Raquel J. Webster
Senior Counsel

December 20, 2019

BY HAND DELIVERY AND ELECTRONIC MAIL

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

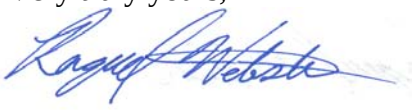
RE: Docket 4983 - 2020 Renewable Energy Growth Program Tariff and Rule Changes
Responses to PUC Data Requests – Set 1

Dear Ms. Massaro:

On behalf of National Grid,[1] I have enclosed the Company's responses to the Public Utilities Commission's First Set of Data Requests in the above-referenced docket.

Thank you for your attention to this matter. If you have any questions, please contact me at 781-907-2121.

Very truly yours,



Raquel J. Webster

Enclosures

cc: Leo Wold, Esq.
Jon Hagopian, Esq.
John Bell, Division

[1] The Narragansett Electric Company d/b/a National Grid (National Grid or Company).

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PUC 1-1

Request:

Please update PUC 2-8 and 2-9 from Docket No. 4954 related to Community Remote Distributed Generation or Shared Solar facilities in operation under the Renewable Energy Growth program?

a. Please list each by size and indicate the number of off-takers for each.

Response:

PUC 2-8 Update:

Currently, the following Community Remote Distributed Generation (CRDG) projects are pending in the queue:

RI CRDG Enrollment		
Anticipated Generation Year	# of projects	size MW DC
2020	7	9.987
2021	3	4.975
TOTAL:	10	14.962

The Company does not have any CRDG resources connected to its system.

Although the Company has limited historical data to formulate a trend for future years, the Company expects to receive 3-4 projects with total capacity of 5MW (DC) per year for future years.

PUC 2-9 Update:

Currently, 19 Shared Solar resources with a total capacity of 136 kW (AC) are connected and enrolled in the RE Growth Shared Solar program. An additional project was counted in the Company's last Information Request, but when verified in the billing data management system, it is a connected RE Growth project incorrectly coded as Shared Solar. In addition, the Company has awarded 9 resources with a total capacity of 76 kW (AC) pending in the queue.

Based on projects connected to date (2017-present), National Grid anticipates that approximately seven Shared Solar projects with a capacity of approximately 50 kW (AC) will be connected per year. The Company expects these rates to remain consistent although the Company acknowledges that evolution of the program and consumer drivers may result in changes.

Prepared by or under the supervision of: Vishal Ahirrao

PUC 1-1, page 2

Since there is a very small data set available, it will be challenging to determine a statistical forecast. Therefore, it is it is challenging to provide an accurate forecast at this time.

a) **SHARED SOLAR**

Case #	System Size (AC kW)	# of off-takers
190686	16.24	5
185387	10.92	3
155466	7.6	2
189680	9.24	2
173094	7.6	3
216150	5	2
161481	11.4	2
191190	4.2	2
161232	7.6	2
162715	4.48	3
187218	5	2
173912	4.76	2
157533	4.25	2
154604	5	2
160964	10	2
172700	9.24	2
221852	5	2
162018	3.8	2
161116	5	2

PUC 1-2

Request:

Please indicate the number of A-60 customers receiving credits from Community Remote Distributed Generation or Shared Solar facilities.

Response:

There are currently no A-60 customers receiving credits from Shared Solar Facilities. There are no interconnected Community Remote Distributed Generation projects. Therefore, there are no A-60 customers receiving credits.

PUC 1-3

Request:

Please provide a history of enrollment for any A-60 customers in Community Remote Distributed Generation or Shared Solar facilities. If there were A-60 customers who were allocated credits but then were replaced during a subsequent "Customer Payment/Credit Transfer," please indicate, at a minimum, for each A-60 customer allocated a portion of the credits, the number of months the customer received credits prior to being replaced. Please provide by type of program.

Response:

To date, there have been no credit transfers to any A-60 customers from either Community Remote Distributed Generation or Shared Solar Facilities.

PUC 1-4

Request:

Please provide a history of enrollment for any A-16 customers Community Remote Distributed Generation or Shared Solar facilities. If there were A-16 customers who were allocated credits but then were replaced during a subsequent "Customer Payment/Credit Transfer," please indicate, at a minimum, for each A-16 customer allocated a portion of the credits, the number of months the customer received credits prior to being replaced. Please provide by type of program.

Response:

There are total of thirty 32 A-16 customers enrolled in Shared Solar facilities that are in operation at this time. There are no Community Remote Distributed Generation (CRDG) facilities in operation so there are no A-16 customers enrolled in the CRDG program. There have been no A-16 customers replaced during subsequent Customer Payment/Credit Transfer change request for 19 Shared Solar facilities.

PUC 1-5

Request:

How often will the Company accept a revised Customer Payment/Credit Transfer form for the Community Remote Distributed Generation and/or Shared Solar programs?
If it is less than monthly, please explain why.

a. If the response to PUC 1-5.a was because the allocation of credits is a manual process, please provide the billing system software updates that have already been funded through the Renewable Energy Growth program and whether they were supposed to address such a manual process.
b. If the response to PUC 1-5.a was because the allocation of credits is a manual process, when will that process be automated and how much will it cost?

Response:

The Company accepts a revised customer Payment/Credit transfer form for CRDG and/or Shared Solar program "once per calendar quarter" per the RE Growth Tariff RIPUC 2152-F, sheet 14, section x and sheet 10, section v, respectively. In addition, the Company is also accepting one - time changes to re-allocate banked credits from final accounts and/or replace final accounts with other eligible customer accounts for the Community Remote Distributed Generation and/or Shared Solar programs.

a. The Company has automated part of the process (monthly allocation of credits on the bill) starting in February 2018; however, the intake of subsequent changes and initial or subsequent setup of such an allocation table in the Company's Billing System is still manual. In order to provide further relief, the Company started to offer transfer of banked credits from final account and/or replacement of the final accounts with other eligible customer accounts on a quarterly basis.
b. The Company plans on automating the process in parts starting with automation of the intake of change requests followed by automation of validating customer accounts on the change request to ensure that they meet the program requirements. Once these steps are complete, the Company will automate integration of the intake process with the Company's billing system so that the entire process can be fully automated. On December 11, 2019, the Company introduced intake of change requests through the Company's Online application portal (nCAP). This will enable the Customers to submit their change request online via nCAP. The Company also plans on automating validation of customer accounts in 2020. Currently, there is no project plan to integrate with billing system so that this process is fully automated; the Company will make a determination on the potential timing of this enhancement depending on several factors such as the number of CRDG projects that reach operation, and the expected timing of a new billing system.

PUC 1-6

Request:

Will any billing software upgrades associated with the Renewable Energy Growth program be transferrable to community remote net metering projects? Why or why not?

Response:

Billing software upgrades associated with the Renewable Energy Growth program are directly transferrable to community remote net metering projects. The functionality to support the host/satellite allocation relationship is directly transferrable from Renewable Energy Growth to community remote net metering projects. The functionality for incentive payment/volumetric transfer disbursement and bill calculation was developed as part of Renewable Energy Growth and is directly transferrable to community remote net metering projects.

PUC 1-7

Request:

Can participants in Community Remote Distributed Generation and/or Shared Solar programs participate in budget billing or be enrolled in deferred payment plans? If so, how many do? How are the credits allocated to these accounts?

Response:

Yes, participants in Community Remote Distributed Generation and/or Shared Solar programs can participate in budget billing or be enrolled in deferred payment plans.

The Company is in the process of determining how many customers that are on budget billing or deferred payment plans also participate in Community Remote Distributed Generation and/or Shared Solar programs. The Company will supplement this response with the number of customers that are on budget billing or deferred payment plans and also participate in CRDG or shared solar programs as soon as it confirms this information.

Customers that are participants in CRDG and/or Shared Solar programs who are also participants in the budget billing or deferred payment plans are allocated billing credits in the same way as customers who are not participants in these plans. In all cases, community net metering recipient accounts receive allocated credits as a monetary transfer (bill credit) based on their allocated percentage of the host credits as defined in the submitted Payment Credit Transfer Form submitted by the host. Participants in a Shared Solar facilities receive a kwh transfer allocation, also as outlined in the Payment Credit Transfer Form submitted by the Shared Solar host, and the credits are calculated in the same fashion for all customers, regardless of their participation in a budget billing or deferred payment plan. These credits are applied to monthly budget amount as a credit. The budget amount is reviewed every six months and re-calculated annually based on total bill. These credits are not factored in to calculate monthly budget amounts.

PUC 1-8

Request:

Is the system sizing formula the same for net metering projects as it is for Renewable Energy Growth program projects (i.e., calculation of the size of a project to accommodate no more than 100% of usage; calculation of the usage)? If not, please explain. In the explanation, please provide all calculations/conversions that the Company uses to determine the appropriate size of a renewable energy system along with cites to tariffs/laws/ESB, etc.?

Response:

All Rhode Island solar projects in either the Net Metering or RE Growth programs are sized to provide no more than 100% percent of the customer's annual historical average usage.

The Net Meter calculation
AC system size multiplied by the number of hours in a year (8760) multiplied by 16.1 % capacity factor that is used to calculate estimated annual output in kWh AC for the AC capacity of the system.

Example

AC kW size * .161 * 8760 = AC kWh produced.

For net metering customers whose usage falls between standard inverter sizes, the Company will allow the next size up inverter if the DC-to-AC estimated annual output is equal to or less than the usage. In these cases, the Company uses the same calculation as in RE Growth using the DC capacity of the panels to determine the projected annual output.

For example, if a system is approved for 6.8 kW and the customer is using Solar edge inverters, the Solar Edge inverters come in the following sizes, with the numbers referring to the watts of capacity: se3000, se3800, se5000, se6000, se7600, se10000, and se11400. In this case, the Company would allow the customer to use a se7600 assuming that the panels are staying at the 6.8 kW size and their usage history allowed that size.

The RE Growth calculation

DC system size (total nameplate rating of panels) multiplied by the number of hours in a year (8760) multiplied by 14.1 % the capacity factor used to calculate estimated invertor efficiency (maximum output) = AC kWh produced.

Example

DC rating (# panels * W/panel) * 8760 * 14.1 = AC kWh produced.

The two capacity factors are based on the use of a 14.1% capacity factor for DC-to-AC output estimation, which has been used since the start of the program. This is slightly higher than the capacity factor used by Sustainable Energy Advantage in the development of the Standard Offer price for Small Solar class systems of 14%. The 16.1% reflects the deration of a system from DC to AC output, due to system losses, inverter losses and inverter sizing norms of approximately 12.5%. Thus, 14.1% divided by 87.58% system efficiency totals 16.1% for an AC-to-AC energy estimation.

Below are specific sections of tariffs and laws that govern the requirement of sizing a system to the customer's historic average annual load.

Net Metering provision

"Eligible Net Metering System" shall mean a facility generating electricity using an Eligible Net Metering Resource that is reasonably designed and sized to annually produce electricity in an amount that is equal to or less than the Renewable Self-generator's usage at the Eligible Net Metering System Site measured by the three (3) year average annual consumption of energy over the previous three (3) years at the electric distribution account(s) located at the Eligible Net Metering System Site. A projected annual consumption of energy may be used until the actual three (3) year average annual consumption of energy over the previous three (3) years at the electric delivery service account(s) located at the Eligible Net Metering System Site becomes available for use in determining eligibility of the generating system.
https://ngus.force.com/servlet/servlet.FileDownload?file=0150W00000ETJ1t

RE Growth Solicitation and Enrollment Process

Section 1.2.2.3.2

The Project must be reasonably designed and sized to produce electricity at an annual level equal to or less than 1) the Residential Customer's On-Site Use as measured over the previous three (3) years at the electric service account located at the Residential Customer's service location; 2) the annualized On-Site Use over the period of service to the Residential Customer's service location if such service has been provided for less than three years; or 3) a reasonable estimate of annual Onsite Use if the Project is located at a new service location.

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Same language is also in the Renewable Energy Growth Program for Residential Customer Tariff, Section 1

https://ngus.force.com/servlet/servlet.FileDownload?file=0150W00000DPLFu

Renewable Energy Growth Program for Non-Residential Customers

Section 8.c

If the Applicant selects Option 2, the DG Project must be reasonably designed and sized to produce electricity at an annual level equal to or less than 1) the Customer's On-Site Use or the aggregate On-site Use of all Bill Credit Recipients if the DG Project is a Shared Solar Facility, as measured over the previous three (3) years at the electric service account located at the Customer or Bill Credit Recipient's service location(s); 2) the annualized On-Site Use over the period of service to the Customer or Bill Credit Recipient's service location(s) if such service has been provided for less than three years; or 3) a reasonable estimate of annual On-Site Use if the DG Project is located at a new service location.

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PUC 1-9

Request:

The Company is proposing that customers with an existing renewable energy system be allowed to add on. Please confirm which pathways are possible:

a. Net metering customer can add a Renewable Energy Growth program system.
b. Renewable Energy Growth program customer can add a net metering system.
c. Renewable Energy Growth program customer can add another Renewable Energy Growth program system.
d. Other

Response:

Under the clarification proposed by the Company, Pathways a., b. and c. would all be allowed and would bill automatically. Another pathway that would be possible is the addition of a Qualifying Facility (QF) to a premise with a RE Growth system, or the addition of a RE Growth system to a premise with a QF. These would also both be possible.

PUC 1-10

Request:

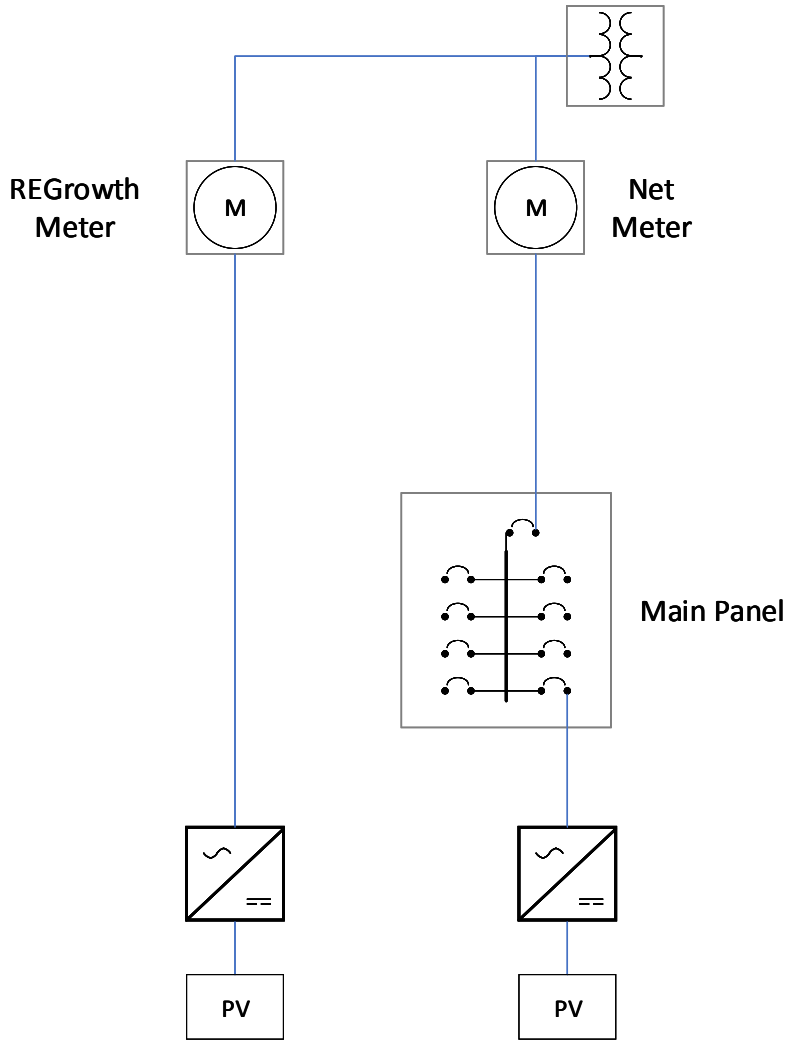
For any applicable pathways in PUC 1-9, please provide an engineering and non-engineering diagram of the proposed configuration(s).

Response:

Please see Attachment PUC 1-10 for a one-line illustration of a RE Growth solar facility connected at a customer premise along with a behind-the-meter solar facility, which could be enrolled under either the Net Meter Provision or the QF Provision. It would not matter which facility is connected first.

Attachment PUC 1-10
Net Metering & REGrowth

Note: Additional disconnections and protection equipment are not displayed



PUC 1-11

Request:

On page 16, lines 11-14, Mr. Springsteel discusses a configuration whereby a Renewable Growth program customer would be allowed to add a third meter to a standalone net metering facility. The customer would then be allowed to transfer credits to a load account.

a. Is National Grid proposing to allow this option (regardless of cost considerations)?
b. Why would such a configuration not constitute remote net metering (i.e., where the net metering facility is not configured behind the load meter)?

Response:

The Company interprets the existing net metering statute and reflects such language in its current Net Metering Provision such that a customer with an Eligible Net Metering System can aggregate and share credits with multiple accounts at the Eligible Net Metering System Site, so long as all of the accounts are in the same name of the customer of record that owns and interconnects the net metering system. Under this interpretation, a residential customer that wishes to establish a net metering system that is not directly connected behind the meter of a service location could use credits created by that on-site system by applying them to other accounts on the site in the name of the customer of record for the net metering system. As this is distinct from remote net metering, which allows for credits from one customer site to be applied to accounts in a separate location, this is not remote net metering. Also, since this is already is allowed by statute, and approved in the tariff, this is not a proposal of the Company.

For reference, the definition of Eligible Net Metering System Site from the tariff and the statute is provided below:

> "Eligible Net Metering System Site" shall mean the site where the Eligible Net Metering System is located or is part of the same campus or complex of sites contiguous to one another and the site where the Eligible Net Metering System is located or a farm in which the Eligible Net Metering System is located. Except for an Eligible Net Metering System owned by or operated on behalf of a Public Entity, Educational Institution, Hospital, Nonprofit, or Multi Municipal Collaborative through a Net Metering Financing Arrangement, or a Community Remote Net Metered System, the purpose of this definition is to reasonably assure that energy generated by the Eligible Net Metering System is consumed by net metered electric delivery service account(s) that are actually located in the same geographical location as the Eligible Net Metering System. All energy generated from any Eligible Net Metering System is and will be considered consumed at the meter where the Eligible Net Metering System is interconnected for

valuation purposes. Except for an Eligible Net Metering System owned by or operated on behalf of a Public Entity, Educational Institution, Hospital, Nonprofit, or Multi-Municipal Collaborative through a Net Metering Financing Arrangement, or a Community Remote Net Metering System, all of the Net Metered Accounts at the Eligible Net Metering System Site must be the accounts of the same customer of record, and customers are not permitted to enter into agreements or arrangements to change the name on accounts for the purpose of artificially expanding the Eligible Net Metering System Site to contiguous sites in an attempt to avoid this restriction. However, a property owner may change the nature of the metered service at the delivery service accounts at the site to be master metered (as allowed by applicable state law) in the owner's name or become the customer of record for each of the delivery service accounts, provided that the owner becoming the customer of record actually owns the property at which the delivery service account is located. As long as the Net Metered Accounts meet the requirements set forth in this definition, there is no limit on the number of delivery service accounts that may be net metered within the Eligible Net Metering System Site.

PUC 1-12

Request:

Is the proposal to allow customers to add on to their existing renewable energy systems only applicable to residential customers?

Response:

The Company is not proposing to allow customers to add on to their existing RE Growth systems. Instead, the Company is clarifying how customers wishing to add an additional, separately connected system at their premise could do so, and the billing and account assignment processes the Company would use to affect this change.

This clarification only applies to residential customers. The RE Growth statute provides for the sale of energy, capacity and environmental attributes from enrollees to the Company, but expressly excludes energy and capacity from residential customers. As a result, residential customers enrolled in the RE Growth program are required under the tariff to receive bill credits from their enrolled system. Commercial customers, on the other hand, are not required to receive bill credits, and may establish facilities that are not associated with a load account and are not limited by the historical amount of load used by that account. Due to the billing system limitations discussed in the testimony of Mr. Springsteel, the Company cannot bill multiple RE Growth systems, or a RE Growth system and a net metered system, associated with the same residential account, as this was not envisioned as a requirement when the system changes for RE Growth were initially implemented. This is not, per se, a change or expansion of customer capabilities because the majority of residential customers[1] are able to establish a separate service at their premise under a commercial rate class. As such, a residential customer could then also establish a business that would allow for the creation of a RE Growth system under the Non-residential Tariff, and not have bill credits associated with their residential account.

[1] A residential customer must own or control their premise to the extent that they can implement a new separate connection at the location. Most renters do not have this authority.

PUC 1-13

Request:

What customer charge will apply to the new account? Why can't the Company create another residential account at the same premise (ex., Unit B)?

Response:

The new commercial account would likely be placed on Rate C-06, which currently has a monthly customer charge of $10.00, compared to $6.00 a month for Rate A-16 customers. As stated in PUC 1-12, by law, residential customers cannot sell their energy and capacity to the Company and must receive bill credits. If a separate residential account were created, there would be no load associated with it, and the tariff limits the size of systems to only serve the load associated with the account. The process proposed in the filing of the Company was the least expensive and most expeditious means the Company could devise to allow customers to add additional systems and be billed and paid automatically without additional changes to the billing system.

PUC 1-14

Request:

On pages 16-17 of Mr. Springsteel's testimony, he explained that the company's proposal to allow customers to add to an existing Renewable Energy Growth program or net metering system would require the creation of a new commercial account. He further stated that at this time, the Company only expected minor reprocessing time associated with the Company's approach. "Given the limited number of customers expected to add such system in the near term, perhaps dozens per year, this would not likely trigger any incremental hiring but may slightly increase allocations of time from incremental employees to the [Renewable Energy] Growth program."

a. Which scenario (from PUC 1-9) would result in additional incremental costs of incremental employees to be charged to the Renewable Energy Growth program?
b. Are there any other scenarios under which additional administrative costs would be charged to the Renewable Energy Growth program as a result of the Company's proposal? If so, please explain.
c. Will the Company's proposal as proposed result in any additional administrative costs to the Renewable Energy Growth program other than those discussed in response to 1-11.a?

Response:

a. None of the scenarios on their own at low to moderate levels of utilization by customers would drive incremental costs or new employees to be charged to the RE Growth program. Only if there was a heavy flow of new RE Growth system applications, Community Remote Distributed Generation enrollments, and add-on systems all at once where the work level outstripped the ability of existing available staff to keep up with required timelines and customer expectations, would the Company need to add additional resources to process these additional system requests.
b. Please see the Company's response to subpart a. above.
c. None are expected outside the conditions that are outlined in a. above.

Prepared by or under the supervision of: Ian Springsteel

PUC 1-15

Request:

Please provide the source of the definition of energy storage systems.

Response:

As proposed, neither tariff offers Energy Storage System as a defined term. For clarity, however, the Company provided the following description for energy storage systems (ESS) to limit the applicability of the clause to these types of systems.

> "Energy storage systems (ESS), such as electro-chemical batteries, that can store and release electrical energy, may be co-located with RE Growth qualifying projects."

This general description limits ESS to those that store and release electrical energy and is based on the Company's experience with ESS in general and in other jurisdictions. ESS can be of other types in terms of storing and releasing energy, but in the context of the RE Growth program, the Company is only concerned with those that store and release electrical energy that could be metered by the Company.

PUC 1-16

Request:

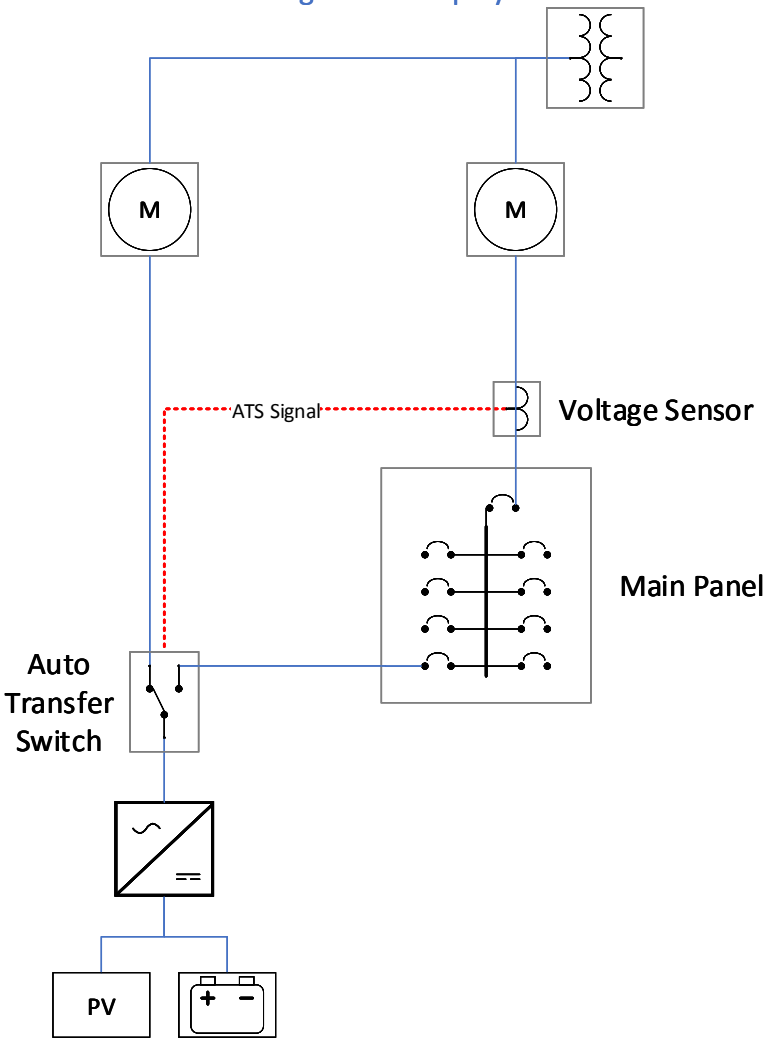
Referencing the energy storage explanation on page 14 of Mr. Springsteel's testimony, please provide an engineering and non-engineering diagram of the required configuration. At a minimum, include the generating facility, premise panel, and battery.

Response:

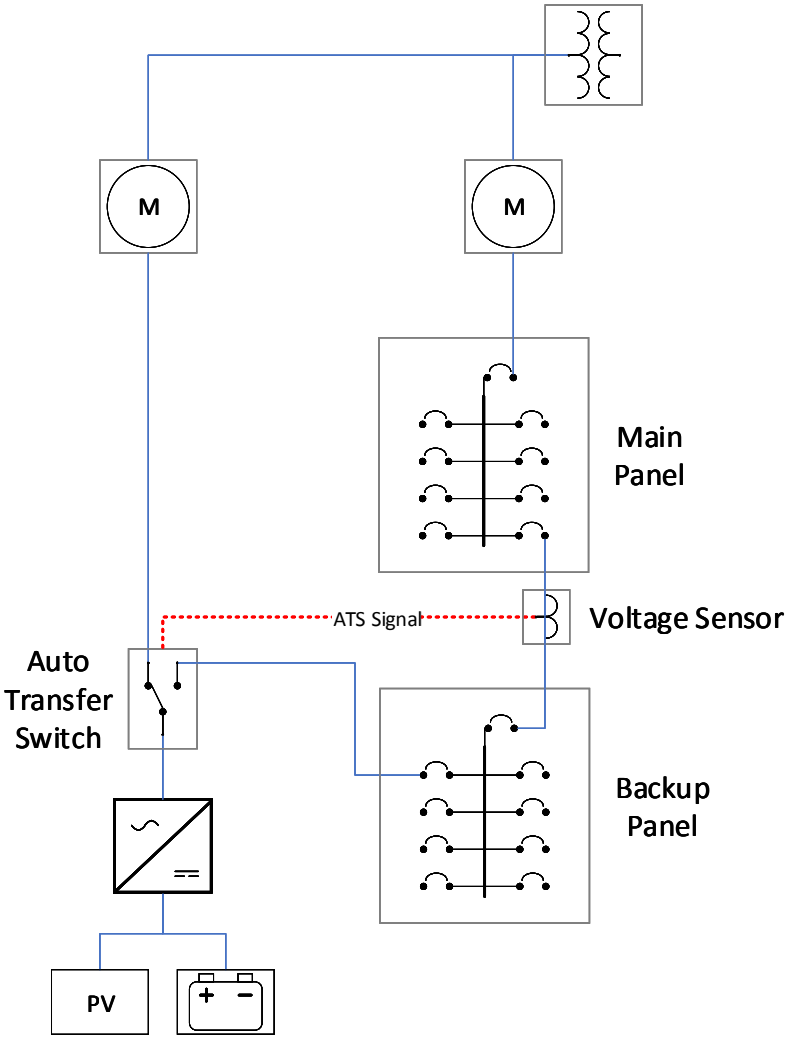
Please see Attachment PUC 1-16 for one-line illustrations of AC and DC coupled storage facilities with RE Growth solar facilities.

Attachment PUC 1-16
DC-COUPLED

Note: Additional means to disconnect to open/reclose the connection between the meter and the main panel during an outage is not displayed



Note: Additional means to disconnect to open/reclose the connection between the main panel and the backup panel during an outage is not displayed



PUC 1-17

Request:

Referencing Schedule IS-3, page 5, the tariff includes the following language: "When configured to charge directly from the RE Growth system, ESS must be configured so that any energy used for back-up supply purposes is not measured by the RE Growth production meter." On page 14 of Mr. Springsteel's testimony, lines 18-20, he states that this configuration "will allow the customer to get the full resiliency benefit of their renewable energy system and prevent them from receiving bill credits for the energy they are directly consuming."

a. Why does National Grid think it is important to prevent residential customers from receiving bill credits for energy they are directly consuming?
b. Is this treatment inconsistent with the language on page 5, Section 5 of the tariff that states: "Pursuant to Chapter 26.6, the Customer shall retain title to all energy and capacity produced by the Project, shall be deemed to have consumed such energy and capacity on-site during the applicable billing period, and no sale of the Project's energy or capacity by the Customer to the Company shall be deemed to have occurred." If not, why not?

Response:

a. In the case the question refers to, the customer is using energy supplied by the RE Growth system and then stored in a battery before it is metered. In the case of a power outage, the customer is then able to use the energy in the battery at their premise by means of a transfer switch, similar to a back up generator. If the customer received a bill credit for this energy, the customer would both be directly using the energy and getting a bill credit. Bill credits are meant to provide value for customers on their bill for energy that is otherwise fully metered at the generation point and then metered again at the customer's revenue meter to the extent their generation matches their load. Because the customer is using the energy, they would be compensated for that energy twice if the company were to issue them a bill credit.

b. Yes, as explained in PUC 1-12, the statute cited establishes that residential customers retain right to their energy and capacity. This is why the tariff requires residential customers to receive bill credits. This proposal is fully consistent with that as the energy is never metered, but is used by the customer on site, similar to coincident use of energy from net metering system; such energy does not create a net metering credit, but simply offsets usage the customer would otherwise need from the Company, or another on-site source.

PUC 1-18

Request:

Who will inspect, monitor, and enforce the proposed battery storage configuration for consistency with the requirements of the Renewable Energy Growth program?

Response:

The customer's installer will be required to provide one lines of the proposed configuration, which the customer and the installer provide with attestation to their accuracy. The installer will also need to provide photos of the metering and wiring configuration, as they do at present with any new connection, in order for the customer representative to close out the application and order a meter to be installed. This is the same process as exists today for establishing RE Growth and other new connections.

PUC 1-19

Request:

In the 2019 Renewable Energy Growth program tariffs and enrollment rules, there were certain changes made. Please respond to the following:

a. The 2019 Enrollment Process Rules require the project development cost field to be filled out as a prerequisite to the application being deemed complete.
   i. How many projects were rejected in 2019 to date as a result of this field being left blank?
   ii. How has National Grid determined whether the project development costs are being calculated consistently with the new definition of "total project costs"?
b. Self-installers and new installers who have not installed a Renewable Energy Growth Small Scale project prior to the 2019 Program Year have been required to complete a mandatory training webinar prior to submitting an interconnection application.
   i. How many self-installers completed the training in 2019 to date?
   ii. How many new installers completed the training in 2019 to date?
   iii. Are there any results regarding the effectiveness of the training yet? If so, please describe.
c. Participants who do not make their facilities available for inspection within 90 days from the date of an OER request for inspection will have their payments suspended until inspection is allowed. Continued failure to allow the facility to be inspected may result in termination of the certificate of eligibility after 180 days from the date OER requested the inspection.
   i. Have any participants failed to make facilities available for inspection within 90 days from the date of an OER request for inspection? If so, how many?
   ii. If any participants failed to make facilities available for inspection within 90 days from the date OER requested the inspection, were the payments suspended? If so, for each participant (generically identified), please indicate the duration of the suspension and the amount suspended.
   iii. If any participants failed to make facilities available for inspection after 180 days from the date OER requested the inspection, were any certificates of eligibility terminated? If so, how many?
d. When payments are suspended or withheld for any reason, up to 90 days of performance-based incentives and bill credits will be available to be paid once the suspension is cured; the value of all generation that occurred prior to 90 days of the cure will be forfeited.
   i. Has the Company had cause to suspend any payments for any reason? If so, please explain.

Response

Prepared by or under the supervision of: Ian Springsteel

ii. Has the Company had cause to suspend any payments for any reason, the result of which was that a participant forfeited any of his or her value of generation? If so, please explain.

Response:

National Grid provided the answers to sections a. and d. below. The Rhode Island Office of Energy Resources provided to National Grid the responses to sections b. and c. below.

a. Project Development Cost Field
   i. There were a total of 44 applications placed back into Draft status during the current program year (4/1/19 to Present).
   ii. While processing all applications, National Grid is ensuring that a cost is populated in the Total Project Cost field. Projects are placed back into draft status when the amount populated is less than $1.00 or if the amount resembles the Solar Permit Fee or the Electrical and Building Permit Fees in lieu of the Solar Permit Fee.
b. Self-installer Training (per the Office of Energy Resources)
   i. 33 individuals watched the webinar training. However, it is not clear how many of these individuals installed a solar system on their own roof.
   ii. 33 individuals watched the webinar training. However, it is not clear how many are new program participants. Some individuals from solar companies that have previously installed Small Scale solar projects watched the webinar. Below is the complete list of individuals who watched the webinar:

Certification ID	Installer First	Installer Last	Job Title	Company Name
RI0001	Joseph	Murphy	Owner	DBA Joseph murphy
RI0002	Ty	Frye	VP of Commercialization	Palmetto Solar LLC
RI0003	Leonel	Rojas	Owner	Moving Forward
RI0004	Thomas	Clemow	Manager	Tom's Farm LC
RI0005	Steven	Depina	Manager	Renewable Energy Solutions
RI0006	Leonard	Wenzel	Owner	Fbn

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RI0007	Ronald	Oliver	Project Coordinator	Ocean State Clean Energy
RI0008	Douglas	Curry	N/A	N/A
RI0009	Shah	Miah	N/A	N/A
RI0010	Aaron	N/A	N/A	N/A
RI0011	Adam	Grenier	N/A	N/A
RI0012	Mark	Waldo	Managing Member	N/A
RI0013	Joshua	Newell	N/A	N/A
RI0014	James	Nell	District Manager	Summit Energy
RI0015	Jamie	Buck	Staff Intern	RI Office of Energy Resources
RI0016	Kevin	Conroy	Project Developer	hep Energy USA LLC
RI0017	Sean	Malcolm	Owner	American Solar Roofing
RI0018	Brian	Cross	Partner	Renewable Energy Support
RI0019	Prasad	Kompelli	Project Engineer	Sunworks
RI0020	Hannah	Inman	Intern	OER
RI0021	James	Biggs	Energy Engineer	SiteLogiq
RI0022	Robert	Travers	Commercial Solar Developer	Accord Power Inc
RI0023	James	Norman	Owner	Turtle Rock
RI0024	Reuben	Goldstein		SolarKal
RI0025	Christopher	McCoy	Journeyman Electrician	
RI0026	Elliott	Richmond	Installer	Self
RI0027	Wilbur	Landry		
RI0028	Andrew	Labell	Managing Partner	North Bridge Development LLC

RI0029	Edward	OBrien		
RI0030	Connor	Devlin	Commercial Developer	Solar Wolf Energy
RI0031	Kevin	LaMarco		
RI0032	David	Reidy	Owner	Cool Energy LLC
RI0033	Lauren	Austin	Project Manager	Direct Energy Solar

iii. The mandatory webinar went live at the beginning of the 2019 program year. It is was outside of Cadmus's Scope of Work for the Quality Assurance work to determine whether installation quality from the installers that had previously participated in the Small Scale solar program improved after watching the webinar. In addition, many of the project inspections performed during the 2019 program year by Cadmus were from the 2018 program year and early 2019 program years. Unfortunately, as a result, it is not possible yet to determine the effectiveness of the training. A more robust evaluation can be completed during the 2020 Program Year.

c. Payment Suspensions Due to Refusal of Inspection (per the Office of Energy Resources)
   i. No respondents refused inspection for more than 90 days.
   ii. See i.
   iii. See i.

d. Payment Suspensions and Grace Period for Back Payments
   i. At this time the Company has not had to suspend any payments.
   ii. At this time the Company has not had to suspend any payments.

PUC 1-20

Request:

Has National Grid confirmed that all municipalities have definitions such that they recognize "permeable and/or non-permeable existing or new parking area[s] and associated walkway areas" in a manner that would allow National Grid to confirm the project meets the definition provided in this case? (Springsteel Test. at 4).

Response:

The PUC reissued this data request to the Distributed Energy Board and Office of Energy Resources.

PUC 1-21

Request:

Does the definition of carport provided on page 4 of Mr. Springsteel's testimony allow for the carport adder to apply to carports built over "temporary" parking lots? Should the definition be amended to require the parking lot to be a "permanent" or a space regularly utilized as a parking area?

Response:

The PUC reissued this data request to the Rhode Island Distributed Energy Board and Office of Energy Resources.

PUC 1-22

Request:

Referencing the new language in RIPUC No. 2151-G (Section 4.a) and RIPUC 2152-G (Section 6.a), is the Company attempting to incorporate the Electric Service Bulletin 750 into the tariff by reference?

a. If so, and in general, can the Electric Service Bulletin be changed by the Company from time to time?
b. Is there generally any advance notice provided to customers of proposed changes to the Electric Service Bulletin?
c. Should the Electric Service Bulletin reference have a date associated with it for purposes of applicability to the 2020 program year?
d. Which Electric Service Bulletin do customers enrolling in the 2019 Renewable Energy Growth Program need to follow?

Response:

The Company does not wish to incorporate the ESB 750 by reference into the tariff. The Company would like to revise the inserted phrase to read: ", or in another location as approved by the Company pursuant with the Company's specifications and policies on metering."

The Company maintains the Electric Service Bulletin 750 and other ESBs as a matter of good utility practice to provide technical guidance to customers and their electricians and engineers as to how to design and implement connection with the electric power system in accordance with the National Electric Code (NEC) and Company work practices. As such, the ESBs are not and have not been subject to review by regulators. ESB 750 and other ESBs are updated at least annually with changes needed to implement new NEC provisions and changes in Company practice.

PUC 1-23

Request:

What is the cost of adding fields to the application for general contractor and electrician license numbers?

Response:

Adding fields to the application tab of the nCAP Portal, such as the ones to capture General Contractor and Electrician License information, are considered minor system modifications that require minimal amounts of time be completed. National Grid employees (whose salaries are included in base rates) can perform these updates without engaging the software vendor and therefore no cost will be passed to the RI RE Growth program.

PUC 1-24

Request:

Please provide a table showing the enrollment by class as compared to the targets as of November 30, 2019.

Response:

Renewable Energy Growth Program - 2019 Program Year [2]

Renewable Energy Class (Nameplate kW)	Annual Enrollment Target (Nameplate kW)	Certificates Of Eligibility Awarded (Nameplate kW)	Remaining Target/ Over-Target (-) (Nameplate kW)
Small-Scale Solar [1] (< 25 kW DC)	12,230	4,530	**7,700**
Medium-Scale Solar (26-250 kW DC)	6,800	6,513	**287**
Commercial-Scale Solar (251-999 kW DC)	7,300	6,946	**354**
Large-Scale Solar (1,000-5,000 kW DC)	11,300	10,871	**429**
Small Wind (10-999 kW)	400	0	**400**
Large Wind (1.0MW to 5.0MW)	6,000	4,500	**1,500**
Large Wind – CRDG (1.0MW to 5.0MW)		0	
CRDG Commercial Solar (251-999 kW DC)	5,000	2,040	**2,960**
CRDG Large Solar (1,000-5,000 kW DC)	5,300	3,393	**1,907**
Anaerobic Digestion (1 - 5,000 kW)	1,000	0	**520**
Hydropower (1 - 5,000 kW)		480	
Total:	**55,330**	**39,273**	**16,057**

(1) Small-Scale Solar enrollment as of December 9, 2019.

(2) Summary does not includes projects selected in the Third Open Enrollment.

Prepared by or under the supervision of: Thomas Kender

PUC 1-25

Request:

Have any Renewable Energy Growth program projects been subjected to Affected System Operator Studies?

a. If so, have any projects been delayed beyond the statutory deadlines set forth in R.I. Gen. Laws §§ 39-26.2-7(2) and 39-26.6-5(a)?
b. If so, have the awards been terminated or have extensions been granted?
c. For any affected Renewable Energy Growth program projects, please provide a listing of project type, size, and relevant dates, including when any extension is expected to be lifted, and any new deadline to achieve 90% of output.

Response:

There were 9 projects enrolled in Renewable Energy Growth (RE Growth) program subject to Affected System Operator (ASO) studies. The Company has already completed ASO studies for all 9 projects and has received approval from ISO-NE.

a. None of the projects were delayed beyond the statutory deadlines due to ASO studies as the studies were completed simultaneously with engineering, design & construction processes.
b. RE Growth Customers were proactively advised to request an extension. Below is the copy of the message that was sent to impacted RE Growth projects above 1MW via National Grid's Customer Application Portal (nCAP). To date there is one project which requested an extension due to ASO Study delay and the Company has granted an extension for the duration of the ASO Study. The extension is now lifted and the revised Output Certification deadline is 10/15/2020.

Good Afternoon,

National Grid has identified your project, sized greater than 1MW, as having a Certificate of Eligibility in the Rhode Island Renewable Energy Growth Program.

This email is to advise you that you may experience a delay in becoming commercially operational due to an Affected System Operator hold being placed on your Interconnection Service Application due to its involvement in a group transmission study or analysis taking place in Rhode Island and ISO-NE approval of your proposed interconnection being required. If requested, National Grid will provide an extension under the Force Majeure rules outlined in R.I.P.U.C. No. 2180 Standards for Connecting Distributed Generation and address each extension request on a case by case basis.

If you have any questions, please reach out to your Customer Energy Integration Consultant.

c. As mentioned in a., there were no projects delayed beyond statutory deadlines due to the ASO study. The Company was able to complete the necessary ASO studies and projects have received ISO-NE approval in time to connect, or receive an updated Estimated Connected Date based on the study timeline.

Case	Project Type	Size (kW AC)	Extension Granted due to ASO?	Current Output Certification Deadline	Estimated Connected Date	Estimated ASO Study Completion Date
177156	Large Scale Solar	2000	Not Requested	1/27/2020	3/18/2020	Concluded Q3 2019
176506	Large Scale Solar	4500	Granted	10/15/2020	6/30/2020	Concluded Q3 2019
177170	Large Scale Solar	1900	Not Requested	1/3/2020	4/1/2020	Q1 2020
177169	Large Scale Solar	4500	Not Requested	6/28/2020	3/31/2021	Q1 2020
177094	Large Scale Solar	3340	Not Requested	6/28/2020	3/31/2021	Concluded Q4 2019
178528	CRDG Large Solar	2464	Not Requested	12/20/2020	10/30/2020	Q1 2020
177831	Large Scale Solar	4422	Not Requested	7/11/2021	10/30/2020	Q1 2020
178688	Wind II (3,000--5,000 kW; 2-turbine)	3000	Not Requested	7/11/2021	12/30/2020	Concluded Q3 2019
199857	Wind I (1,000-2,999 kW)	1500	Not Requested	10/15/2021	12/30/2020	Concluded Q3 2019

PUC 1-26

Request:

Referencing the Company's PUC 1-1 in Docket No. 4954 (http://www.ripuc.org/eventsactions/docket/4954-NGrid-DR-PUC1%20(9-23-19).pdf), has the Company examined changes to metering configurations, metering technology, and/or supplier agreements to reduce payments to competitive suppliers for energy generated and consumed on site by the Renewable Energy Growth Program participants?

a. If so, how?
b. If not, why not?
c. If not, how is the administration of the Renewable Energy Growth Program being conducted consistent with least cost principles?

Response:

a. No, the Company has not made any changes to metering or any agreements to affect competitive supply charges when incurred by a RE Growth customer receiving bill credits.

b. The Company does not believe that there is an issue with the current configuration of metering or the financial arrangements between customers and competitive suppliers in this regard. PUC 1-1 in Docket No. 4954 shows many customers with competitive supply charges that are in excess of the bill credits based on the Standard Offer Service value from their solar PV production. This is due to a variety of factors such as the following: customers often do not size solar PV systems large enough to match their entire annual usage, typically due to roof size limitations, and azimuth and shading issues that lower production; the competitive supply rate may be different, and is shown in PUC 1-1 to often be higher, than Standard Offer Service rate; and the timing of usage versus system output month to month is typically different. The metering configuration of the RE Growth system, two meters in parallel, provides transparency to the actual onsite usage by each customer, while they enjoy the benefit of a bill credit for each kWh their solar PV system generates up to the amount of usage by the customer in that month, or the amount of solar production, whichever is less. When usage is less than the system production, RE Growth customers are paid for the overproduction that month in cash at the full Performance Based Incentive rate, giving the customer choice as to for what to use the funds, such as paying future competitive supply costs.

Prepared by or under the supervision of: Ian Springsteel

c. The RE Growth program is conducted in accordance with the least cost principles in that customers have a clear view as to how much energy they are using each month, giving them an incentive to implement energy efficiency measures and otherwise conserve, and the approach has used existing metering infrastructure. A separate issue that led to the original Record Request 7 in Docket 4892, which is the basis for Docket No. 4954 PUC 1-1, is the issue of the non-settlement of output from RE Growth solar PV systems that are less than 25 kW in AC nameplate. The Company, in serving load to customers, and competitive suppliers jointly share in the benefit of this unaccounted-for energy that flows onto the system from these facilities in the form of reduced losses. For the Company, this results in a future reconciliation of the Standard Offer rate if losses were less than expected and there was an overcollection. For competitive suppliers, this loss reduction is one of several influences on their rates and collections from customers. However, to date, the amount of unaccounted for energy has been less than 1% of annual energy use and is, thus, a minor factor in energy supply to all customers.

   The Company could instead settle all of this energy in the ISO-NE energy market, thereby obtaining full value of the output from small solar facilities for the benefit of customers. This would require interval metering on all RE Growth systems, however, which would require re-metering with more expensive cellular equipped meters, or the implementation of Advanced Metering Infrastructure (AMI) and new interval meters that could integrate with that new network.