

September 28, 2020

VIA E-FILING

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

Re: Docket 5039 - 2020 Renewable Energy (RE) Growth Program Factor Filing

Dear Ms. Massaro:

On behalf of The Narragansett Electric Company d/b/a National Grid (the Company), enclosed for filing with the Rhode Island Public Utilities Commission (the Commission) please find the Company's responses to the record requests issued by the Commission.

Consistent with the instructions issued by the Commission on March 16, 2020, the Company is making this filing electronically. The Company will send hard copies to the Commission and the service list as soon as possible.

If you have any questions, please contact me at: 781-907-2126. Thank you for your time and attention to this matter.

Very truly yours,



Laura C. Bickel
RI Bar # 10055

Enclosures

cc: Docket No. 5039 Service List

**Docket No. 5039 – National Grid 2020 Renewable Energy Growth Reconciliation Filing
 Service List updated 7/22/2020**

Parties' Name/Address	E-mail	Phone
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PUC RR-1

Request:

Please provide the sanction documents for Public Entity Net Metering (regular net metering); Community Remote Net Metering; Shared Solar; and Community Remote Distributed Generation (Community RE Growth).

Response:

Please see Attachments PUC RR-1-1, RR-1-2, RR-1-3, and PUC RR-1-4 for the Company's sanction documents pertaining to Investment Project 4124, regarding automated billing of Public Entity Net Metering (or regular net metering), and Investment Project 4555, regarding automated billing of Community Remote Net Metering, Shared Solar, and Community Remote Distributed Generation (or Community RE Growth).

The Company has already automated billing for Public Entity Net Metering, Community Remote Net Metering, and Shared Solar. The Company removed Community Remote Distributed Generation from Investment Project 4555 due to low customer volume when compared to the cost to manually generate bills.



US Sanction Paper

Title:	Automate Remote Net Metering	Sanction Paper #:	USSC-15-259 v3
Project #:	INVP 4124	Sanction Type:	Sanction
Operating Company:	National Grid USA Svc. Co.	Date of Request:	December 14, 2016
Author:	Phyllis Agin / Joe Howard	Sponsor:	Jody Allison, VP Billing and Collections Strategy
Utility Service:	IS	Project Manager:	Deborah Rollins

1 Executive Summary

1.1 Sanctioning Summary

This paper requests sanction of INVP 4124 in the amount \$3.988M with a tolerance of +/- 10% for the purposes of full project implementation.

This sanction amount is \$3.988M broken down into:

\$3.130M CapEx

\$0.858M OpEx

1.2 Project Summary

National Grid will fully automate the remote net metering billing process. The billing function is currently performed manually by Accounts Processing. As the volume of remote net metering customers increases, this effort will eliminate manual record keeping, minimize the risk of processing errors, generate bills as the charges are incurred, and reduce Sarbanes Oxley (SOX) compliance risks.

1.3 Summary of Projects

Project Number	Project Type (Elec only)	Project Title	Estimate Amount (\$M)
INVP 4124	D-LINE	Automated Remote Net Metering	3.988
Total			3.988

1.4 Associated Projects

N/A



US Sanction Paper

1.5 Prior Sanctioning History

Date	Governance Body	Sanctioned Amount	Potential Project Investment	Paper Title	Sanction Type	Tolerance
Jun 2016	USSC	\$2.326M	\$3.464M	INVP 4124 Automate Remote Net Metering	Partial Sanction	10%
Nov 2015	USSC	\$0.480M	\$1.190M	INVP 4124 Automate Remote Net Metering	Partial Sanction	25%

1.6 Next Planned Sanction Review

	Purpose of Sanction Review
Jan 2018	Project Closure

1.7 Category

Category	Reference to Mandate, Policy, NPV, or Other
<input type="checkbox"/> Mandatory	New York NYS-PSC: Case 02E – 1622, Case 11E – 0321, Case 14E – 0151, Case 14E – 0422, Case 15E - 0082
<input checked="" type="checkbox"/> Policy- Driven	Massachusetts MA-DPU: 220 CMR 18.00: M.G.L. c. 164, §§ 138 through 140; St. 2014, c. 251, §§ 5 and 6.
<input type="checkbox"/> Justified NPV	
<input type="checkbox"/> Other	Rhode Island RI-PUC: Statute Title 39, Chapter 39-26.4



US Sanction Paper

1.8 Asset Management Risk Score

Asset Management Risk Score: 48

Primary Risk Score Driver: (Policy Driven Projects Only)

Reliability Environment Health & Safety Not Policy Driven

1.9 Complexity Level

High Complexity Medium Complexity Low Complexity N/A

Complexity Score: [Project Complexity Score]

1.10 Process Hazard Assessment

A Process Hazard Assessment (PHA) is required for this project:

Yes No

1.11 Business Plan

Business Plan Name & Period	Project included in approved Business Plan?	Over / Under Business Plan	Project Cost relative to approved Business Plan (\$)
IS Investment Plan FY16-17	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Over <input type="checkbox"/> Under <input type="checkbox"/> NA	\$3.284M

1.12 If cost > approved Business Plan how will this be funded?

Re-allocation of funds within the portfolio has been managed by the IS Relationship Manager with the Planning Analyst assistance to meet jurisdictional budgetary, statutory and regulatory requirements.



US Sanction Paper

1.13 Current Planning Horizon

		Current Planning Horizon						Total
		Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6 +	
\$M	Prior Yrs	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	
CapEx	0.043	2.294	0.793	0.000	0.000	0.000	0.000	3.130
OpEx	0.257	0.228	0.373	0.000	0.000	0.000	0.000	0.858
Removal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CIAC/Reimbursement	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.300	2.522	1.166	0.000	0.000	0.000	0.000	3.988

1.14 Key Milestones

Milestone	Target Date: (Month/Year)
Start Up	July 2015
Partial Sanction R&D	Nov 2015
Begin Requirements and Design	Dec 2015
Partial Sanction D&I	June 2016
Begin Development and Implementation	June 2016
Full Sanction	Dec 2016
Begin User Acceptance Testing	Feb 2017
Move to Production	Aug 2017
Project Complete	Oct 2017
Project Closure Sanction	Jan 2018



US Sanction Paper

1.15 Resources, Operations and Procurement

Resource Sourcing			
Engineering & Design Resources to be provided	<input checked="" type="checkbox"/> Internal	<input checked="" type="checkbox"/> Contractor	
Construction/Implementation Resources to be provided	<input checked="" type="checkbox"/> Internal	<input checked="" type="checkbox"/> Contractor	
Resource Delivery			
Availability of internal resources to deliver project:	<input type="checkbox"/> Red	<input type="checkbox"/> Amber	<input checked="" type="checkbox"/> Green
Availability of external resources to deliver project:	<input type="checkbox"/> Red	<input type="checkbox"/> Amber	<input checked="" type="checkbox"/> Green
Operational Impact			
Outage impact on network system:	<input type="checkbox"/> Red	<input type="checkbox"/> Amber	<input checked="" type="checkbox"/> Green
Procurement Impact			
Procurement impact on network system:	<input type="checkbox"/> Red	<input type="checkbox"/> Amber	<input checked="" type="checkbox"/> Green

1.16 Key Issues (include mitigation of Red or Amber Resources)

N/A

1.17 Climate Change

Contribution to National Grid’s 2050 80% emissions reduction target:	<input checked="" type="checkbox"/> Neutral	<input type="checkbox"/> Positive	<input type="checkbox"/> Negative
Impact on adaptability of network for future climate change:	<input checked="" type="checkbox"/> Neutral	<input type="checkbox"/> Positive	<input type="checkbox"/> Negative

1.18 List References

1	INVP 4124 – Total Cost of Ownership Full Project.xls
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Please contact Project Manager for copies of this document as needed.



US Sanction Paper

2 Decisions

The US Sanctioning Committee (USSC) at a meeting held on December 14, 2016:

- (a) APPROVED this paper and the investment of \$3.988M and a tolerance of +/-10%.
- (b) APPROVED the RTB impact of \$0.180M for 5 years.
- (c) NOTED that Deborah Rollins has the approved financial delegation.

Signature.....Date.....

Christopher Kelly
Acting Senior Vice President, Engineering Design & Process
US Sanctioning Committee Co – Chair Person



US Sanction Paper

3 Sanction Paper Detail

Title:	Automate Remote Net Metering	Sanction Paper #:	USSC-15-259 v3
Project #:	INVP 4124	Sanction Type:	Sanction
Operating Company:	National Grid USA Svc. Co.	Date of Request:	December 14, 2016
Author:	Phyllis Agin / Joe Howard	Sponsor:	Jody Allison, VP Billing and Collections Strategy
Utility Service:	IS	Project Manager:	Deborah Rollins

3.1 *Background*

Billing Operations and Account Maintenance & Operations currently use a manual process to track the National Grid customers in the remote net metering program which includes customers that over-generate usage and customers who will receive a portion of the over-generation. This involves maintaining customer spreadsheets, calculating the over-generation and how much each customer will receive, transferring excess dollars or kWh to the customers, and producing the bills.

Due to the rapid increase of customers signing up for remote net metering and the anticipated volume of community net metered customers, where hundreds of customers could receive credits from a customer that over-generates, the process will be automated within the Customer Service System.

3.2 *Drivers*

The primary driver is to ensure the Company has the capability to effectively comply with the statutes, regulations, and regulatory orders in the states in which National Grid provides electric service, while eliminating the risk of human error in performing complex and repetitive calculations, assignments, tracking, and associated rebilling activities.

3.3 *Project Description*

This project will automate the process of maintaining account relationships, the allocation of excess dollars or usage via percentage or cascading method, which will transfer to the accounts in the order in which they bill, and the ability to distribute the



US Sanction Paper

account’s over-generation. This data will be used during the billing process to calculate the credit and apply it to the bills. This process also includes Community net metering, which will distribute excess credits via volume or monetary basis.

The project will also include automating the annual process for crediting net metering accounts with a closing credit balance by applying the applicable avoided cost.

This project is broken into 6 workstreams:

- Workstream 1 – This is the Host Satellite Relationship Set-up which will tie the host Account to the satellite account. The benefiting companies are UNY, MA and RI.

Operating Company	% Allocation
Niagara Mohawk Power Corp.- Electric Distr.	47.71%
Massachusetts Electric Company	37.69%
Nantucket Electric Company	0.38%
Narragansett Electric Company	14.22%
TOTAL	100.00%

- Workstream 2 – This is the SC2 Non Demand kWh Transfer which will calculate excess usage on host account, transfer total excess usage from host account to satellite accounts and calculates net metering adjustment on satellite accounts. The benefiting company is UNY.

Operating Company	% Allocation
Niagara Mohawk Power Corp.- Electric Distr.	100%

- Workstream 3 – This is the Community Net Metering which will allow the community host to provide special instructions for distributing excess credit in the anniversary month and to transfer excess usage from host account to active satellite accounts on a volume or monetary basis. The benefiting companies are UNY, MA and RI.

Operating Company	% Allocation
Niagara Mohawk Power Corp.- Electric Distr.	47.71%
Massachusetts Electric Company	37.69%
Nantucket Electric Company	0.38%
Narragansett Electric Company	14.22%
TOTAL	100.00%

- Workstream 4 – This is the Percentage Dollar Transfer which will allow dollars associated with excess usage from the host account to be transferred to active satellite accounts based on percentage allocation specified in the contract. The benefiting companies are; UNY, MA and RI.

Operating Company	% Allocation
Niagara Mohawk Power Corp.- Electric Distr.	47.71%
Massachusetts Electric Company	37.69%



US Sanction Paper

Nantucket Electric Company	0.38%
Narragansett Electric Company	14.22%
TOTAL	100.00%

- Workstream 5 – This is the Cascading Dollar Transfer which will allow dollars associated with excess usage from the host account to be transferred to active satellite accounts based on cascading allocation method, according to order of satellite billings . The benefiting company is UNY.

Operating Company	% Allocation
Niagara Mohawk Power Corp.- Electric Distr.	100%

- Workstream 6 – This is the Avoided Cost Credit which will automate the annual process for crediting net metering accounts with a closing credit balance by applying the applicable avoided cost. The benefiting company is UNY.

Operating Company	% Allocation
Niagara Mohawk Power Corp.- Electric Distr.	100%

3.4 Benefits Summary

- Ensure compliance with relevant statutes, regulations, and regulatory orders in the states in which National Grid provides electric service, while mitigating the risk of error in billing calculations.

3.5 Business and Customer Issues

There are no significant business issues beyond what has been described elsewhere.

3.6 Alternatives

Alternative 1: Do Nothing / Defer Project

- Continued and increasing manual account handling load may jeopardize the company’s ability to accurately bill net metered accounts in a timely manner, therefore this alternative is not recommended.

3.7 Safety, Environmental and Project Planning Issues

There are no significant issues beyond what has been described elsewhere.



US Sanction Paper

3.8 Execution Risk Appraisal

Number	Detailed Description of Risk / Opportunity	Probability	Impact		Score		Strategy	Pre-Trigger Mitigation Plan	Residual Risk	Post Trigger Mitigation Plan
			Cost	Schedule	Cost	Schedule				
1	Regulatory Requirements are not finalized; New updates/ requirements are received from NY PSC on a regular basis	3	3	4	12	12		Project Investment Proposal and TCO Logs are prepared based on the information available to date. As changes are identified, impacts need to be assessed in terms of Cost, Time and Resources.		
2	There is a risk that if another billing SME is not identified and onboarded soon, the detailed design for SC2ND may take longer than expected impacting overall project schedule	4	3	3	12	12		Actively looking to identify a suitable resource who can augment existing resource and accelerate the detailed design for SC2ND workstream		

3.9 Permitting

N/A

3.10 Investment Recovery

3.10.1 Investment Recovery and Regulatory Implications

Recovery will occur at the time of the next rate case for any operating company receiving allocations of these costs.

3.10.2 Customer Impact

N/A

3.10.3 CIAC / Reimbursement

N/A



US Sanction Paper

3.11 Financial Impact to National Grid

3.11.1 Cost Summary Table

Project Number	Project Title	Project Estimate Level (%)	Spend (\$M)	Prior Yrs	Current Planning Horizon						Total
					Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6 +	
INVP 4124	Automated Remote Net Metering	Est Lvl (e.g. +/- 10%)	CapEx	0.043	2.294	0.793	0.000	0.000	0.000	0.000	3.130
			OpEx	0.257	0.228	0.373	0.000	0.000	0.000	0.000	0.858
			Removal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			Total	0.300	2.522	1.166	0.000	0.000	0.000	0.000	3.988
Total Project Sanction			CapEx	0.043	2.294	0.793	0.000	0.000	0.000	0.000	3.130
			OpEx	0.257	0.228	0.373	0.000	0.000	0.000	0.000	0.858
			Removal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			Total	0.300	2.522	1.166	0.000	0.000	0.000	0.000	3.988

3.11.2 Project Budget Summary Table

Project Costs Per Business Plan

	Prior Yrs (Actual)	Current Planning Horizon						Total
		Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6 +	
\$M		2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	
CapEx	0.000	0.657	0.000	0.000	0.000	0.000	0.000	0.657
OpEx	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047
Removal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total Cost in Bus. Plan	0.000	0.704	0.000	0.000	0.000	0.000	0.000	0.704

Variance (Business Plan-Project Estimate)

	Prior Yrs (Actual)	Current Planning Horizon						Total
		Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6 +	
\$M		2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	
CapEx	(0.043)	(1.637)	(0.793)	0.000	0.000	0.000	0.000	(2.473)
OpEx	(0.257)	(0.181)	(0.373)	0.000	0.000	0.000	0.000	(0.811)
Removal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total Cost in Bus. Plan	(0.300)	(1.818)	(1.166)	0.000	0.000	0.000	0.000	(3.284)

3.11.3 Cost Assumptions

This estimate was developed in 2016 using the standard IS estimating methodology. The accuracy level of the estimate for each project is identified in table 3.11.1.



US Sanction Paper

3.11.4 Net Present Value / Cost Benefit Analysis

3.11.4.1 NPV Summary Table

This is not an NPV project.

3.11.4.2 NPV Assumptions and Calculations

N/A

3.11.5 Additional Impacts

None

3.12 Statements of Support

3.12.1 Supporters

The supporters listed have aligned their part of the business to support the project.

Role	Individual's Name
Business Executive Sponsor	Jody Allison
Head of BRM/Strategy	Jon Poor
Head of PDM	Jeff Dailey on behalf of Don Stahlin
Relationship Manager	Joel Semel
Program Delivery Manager	Deborah Rollins
IS Finance Management	Chip Benson
IS Regulatory	Dan DeMauro
DR&S	Elaine Wilson
Service Delivery	Brian Detota
Enterprise Architecture	Joe Clinchot

3.12.2 Reviewers

The reviewers have provided feedback on the content/language of the paper.

Function	Individual	Area
Finance	Benson, Chip	All
Regulatory	Zschokke, Peter	All
Jurisdictional Delegate(s)	Harbaugh, Mark	Electric - NY
	Patterson, James	Electric - NE
	Hill, Terron	FERC
Procurement	Curran, Art	All



US Sanction Paper

4 Appendices

4.1 Sanction Request Breakdown by Project

N/A

4.2 Other Appendices

4.2.1 Project Cost Breakdown

Project Cost Breakdown			
Cost Category	sub-category	\$ (millions)	Name of Firm(s) providing
Personnel	NG Resources	1.328	
	SDC Time & Materials	1.814	
	SDC Fixed-Price	-	
	All other personnel	0.318	
	TOTAL Personnel Costs	3.459	
Hardware	Purchase	-	
	Lease	-	
Software		-	
Risk Margin		0.234	
Other		0.295	
TOTAL Costs		3.988	

4.2.2 Benefitting Operating Companies

This investment will benefit the electric companies in the New York and New England geographic locations where net metering is offered.

Operating Company Name	Business Area	State	Release
Niagara Mohawk Power Corp	Electric Distribution	NY	1,2,3,4,5,6
Massachusetts Electric	Electric Distribution	MA	1,3,4
Nantucket Electric Company	Electric Distribution	MA	1,3,4
Narragansett Electric Company	Electric Distribution	RI	1,3,4



US Sanction Paper

4.2.3 IS Ongoing Operational Costs

This project will increase IS ongoing operations support costs as per the following table. These are also known as Run the Business (RTB) costs.

Summary Analysis of RTB Costs							
All figures in \$ millions	Yr. 1 15/16	Yr. 2 16/17	Yr. 3 17/18	Yr. 4 18/19	Yr. 5 19/20	Yr. 6+	Total
Forecast of RTB Impact							
RTB if Status Quo Continues	-	-	-	-	-	-	-
RTB if Project is Implemented	-	-	0.022	0.034	0.034	0.089	0.180
Net change in RTB	-	-	0.022	0.034	0.034	0.089	0.180
RTB Variance Analysis (if Project is Implemented)							
Net Δ RTB funded by Plan(s)	-	0.011	-	-	-	-	0.011
Variance to Plan	-	(0.011)	0.022	0.034	0.034	0.089	0.169
Total RTB Costs - by Cost Type (if Project is Implemented)							
App.Sup. - SDC 1	-	-	0.022	0.034	0.034	0.089	0.180
App.Sup. - SDC 2	-	-	-	-	-	-	-
App.Sup. - other	-	-	-	-	-	-	-
SW maintenance	-	-	-	-	-	-	-
SaaS	-	-	-	-	-	-	-
HW support	-	-	-	-	-	-	-
Other: IS	-	-	-	-	-	-	-
All IS-related RTB (sub-Total)	-	-	0.022	0.034	0.034	0.089	0.180
Business Support (sub-Total)	-	-	-	-	-	-	-
Total RTB Costs	-	-	0.022	0.034	0.034	0.089	0.180

The RTB increase was due to added functionality to automate complex billing processes for remote net metering customers, including new interfaces and reports.

4.3 NPV Summary

N/A

4.4 Customer Outreach Plan

N/A



US Sanction Paper

Title:	Rhode Island Renewable Programs	Sanction Paper #:	USSC-17-363 v3
Project #:	INVP 4555 Capex: C078581	Sanction Type:	Partial Sanction
Operating Company:	The Narragansett Electric Co.	Date of Request:	9/11/2018
Author:	Susan Stallard / Rick Malek	Sponsor:	Jody Allison, VP Billing and Collections Strategy
Utility Service:	IS	Project Manager:	Deborah Rollins / Rick Malek

1 Executive Summary

1.1 Sanctioning Summary

This paper requests partial sanction of INVP 4555 in the amount of \$2.230M with a tolerance of +/- 10% for the purposes of completing Development and Implementation (D-I) changes requested for Workstream 1 - Shared Solar and Requirements for Workstream 3 - Community Renewable Energy Growth.

This sanction amount is \$2.230M broken down into:

- \$2.135M Capex*
- \$0.095M Opex*
- \$0.000M Removal*

NOTE the potential investment of \$2.535M with a tolerance of +/- 25%, contingent upon submittal and approval of a Project Sanction paper following completion of D-I changes requested for Workstream 1 and Requirements for Workstream 3.

1.2 Project Summary

The State of Rhode Island has passed two laws, RI Law §Chapter 39-26.6 and §Chapter 39-26.4, that will streamline its growing clean energy economy in order to allow virtual net metering, third party financing, and a predictable tax process for commercial systems in host communities. This project will address renewable energy policies with the following workstreams: (1) Shared Solar Renewable Energy Growth; (2) Community Remote Net Metering; and (3) Community Renewable Energy Growth.

These Renewable Energy Programs require complex billing capabilities that impact National Grid’s CSS billing system. Each program also has its own distinct rules for participation and allocation of excess energy credits. These programs will use the current customer system account maintenance screens and much of the program/module that has been developed as part of INVP 4124 Automate Remote Net



US Sanction Paper

Metering Project, which was implemented in early 2018. Automating the processes that calculate the complex bills will help ensure accuracy of the customer billing system.

1.3 Summary of Projects

Project Number	Project Title	Estimate Amount (\$M)
INVP 4555	Rhode Island Renewable Programs	2.535
Total		2.535

1.4 Associated Projects

Project Number	Project Title	Estimate Amount (\$M)
4124	Remote Net Metering	3.988
Total		3.988

1.5 Prior Sanctioning History

Date	Governance Body	Sanctioned Amount	Potential Project Investment	Sanction Type	Potential Investment Tolerance
12/12/17	USSC	\$1.180M	\$1.680M	Partial	25%
6/13/17	ISSC	\$0.266M	\$0.898M	Partial	25%

1.6 Next Planned Sanction Review

Date (Month/Year)	Purpose of Sanction Review
December 2018	Project Sanction



US Sanction Paper

1.7 Category

Category	Reference to Mandate, Policy, NPV, or Other
<input checked="" type="checkbox"/> Mandatory <input type="checkbox"/> Policy- Driven <input type="checkbox"/> Justified NPV <input type="checkbox"/> Other	R.I. Gen. Laws: <ul style="list-style-type: none"> • §Chapter 39-26.6, administered by the Company through the following tariffs approved by the RI Public Utilities Commission (RIPUC): RIPUC No. 2151-E, RIPUC No. 2152-E, and RIPUC No. 2208 (Workstream 1 and Workstream 3). • §Chapter 39-26.4, administered by the Company through the tariff approved by the (RIPUC): RIPUC No. 2178 (Workstream 2).

1.8 Asset Management Risk Score

Asset Management Risk Score: 49

Primary Risk Score Driver: (Policy Driven Projects Only)

Reliability
 Environment
 Health & Safety
 Not Policy Driven

1.9 Complexity Level

High Complexity
 Medium Complexity
 Low Complexity
 N/A

Complexity Score: 18

1.10 Process Hazard Assessment

A Process Hazard Assessment (PHA) is required for this project:

Yes
 No



US Sanction Paper

1.11 Business Plan

Business Plan Name & Period	Project included in approved Business Plan?	Over / Under Business Plan	Project Cost relative to approved Business Plan (\$)
IS Investment Plan FY19-23	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Over <input type="checkbox"/> Under <input type="checkbox"/> NA	\$0.085M

1.12 If cost > approved Business Plan how will this be funded?

Re-allocation of funds within the US business has been managed to meet jurisdictional budgetary, statutory and regulatory requirements. Future fiscal year forecasts will be addressed in future year business plans.

1.13 Current Planning Horizon

\$M	Prior Yrs	Current Planning Horizon						Total
		Yr. 1 2018/19	Yr. 2 2019/20	Yr. 3 2020/21	Yr. 4 2021/22	Yr. 5 2022/23	Yr. 6 + 2023/24	
CapEx	0.716	1.639	0.041	0.000	0.000	0.000	0.000	2.396
OpEx	0.094	0.001	0.044	0.000	0.000	0.000	0.000	0.139
Removal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CIAC/Reimbursement	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.810	1.640	0.085	0.000	0.000	0.000	0.000	2.535



US Sanction Paper

1.14 Key Milestones

Milestone	Target Date: (Month/Year)
Start Up	May 2017
Partial Sanction	May 2017
Begin Requirements and Design	June 2017
Begin Development and Implementation – Workstreams 1 & 2	October 2017
Partial Sanction	December 2017
Partial Sanction	September 2018
Begin Development and Implementation – Workstream 1 and Requirements - Workstream 3	September 2018
Project Sanction	December 2018
Begin Design, Development and Implementation – Workstream 3	December 2018
Move to Production / Last Go Live	April 2019
Project Closure	July 2019

1.15 Resources, Operations and Procurement

Resource Sourcing			
Engineering & Design Resources to be provided	<input checked="" type="checkbox"/> Internal	<input checked="" type="checkbox"/> Contractor	
Construction/Implementation Resources to be provided	<input checked="" type="checkbox"/> Internal	<input checked="" type="checkbox"/> Contractor	
Resource Delivery			
Availability of internal resources to deliver project:	<input type="checkbox"/> Red	<input type="checkbox"/> Amber	<input checked="" type="checkbox"/> Green
Availability of external resources to deliver project:	<input type="checkbox"/> Red	<input type="checkbox"/> Amber	<input checked="" type="checkbox"/> Green
Operational Impact			
Outage impact on network system:	<input type="checkbox"/> Red	<input type="checkbox"/> Amber	<input checked="" type="checkbox"/> Green
Procurement Impact			
Procurement impact on network system:	<input type="checkbox"/> Red	<input type="checkbox"/> Amber	<input checked="" type="checkbox"/> Green



US Sanction Paper

1.16 Key Issues (include mitigation of Red or Amber Resources)

N/A

1.17 Climate Change

Contribution to National Grid's 2050 80% emissions reduction target:	<input type="checkbox"/> Neutral	<input checked="" type="checkbox"/> Positive	<input type="checkbox"/> Negative
Impact on adaptability of network for future climate change:	<input checked="" type="checkbox"/> Neutral	<input type="checkbox"/> Positive	<input type="checkbox"/> Negative

1.18 List References

N/A



US Sanction Paper

2 Decisions

- I:
- (a) APPROVE this paper and the investment of \$2.230M and a tolerance of +/-10% for the purposes of completion of D-I for Workstream 1 - Shared Solar and Requirements for Workstream 3 - Community Renewable Energy Growth.
 - (b) NOTE the potential run-the-business (RTB) impact of \$ 0.002M (per annum) for 5 years.
 - (c) NOTE the potential investment \$ 2.535M and a tolerance of +/- 25%, contingent upon submittal and approval of a Project Sanction paper following completion of requirements and design.
 - (d) NOTE that Deborah Rollins is the Project Manager and has the approved financial delegation.

Signature.....Date.....
David H. Campbell, Vice President ServCo Business Partnering, USSC Chair



US Sanction Paper

3 Sanction Paper Detail

Title:	Rhode Island Renewable Programs	Sanction Paper #:	USSC-17-363 v3
Project #:	INVP 4555 Capex: C078581	Sanction Type:	Partial Sanction
Operating Company:	The Narragansett Electric Co.	Date of Request:	9/11/2018
Author:	Susan Stallard / Rick Malek	Sponsor:	Jody Allison, VP Billing and Collections Strategy
Utility Service:	IS	Project Manager:	Deborah Rollins / Rick Malek

3.1 Background

There are currently two different types of Renewable Energy Programs in Rhode Island. One is referred to as Net Metering and the other is Renewable Energy Growth. Rhode Island passed 2 laws §Chapter 39-26.6 and §Chapter 39-26.4 to streamline the Renewable Energy policies for the state.

The following are the associated Renewable Energy Programs:

- Shared Solar Renewable Energy Growth
- Community Remote Net Metering
- Community Renewable Energy Growth

The three Renewable Energy Programs are described in more detail in Section 3.3.

Currently National Grid’s Billing Operations and Account Maintenance & Operations teams use a manual process to track National Grid customers in the remote net metering programs. These programs include Host customers that generate more electricity than they use, and Satellite customers who will receive a portion of the over-generation. The manual processing of these programs involves maintaining customer spreadsheets, calculating the electric over-generation (kW) and how much electricity (kW) each customer receives, transferring excess dollars or kWh to the customers, and producing the bills. The transferred/allocated kWh is used to calculate a Bill Credit that is applied to the Satellite customer’s bill. Due to the number of customers signing up for Net Metering, the current manual process of billing customers will be automated in this project.

The Automate Net Metering project (INVP 4124) was implemented in early 2018 which supports the automation of National Grid’s net metering programs. The Rhode Island Renewable Program project will be utilizing and building on the complex logic put in place by the Automate Net Metering project.



US Sanction Paper

3.2 Drivers

The primary driver is to ensure that the Company has the capability to effectively comply with the R.I. Gen. Laws:

- §Chapter 39-26.6 and the Company's electric tariffs at RIPUC No. 2151-E, 2152-E, and 2208 for Workstream 1 and Workstream 3; and
- §Chapter 39-26.4 and the Company's electric tariffs at RIPUC No. 2178 for Workstream 2.

The secondary driver is to eliminate the risk of human error in performing manual billing, so this project automates all the billing calculations.

3.3 Project Description

This project will automate the following three Rhode Island Renewable Programs, which are comprised of separate Workstreams:

- The Shared Solar Renewable Energy Growth program
 - Consists of a single generation meter associated with multiple nearby account meters. This program will allow allocation between 2 and 50 satellite accounts. The calculations for the original Renewable Energy Growth program for both the Total Performance Based Incentive (PBI) Payment which is calculated against the Host's generated usage, and the Bill Credit will remain the same except that they will be calculated on the Satellite (at that particular rate). The Bill Credit is calculated on the amount of kWh that is allocated to the Satellite account(s) and then subtracted from the Host's PBI. Each Bill Credit is used to offset the prospective Satellite's kWh charges and reduce the Host account's PBI payment.
- The Community Remote Net Metering program
 - Allows for automated money transfers from the Host to the Satellite Accounts. The transfers will be based on an allocation percentage stored and calculated at the Host level. Although there is no technical limit to the number of Satellite customers associated to the Host, there will be a natural limit based on the size of the Host system.
- The Community Renewable Energy Growth program
 - Allows the allocation from a minimum of 3 with no maximum limit of Satellite accounts. Like the original Renewable Energy Growth program, the PBI payment will still be calculated against the Host's generated usage. The Bill Credits, however, will be calculated at the Satellite level using a single contract price.



US Sanction Paper

3.4 Benefits Summary

Automating the process for calculating the complex Renewable Energy Program bills will help ensure accuracy in the customer billing system.

3.5 Business and Customer Issues

There are no significant business issues beyond what has been described elsewhere.

3.6 Alternatives

Alternative 1: Do Nothing/Defer

Doing nothing or deferring the work is not a viable option, as National Grid would be out of compliance with Rhode Island law and the Company’s tariffs approved by the RIPUC.

3.7 Safety, Environmental and Project Planning Issues

All National Grid safety and environmental rules will be followed.

3.8 Execution Risk Appraisal

Number	Detailed Description of Risk / Opportunity	Probability	Impact		Score		Strategy	Pre-Trigger Mitigation Plan	Residual Risk	Post Trigger Mitigation Plan
			Cost	Schedule	Cost	Schedule				
1	Future changes to regulatory requirements pertaining to the project can impact the project scope, schedule and cost.	3	3	3	9	9	Accept	Implementing Agile methodology and working closely with business		Work closely with regulatory groups to quickly assess impact of new requirements to the project. As changes are identified, impacts need to be assessed in terms of Cost, Time and Resources.
2	The project is divided in multiple workstreams. There is a risk that due to cross impacts between workstreams, timelines and resources for the individual workstream might be impacted.	2	2	2	4	4	Mitigate	Add or replace resources as required to meet the schedule.		During Design phase for each workstream establish impacts to other workstream(s) for timeline and resources and make necessary adjustments.

3.9 Permitting

N/A



US Sanction Paper

3.10 Investment Recovery

3.10.1 Investment Recovery and Regulatory Implications

Recovery is currently occurring for past and current costs of this project, and will be proposed, through the RE Growth Recovery Factor as work progresses.

3.10.2 Customer Impact

N/A

3.10.3 CIAC / Reimbursement

N/A

3.11 Financial Impact to National Grid

3.11.1 Cost Summary Table

Project Number	Project Title	Project Estimate Level (%)	Spend (\$M)	Prior Yrs	Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6 +	Total	
					2018/19	2019/20	2020/21	2021/22	2022/23	2023/24		
INVP 4555	Rhode Island Renewable Programs	+/- 10%	CapEx	0.716	1.639	0.041	0.000	0.000	0.000	0.000	0.000	2.396
			OpEx	0.094	0.001	0.044	0.000	0.000	0.000	0.000	0.000	0.139
			Removal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			Total	0.810	1.640	0.085	0.000	0.000	0.000	0.000	0.000	2.535

3.11.2 Project Budget Summary Table

Project Costs per Business Plan

\$M	Prior Yrs (Actual)	Current Planning Horizon						Total
		Yr. 1 2018/19	Yr. 2 2019/20	Yr. 3 2020/21	Yr. 4 2021/22	Yr. 5 2022/23	Yr. 6 + 2023/24	
CapEx	0.716	1.639	0.000	0.000	0.000	0.000	0.000	2.355
OpEx	0.094	0.001	0.000	0.000	0.000	0.000	0.000	0.095
Removal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total Cost in Bus. Plan	0.810	1.640	0.000	0.000	0.000	0.000	0.000	2.450

Variance (Business Plan-Project Estimate)

\$M	Prior Yrs (Actual)	Current Planning Horizon						Total
		Yr. 1 2018/19	Yr. 2 2019/20	Yr. 3 2020/21	Yr. 4 2021/22	Yr. 5 2022/23	Yr. 6 + 2023/24	
CapEx	0.000	(0.000)	(0.041)	0.000	0.000	0.000	0.000	(0.041)
OpEx	(0.000)	0.000	(0.044)	0.000	0.000	0.000	0.000	(0.044)
Removal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total Cost in Bus. Plan	0.000	0.000	(0.085)	0.000	0.000	0.000	0.000	(0.085)



US Sanction Paper

3.11.3 Cost Assumptions

This estimate was developed in 2018 using the standard IS estimating methodology. The accuracy level of estimate for each project is identified in table 3.11.1.

3.11.4 Net Present Value / Cost Benefit Analysis

3.11.4.1 NPV Summary Table

N/A

3.11.4.2 NPV Assumptions and Calculations

N/A

3.11.5 Additional Impacts

N/A

3.12 Statements of Support

3.12.1 Supporters

The supporters listed have aligned their part of the business to support the project.

Department	Individual	Responsibilities
Revenue Cycle Management	Jody Allison	Business Representative
Program Delivery Management	Deborah Rollins	Head of PDM
Business Relationship Management	Joel Semel	Relationship Manager
Program Delivery Management	Riziel Cruz-Bower	Program Delivery Director
IS Finance	Michelle Harris	Manager
IS Regulatory	Dan DeMauro	Director
Digital Risk & Security	Elaine Wilson	Director
Service Delivery	Mark Mirizio	Manager
Enterprise Architecture	Joseph Clinchot	Director



US Sanction Paper

3.12.2 Reviewers

The reviewers have provided feedback on the content/language of the paper.

Function	Individual
Regulatory	Harvey, Maria
Jurisdictional Delegate - Electric NE	Easterly, Patricia
Jurisdictional Delegate - FERC	Hill, Terron
Procurement	Chevere, Diego



US Sanction Paper

4 Appendices

4.1 Sanction Request Breakdown by Project

\$M	INVP 4555	Total
CapEx	2.135	2.135
OpEx	0.095	0.095
Removal		0.000
Total	2.230	2.230

4.2 Other Appendices

4.2.1 Project Cost Breakdown

Project Cost Breakdown \$ (millions)					
Cost Category	sub-category	VOWD	FTC	FAC=VOWD+FTC	Name of Firm(s) providing
Personnel	NG Resources	0.121	0.007	0.128	
	SDC Time & Materials	1.090	0.552	1.642	IBM
		0.000	-	-	WiPro
		0.000	-	-	DXC
		0.000	-	-	Verizon
	SDC Fixed-Price	0.000	-	-	IBM
		0.000	-	-	WiPro
		0.000	-	-	DXC
		0.000	-	-	Verizon
	All other personnel	0.162	0.273	0.435	
TOTAL Personnel Costs	1.373	0.832	2.205		
Hardware	Purchase	0.000	-	-	
	Lease	0.000	-	-	
Software		0.000	-	-	
Risk Margin			0.149	0.149	
AFUDC		0.030	0.123	0.153	
Other		0.015	0.012	0.027	
TOTAL Costs		1.418	1.117	2.535	Should match Financial Summary Total

4.2.2 Benefiting Operating Companies

The following is the benefiting operating company:

Operating Company Name	Business Area	State
The Narragansett Electric Company	Electric Retail	RI



US Sanction Paper

4.2.3 Operational Costs (RTB)

This project will increase IS ongoing operations support costs as set forth in the following table. These are also known as Run the Business (RTB) costs.

all figures in \$ thousands						
INV ID:	INV 4555				Forecast Date:	
Investment Name:	RI Renewable				Go-Live Date:	
Project Manager:	Rick Malek			PDM:	Deborah Rollins	
All figures in \$ thousands	Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Total
	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	
Last Sanctioned Net Impact to RTB						
Last Sanction IS Net Impact to RTB						-
Last Sanction Business Net Impact to RTB						-
Last Sanction Total Net Impact to RTB	-	-	-	-	-	-
Planned/Budgeted Net Impact to RTB						
IS Investment Plan Net Impact to RTB						-
Business Budgeted Net Impact to RTB						-
Currently Forecasted Net Impact to RTB						
IS Funded Net Impact to RTB Forecasted at Go-Live	0.5	2.0	2.0	2.0	2.0	8.5
Business Funded Net Impact to RTB Forecasted at Go-Live	-	-	-	-	-	-
Variance to Planned/Budgeted Net Impact to RTB						
IS Investment Plan Net Impact to RTB Variance	(0.5)	(2.0)	(2.0)	(2.0)	(2.0)	(8.5)
Business Budgeted Net Impact to RTB Variance	-	-	-	-	-	-

4.3 NPV Summary (if applicable)

N/A

4.4 Customer Outreach Plan

N/A

Closure Paper

Title:	Automate Remote Net Metering	Sanction Paper #:	USSC-15-259C
Project #:	INVP 4124 Capex: S006201	Sanction Type:	Closure
Operating Company:	National Grid USA Svc. Co.	Date of Request:	8/24/2018
Author:	Richard Malek/Riziel Cruz-Bower	Sponsor:	Jody Allison, VP Billing Collections Strategy & Operations
Utility Service:	IS	Project Manager:	Richard Malek/ Riziel Cruz-Bower

1 Executive Summary

This paper is presented to close INVP4124. The total spend was \$4.003M. The original sanctioned amount for this project was \$3.998M at +/- 10%.

2 Project Summary

The Remote Net Metering Project fully automated the remote net metering billing process in the Customer Service System (CSS). Prior to the project completion, the billing function was performed manually by Accounts Processing. As the volume of remote net metering customers has increased, this effort eliminated manual record keeping, minimized the risk of processing errors, generated bills as the charges are incurred, and reduced Sarbanes Oxley (SOX) compliance risks.

This project was broken into 6 workstreams:

- Host and Satellite Relationship Set-up
- SC2 Non Demand kWh Transfer
- Community Net Metering
- Percentage Dollar Transfer
- Cascading Dollar Transfer
- Avoided Cost Credit

Closure Paper**3 Variance Analysis****3.1 Cost Summary Table**

Project Sanction Summary (\$M)				
INVP4124 Automate Remote Net Metering	Breakdown	Total Actual Spend	Original Project Sanction Approval	Variance (Over) / Under
4124	Capex	3.380	3.130	(0.250)
	Opex	0.620	0.858	0.238
	Removal	0.000	0.000	0.000
	Total	4.000	3.988	(0.012)

3.2 Cost Variance Analysis

Although the project was delayed by six months, the project team was able to complete all deliverables within the sanctioned cost.

3.3 Schedule Variance Table

Schedule Variance	
Project Grade – Ready for Use Date	08/31/2017
Actual Ready for Use Date	02/23/2018
Schedule Variance	0 years, 6 months, 0 days

3.4 Schedule Variance Explanation

The Remote Net Metering project automated the manual net metering billing processes in the Customer Service System (CSS) through the completion of six project workstreams. However, the project was six months late of its projected schedule of completion.

The following are the reasons for the schedule variance: (1) There were seven changes in business requirements, resulting in multiple change requests, a deviation from the original scope, and impacting overall project schedule and cost and (2) an Extended User Acceptance Test schedule.

Closure Paper**4 Final Cost by Project**

Actual Spending (\$M) vs. Sanction (\$M)				
INVP4124 Automate Remote Net Metering	Breakdown	Total Actual Spend	Original Project Sanction Approval	Variance (Over) / Under
4124	Capex	3.380	3.130	(0.250)
	Opex	0.620	0.858	0.238
	Removal	0.000	0.000	0.000
	Total	4.000	3.988	(0.012)

5 Improvements / Lessons Learned/Root Cause

1. 2018-LL-553

Lesson learned - When implementing new programs that are viable for multiple work stream releases, it is better to do partial sanctions for each workstream; this way, there will be a more accurate cost and timeline assessment and can accommodate for potential requirement changes.

Action - Plan for a multiple partial sanction for each workstream/release.

2. 2018-LL-554

Lesson Learned - Implementing new programs can be challenging. There were no business Subject Matter Experts ("SMEs") nor technical SMEs that have implemented this new billing program for remote net metered accounts on Distributed Generation. Requirements can potentially change due to difference in regulatory requirement interpretations.

Action - Increase the project risk margin for novel programs to allow for potential requirement changes.

3. 2018-LL-556

Lesson Learned - Business resource availability may affect project time line and delivery during User Acceptance Testing.

Action - Understand resource requirements and reconfirm business availability prior to User Acceptance Testing.

Closure Paper

6 Closeout Activities

The following closeout activities have been completed.

Activity	Completed
All work has been completed in accordance with all National Grid policies	<input checked="" type="radio"/> Yes <input type="radio"/> No
Gate E checklist completed (appl. only to CCD)	<input type="radio"/> Yes <input checked="" type="radio"/> N/A
All relevant costs have been charged to project	<input checked="" type="radio"/> Yes <input type="radio"/> No
All work orders and funding projects have been closed	<input checked="" type="radio"/> Yes <input type="radio"/> No
All unused materials have been returned	<input checked="" type="radio"/> Yes <input type="radio"/> No
All IS Service Transition activities have been completed	<input checked="" type="radio"/> Yes <input type="radio"/> No
All lessons learned have been entered appropriately into the IS Knowledge Management Tool (KMT) lesson learned database	<input checked="" type="radio"/> Yes <input type="radio"/> No

7 Statements of Support

7.1 Supporters

The supporters listed have aligned their part of the business to support the project.

Department	Individual	Responsibilities
Business Department	Charles Florczyk	Business Representative
PDM	Deb Rollins	Head of PDM
BRM	Joel Semel	Relationship Manager
PDM	Riziel Cruz-Bower	Program Delivery Director
IS Finance	Michele Harris	Manager
IS Regulatory	Dan DeMauro	Director
DR&S	Elaine Wilson	Director
Service Delivery	Mark Mirizio	Manager
Enterprise Architecture	Joe Clinchot	Director

7.2 Reviewers

The reviewers have provided feedback on the content/language of the paper.

Closure Paper

Function	Individual
Regulatory	Harvey, Maria
Jurisdictional Delegate - Electric NE	Easterly, Patricia
Jurisdictional Delegate - Electric NY	Harbaugh, Mark A.
Jurisdictional Delegate - FERC	Hill, Terron
Jurisdictional Delegate - Gas NE	Currie, John
Jurisdictional Delegate - Gas NY	Wolf, Don
Procurement	Chevere, Diego



Closure Template

8 Decisions

I approve this paper.

Signature.....Date.....

David H. Campbell, Vice President ServCo Business Partnering, USSC Chair



Closure: US Sanction Paper

Title:	Rhode Island Renewable Programs	Sanction Paper #:	USSC-17-363 C
Project #:	INVP 4555	Sanction Type:	Closure
Capex #:	C078581		
Operating Company:	National Grid USA Svc. Co.	Date of Request:	11/22/2019
Author:	Cruz-Bower, Riziel	Sponsor(s):	McConnachie, Chris Vice President, Finance Services, Finance
Utility Service:	IT	Project Manager:	Cruz-Bower, Riziel

Executive Summary

This paper is presented to close INVP 4555. The total spend was \$2.206M. The original sanctioned amount for this project was \$2.230M at +/- 10%.

Project Summary

The State of Rhode Island has passed two laws, RI Law §Chapter 39-26.6 and §Chapter 39-26.4, that will streamline its growing clean energy economy in order to allow virtual net metering, third party financing, and a predictable tax process for commercial systems in host communities. This project will address renewable energy policies with the following workstreams: (1) Shared Solar Renewable Energy Growth; (2) Community Remote Net Metering and (3) Community Regrowth. Workstream (3), Community Regrowth, was removed from the project scope at the request of the Billing Operations business team. The project was concluded early as a result of the removal of Community Regrowth from the scope.

Schedule Variance Table

Schedule Variance	
Project Grade - Ready to use Date	3/1/2019
Actual Ready to use Date	3/1/2019
Schedule Variance	0 year(s), 0 month(s), 0 day(s)

Schedule Variance Explanation

Cost Summary Table

Project Sanction Summary (\$M)

Breakdown	Total Actual Spend	Original Project Sanction Approval	Variance (Over) / Under
Capex	2.020	2.135	0.115

Opex	0.186	0.095	(0.091)
Removal	0.000	0.000	0.000
Total	2.206	2.230	0.024

Cost Variance Analysis

The project underspend (0.024) was within the expected the spend tolerance.

Final Cost by Project

Actual Spending (\$M) vs. Sanction (\$M)

Project	Breakdown	Total Actual Spend	Original Project Sanction Approval	Variance (Over) / Under
C078581	Capex	2.020	2.135	0.115
	Opex	0.186	0.095	(0.091)
	Removal	0.000	0.000	0.000
	Total	2.206	2.230	0.024
Project Sanction Summary (\$M)				
	Breakdown	Total Actual Spend	Original Project Sanction Approval	Variance (Over) / Under
Total	Capex	2.020	2.135	0.115
	Opex	0.186	0.095	(0.091)
	Removal	0.000	0.000	0.000
	Total	2.206	2.230	0.024

Improvements / Lessons Learned

2019-LL-718 - Description :Scope for WS3, Community Regrowth was not defined at the start of the project as this element was evolving with the regulatory agencies. The project was partially sanctioned without clear definition of scope for part of the project. With the removal of this element from the scope, a final sanctioning was not created.

Action - Create a separate project for project elements which do not have clear requirements from regulatory agencies therefore avoiding partial sanctions.

2019-LL-719 - Description: There were missed requirements that were not defined by the business. Test cases were not created for the missed requirements resulting in a production issue (Bill Print images).

Action - Include specific top to bottom review of all bill print images in the creation of the regression test cases.

2019-LL-720 - Description: The business hired extra part time resources to help with the UAT.

Action - Make this a common plan in order to accommodate the large number of test cases.

Closeout Activities

ACTIVITY

COMPLETED

All work has been completed in accordance with all

- National Grid policies Yes No
- All relevant costs have been charged to project Yes No
- All work orders and funding projects have been closed Yes No
- All unused material have been returned Yes No
- All as-builts have been completed Yes No
- All lessons learned have been entered appropriately into the lesson learned database Yes No
- Project documentation archived per department procedures Yes N/A
- CIAC reconciled per the appropriate tariff Yes N/A
- Project specific contracts closed Yes N/A
- Accounting provided for ongoing costs Yes N/A

Statement of Support

Department	Individual	Responsibilities
Business Department	McConnachie, Chris	Business Representative
Business Partner (BP)	Semel, Joel	Relationship Manager
Program Delivery Management (PDM)	Cruz-Bower, Riziel	Program Delivery Director
IT Finance	Harris, Michelle	Manager
IT Regulatory	DeMauro, Daniel J.	Director
Security	Shattuck, Peter	Manager
Service Delivery	Detota, Brian A.	Principal Analyst
ARB Verification	Schoener, Andy	Manager
Enterprise Portfolio Management	Cronin, Daniel	Analyst

Reviewers

Function	Individual
Regulatory	Mancinelli, Lauri A.
Jurisdictional Delegate - Electric NE	Easterly, Patricia
Jurisdictional Delegate - Electric NY	Harbaugh, Mark A.
Jurisdictional Delegate - FERC	Hill, Terron
Jurisdictional Delegate - Gas NE	Smith, Amy
Jurisdictional Delegate - Gas NY	McNeill, Brian R.
Procurement	Chevere, Diego

Decisions

I approve this paper.

Signature Christine McClure

Date 11/25/19

Christine McClure, Vice President, Finance Business Partner Service Company, USSC Chair

Appendix

N/A

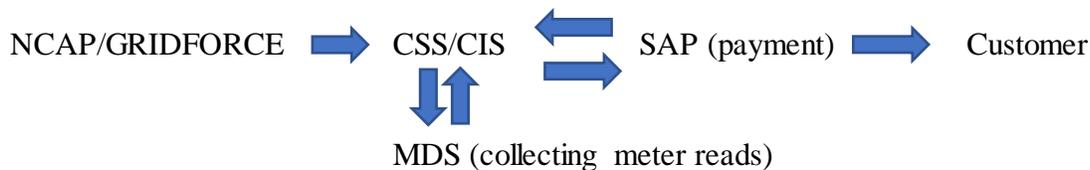
PUC RR-2

Request:

Please provide a diagram (flow chart) showing which systems/process all need to interact to provide each of the programs listed in PUC RR-1.

Response:

Please see the diagram below. First, National Grid is notified of a customer applying for a distributed generation program via the National Grid Customer Application Portal (NCAP). Next, a Company representative reviews the application. Once the application is approved/completed, then the Company issues a service order to install a generation meter in National Grid's Customer Service System, which is sometimes referred to as its Customer Information System (CSS/CIS). After the meter is set in CSS/CIS, National Grid's meter data services group (MDS) begins receiving meter reads from the customer's distributed generation. Based on the customer's program, CSS/CIS directs MDS to the customer meters it must read in order to calculate a volumetric or monetary credit. MDS reports the data to CSS/CIS. If the customer is supposed to receive a monetary payment from the Company, then the payment amount is transferred to the Company's SAP (accounting) system, and the Company generates a payment that is based on the customer's selected payment type (i.e., electronic payment or paper check). Once issued, a payment confirmation is sent back to CSS/CIS from SAP.



National Grid Customer Application Portal (NCAP) – signup/customer portal

Customer Service System (CSS/CIS) – National Grid's customer billing system

Enterprise Resource Planning System (SAP) – National Grid's payment system

Meter Data Services (MDS) – Company department that provides meter reading

PUC RR-3

Request:

Please provide a timeline for the development and roll-out of a new billing software system.

Response:

Under today's assumptions, at present, July 2026 is the Company's planned "go-live" date for an updated billing system in Rhode Island. To reach this target date, the Company would have to begin development of the billing system in Rhode Island in April 2024. However, as discussed by the Company's witnesses at the hearing in this proceeding, a new billing system may not be able to automatically implement the constraints and requirements of all renewable energy programs as of the "go-live" date in July 2026. The Company may have to do additional programming to automate billing for those programs.

Notably, the Company has already modified its plans for the implementation of new billing system software, based on the ongoing global pandemic, and it will continue to evaluate its plans based on changing conditions. As such, the Company's planned development timeline is subject to change.