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May 27, 2021

VIA ELECTRONIC SERVICE
and HAND DELIVERY

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

Re: Dockets 5073 – Petition of Retail Energy Supply Association for Implementation of Purchase of Receivables Program

Dear Ms. Massaro:

Enclosed please find an electronic version of Good Energy's response to Data Request 1-1. It include three documents (1) a description of the Benefits-Cost Analysis (BCA) conducted by Good Energy focusing on the intersection of POR and municipal aggregation programs, (2) Exhibit 1 - the BCA table, and (3) Exhibit 2 - expert testimony of Patrick Roche in support of the analysis.

Thank you for your attention to this submission. If there any questions, please contact me at 401-758-7288.

Sincerely,

James G. Rhodes
Counsel for Good Energy, L.P.

Enclosure

cc: Docket 5073 Service List

Certificate of Service

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

Paper copies are available upon request.

May 27, 2021

Docket No. 5073 – Retail Energy Supply Associations Petition for Implementation of Purchase of Receivables Program
Service List updated 4/1/2021

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STATE OF RHODE ISLAND
PUBLIC UTILITIES COMMISSION

IN RE: RETAIL ENERGY SUPPLY	**:**	
ASSOCIATION (RESA) - PETITION FOR	**:**	**DOCKET #5073**
IMPLEMENTATION OF	**:**	
PURCHASE OF RECEIVABLES PROGRAM	**:**	

RESPONSE OF GOOD ENERGY TO COMMISSION DATA REQUEST 1-1: PURCHASE OF RECEIVABLES BENEFITS COST ANALYSIS WITH RESPECT TO AGGREGATION PROGRAMS

I. INTRODUCTION

Before the Commission is a proposal to establish a Purchase of Receivables ("POR") program as described in the Proposed Settlement to be filed contemporaneously with this analysis. In support of the Proposed Settlement and in response to the Commission's Data Request 1-1 directed to Good Energy issued on April 26, 2021, Good Energy is providing this discussion of the Program elements that specifically intersect with the interests of Good Energy's clients who have approved Municipal Aggregation plans.[1]

The purpose of this discussion is to establish the baseline scenario against which the establishment of a POR program should be compared. Additionally, it sets out how the assertions provided in Exhibit 1, the Benefit Cost Analysis Summary Table, were established. In Exhibit 2 expert testimony is provided by Patrick Roche to describe why certain assumptions were made in this analysis, and how it was determined that the proposed program would impact aggregations.

[1] See Public Utilities Commission, Dockets 5042, 5047, 5061 & 5062.

II. DESCRIPTION OF BASE CASE AND IMPACT OF PORT

Good Energy's first step in preparing a Benefit Cost Analysis ("BCA") is to determine the baseline against which a POR program can be compared. In this instance, that would be the launch and operation of a Municipal Aggregation program without POR in place. Initially, Good Energy interpreted Base Case to be the status quo. However, for this discussion, the Base Case envisions that aggregations will be approved and implemented regardless of the outcome of POR. What we know from the Aggregation dockets in footnote 1, is that should the Base Case occur, there is a segment of Rhode Island customers whose customer experience and billing arrangements will be altered. The approval of a POR program, our comparison case here, would maintain existing customers' billing experiences while their supplier changes due to the aggregation.

Given the unique positioning of the analysis, there are two ways to consider what "benefit" and "cost" mean with respect to the analysis done below. Traditionally, we would identify benefits as what some segment of our electricity system would gain if the proposal is approved and, conversely, the costs are the system losses if approved. Yet, in this analysis, it would also be accurate to state that if the proposal is denied, there are inevitable system costs. Thus, the benefits associated with approving POR is to avoid known system costs, even if we are unsure of the precise quantification of those costs.

Since the Base Case is attempting to establish what would happen in the event of changing the customer experience, Good Energy recognizes the limitations of accurately predicting consumer behavior in a given scenario. Good Energy has undertaken to provide sufficient justification for the assumptions made both in this analysis and with supporting expert testimony, and it is cognizant of the potentially large range of possible outcomes.

Table 1 - Aggregation Program Participation: A60 Rate Class

(Percentages are of aggregation eligible customers)

	Aggregation without POR	Aggregation with POR	**Net Loss**
Assumed Participation Rate	31%	62%	31%
Participating Accounts in Communities with Pending Programs	2,888	5,776	2,888
Participating Accounts Statewide Potential	9,100	18,201	9,100

The first variable identified by Good Energy is the aggregation participation rate of low-income customers. This rate is expected to change due to education and outreach efforts that include the message that customers will lose access to two programs (1) Arrearage Management Plan and (2) Budget Billing covering their full bill.[2]

These messages have not been tested, since POR is in place in the markets with active programs managed by Good Energy. While inclusion of this message may not be required by law, the Division of Public Utilities and Carriers has indicated their opinion that customers should be made aware of the potential loss of these programs, and Good Energy wholly agrees.[3] Additionally, National Grid has proposed, and Good Energy has not objected, to classify customers currently on an Arrearage Management Plan as ineligible customers for the purposes of default enrollment into an aggregation program.[4]

[2] See. Revised Electricity Services Agreements filed in Dockets 5041, 5047, 5061, and 5062. Highlighted portions of the template ESA indicate how the proposed Aggregation Plans would provide a certain amount of consumer protection and financial benefit to A60 ratepayers.

[3] Division of Public Utilities and Carriers Recommendation in Dockets 5042, 5047, 5061 and 5062.

[4] National Grid, "Proposal on Arrearage Management Program (AMP) Plan." RIPUC Docket 5058. Filed April 26, 2021.

Based upon these factors, Good Energy believes that low-income ratepayer participation in aggregation may drop from 62%, current median participation in Good Energy's National Grid Massachusetts aggregation programs, to 31%.[5]

The number of accounts this represents only reflects the number of low-income ratepayers in the communities that have an approved plan. Good Energy considers this to be the lower limit of the potential impact of POR. To establish the possible upper limit, Good Energy has also provided the hypothetical if all municipalities served by National Grid in Rhode Island implemented an aggregation program (referred to as "Statewide Potential").[6]

Table 2 - Aggregation Program Participation: A16 Rate Class

(Percentages are of aggregation eligible customers)

	Aggregation without POR	Aggregation with POR	**Net Loss**
Assumed Participation Rate	75%	81%	7%
Participating Accounts in Communities with Approved Programs	2,016	2,194	178
Participating Accounts Statewide Potential	9,107	9,910	803

The next identified variable to be impacted by POR is lowered participation across all rate classes due to the loss of Budget Billing for the supply portion of their bill.[7] Similar to the

[5] Exhibit 2, Testimony of Patrick Roche, p 2.

[6] For statewide calculations, Good Energy used published data from National Grid for total low-income accounts and usage on Standard Offer/Last Resort Service. Good Energy then applied the participation rates from Table 1.

[7] See. National Grid, "Response to PUC Inquiry regarding Arrearage Management Plan Law and Tariff." RIPUC Dockets 5042, 5047, 5061, and 5062. Filed February 25, 2021.

previous analysis, the impact of this message has not been tested, and Good Energy believes that as many as 7% of non-low income residential customers, when presented with the loss of this billing option, will choose to remain with utility service.[8] Few, if any, commercial or industrial accounts participate in budget billing, based on data received for the communities with an approved aggregation plan, and as a result Good Energy did not model impacts based on budget billing for these rate classes.

III. POWER SYSTEM LEVEL BENEFITS / COSTS

At this time, Good Energy has not identified any potential benefit or cost categories outlined in the Power System Level of analysis that would be impacted by the intersection of Municipal Aggregation and POR.

IV. CUSTOMER LEVEL BENEFITS / COSTS

From the perspective of combining Municipal Aggregation and POR, most of the benefits are attributable at the Customer Level of analysis. The following discussion addresses only those categories impacted by the implementation of POR. Those categories that are not impacted, or not known to be impacted, are not discussed here.

Program Participant Benefits

To clarify Good Energy's analysis in this section, program participation is defined as customers participating in Municipal Aggregation with POR, in comparison to customers participating in Municipal Aggregation without POR.

[8] Roche, supra at 4.

Table 3 - Customer Level Benefits in Aggregation: Basic Residential and Low-Income

	A-16	A-60	Total
Customer Savings, per National Grid Massachusetts data[9]	8.2%	8.6%	
Assumed Comparison Last Resort Rate (Average of April-September 2020; October 2020-March 2021)	0.09335	0.09335	
Assumed Municipal Aggregation Rate	0.08567	0.08532	
Savings per kWh, applying Customer Savings %	0.00767	0.00803	
Average annual usage per customer	6,296	6,233	
Total Savings per Customer Participating	$46.24	$47.96	
Net Additional Customers Participating in Aggregation with POR			
in Communities with Pending Programs	178	2,888	
Accounts Statewide	803	9,100	
Net Annual Savings with of POR			
in Communities with Pending Programs	$8,222	$138,496	**$146,718**
Accounts Statewide	$37,132	$436,447	**$473,578**

As Good Energy notes in all its communications, Municipal Aggregation cannot guarantee savings. No matter what per kilowatt hour rate is secured through the bidding process, future utility rates to which it will be compared are not known. This analysis relies solely upon historical data already in the record and should not be construed as predictive of aggregation rates to be secured in the future following the bidding process.

As a way to model the potential benefits of POR, Good Energy relies on data from Massachusetts comparing Basic Service rates with Municipal Aggregation rates, which is not wholly an apples-to-apples comparison though is the best data source available.[10] The data

[9] See. National Grid. Response to Data Request 1-2, Attachment PUC 1-2. Filed March 3, 2021.

[10] Roche, supra at 5-6.

provided by National Grid indicated that over the previous four (4) years, residential ratepayers in an aggregation program saved 8.2% and low income ratepayers saved 8.6% when compared to standard utility supply. For this analysis, Good Energy is applying that same savings differential per rate class.

The baseline rate for purposes of comparison is the average of the April 2020 - Sept 2020 and Oct. 2020 - Mar. 2021 rates. Applying the savings percentage indicated in the National Grid data to the average utility rate results in a measurement of savings per kilowatt hour. Applying this savings to the annual usage per customer, by rate class, results into a total savings per customer. This is then multiplied by the net customer change should POR not be approved.

The result of this formula nets a total savings of $138,495 for low income rate payers and $8,222 for standard residential ratepayers, with a total customer specific savings of $146,717 in the four communities with approved programs. In the most expansive hypothetical where all eligible Rhode Island communities have established an aggregation program, the maximum customer level savings is estimated at $473,578.

Customer Level Costs

In the subset of aggregation eligible customers who opt out of the program, it is an unknown whether they will remain on aggregation or choose an alternative supplier. Using the same data set relied upon above, it is logical to conclude that they may pay a higher per kilowatt hour rate than those customers on Last Resort Service.

Good Energy is not providing any analysis of the potential customer level cost of those actions, as it would require a set of assumptions based on the assumption, we have made for aggregation participation previously. Given the high margin of error in such an analysis, it is unlikely to provide any reliable information. Good Energy has done the first set of assumptions

as it is in a field in which there is a level of expertise, and any such work in the non-aggregation market is outside that scope.

However, Good Energy also asserts that customers making such a decision will have received communication from the aggregation's education and outreach efforts and should be knowledgeable market participants, who have chosen to enter the open market after being fully informed. Given that that level of market knowledge and customer choice is a benefit recognized under statute and the 4600 framework, Good Energy is asserting that this is a net neutral consideration.

Low-Income Participant Benefits

The quantifiable benefits to low-income ratepayers are captured in the previous section. Beyond these defined financial benefits, low-income participants also will enjoy a more generalized participation benefit unrelated to their financial means. In the Base Case, aggregation programs are likely to require a provision in their All Requirements Electricity Services Agreement ("ESA") with a competitive supplier an option to remove a program participant from the program due to their failure to stay current on their bill as distributed by National Grid.[11] This provision is intended to protect suppliers from amassing a significant amount of unpaid consumer debt on which they are unable to collect due to (1) not being the billing entity, (2) the payment allocation method of National Grid,[12] and (3) not having shutoff authority.

Recognizing these limitations, Good Energy has developed a model ESA that, in the absence of POR, gives suppliers the option of removing a customer from the aggregation for an

[11] Revised Electricity Services Agreement, supra note 2.

[12] National Grid's current payment allocation policy in the event of customer underpayment is to (1) current distribution charges, (2) arrearage distribution charges, (3) current supply charges, and (4) arrearage supply charges.

arrearage greater than fourteen (14) days. This optional nature of this clause allows the supplier to evaluate what poses a greater risk, (a) customer nonpayment or (b) underutilization of their supply purchase obligations. Knowing that the rate of nonpayment is greater in the A60 rate class than the A16 rate class, this potential of being removed from the program for nonpayment falls disproportionately on those with less financial means.

POR addresses these concerns and allows all ratepayers equal access to the program based not on their ability to pay but by dint of their living in a community that has authorized an aggregation program. Noting the other benefits identified in this analysis ranging from cost savings to environmental impacts, POR creates a more equitable system for participants whereby all of a communities' ratepayers are eligible to receive the benefits of aggregation. Failure to approve POR means that participation in the program will be subject to both a customer's location and their financial means. Creating this type of discrimination in participation is not the intent of any community that is proceeding with a program.

Consumer Empowerment and Choice

Municipal Aggregation creates new options for electricity supply available to residential customers, and these options include characteristics unique to aggregation such as municipal oversight of terms and conditions and substantial residential buying power. Without POR, even if these new benefits are appealing, many low-income and other residential customers will be limited in their ability to choose the aggregation products because of the loss of payment plans and budget billing for their full bill. This limitation disappears with POR, and as a result, POR enables better customer choice.

One of the benefits and goals of Municipal Aggregation is encouraging consumer engagement by selecting their electricity supply and offering easily understandable and

accessible alternative products that may be better aligned with consumer values and priorities. To identify this benefit, Good Energy looks to the average participation rate in the products offered in its programs in Massachusetts.[13]

Table 4 - Product Selection Rates

(Percentages are of participating aggregation customers)

	Default	Basic	Extra 50%	Extra 100%	Total
Assumed Participation Rate in Aggregation Products					
A-16	94.97%	1.04%	0.63%	3.36%	100.00%
A-60	97.23%	1.47%	0.26%	1.05%	100.00%

The programs administered by Good Energy generally see the above distribution across the supply products offered by an aggregation. These participation rates are provided primarily to show that aggregation with POR leads to roughly 5% of all standard residential customers and roughly 3% of low-income customers choosing products other than the default.

Non-Participant Rate and Bill Impacts

Subject to the assumptions described thus far, Good Energy asserts that POR will increase low-income ratepayer participation in Municipal Aggregation programs. The savings realized on their bill from lower per kilowatt hour rates can result in a quantifiable benefit for non-participants as well. This benefit stems from the overall reduction in the systemwide low-income discount. The low-income discount applied by National Grid to qualifying customers is collected through the distribution rates paid by all ratepayers, and any reduction in the dollar value of that benefit should result in downward pressure on distribution rates.

[13] Municipalities included are those with similar default and optional product offerings as in the aggregation plans approved with the Commission and that have engaged Good Energy to help promote their optional products: Melrose, Somerville, Arlington, Winchester, and Brookline.

Table 5 -Benefits for Non-Participant Customers

	A-60 (Aggregation)
Net Annual Savings with of POR to Customer (from Table 3)	
in Communities with Pending Programs	$138,496
Accounts Statewide	$436,447
Discount Rate for Low-Income Bills	25%
Net Annual Savings with of POR to Rate Payers	
in Communities with Pending Programs	$34,624
Accounts Statewide	$109,112

To determine this potential benefit, Good Energy used the net annual savings for low-income customers, calculated in Table 3 for the four communities with approved programs. The total customer savings is multiplied by the baseline discount rate of 25%.[14] The total savings, multiplied by the discount rate of 25%, indicates the reduction in total cost born by all ratepayers through distribution costs. The estimated net benefit is over $34,000 for the recently approved programs and almost $109,000 if all communities proceed with adopting aggregation programs. Good Energy recognizes that this is a small benefit in comparison to the total cost of distribution.

V. SOCIETAL LEVEL BENEFITS / COSTS

The assumption that POR will result in greater participation in municipal aggregation across rate classes also translates into societal benefits associated with reduction of Greenhouse Gas Emissions and other air pollutants.

Greenhouse Gas Externality Costs

The inclusion of voluntary REC purchases in the proposed default supply in all approved aggregation programs translates into greater REC retirement if POR is implemented.

[14] To be conservative and simplified, Good Energy opted to solely apply the 25% discount for the purposes of this analysis rather than further subdividing by those receiving 25% vs. 30% discounts.

Table 6 - Increased RECs (A16 & A-60 Rate Class)

	Default	Basic	Extra 50%	Extra 100%	Total
Assumed Participation Rate in Aggregation Products					
A-16	95.0%	1.0%	0.6%	3.4%	100.0%
A-60	97.2%	1.5%	0.3%	1.0%	100.0%
Net Accounts in Aggregation with POR					
Communities with Pending Programs					
A-16	169	2	1	6	178
A-60	2,808	42	7	30	2,888
Statewide Potential					
A-16	763	8	5	27	803
A-60	8,848	134	24	95	9,100
Net RI New RECs in Aggregation with POR					
Communities with Pending Programs					
A-16	106	-	4	30	140
A-60	1,750	-	23	153	1,926
Total	1,856	-	27	183	**2,066**
Statewide Potential					
A-16	480	-	16	138	634
A-60	5,514	-	73	482	6,069
Total	5,995	-	89	619	**6,703**

Table 7 - Lower GHG Emissions (A-16 & A-60 Rate Classes)

	CO2
Residual Mix Emissions Rate for Calendar Year 2019 from NEPOOL GIS (Lbs/MWh)	722.8
RI New Weighted Average Emissions for Calendar Year 2019 (Lbs/MWh)	13.0
Reductions in Emissions per Lbs	709.8
Net Emissions Avoided (Lbs) with POR	
in Communities with Approved Programs	1,466,709
Accounts Statewide	4,758,052
Net Emissions Avoided (Metric Tons) with POR	
in Communities with Approved Programs	665
Accounts Statewide	2,158
Social Value of Avoided Emissions ($/Metric Ton)	51
Total Value	
in Communities with Pending Programs	$33,930
Accounts Statewide	$110,069

The information in Table 6 shows Good Energy's estimates with respect to how increased participation in an aggregation program translates into additional RECs being purchased voluntarily. Table 7 shows the subsequent decrease in systems CO2 emissions due to those purchases.

Each supply product being offered includes the voluntary purchase of a certain number of additional qualifying RECs on behalf of the customers who select that product. To estimate the number of accounts that would choose each product, Good Energy looked at the average distribution in Massachusetts accounts across the available products, as provided in Table 4.

The analysis returns to the net increase in the number of participants due to POR. The number of accounts is multiplied by the average account usage across those communities with approved programs. This results in the expected annual MWh of usage and corollary total number of REC purchases based on supply product. To calculate the expected equivalent reduction in emissions, the total number of RECs is multiplied by the equivalent pounds of each pollutant that would be displaced, based on NEPOOL GIS emissions data. In February 2021, the Biden Administration's Interagency Working Group on Social Cost of Greenhouse Gases released an updated report, which provided revised calculations for the social cost of CO2 and NOx. Good Energy has chosen the value for the year 2020 using the middle discount rate provided in the report, which is $51/metric ton and $18,000/metric ton, respectively.

In total, increased participation in aggregation programs that are already approved due to POR is estimated to equate to 2,066 additional RECs being purchased and a reduction of 665 metric tons of carbon dioxide. Using the Social Cost report, this translates into a social value of $33,930. If aggregation encompasses all eligible communities, this could reach 6,700 additional RECs retired per year and 2,158 tons of avoided carbon dioxide per year with a social value of $110,000.

Criteria Air Pollutant and Other Environmental Externality Costs

Table 8 - Decrease in Air Pollutants (A-16 & A-60 Classes)

	CO	Mercury	NOx	Particulates	<10 Micron Particulates	SO2	Organic Compounds	Net
Residual Mix Emissions Rate for Calendar Year 2019 from NEPOOL GIS (Lbs/MWh)	0.69255	0.00001	1.07482	1.14480	0.45380	1.54296	0.05246	
RI New Weighted Average Emissions for Calendar Year 2019 (Lbs/MWh)	0.01878	0.00000	0.01041	0.00161	0.00057	0.00307	0.00050	
Reductions in Emissions per Lbs	0.67377	0.00001	1.06441	1.14319	0.45323	1.53989	0.05196	
Net Emissions Avoided (Lbs) with POR								
in Communities with Pending Programs	1,392.2	0.0	2,199.4	2,362.2	936.5	3,181.9	107.4	
Accounts Statewide	4,516.4	0.1	7,135.0	7,663.1	3,038.1	10,322.2	348.3	
Net Emissions Avoided (Metric Tons) with POR								
in Communities with Pending Programs	0.63	0.00	1.00	1.07	0.42	1.44	0.05	
Accounts Statewide	2.05	0.00	3.24	3.48	1.38	4.68	0.16	
Social Value of Avoided Emissions ($/Metric Ton)	N/A	N/A	$3,300	N/A	N/A	$1,600	N/A	
Total Value								
in Communities with Pending Programs	N/A	N/A	$3,292	N/A	N/A	$2,309	N/A	**$5,602**
Accounts Statewide	N/A	N/A	$10,680	N/A	N/A	$7,491	N/A	**$18,171**

The information in Table 8 shows Good Energy's estimates with respect to how increased participation in an aggregation program translates into reductions in air pollutants. The method of analysis follows that established in Tables 5 and 6 and relies on the assumed participation rates due to POR.

To calculate the expected equivalent reduction in emissions, the total number of RECs is multiplied by the equivalent pounds of each pollutant that would be displaced, based on NEPOOL GIS emissions data. To quantify the value of the avoided pollution, Good Energy used a peer-reviewed report on the air pollution co-benefits from climate policies published in 2014 in the Journal of Technological Forecasting & Social Change.[15] The report provides values for NOx and SO2. The values are not localized to the United States specifically as are the numbers for CO2. Rather, values are for Annex I countries with the European Union removed. This generally means it includes the United States and other non-EU developed countries.[16] Good Energy believes these numbers are useful in assessing relative magnitude of impact, even if they are not custom specifically to the US. Good Energy was unable to find values for other pollutants.

In total, with POR, it is estimated that customers participating in aggregation programs already approved will be responsible for the net avoided emissions of 0.6 metric tons of carbon monoxide, 1 metric ton nitrogen oxides, 1 metric ton of particulates, 0.4 metric tons of <10 micron particulates, and 1.4 metric tons of sulfur dioxides and 0.05 metric tons of organic

[15] Bollen, Johannes. "The value of air pollution co-benefits of climate policies: Analysis with a global sector-trade CGE model calledWorldScan", 2015 available at <https://www.sciencedirect.com/science/article/abs/pii/S0040162514002947?via%3Dihub> Accessed May 27, 2021.

[16] "Annex I Parties include the industrialized countries that were members of the OECD (Organisation for Economic Co-operation and Development) in 1992, plus countries with economies in transition (the EIT Parties), including the Russian Federation, the Baltic States, and several Central and Eastern European States" from United Nations Framework Convention on Climate Change. Available at <https://unfccc.int/parties-observers>. Accessed May 27, 2021.

compounds. At this time, Good Energy does not have any metric for the dollar value associated with these emissions.

VI. CONCLUSION

Good Energy has sought to provide a data-driven approach to determining the potential benefits of a POR program, and there is one more important perspective underlying each of these figures. Each of these accounts represents a person or family at differing levels of fluency with respect to the overall electricity system and their own individualized billing method. As everyone involved in this docket knows, the system's operations and financing are extremely complex while providing an essential service.

Aggregation programs have been approved. Here, the Commission is tasked with reviewing a corollary program whose effective operation will facilitate participation in aggregation programs by allowing customers to retain existing billing and financial support options. A denial of the proposal would result in the disruption of the customer experience, cause likely confusion with respect to billing, and will be attributed to the aggregation program.

Each of these impacts serve to weaken the underpinnings of aggregation programs, as customers upset by the disturbance to their billing options are sure to lay their grievances at the feet of the political officials who authorized the program. This type of political engagement, regardless of any data that demonstrates either savings or environmental benefits, is likely to jeopardize programs' existence. Though that analysis is not undertaken here, a potential cost in denying POR would be the relative savings and environmental impacts of all aggregation programs participants should the program fail due to unresolved and publicly difficult to understand billing mechanisms.

Good Energy believes these documented benefits are important in determining whether POR should be put in place. However, Good Energy's primary support for the program is that it keeps consumers from being unnecessarily confused or frustrated by the billing experience. This prevents the erosion of trust in local officials who are ultimately responsible for the creation and implementation of programs and sets them up for long term success. That success may be more than just lower electricity rates, it is also the power for a community to take control of its energy supply and be sure that it reflects community values.

Consistent with the standard that the benefits to ratepayers outweigh the cost, Good Energy believes that this BCA is sufficient to meet that threshold. Thus, Good Energy respectfully requests that the Commission approve the program as described in the Settlement Agreement.

EXHIBIT 1 - PURCHASE OF RECEIVABLES BENEFITS-COST ANALYSIS

Level	Mixed Cost-Benefit, Cost, or Benefit Category	Net Impact	Analysis Type and Description	Identified Benefit / Cost
Power System Level	Energy Supply & Transmission Operating Value of Energy	Neutral		
Power System Level	Renewable Energy Credit Cost / Value	Neutral		
Power System Level	Retail Supplier Risk Premium	Neutral		
Power System Level	Forward Commitment: Capacity Value	Neutral		
Power System Level	Forward Commitment: Avoided Ancillary Services Value	Neutral		
Power System Level	Utility / Third Party Developer Renewable Energy,	Neutral		
Power System Level	Electric Transmission Capacity Costs / Value	Neutral		
Power System Level	Electric transmission infrastructure costs for Site	Neutral		
Power System Level	Net risk benefits to utility system operations (generation,	Neutral		
Power System Level	Option value of individual resources	Neutral		
Power System Level	Investment under Uncertainty: Real Options Cost / Value	Neutral		
Power System Level	Energy Demand Reduction Induced Price Effect	Neutral		
Power System Level	Greenhouse gas compliance costs	Neutral		
Power System Level	Criteria air pollutant and other environmental compliance	Neutral		
Power System Level	Innovation and Learning by Doing	Neutral		
Power System Level	Distribution capacity costs	Neutral		
Power System Level	Distribution delivery costs	Neutral		
Power System Level	Distribution system	Neutral		
Power System Level	Distribution system performance	Neutral		
Power System Level	Utility low income	Neutral		
Power System Level	Distribution system and customer reliability / resilience	Neutral		
Power System Level	Distribution system safety loss/gain	Neutral		

EXHIBIT 1 - PURCHASE OF RECEIVABLES BENEFITS-COST ANALYSIS

Level	Mixed Cost-Benefit, Cost, or Benefit Category	Net Impact	Analysis Type and Description	Identified Benefit / Cost
Customer Level	Program participant / prosumer benefits / costs	Net Benefit	Quantifiable, subject to assumptions as described.	$146,000 - $474,000
Customer Level	Participant non-energy costs/benefits: Oil, Gas, Water, Waste	Neutral		
Customer Level	Low-Income Participant Benefits	Net Benefit	Quantifiable as potential savings. Qualitative through ability to participate in the program without concern about difficulty to pay.	[$138,000 - $437,000, which is included as part of Program Participant Benefits above]. Non-quantitative benefits include the ability of low-income participation to be disassociated with the payment status.
Customer Level	Consumer Empowerment & Choice	Net Benefit	Qualitative based upon (a) procurements result in greater supplier participation and (b) all ratepayers will have access to the products offered by the aggregation.	Enrollment in alternative products and from 3% - 5% across residential classes.
Customer Level	Non-participant (equity) rate and bill impacts	Net Benefit	Quantitative as the reduced total value of low-income discount recovered in distribution rates.	$34,000 - $109,000
Level	**Mixed Cost-Benefit, Cost, or Benefit Category**	**Net Impact**	**Analysis Type and Description**	**Identified Benefit / Cost**
Societal Level	Greenhouse gas externality costs	Net Benefit	Quantitative as the additional voluntary REC purchases and associated emissions reductions for CO2.	(1) 2,000 - 6,700 estimated RECs retired per year. (2) 665 - 2,158 estimated metric tons avoided carbon dioxide. (3) a total estimated social value of $33,000 - $100,000.
Societal Level	Criteria air pollutant and other environmental externality costs	Net Benefit	Quantitative as as the additional voluntary REC purchases and the associated avoided emissions of air pollutants.	(1) 1.44 - 4.68 estimated tons of avoided sulphur oxides; Social value of $2,300 - $7,500. (2) 1.00 - 3.24 estimated tons of avoided nitrogen oxides; Social value of $3,300 - $10,700. (3) 0.63 - 2.05 estimated tons of avoided carbon monoxide. (4) 0.00 estimated toncs of avoided mercury. (5) 1.07 - 3.48 estimated tons of avoided particulate emissions. (6) 0.42 - 1.38 estimated tons of avoided <10 micron particulates. (7) 0.05 - 0.16 estimated tons of avoided organic compounds.
Societal Level	Conservation and community benefits	Neutral		
Societal Level	Non-energy costs/benefits: Economic Development	Neutral		
Societal Level	Innovation and knowledge spillover (Related to	Neutral		
Societal Level	Societal Low-Income Impacts	Neutral		
Societal Level	Public Health	Neutral		
Societal Level	National Security and US international influence	Neutral		

STATE OF RHODE ISLAND
PUBLIC UTILITIES COMMISSION

EXHIBIT 2 - DIRECT TESTIMONY OF

PATRICK ROCHE

ON BEHALF OF GOOD ENERGY L.P.

Docket No. 5073

May 27, 2021

Q. Please state your name and business address.

A. My name is Patrick Roche, and my business address is 8 Edward Drive, North Grafton, MA 01536.

Q. By whom are you employed and in what capacity?

A. I am currently employed by Good Energy, L.P., in the role of Director of Innovation for New England.

Q. Please describe your present responsibilities.

A. I participate in aggregation plan development and program operation, with a focus on how aggregation programs can support the growth of clean energy in our region.

Q. Have you previously testified before the Rhode Island Public Utilities Commission ("Commission")?

A. Yes, I have participated in the Technical Sessions associated with Aggregation Programs proposed in Docket #5042 (City of Central Falls) and Docket 5047 (Town of Barrington), Docket 5073 (Terms and Conditions for Municipal Aggregators), and this current docket.

Q. What is the purpose of your testimony?

A. The purpose of this testimony is to provide additional context on the intersection of Municipal Aggregation Programs and a Purchase of Receivables ("POR") program. Specifically, this testimony is intended to identify the benefits of a POR program in connection with aggregation and to provide the Commission as to the potential risks of launching an aggregation program in the absence of POR.

Q. Good Energy, in its analysis of the proposed POR program, has indicated that it believes that in the absence of a POR program only 31% of low income ratepayers are estimated to participate in the aggregation program. However, if POR is approved, the participation rate will rise to 61%. Can you explain how these participation rates were estimated?

A. In determining the participation rates, the best data source available is current participation rates in Massachusetts municipalities with established aggregation programs. Participation data is available in the annual reports submitted by each municipality to the Division of Public Utilities. For the purpose of this analysis, we have only reviewed data from those municipalities that are working with Good Energy and served by National Grid. We feel it would be inappropriate to represent or interpret the data from those municipalities that have chosen another consultant to develop and implement their aggregation program.We have chosen to include data from municipalities served by National Grid both because it is the same utility as in Rhode Island and due to data availability for the most recent calendar year, 2020.

For those municipalities reviewed,[1] the current median participation rate of R-2 customers, the rate class comparable with Rhode Island's A-60, is 62% of eligible customers.

[1] Good Energy client communities included in this analysis are Rockland, Medford, Attleboro, Avon, Westford, Swansea, Rehoboth, Oxford, Northbridge, Millbury, Seekonk, Norton, Somerset, Melrose, Hamilton, Charlton, Dighton, Dracut, Gloucester, Fall River, Douglas and Plainville.

In determining how this rate would drop without POR, Good Energy took into account the current participation in payment plans and the potential interest in the payment plans, such as the AMP program. Current participation by low-income (A-60) rate class in municipalities with approved aggregation plans in Rhode Island is ~7% in any type of payment plan and ~10% for budget billing.[2] These customers are the most likely not to participate, given the risk of losing access to future payment plans for their full bill, as well as National Grid's proposal not to enroll any customer currently participating in AMP. For potential interest in the payment plans, Good Energy considered that preserving financial protection for a necessity such as electricity - within a population that is already financially stressed - is likely to play a critical role in decision making; the widespread economic toll of the COVID-19 pandemic may strengthen this even further. Without a live field test to determine this impact, Good Energy believes the potential interest could be much higher than current participation, and as much as 50%. Overall, Good Energy applied this 50% opt out rate to the 62% participation rate to achieve a 31% participation rate without POR.

[2] This includes Providence, Central Falls and Barrington for which National Grid provided data on Budget Billing and Payment Plans; data was not provided for South Kingstown.

Q. Similar to the participation rates for A60 customers, Good Energy has estimated that without a POR program, A16 participation rates will drop by 7%. Can you explain how these participation rates were estimated?

A. Good Energy first looked to the median participation rate in the MA communities where we are managing their programs. In MA, the median participation rate at program launch is roughly 81.5% of eligible customers.[3]

In determining how this rate would drop without POR, Good Energy took into account current participation and potential interest in budget billing. Currently, the statewide average participation in budget billing in municipalities with approved aggregation plans in Rhode Island is 3.3% of all customers.[4] Good Energy assumes that each of these individuals will opt-out of the program when presented with outreach materials that indicate that they will lose budget billing for the supply portion of their bill. For potential interest, without having a live field test to determine how many additional customers will opt-out of the program when informed that they will lose access to a program that they do not currently utilize, it felt safe to assume that this opt-out rate would double. While much lower than the 50% opt out rate assumed for A-60 customers, Good Energy considered that budget billing is less of a decision-making issue than payment plans because it is a weaker financial protection mechanism and because the A-

[3] Id.

[4] Percentage is based on the percent of A-16 residential budget billing accounts in the four municipalities that have approved aggregation plans with the PUC.

16 customers are less financially burdened than the A-60 customers. Doubling the opt out rate would lead to a participation drop of 6.6% to 73.9% of eligible customers.

Q. What is the net impact on participation as a result of these assumptions?

A. For the programs currently pending before the Commission, this translates to over 3,000 residential accounts opting out due to the loss of budget billing and payment plans. Should this be extrapolated to the statewide eligible participation, this could expand to over 9,900 residential accounts opting out.

The opt-out account numbers for both A-16 and A-60 rate classes are the base number for analysis of the fiscal and environmental impacts of a POR program.

Q. Good Energy indicated that comparing Basic Service to Municipal Aggregation rates is not a straight comparison. How do the products differ?

A. In Massachusetts, comparing rates from Basic Service provided by the utilities to that offered by the Municipal Aggregation is not a one-to-one product comparison. RESA has put on some evidence that the Basic Service Rate is fundamentally subsidized by the utilities distribution service, making it an artificially depressed rate in comparison to suppliers who are not regulated distribution entities. However, Good Energy is not in the best position to further describe those issues.

What Good Energy can speak to is that many of the aggregation programs we facilitate include additional REC purchases in their default options, increasing the per kilowatt hour cost. Additionally, the data provided by National Grid does not distinguish

those customers who have opted-up as high as 100% renewable products. As far as we can tell, all of these additional REC purchases are included in the prices reported by National Grid which is then compared to a product containing only RPS renewable purchases.

While we use this rate for comparison purposes here, it is important to note that there is evidence that indicates subsidization of the National Grid rate while inflating the costs of the municipal aggregation rate to include voluntary REC purchases.

Q. Good Energy has calculated the environmental benefits of increased participation in aggregation programs based on the purchase of additional voluntary Rhode Island New Renewable Energy Certificate. What is the connection between these purchases and environmental benefits?

A. All electricity generated within the ISO New England (ISO-NE) control area and fed on to the New England grid, as well as electricity exchanged between ISO-NE and adjacent control areas, is tracked via the New England Power Pool (NEPOOL) Generation Information System (GIS). For each megawatt hour (MWh) of electricity generated within or exchanged between the ISO-NE control area, whether renewable or not, one serial-numbered, electronic GIS certificate is created. The GIS certificate represents all attributes or characteristics, such as fuel source, air emissions, location, etc. of that one MWh of electricity.

Suppliers must retire GIS certificates from sources eligible for the Rhode Island Renewable Energy Standard in an amount equivalent to that year's compliance

requirements. The remaining electricity supply is typically from system power contracts, and system power is assigned attributes based on the mix of GIS certificates of sources found on the New England electricity grid that have not been obtained and retired by other entities (referred to as the 'Residual Mix').

By voluntarily purchasing and retiring additional RI New Certificates, aggregation participants reduce the quantity of Residual Mix certificates assigned to their power. NEPOOL GIS publishes the emissions of Residual Mix certificates, and in our calculations Good Energy used emissions for the most complete calendar year, 2019. For RI New Certificates, Good Energy used the most recent Annual Renewable Energy Standard Compliance Report published by the RI Public Utilities Commission, for 2019, to identify the sources and their relative proportions. Good Energy then used NEPOOL GIS to identify the emissions associated with each source, and applied those emissions proportionally to find a weighted average emissions for RI New Certificates. The weighted average emissions of the RI New Certificates are significantly lower (and near zero) compared to the Residual Mix.

Across the entire Rhode Island electricity system, the total GHG and other pollutant emissions are the sum of the emissions from all of the GIS Certificates assigned to usage of all RI electricity consumers. Reducing the quantity of Residual Mix certificates and increasing the quantity of lower-emission RI New Certificates will result in a lower emissions profile of the entire Rhode Island system.

Q. Good Energy offers voluntary 100% products that procure 100% RI New RECs in addition to RECs from RES compliance. How is this factored into your emissions calculations?

A. Good Energy's voluntary 100% product purchases and retires RECs to meet the RES and additional RI New RECs equal to 100% of a customer's usage. In 2021, this would mean purchasing and retiring RECs equal to 119% of a customer's usage (19% for the RES and 100% voluntary). In our calculations of emissions, Good Energy only included voluntary RECs such that total RECs for a given customer will equal 100% of a customer's usage. For example in 2021, the RES requires 19% RECs, so the voluntary RECs used in the calculation are 81%. In reality, Good Energy will be purchasing 100% voluntary RECs, and 19% are excess (i.e. above the customer's usage). RECs in excess of a customer's usage create more demand for renewable energy, however, they do not displace any more Residual Mix certificates for that customer. Because our calculations of impact are based on displacing Residual Mix certificates, the excess RECs are not used in calculations of emissions impact.