation. If the actual implementation expenses in a sector at year-end are less than the planned implementation expenses for that sector by more than five percent, and if achieved savings in the sector exceed 100% of the target savings goal, the savings goal for that

sector will be adjusted by the ratio of actual implementation expenses to the planned implementation expenses. Conversely, if the actual implementation expenses[31] in a sector at year-end are greater than the planned implementation expenses by more than five percent, and if achieved savings in the sector are less than 100% of the target savings goal, the savings goal for that sector will be adjusted by the ratio of actual implementation expenses to the planned implementation expenses.

The Company will report final program results and earned incentive in its Year-End Report regarding 2019 Energy Efficiency Program efforts.

~~13.~~14. Testing Performance Metrics

As indicated in the 2018-2020 Three-Year Plan and in the 2018 Annual Plan, the Company agreed to work with the OER, the DPUC, the EERMC, and the Collaborative during program year 2018 to consider new performance metrics for future Annual Plans that would better~~to~~ align ~~energy efficiency~~the plans with ~~the~~ Rhode Island's goals for Power Sector Transformation and greenhouse gas emissions reduction.

Energy efficiency measures and initiatives have evolved over time due in part to state policy objectives, customer preferences, and technological advancements. In recent years it has become clear to the Company that the annual energy and demand ~~KWh, KW, and MMBtu~~ savings goals denominated in kWh, kW, and MMBtu, may not capture the full benefits of all energy efficiency measures. Although all energy efficiency measures comply with Least Cost Procurement, contribute to State policy goals, reduce overall energy usage, and provide net benefits to customers, many do not provide significant contributions to annual savings goals. An example is the suite of measures that reduce consumption of delivered fuels. High-efficiency oil heating measures, oil weatherization, and beneficial electrification of heating only provide a small contribution to electric savings goals, but create a significant contribution to the State's greenhouse gas reduction goal.

~~It is important that~~The ~~the~~ goals in Annual Plans should send an appropriate signal for investment in all forms of cost-saving measures, not just those that save annual electric energy, electric demand, and natural gas. In 2019, the Company is proposing to test new performance metrics to gain experience tracking and reporting ~~out~~ on progress towards defined goals that are not tied to a financial reward.

[31] Expenses related to overspending for deliverable fuels will be excluded from implementation expenses in this calculation.

Throughout program year 2019, the Company will work towards ~~achieving~~ implementing the test metrics defined below to determine if any are viable to become part of an annual goal in future Annual Plans. The Company will provide updates on progress, challenges, and lessons learned with the Collaborative and the EERMC during 2019~~report out on any challenges that occur and seek to find solutions if needed~~. While Company performance against a test metric may help inform future goals, it will not predetermine ~~future~~ these goals. At the end of 2019, the Company, in consultation with the Division, OER, EERMC Consultants, the Collaborative, and the PST Advisory Group~~,~~ ~~it~~ may ~~be~~ determine~~d~~ that a metric is not appropriate for use in the future. Likewise, it may be determined that a metric has the ~~potential~~ merit to become an annual goal tied to a financial award in future Annual Plans. The Company will work with the Division, OER, EERMC Consultants, and the Collaborative ~~to~~ in the development of future baselines and financial rewards for any new annual goals resulting from these test metrics. ~~determine the appropriate benchmark for any new annual goals resulting from test metrics and any new financial reward.~~

i. Carbon Reductions

The Company proposes to track annual and lifetime carbon ~~CO_2~~ reductions resulting from investments in the electrification of heating and delivered fuels measures. This approach mirrors what was proposed in the Company's Power Sector Transformation Vision and Implementation Plan (PST Plan), as detailed in the Docket Nos. 4770/4780 Settlement Agreement. The ~~CO_2~~ carbon reductions will be calculated using emission rates from the 2018 AESC Study shown in the table below, multiplied by the resulting annual and lifetime avoided oil or propane from this suite of measures.

2018 AESC Study Emmission Rates		
#2 Fuel Oil	0.081	CO2 (tons/MMBtu)
Propane	0.070	CO2 (tons/MMBtu)

The carbon metric will provide additional visibility on this suite of measures that do not significantly contribute to existing electric and demand savings goals but contribute to Rhode Island's greenhouse gas reduction goals.[32]

The Company appreciates the direction given by the PUC at the Open Meeting on Docket Nos. 4770/4780 held on August 3, 2018 indicating that the Company could propose a shareholder incentive for achieving carbon reductions from the electrification of heating in future energy efficiency

[32] Rhode Island Greenhouse Gas Emissions Reduction Plan, December 2016.

Annual Plans. For 2019, the Company proposes to only test a performance metric for carbon. The Company believes it is prudent to track this metric for a year to help inform the development of an annual goal and appropriate shareholder incentive level.

ii. **Lifetime MWh and MMBtu Savings**

National Grid currently includes lifetime electric and gas savings ~~MWh and MMBtu values~~ in its Annual Plans. These values are based ~~off of~~on the lifetime savings associated with the measures in the Plan. Year-End Reports currently show achieved lifetime savings but do not show it against the planned goal. The Company will edit quarterly and Year-End Reports to include planned lifetime savings to better understand performance in the realization of lifetime savings and to consider program adjustments in the future.

iii. Program costs per energy savings

The Company currently includes the projected costs of lifetime ~~MWh and MMBtu~~ electric and gas savings in its Annual Plans. The Company recently began including the actual costs of lifetime savings compared to planned values in its quarterly reports. In 2019, the Company will continue this reporting in its quarterly reports and will add this metric to its Year-End Report.

The Company will also report out on the cost of saved peak demand for the residential and C&I demand response programs. This metric will be important to track as these new program offerings scale up.

iv. Customer Satisfaction

The Company proposes to track a Customer Satisfaction metric in 2019. Initially the metric will be applied to whole house programs with the potential to expand to other residential programs over time.

The Company proposes to utilize a third party vendor to conduct the customer survey. The metric would be based off customer responses to the following questions:

1. Would you recommend this program to a friend or family member?
2. How satisfied are you with the energy efficiency services received?

The Company will track customer responses and report out on the average satisfaction across.

The Company will provide progress on the above proposed metrics in its quarterly reports as well as a detailed summary of the results, lessons learned, and any needed improvements in its 2019 Year-End Report to the PUC.

~~14.~~15. Miscellaneous Provisions

i. Other than as expressly stated herein, this Settlement establishes no principles and shall not be deemed to foreclose any party from making any contention in any future proceeding or investigation before the PUC.

ii. This Settlement is the product of settlement negotiations. The content of those negotiations is privileged and all offers of settlement shall be without prejudice to the position of any party.

iii. Other than as expressly stated herein, the approval of this Settlement by the PUC shall not in any way constitute a determination as to the merits of any issue in any other PUC proceeding.

iv. The Parties agree that the Collaborative shall meet no less than six times in 2019 to review the status and performance of the Company's ~~2018~~ 2019 energy efficiency programs and advise the Company on potential energy efficiency programs for ~~2019~~2020.

The Parties respectfully request that the PUC approve this Stipulation and Settlement as a final resolution of all issues in this proceeding.

Respectfully submitted,
THE NARRAGANSETT ELECTRIC COMPANY D/B/A NATIONAL GRID

_____

By its Attorney, Date
Raquel J. Webster