The Narragansett Electric Company

d/b/a National Grid

INVESTIGATION AS TO THE PROPRIETY OF PROPOSED TARIFF CHANGES

Appendices and Workpapers of:

Power Sector Transformation Panel

Book 2 of 3 REDACTED

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Appendix 4.1

Appendix 4.1

AMF Technology & BCA

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APPENDIX 4.1: AMF TECHNOLOGY AND BCA

1. AMF TECHNOLOGY AND COSTS

The following descriptions of the end to end metering technologies are meant to provide a broad explanation of the capabilities of individual components presented in this document. Descriptions of components and capabilities defined herein do not constitute a complete list, nor are they linked to a specific vendor or vendors. Rather, it is intended to be directional in nature, establishing the order of magnitude of a comprehensive scope of deployment.

The AMF solution under consideration by National Grid will include solid-state meters, interval consumption measurement, radio frequency (RF) mesh and cellular telecommunications, remote firmware upgrades, network ping support and sensors for power quality measurement such as last gasp notifications and voltage fluctuations. Within the meter's functionality are autonomous algorithms for abnormal operation, tamper detection and support for remote connect and disconnect service functionality for electric customers.

The Company proposes to install approximately 515,000 electric AMF meters (this includes meter points that are inactive since January 2016) across its service territory over the eighteen-month meter deployment phase beginning the second half of fiscal year 2021. One-third of the meters are to be deployed in fiscal year 2021 and the remainder in fiscal year 2022. Actual deployment could vary from the proposed schedule based on field conditions and other factors. Meter deployment is closely aligned to the lifecycle replacement of electric AMR meters.

Gas AMF Encoder Receiver Transmitters (ERTs) will be deployed separately from the electric AMF meters as part of the normal Gas AMR ERT replacement cycle as projected in Table 4-1.

Table 4-1: Gas ERT replacement cycle, FY19 – FY29

Deployment Year	Gas ERT Installation
FY 19	7.85%
FY 20	7.85%
FY 21	7.85%
FY 22	7.85%
FY 23	7.85%
FY 24	27.55%
FY 25	7.85%
FY 26	7.85%
FY 27	7.85%
FY 28	7.85%
FY 29	1.80%

Beginning in fiscal year 2019 gas AMR ERTs will be replaced with ERTs that can be configured for either AMR or AMF meter data collection. ERTs installed in areas without AMF infrastructure will initially be configured for AMR, and then reconfigured remotely for AMF

once the AMF infrastructure is in place. Since the cost of gas AMF ERT deployment is the same as the cost of the gas AMR ERT replacement program, the AMF business case does not include the costs of gas AMF ERT replacement.

1.1 AMF METER EQUIPMENT AND INSTALLATION

An electric AMF meter is an electronic device used to measure electric consumption at residential, commercial, and industrial locations. This device digitally communicates the interval data using two-way telecommunications infrastructure and can be equipped to leverage either a cellular radio or a RF mesh network to communicate with back-office systems. The electric meters will be replaced by an AMF solution which possesses a fully self-contained measurement and communication system.

Gas meters are equipped with an external ERT (compatible encoder receiver transmitters) module that records and transmits the gas consumption data measured by the meter. AMF replacement of the ERT will allow the gas meter to communicate with the electric AMI meter or directly with the telecom system, enabling both meters to be read in near real-time (instead of monthly) through the AMF solution.

1.1.1 AMF Electric Meter Equipment and Installation

The AMF electric meters support the following functionality:

- A Flexible Two-Way Communication System.
- Upgradable Firmware: Customizable firmware upgrades with automated roll-back functionality and the ability to create phased firmware packages.
- Bi-Directional Metering: Support for both consumption and generation measurements for distributed generation customers. AMF also provides the functionality to net this usage in the MDM and at the meter level.
- Energy Measurements:
- kWh delivered, received and net.
- kVARh delivered and received.
- kVARh Q1-Q4.
- VAh delivered, received and net.
- Demand Measurements:
- Max Watts delivered and received
- Max VA delivered and received
- Max VAR delivered and received
- VAR Q1, Q2, Q3, Q4
- Min Power Factor.
- Meter Reading: Remotely interrogate register and interval billing data from the AMF meters. Additionally meter events and exceptions will be delivered to the head-end software for detailed analysis.
- Real-Time Meter Event and Alarm Retrieval: Alarms received by the head-end system can be automatically distributed to a specific user or group of users.
- Tamper Detection: Detect and report exceptions for events such as magnetic interference, voltage integrity issues and disruption in service.

- Remote Disconnect/Reconnect: Integrated functionality allowing remote disconnect and reconnect of electric service.
- Integration & Installation: A self-contained metering solution allows a simple and streamlined field deployment.
- Meter Security: Multiple security protocols with an encrypted file system, secure boot, standard DLMS security, application layer enhanced security and local access signed authorization.
- Adaptive Communications: Supports both RF and Power Line Communication (PLC) for "last gasp" communication. Each meter is assigned a global routable address with meters dynamically selecting the optimal link based on channel conditions and target QoS. The mesh network uses adaptation layers and an RPL routing protocol.
- Radio Specifications: Radio Output Power configured at time of manufacture: – 500mW-1W.
- Possesses the ability to communicate and operate within Home Area Network (HAN) and Business Area Network (BAN) technologies.

This functionality is included in models that are currently available on the market. Meter manufacturers have been working to bring updated models to market that include additional functionality:

- Integration with distributed generation and load control devices
- Improved granularity of voltage and consumption data
- Location awareness and communication with other meters

While we did not account for devices with these capabilities in our analysis, we will be looking to procure the latest technology to maximize value for our customers.

1.1.2 AMF Gas ERT Equipment

The AMF Gas ERT supports the following functionality:

- Continually stores and updates the last 40 days of hourly interval data which can be read via mobile collection and fixed network.
- Continually stores and updates the last 40 days of sub-hourly interval data which can be read via fixed network.
- Operates in bubble-up mode and does not require a license from the Federal Communications Commission (FCC).
- Designed for a 20-year battery based on standard data collection to ensure low operating and maintenance costs.
- Module design makes installation fast and easy, especially when gas is flowing through the meter.
- The compact design and direct engagement with the meter drive assure the unparalleled accuracy that makes gas modules the industry standard.
- The two-way 500G DLN offers improved tilt tamper detection.

1.1.3 AMF Inventory

This cost is for AMF electric meter storage that will support each local operating area to facilitate ongoing day-to-day operations. An inventory level of 2.5% is assumed and will be allocated consistent with the AMF meter deployment schedule.

1.1.4 Support Infrastructure

Deployment of AMF meters will require significant coordination of personnel, meter and CGR staging, dispatching and disposal of legacy AMR meters. While costs are sought to be minimized through coordinated equipment deliveries, supplemental costs will be incurred.

In addition to field operations, additional back office and clerical personnel will be required to support the AMF implementation. Once AMF meters have been deployed efforts are undertaken from the back office to validate meter installation and ensure that the deployment was performed correctly. While existing staff will support these efforts, supplemental personnel will be required to support increased workload during AMF deployment.

1.1.5 AMF Meter Equipment and Installation Cost Summary

Table 4-2: AMF Meter Equipment and Installation Costs ($million) – Rhode Island only

Rhode Island Only Deployment	Deployment Period Capital Cost	20-Year NPV (FY20$)
AMF Electric Meter Equipment and Installation	$89.57	$76.01
AMF Inventory	$1.53	$1.26
Support Infrastructure	$7.37	$6.32
Total	$98.47	$83.58

<u>Multi-Jurisdiction Deployment</u>

Cost synergies reflected in the following multi-jurisdiction deployment table are the result of a lower per unit meter cost attributed to volume efficiencies that could be experienced across the operating companies.

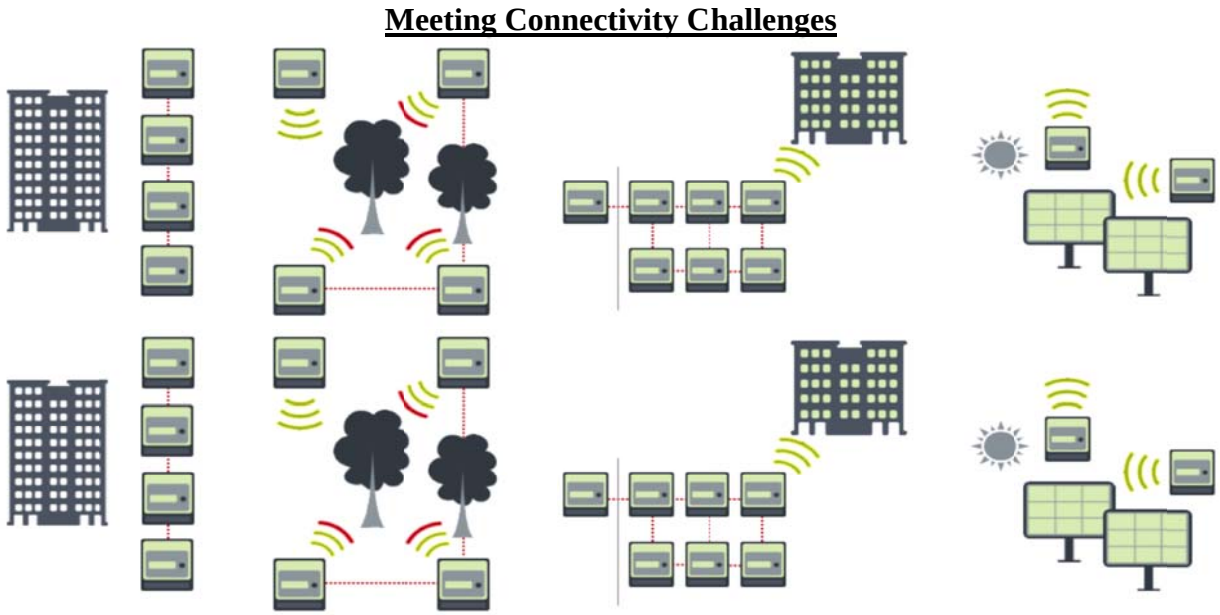
Table 4-3: AMF Meter Equipment and Installation Costs ($million) – Multi Jurisdiction

Multi-jurisdiction Deployment	Deployment Period Capital Cost	20-Year NPV (FY20$)
AMF Electric Meter Equipment and Installation	$88.84	$75.11
AMF Inventory	$1.51	$1.25
Support Infrastructure	$7.37	$6.32
Total	$97.92	$82.68

1.2 Communication Network Equipment and Installation

While the Company plans to evaluate alternative options for a shared communications system in the detailed design phase of development, the proposed AMF solution will leverage the evolving technological landscape to create a strong, secure mesh network. This will ensure that obstacles such as high rise buildings, changing RF conditions, meter vaults and low-density conditions will not pose significant restrictions in the new network environment.

Figure 4-1: AMF Communication Network Illustration



1.2.1 Network Equipment and Installation

Embedded within each meter is a communications module that enables the meter to communicate with peer meters and back office systems. These modules can either be outfitted with RF or cellular radios depending on various geographical and environmental considerations.

The principal focus of AMF network design is to support accurate and timely meter communications and data collection. However, it's possible the network could be leveraged for other distribution modernization functions which will be considered during detailed design.

A radio frequency mesh network is created by including a low-power, short-range radio in each meter. Each meter can transmit its own load profile as well as a finite collection of data from downstream meters. All meters with this technology dynamically communicate with each other to identify optimal communication pathways back to centralized data collection points. In doing so, these networks of devices can self-identify the most efficient paths on an ongoing basis and dynamically reconfigure to maintain optimal routing in varying operational situations.

For most urban/suburban areas where a sufficient population density exists, National Grid will utilize a radio frequency mesh network to facilitate meter communication with the backhaul system. In areas of low population density or poor RF performance a cellular communication solution will be leveraged by the meter. National Grid has assumed a five percent of the electric AMF meters will utilize cellular communications.

The AMF network will have several characteristics that enable communications efficiency and effectiveness. They are:

- Network components that will dynamically reroute to maintain the most efficient communications pathways across seasons, varying weather conditions and vegetation cycles.
- In the event of a power outage, the field area network will stay up long enough to transmit a power-off notification to alert the outage management system (OMS).
- Multiple device layers will collect and transmit data:
    - CGRs: Large bandwidth devices to manage data transmission to back-office systems;
    - Relays: Devices extend communication range
    - Meters: Small short range communication devices
- Overall network design and configurations implemented in each device will impact transmission speed.

The network will be designed to support low latency meter data collection. The general industry standard for AMF implementations in the United States has been to make bill-quality interval data available within 24 hours of collection. Under the Company's program electric customers will have access to their raw usage data within four to five hours after an interval. Gas customers will have access to this raw usage information within eight hours due to battery limitations. In both cases, customers will have bill quality data within approximately 24 hours of the end of a given interval. The Company expects to engage stakeholders further with respect to their real-time information access needs and can adapt the system to meet evolving needs.

1.2.2 Communication Network Installation Management

During the network installation and meter deployment phase of the program internal Company department resources will be paired with meter vendor resources under the direction of the AMF program management team to manage the communications infrastructure, meter deployments,

and coordinate the initial stabilizations as appropriate. This team will also be responsible for troubleshooting any meter related issues that occur during this phase. Once the meter deployment phase is complete, these responsibilities will be permanently assigned to the appropriate internal departments.

1.2.3 Backhaul

The backhaul network is a wide area network ("WAN") that is the high-speed, high-bandwidth communications structure between the collectors and the AMF Head-End. The network can either be public or private depending on several factors, including cost (both upfront and reoccurring), security, meter density in the area and distance from the existing fiber network.

Regarding private communication National Grid has a SONET fiber communications system that ties a number of larger transmission substations and other corporate facilities together. In some instances, distribution level substations also leverage this network to send operational data back to our corporate facilities. In addition to fiber optic systems, the Company operates numerous licensed and unlicensed microwave point-to-point links that provide backhaul connectivity for multiple operational and corporate systems.

AMF CGRs will backhaul their data utilizing 4G cellular networks or company private networks when located at substations or other company facilities with private network connectivity.

1.2.4 Communication Network Equipment and Installation Cost Summary

Table 4-4: Communication Network Equipment and Installation Costs ($million) – Rhode Island Only

Rhode Island Only Deployment	Deployment Period Capital Cost	20-Year NPV (FY20$)
Network Equipment and Installation	$2.04	$2.83
Communication Network Installation Management	$2.42	$3.69
Backhaul	-	$1.06
Total	$4.46	$7.58

<u>Multi-Jurisdiction Deployment</u>

Cost synergies reflected in the following multi-jurisdiction deployment table are the result of lower vendor services support costs attributed to volume efficiencies that could be experienced across the operating companies.

Table 4.5: Communication Network Equipment and Installation Costs ($million) – Multi Jurisdiction

Multi-jurisdiction Deployment	Deployment Period Capital Cost	20-Year NPV (FY20$)
Network Equipment and Installation	$2.04	$2.83
Communication Network Installation Management	$2.09	$3.18
Backhaul	-	$1.06
Total	$4.12	$7.06

1.3 IT PLATFORM AND ONGOING IT OPERATIONS

Five IT platform elements are included as part of the AMF program; AMF Head-end and Meter Data Management Systems, enhancements to the Customer Service System, Customer Engagement Products and Services, IS Infrastructure, and Cyber Security. Each of these elements is described below.

1.3.1 AMF Head-End and Meter Data Management System

The AMF Head-end is the command and control system that integrates the communications infrastructure in the field and the back-office systems. An AMF Head-End communicates with AMF meters to collect meter data, interval readings and events. It also can ping individual meters as necessary and push firmware updates across the network. For electrical systems, it can remotely initiate the connection and disconnection of the service at a meter level. This system serves as the main point bi-direction data transmission across the meter population.

An effective AMF platform also requires a meter data management system (MDMS). The MDMS provides data storage and archival capabilities for meter information. Additionally, the MDMS performs initial validation, editing and estimating of the incoming meter data. Once the raw data has been processed, it can be utilized by back-office systems such as billing, customer service, and data analytics. This data can also be uploaded to the Energy Management portal and Green Button Connect for customer and authorized third party viewing and utilization.

An important function of the MDMS is the validation, editing, and estimating process. During validation, editing, and estimating, the MDMS reviews all incoming data from the AMF meters in an effort to validate data accuracy, estimate data and identify anomalies. Any meter with data that cannot pass initial validation is routed to a “validation queue” which is worked by support staff. From this queue missing data intervals, data integrity issues and configuration errors are resolved to produce billing quality data.

Cost estimates in this area assume the Company contracts with an outside service vendor to host these systems. The arrangement is referred to as Software as a Service.

1.3.2 Service System

The customer service system (CSS) is utilized to manage customer-facing activities. A multitude of processes pull meter data, perform billing and payment processing, support collections and

various pricing program rates. As part of the AMF deployment CSS will be modified and configured to support the enhanced data requirements of smart metering. Additional configurations will be made for expanded pricing programs such as time-of-use and critical peak pricing. With such a prominent role in customer interaction, an effective CSS with support for AMF capabilities is critical to maintaining customer satisfaction. Moreover, as distributed energy resource (DER) penetration increases throughout Rhode Island, CSS must be adaptable to the dynamic energy environment.

CSS also possesses capabilities intended to foster our relationship with customers and assist in customer retention through personalized service. The system interfaces with various back-office resources to create personal profiles for customer engagement. CSS can be linked with an interactive voice response (IVR) system to send automated outage response notifications received from AMF meters. Additionally, CSS will present customer history and real-time meter status to the customer services representatives (CSR) providing enhanced customer service. CSRs will also have a new suite of tools to perform meter diagnostics and remote service re-connection.

Contact Center Personalization Engine Tools
The Company is planning on making investments in the technology utilized by Customer Service Representative (CSR) staff operating out of the Contact Center in order to facilitate meaningful interactions with low and medium-income customers.

These enhanced tools will provide staff with necessary customer specific data to provide these customers with information about the most relevant and appropriate programs for their particular situations.

While this solution is currently intended to utilize monthly consumption data, access to the more timely and granular consumption data enabled by AMF would support a more robust solution on multiple levels:

- Enable more timely and specific outbound customer alerting and communications, as these communications would be based on near real-time observations of customer consumption patterns
- Enable Contact Center staff to engage customers about changes to consumption patterns (and likely resulting bill changes) mid-month, while customers would still have an opportunity to take actions to impact an upcoming monthly bill. Access to this information earlier in a customer billing cycle could reduce both the scale of volatility in customer bills as well as the likelihood of a customer receiving an unexpectedly high bill. Both outcomes are drivers of inbound Contact Center call volumes, as well as reduced on-time bill payment performance by customers
- Provide Contact Center staff with more granular, actionable and accurate insights into drivers of customer energy consumption patterns, as well as the likely impact and potential benefits associated with customers' taking behavioral actions or implementing other direct energy efficiency measures. This could be expected to

drive both higher customer satisfaction with Company energy efficiency programs, as well as greater customer adoption of these programs.

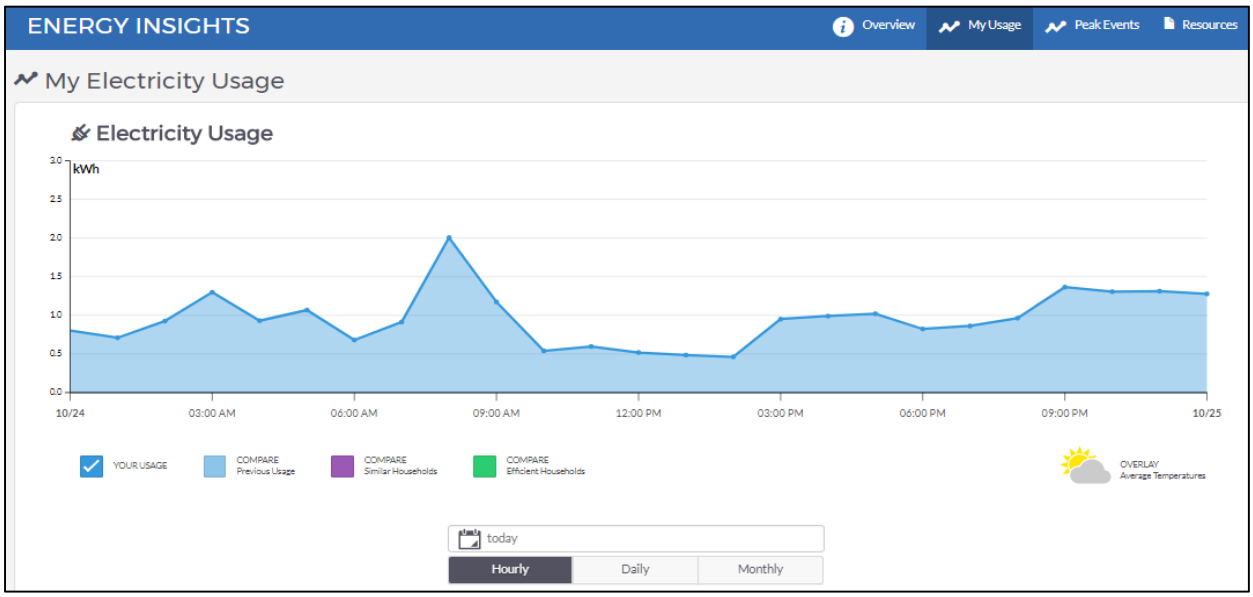
1.3.3 Customer Engagement Products and Services

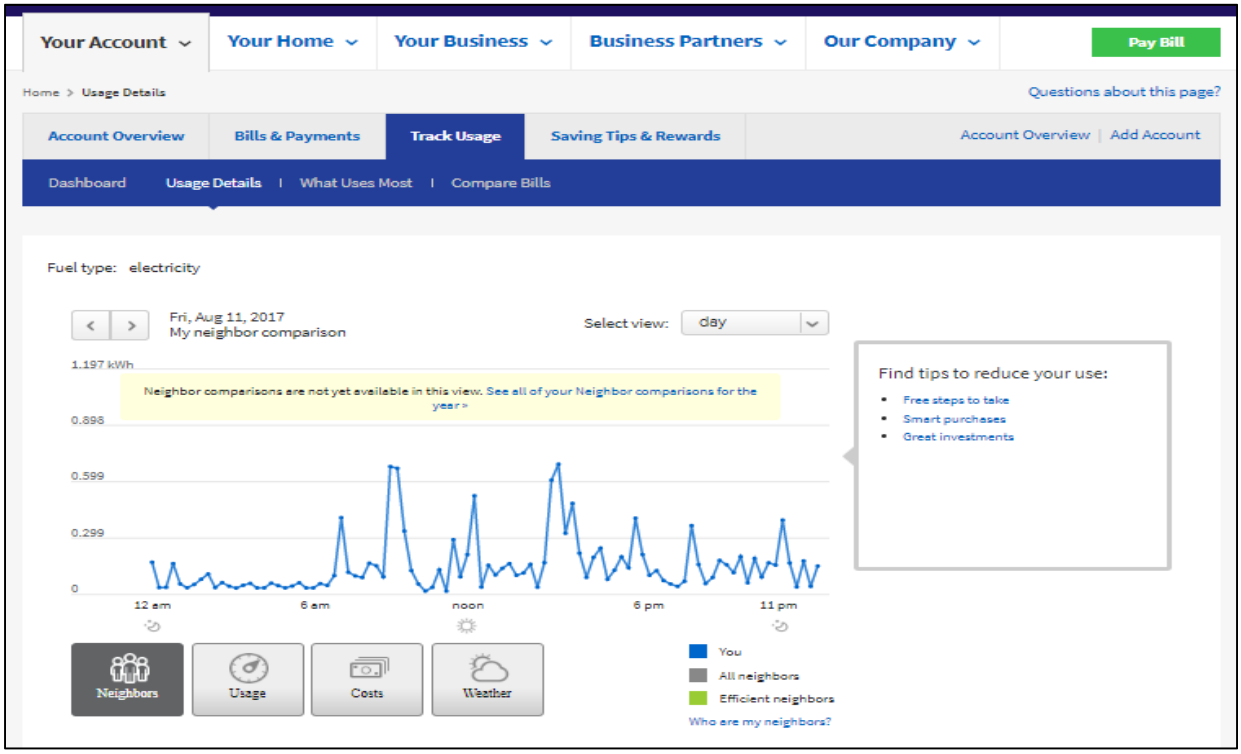
For the benefits of smart meter technology to be fully realized by the customer, the Company must pair AMF technology with proactive customer and market engagement initiatives. As part of the AMF deployment, National Grid will develop and implement an Energy Management Portal and Green Button functionalities (i.e. Green Button Download My Data and Green Button Connect My Data). The cost of these solutions is included in the AMF benefit cost analysis.

<u>Energy Management Portal & the Customer Engagement Management Platform (CEMP)</u>
As part of the AMF deployment, National Grid will be develop an energy management web portal (hereafter *the Portal*) that will act as a hub for residential, commercial, and industrial customers to view their energy usage, including smart meter interval data. The Portal will allow electric customers to view raw consumption data within four hours of the end of a given billing interval and gas customers within eight hours. Both electric and gas customers will be able to view billing quality data within 24 hours. Additionally, from the Portal customers will have the ability to download and/or share their interval data with qualified third parties via the Green Button Download My Data and Green Button Connect My Data features, respectively.

Access to this granular interval data, paired with personalized insights, will enable customers to make better informed decisions about how and when they use energy, and can help facilitate action that will reduce customers' energy usage and costs, aligning well with the power sector transformation goal of "giving customers more energy choices". The Company already has experience in delivering this type of customer engagement portal through both its ongoing Smart Energy Solutions smart grid pilot programs. Examples of these Portals from the two Smart Energy Solutions pilot programs are included in Figure 4-2. The Company will apply learnings and best practices from these two programs to ensure that customers are provided with a "best in class" portal experience that leverages AMF deployment. In fact, within it Smart Energy Solutions program in Worcester, MA, the Company found that customers who utilized the provided Energy Management Web Portal saved an incremental 10% in peak energy load during critical peak pricing hours, as well as an incremental 3-5% in annual energy savings, compared to those who did not access the Portal.

Figure 4-2: Screenshots of Energy Management Portals from Worcester SES and Clifton Park SES



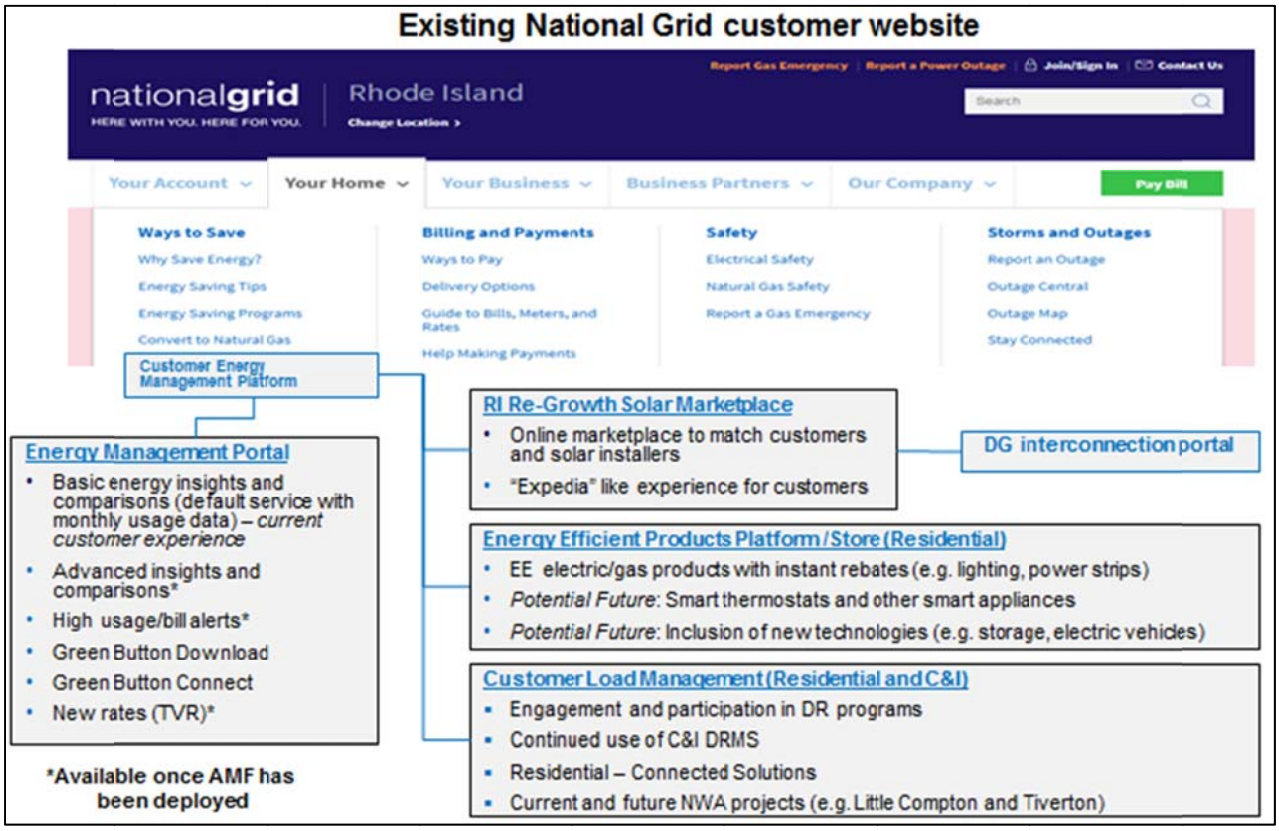


The Company envisions that this proposed energy management portal will exist as the foundational element of a larger approach denoted as the Customer Energy Management Platform (CEMP). The CEMP aims at providing a "state of the art" platform approach to best provide customers with accurate and personalized energy usage information, as well as various choices and options to enroll in programs and services that can leverage the more granular data provided by AMF deployment. These include programs and services such as energy efficiency programs, demand response, adoption of distributed generation (e.g. solar PV and Electric Vehicles), and other potential time-varying pricing programs that may accompany AMF deployment. From the CEMP, customers can easily and conveniently access a variety of tools and information that will help them conserve energy and better manage their energy usage.

Customers will also be able to access existing educational and safety information, all of which is currently provided to customers on the Company's home webpage. As such, the CEMP will be accessible through that same channel, and will seek to link together a number of existing customer portals and third party websites, with the proposed Energy Management Portal serving as the anchor of the CEMP. An illustrative example of what the CEMP could look like is provided in Figure 4-3, and the Company will continue to refine this design based on stakeholder and customer feedback, as well as on the market evolution of customer offerings, technologies, and solutions.

In the long term, the Company envisions integrating the CEMP with smartphone applications that allow customers to access their data on the go, in addition to being able to create customizable alerts notifying them of grid conditions (including outages, reductions or curtailments), unusual consumption patterns, and bill pay.

Figure 4-3 – Illustrative Example of Customer Energy Management Platform ("CEMP")

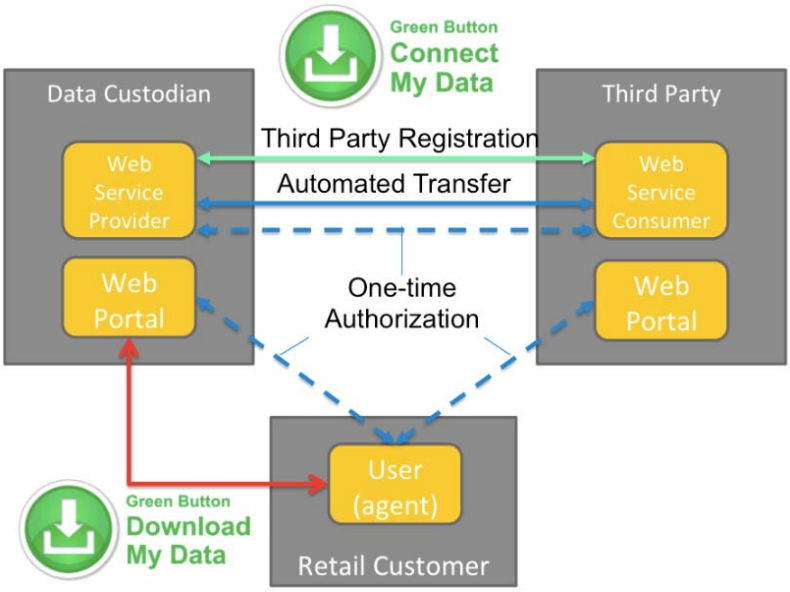


Green Button

Many utilities, including National Grid, have implemented the Green Button Download My Data functionality. This system gives every utility customer the ability to download their personal energy consumption data directly to their computer in a secure manner. Additionally, if customers are interested, they can upload their data to a third-party application.

The Green Button Connect My Data functionality takes this process further by streamlining it to allow utility customers to automate the process. With Green Button Connect My Data customers can securely authorize both National Grid and designated third parties to send and receive data on the customer's behalf as may be seen in Figure A-4. Upon authorization, energy usage data can be transferred as required. Making this data accessible to third parties is critical to animating the market and driving innovation.

Figure 4-4: Standard communications protocol for Green Button Connect My Data



1.3.4 Information Technology (IT) Infrastructure

The following IT infrastructure capabilities are required to support the AMF systems. These capabilities are further described in Chapter 3 of the Plan, *Investment in a modern Grid.*

- Telecommunications - Enhancements are required to expand existing backhaul capabilities and bandwidth to support data transfer.
- Enterprise Service Bus (ESB) - To implement several of the AMF and ADMS use cases, systems in the new distribution ESB will need to communicate with legacy systems that currently use a corporate ESB.
- Information Management & Advanced Analytics - Costs in this category allow data ingestion, data quality and analytic capabilities to be configured and deployed. The big data analytics capabilities will allow for the analysis of the data gathered from existing and third-party data sources to provide valuable output reflecting current state as well as predictive and prescriptive outcomes.
- Cloud Computing & Data Lake - Rather than hosting these data management capabilities on servers within National Grid data centers, greater efficiencies, redundancies, and security regimes can be cost effectively procured by outsourcing this function. This cost element captures the costs associated with setting up a cloud data lake environment.

While the IS projects described above are a necessary component of the AMF proposal, their use goes beyond AMF. Therefore, to avoid duplication in calculating the total Revenue Requirement for the Plan, the Company has removed the AMF allocation of these projects from the schedule of AMF costs. The full costs of each IS project above are included in Chapter 3: *Investment in a Modern Grid*. However, the Company uses the AMF portion of the IS project costs when computing the AMF benefit-cost analysis.

1.3.5 Cyber Security

The Company understands that in an evolving technology landscape, there are growing cyber security risks. To best secure AMF, National Grid is preparing a comprehensive cyber security plan to ensure protection for both customers and the company. At a high level, this plan will ensure that proper end-to-end security controls are incorporated into all aspects of design, implementation, and deployment of AMF meter technology. These security controls will ensure that all AMF meter devices, communications infrastructure, and back office systems supporting them, along with user portals and other critical infrastructure are fully secured and monitored. Moreover, the plan will also ensure that any data transmitted across this network is properly encrypted using nationally recognized standards and protocols.

The Company will leverage industry-leading best practices to meet the goals of an effective cyber security program. These practices include training, change control, configuration management security, access monitoring, incident management, end-to-end encryption, network segmentation, firewalls and other security controls. The cyber security measures outlined will enable National Grid to maintain confidentiality and integrity to the best of its ability in both the short and long term future of AMF.

All systems, components, and integrations from the AMF Business Case were considered as part of this review in consideration of the following service domains:

- Network Security Services
- Data Security Services
- Identity & Access Management Services
- Threat and Vulnerability Management Services
- Security Operations Center Services
- Host and Endpoint Security Services
- Security Policy Management Services
- Cryptography Services
- Change & Configuration Management Services
- Security Awareness & Training Services
- Application Security Services
- Third Party Assurance Services
- Remote Access Services
- Privacy Services

1.3.6 IT Platform and Ongoing IT Operations Cost Summary

Table 4-6: IT Platform and Ongoing IT Operations Costs ($million) – Rhode Island Only

Rhode Island Only Deployment	Deployment Period Capital Cost	20-Year NPV (FY20$)
AMF Head-end and Meter Data Management Systems*	[redacted]	[redacted]
Customer Service System	[redacted]	[redacted]
Customer Engagement Products and Services	[redacted]	[redacted]
IT Infrastructure	[redacted]	[redacted]
Cyber Security	[redacted]	[redacted]
Total	$88.73	$137.79

* Assumes Software as a Service payments are capitalized and are discounted to 2020 dollars

Multi-Jurisdiction Deployment

Cost synergies reflected in the following multi-jurisdiction deployment table are the result of lower Head-end and Meter Data Management SaaS fees attributed to volume efficiencies, and the sharing of the fixed costs related to development and deployment of supporting computer technologies, that could be experienced across the operating companies.

Table 4-7: IT Platform and Ongoing IT Operations Costs ($million) – Multi Jurisdiction

Multi-jurisdiction Deployment	Deployment Period Capital Cost	20-Year NPV (FY20$)
AMF Head-end and Meter Data Management Systems*	[redacted]	[redacted]
Customer Service System	[redacted]	[redacted]
Customer Engagement Products and Services	[redacted]	[redacted]
IT Infrastructure	[redacted]	[redacted]
Cyber Security	[redacted]	[redacted]
Total	$53.15	$72.78

** Assumes Software as a Service payments are capitalized and are discounted to 2020 dollars*

1.4 Project Management and Ongoing Business Operations

1.4.1 Project Management

AMF Project Management will provide the necessary framework for the successful integration of interdependent technology components and processes through the proposed thirty-six month AMF program. The project management team will consist of internal project management leadership, internal business support and external support.

1.4.2 Equipment and Installation Refresh Cost

This area includes the following cost elements:

- AMF meter replacement cost recognizes that over time meters will need to be replaced for a number of reasons, including damage or failure. While a warranty is provided on meters for a one-year period, after this period expires, it will be National Grid's responsibility to procure replacements.
- A subset of electric meters are located in rural areas with insufficient density to form a stable and consistent mesh. For these locations, a meter with a cellular communication module will be leveraged and will have a corresponding ongoing service fee with public cellular providers.
- AMF meters can communicate with peer meters through RF technology for short range communications but rely on more robust communications to reach back office systems. For this CGRs are leveraged which can aggregate data from local metering mesh clusters and deliver data to the head-end system. Over time, it is expected that these devices will fail and require replacement. This cost element addresses the costs of the replacement equipment and the installation cost associated with replacing failed equipment throughout the duration of the program.
- CGRs used to support electric AMF meters / gas ERTs, also have a corresponding annual service fee allowing them to communicate with the public cellular backhaul. These cost elements are annual cost for operations.

1.4.3 Ongoing Business Management

AMF deployment will require additional operational support to monitor and manage system performance and oversee numerous AMF processes such as validation, editing, and estimating, meter and communication mitigation, field area network performance and firmware deployments. The Company's pilot experience is used to estimate these costs.

1.4.4 Customer Engagement Cost

A robust customer education and outreach effort will be needed to support the AMF rollout. The objective of the Customer Engagement plan is to build customer awareness and interest in both, the grid modernization and the AMF that will enable it, in order to eliminate potential adoption barriers, encourage participation and facilitate transition to AMF meters. The line item captures costs related to multi-channel marketing content development and implementation, community outreach, surveys to test communications effectiveness and satisfaction, and additional support staff.

1.4.5 Project Management and Ongoing Business Operations Cost Summary

Table 4-8: Project Management and Ongoing Business Operations Costs ($million) – Rhode Island Only

Rhode Island Only Deployment	Deployment Period Capital Cost	20-Year NPV (FY20$)
Project Management	$5.58	$13.25
Equipment and Installation Refresh Cost	$0.12	$2.98
Ongoing Business Management	-	$6.27
Customer Engagement Cost	-	$8.30
Total	$5.70	$30.80

Multi-Jurisdiction Deployment

Cost synergies reflected in the following multi-jurisdiction deployment table are the result of lower project management support costs as well as lower per unit meter costs attributed to volume efficiencies that could be experienced across the operating companies.

Table 4-9: Project Management and Ongoing Business Operations Costs ($million) – Multi Jurisdiction

Multi-jurisdiction Deployment	Deployment Period Capital Cost	20-Year NPV (FY20$)
Project Management	$4.47	$11.58
Equipment and Installation Refresh Cost	$0.11	$2.94
Ongoing Business Management	-	$6.27
Customer Engagement Cost	-	$8.30
Total	$4.58	$29.09

2. AMF BENEFITS

2.1 AVOIDED O&M COSTS

2.1.1 AMR Meter Reading

National Grid currently has a fleet of AMR meters covering its electric and gas service territory. These AMR meters have monthly reads that are acquired through radio frequency technology. These collections are done by a fleet of service vans which meter readers drive along routes to allow communication with each meter. Starting in the second half of fiscal year 2021, National Grid will replace its current electric AMR meters with AMF meters thereby reducing the need for AMR meter readers, associated vehicles and annual AMR meter reading equipment maintenance costs.

2.1.2 Meter Investigation

Smart meters will provide auto and on-demand meter reads and diagnostics to alert and inform the Company about anomalous situations that in-turn allows for the reduction of visits to the meter for manual meter investigations. This will reduce labor and vehicle costs. The types of manual meter investigations that can be avoided in part include Use on Inactive Electric Meter Investigations, Meter On/Off and Meter Reads.

2.1.3 Remote Connect and Disconnect

Advanced Metering provides the ability to connect and disconnect electric service remotely and in near real-time. This capability can be used in various service situations to avoid initial and in some cases repeat visits to the meter for manual meter connects and disconnects. The estimated savings assumes the Company would need to continue manual field connects and disconnects for dual fuel customers. With respect to collections related disconnects, the Company will comply with all requirements per Title 39 of the State of Rhode Island General Laws and the Rules and Regulations promulgated by the PUC and the Rhode Island Division of Public Utilities and Carriers regarding termination of service, including visits to the customer premises. Avoided meter visits will reduce labor and vehicle costs.

2.1.4 Reduction in Damage Claims

In the course of business, despite efforts for mindfulness and safety consciousness, accidents occasionally occur. In certain circumstances arising from driving to/from service orders, routine meter reading routes, or other day to day activities, damage to third party property can occur. As discussed during some of the previous AMF benefits, the advanced metering technologies will allow for remote interaction that will keep metering service reps off of the road and away from customers' premises. The reduction of opportunities for accidents and damage to occur will reduce damage claims.

2.1.5 Storm OMS Benefit

The Company spends millions of dollars annually on storm restoration efforts to include procurement of external crews, meals and lodging, and overtime. AMF would increase visibility during major and minor storms due to the ability to contact meters remotely and determine outage status. This enhanced situational awareness creates efficiencies with crew management and deployment as well as the avoidance of false outages, thereby reducing costs.

2.1.6 FCS Meter Reading

The Field Collection System (FCS) is currently utilized to perform manual and AMR meter reading for both residential and commercial customers. With the implementation of AMF meters the FCS back-office costs will be phased out as the AMF system utilizes different back office systems to manage data collection and processing.

2.1.7 Interval Meter Reading

The AMF system will replace the current MV90 system. The MV90 system currently supports electric interval metering reading for Narragansett Electric, Niagara Mohawk, and Massachusetts Electric. A benefit has been developed and allocated to Narragansett Electric for the costs that will be avoided, including MV90 licensing and IS support, and avoided field visit costs.

2.1.8 Avoided O&M Costs Summary

Table 4-10: Avoided O&M Costs ($million)

Avoided O&M Costs	20-Year NPV (FY20$)
AMR Meter Reading	$14.75
Meter Investigation	$6.20
Remote Connect and Disconnect	$26.90
Reduction in Damage Claims	$2.61
Storm OMS Benefit	$1.88
FCS Meter Reading	$0.28
Interval Meter Reading	$0.02
Total	$52.64

2.2 AVOIDED AMR COSTS

2.2.1 Capital

The AMF program will avoid the need and associated capital costs of the life-cycle replacement program for the existing electric AMR meters. The AMR life-cycle replacement program includes many of the same capital activities as the AMF program such as electric meter installation, communication equipment upgrades, and project management. The avoided cost of these similar activities are estimated as part of, and consistent with, the AMF model.

2.2.2 Operations & Maintenance

The AMF program will avoid the need and associated O&M costs of the life-cycle replacement program for the existing electric AMR meters. The AMR life-cycle replacement program includes many of the same O&M activities as the AMF program such as call center calls, customer communications, and project management. The avoided cost of these similar activities are estimated as part of, and consistent with, the AMF model.

2.2.3 Avoided AMR Costs Summary

Table 4-11: Avoided AMR Costs ($million)

Avoided AMR Costs	20-Year NPV (FY20$)
Capital	$60.52
Operations & Maintenance	$5.97
Total	$66.49

2.3 CUSTOMER BENEFITS

2.3.1 Volt-VAR Optimization ("VVO")

The more granular and frequent data from AMF meters enhances the effectiveness of this program. In particular, a subset of AMF meters can act as end of line sensors that provide real-time information to centralized control systems to adjust grid operational characteristics. More granular metering information can also define more precise load models of individual circuits with adjustments for time of day and year or temperature correlation. For the purposes of this business case, the Company recognizes VVO benefits that would be considered incremental to those achieved by Grid Modernization.

2.3.2 Energy Insights/High Usage Alerts

Through the deployment of AMF smart meters and associated back-office infrastructure, the Company will have access to customer usage data in near real-time, with granularity at sub-hour reading intervals. National Grid will be building an Energy Management Portal that will act as a hub for residential, commercial, and industrial customers to view their energy usage, including the smart meter interval data. This platform will allow electric customers to have access to their raw, not validated, edited and estimated usage data within four hours after an interval, and gas customers will have access to raw usage information within eight hours[1]. Customers will subsequently be able to view billing quality data within 24 hours. In addition to allowing customers to view their energy consumption in near real-time, the Energy Management Portal will allow customers to compare their usage and costs against certain variables such as weather, historic consumption at the same time and dates, and neighbors' usage to understand factors that may be driving their energy use.

Armed with this information, customers can take action using the functionality that the Energy Management Portal provides. This could include enrollment in the Company's energy efficiency and demand response, as well as any pricing programs that are implemented as a part of or subsequent to the AMF deployment. In addition, customers can access the Energy Management Portal for energy savings programs and personalized energy tips and strategies to reduce their energy usage and save money. The Energy Management Portal can also be customized with alerts, notifying customers of high use or events on the electric system such as an outage.

[1] Gas customers will receive monthly register reads until such time that Gas ERTs are installed and interval metering becomes available.

As described in a report issued by the Electric Power Research Institute (EPRI)2, there is a range of potential savings that can be achieved by empowering customers with personalized energy insights. The EPRI report cites savings achieved during 35 pilot projects in the range of zero to twenty-five percent. To address the potential uncertainty of the benefit estimate for the Energy Management Portal, the Company has calculated a low and high benefit of one percent and three percent, respectively. The low savings estimate will be included with the low TVP pricing options and the high savings with the high TVP pricing options in the Company's BCA analysis.

2.3.3 Time Varying Pricing ("TVP")

AMF technology will allow National Grid to collect utility customers' energy usage in greater detail than previous technologies will allow[3]. This time-stamped data is the foundation by which new pricing programs can be implemented. Through the provision of more granular, time-variant price signals, customers will have new opportunities to reduce energy consumption and/or shift usage from high cost periods to lower cost periods, while also creating system savings.

The Company has evaluated an opt-out scenario where, by default, a large percentage of customers will be enrolled in time variant pricing programs, as well as an opt-in scenario, in which customers must choose to enroll on the rate. Through educational initiatives and pricing signals designed to encourage efficient consumption behavior, over time customers will proactively shift portions of their energy consumption to times of day where energy rates are lower, thereby resulting in reductions in their electric bills. In addition to incentivizing customers' savings, consumers shifting their energy usage will flatten the overall load curve. This shift, combined with other programs such as VVO and energy efficiency, will lower energy peaks, thus reducing expenditures on generation capacity.

Creating an optimal TVP program that maximizes the net benefits to the system could be achieved over years of phase-ins or introductions of new rate designs, software tools, data availability and customer education. This means an optimal design will likely evolve over time, while the concepts described in this business case are intended to be illustrative of how such programs could be implemented. The conceptual TVP program described in our BCA analysis consists of two supply pricing components:

Time of Use – supply prices will vary by specific times of day, every month, with peak (higher price) and off-peak (lower price) periods defined. In response to time of use rates, customers save by reducing consumption during higher cost peak periods and/or shifting use from peak to off-peak periods.

Critical Peak Pricing– supply prices will increase further by time of day on a limited number of specific days (typically during high demands on the electrical system, where customers are notified in advance) designated as critical peak pricing events. Critical peak pricing is designed

[2] Electric Power Research Institute (EPRI), *Characterizing and Quantifying the Societal Benefits Attributable to Smart Metering Investments*, July 2008.
[3] Section 3.4 provides an overview of why AMR technology is insufficient to deliver the Company's TVR program

to recover most of the costs for generation capacity in the hours that have the greatest need for peak capacity. When customers avoid consumption during the highest peak loads of the year, future generation capacity costs, as determined through ISO-NE's Forward Capacity Market auction, are reduced relative to what they otherwise might have been, resulting in capacity cost savings that are included in supply rates for customers. CPP events would be limited to a specific number of days and during specific hours of the day, which gives customers a greater level of flexibility relative to a set critical peak price period.

The benefits from the Company's illustrative TVP program will result from savings in generation capacity costs described above as well as savings in energy costs[4]. Energy cost savings result from a reduction in energy consumption during higher-cost peak periods, and the resulting reduction in the hourly marginal generation cost.

The level of benefits achieved will be directly related to the 1) number of enrolled customers and 2) the level of customer response to the new price signals and the resulting peak and energy savings. National Grid recognizes that customers will require a substantial amount of education, training and access to tools that will enable them to become active participants in TVP programs. For example, customers will need to fully understand the cost implications of consuming electricity during hot summer days, as compared to a springtime morning, as well as how specific technology and program offerings can help them manage their energy costs. With this in mind, the Company evaluated both "High" and "Low" scenarios that vary assumptions about peak reductions and reduction in on-peak energy use.

Energy and capacity savings were calculated for four scenarios: 1) Opt-in TVP with low customer responsiveness; 2) Opt-in TVP with high customer responsiveness; 3) Opt-out TVP with low customer responsiveness; and 4) Opt-out TVP with high customer responsiveness.

<u>Key Assumptions</u>
Key assumptions used to estimate potential savings for the four scenarios are summarized in Table 4-12. These assumptions leverage multiple sources to include:

- Smart Grid Investment Grant Program[5];
- Price Responsiveness Survey[6]; and
- Experiences from National Grid's Smart Energy Solutions smart grid pilot program in Worcester, MA

For our illustrative rate program, National Grid assumed all residential customers would have the ability to participate in the TVP program. Customers would have the ability to Opt-out of TVP, and for this analysis, the Company assumed that 15% of the customers would do so. This 15% opt-out assumption is conservative, as the Company has experienced a less than 10% opt-out in

[4] The assumptions on the value of avoided capacity cost savings and avoided energy cost savings are based on the 2017 update to the 2015 New England Avoided Energy Supply Cost Study.
[5] American Recovery and Reinvestment Act of 2009, *Customer Acceptance, Retention, and Response to Time-Based Rates from the Consumer Behavior Studies*, November 2016.
[6] The Brattle Group Economists (Submitted to EDI Quarterly), *The Discovery of Price Responsiveness – A Survey of Experiments involving Dynamic Pricing of Electricity*, March 2012.

the Smart Energy Solutions smart grid pilot program in Worcester, MA, as well as a 98% customer participation retention rate over the Pilot's first two years.

Customer participation is also dependent on the pace of meter deployment, which is assumed to be 33% during the second half of FY21, and 67% in FY22. Steady state enrollment in the TVP is assumed to occur after year 10. This acknowledges and assumes that while all meters scheduled to be deployed as of a given year become operational, customer behaviors are slower to change, implying lower capacity and energy savings in the early years of the program. As customers become familiar with the new TVP program, more customers will become reliability active in delivering CPP load reductions. Different levels of customer engagement and responsiveness to the rates are captured in the low and high scenarios.

Table 4-12: Assumptions to estimate savings from time varying rates

Program Type	Scenario	Customer Participation	Meter Deployment Rate/Year	Years to Steady State	CPP Peak Load Reduction	TOU OnPeak Energy Reduction
Opt-In	Low	20%	33.33%/66.67%	10	8%	4%
Opt-In	High	20%	33.33%/66.67%	10	18%	8%
Opt-Out	Low	85%	33.33%/66.67%	10	6%	3%
Opt-Out	High	85%	33.33%/66.67%	10	13.5%	6%

Forecasted Savings

A summary of the total savings over 20 years is shown in Table 4-13. The savings represent net savings as they are offset by the costs to market and administer the TVP program (i.e. assumed to be 20% of the gross benefits). The range of savings is from a low of $8.4 million to a high of $57.4 million (with a discount rate of 7.51%).

Table 4-13: Summary of Total TVP Savings over 20 Years ($million)

	WACC (after tax)	
NPV ($millions)	**7.51%**	
Opt-In	**Low**	**High**
CPP Savings	$4.6	$10.3
TOU Savings	$3.8	$7.7
Total Savings	$8.4	$18.0
Opt-Out	**Low**	**High**
CPP Savings	$14.6	$32.9
TOU Savings	$12.3	$24.5
Total Savings	$26.9	$57.4

2.3.4 Electric Vehicle Pricing

The Company expects the introduction of AMF and TVP to enable demand savings and avoided energy charges. The estimate for the electric vehicle integration benefit assumes a certain percentage of electric vehicle charging is done during peak periods and can be displaced, thereby generating both system demand (kw) reductions/savings and avoided energy costs by charging at off-peak versus peak rates.

2.3.5 Customer Benefits Summary

Table 4-14: Customer Benefits ($million)

Customer	20-Year NPV (FY20$)
Volt-VAR Optimization	$13.73
Energy Insights/High Usage Alerts*	$22.02
Time Varying Pricing*	$8.43
Electric Vehicle Pricing	$24.81
Total	$68.99

* Opt-In Low Savings Scenario

2.4 SOCIETAL BENEFITS

2.4.1 Reduction in Greenhouse Emissions

AMF will produce societal benefits through the reduction of greenhouse gas emissions. Reductions will occur as a result of energy conservation enabled by AMF, including enhanced access to usage information and usage alerts, education, and pricing programs. Greenhouse gas emissions will also be reduced due to load reductions enabled by AMF/VVO integration and by eliminating the need for vehicle trips to read meters, connect and disconnect service, and investigate service anomalies.

2.4.2 Societal Benefits Summary

Table 4-15: Societal Benefits ($million)

Societal (CO2 Emission Reductions)	20-Year NPV (FY20$)
AMR Meter Reading	$0.02
Meter Investigations	$0.01
Remote Connect and Disconnect	$0.17
Energy Insights/High Usage Alerts	$7.88
Time Varying Pricing	$2.86
Volt-VAR Optimization	$5.65
Total	$16.40

2.5 REVENUE BENEFITS

2.5.1 Reduction in Theft of Service

Smart meter technology combines greater frequency of readings with sophisticated algorithms to ensure that electric and gas consumption is accurate. AMF provides tamper alarms after detecting usage that attempts to bypass the meter, and also produces customer level data that can be analyzed for reasonableness in order to identify unusual patterns that may reflect theft of service. If discrepancies are proven to be theft, the Company can take action to address the situation, thus minimizing a cost that would normally be socialized across the customer base, thereby saving other customers money.

Per a report from the Electric Power Research Institute (EPRI)[7], today's well managed utilities with proactive revenue protection programs will experience average revenue losses from all non-technical sources (excluding bad debt) of 1.5%, with 3% representing the higher end of the range. This same report explains that AMF with meter data management can mitigate many of the factors contributing to these losses. For the purposes of this business case, we have utilized a conservative assumption that AMF implementation will reduce non-technical revenue losses (excluding bad debt) by .25%.

2.5.2 Reduction in Write-offs

Bad debt is incurred when National Grid customers are unable or unwilling to pay their billing obligations. National Grid makes every reasonable attempt to collect those outstanding bills. Eventually, this unrealized revenue is classified as a loss and is written off and spread across all customers. A smart meter's ability to remotely disconnect service, within the existing approved parameters and in consideration of all consumer protection processes, will reduce these socialized costs. Although the smart meters cannot entirely eliminate bad debt write-offs, the remote disconnect function can reduce the period between when an electric customer defaults on payment to when their meter is actually disconnected, thus reducing the loss incurred. In time the impact of this functionality will prompt a change in customer behavior, resulting in a significant reduction in overall bad debt and operational expense. This will improve the customer experience due to fewer collection activities such as mailings, phone calls, and field visits.

2.5.3 Electromechanical Meter

The majority (i.e. approx. 70%) of electric meters currently deployed in the Rhode Island service territory are electromechanical by design. Electromechanical meters operate by counting the rotation of an internal metal disk, and various studies have shown that the accuracy of this count begins to decline over time. The net effect of the reduced accuracy is to understate usage, thereby decreasing revenue. The electromechanical meter benefit recognizes the ability to increase revenue through the introduction of AMF and related solid state technology which mitigates the impact of declining meter reading accuracy over time.

[7] Electric Power Research Institute, *Advance Metering Infrastructure Technology – Limiting Non-Technical Distribution Losses in the Future*, December 2008, Pages 1-6, 1-14.

2.5.4 Revenue Benefits Summary

Table 4-16: Revenue Benefits ($million)

Revenue Benefits	20-Year NPV (FY20$)
Reduction in Theft of Service	$26.95
Reduction in Write-offs	$6.15
Electromechanical Meter	$15.98
Total	$49.08

2.6 ADDITIONAL SYNERGIES/COORDINATION BENEFITS

The components, capabilities, costs, and benefits articulated in the prior sections all align to the core vision of AMF for near-term implementation. Other capabilities and use cases were also contemplated but were determined to be out of scope. As such, no costs or benefits have been defined for these capabilities. However, as AMF deploys, stabilizes, and matures, the preliminary vision can be expanded upon in the following ways.

2.6.1 Water Utility/Municipality Revenue Opportunities with Joint Use

Electric utilities have pursued the concept of "Joint Use" for many years through the use of shared infrastructure like utility poles that support electric, telephone, and cable television lines. Applied to metering technology, the technical umbrella of National Grid's proposed infrastructure could be leveraged to support the metering efforts that overlap with water utilities. While water meters themselves could likely be procured and installed by the respective water agency, wireless radios, backhaul, and back-office validation systems could be owned by National Grid but provided as "Metering-As-A-Service" to interested jurisdictions. In this way, the concepts of greater customer information and empowered decision making can be expanded as a more holistic capability for Rhode Island customers.

2.6.2 AMF for Streetlights and Ancillary Devices

Many metering technology vendors, in addition to numerous lighting control technology applications, offer metering capabilities for street light infrastructure which complements the other proposed metering capabilities. Street lights have a universal, industry standard receptacle for a light sensitive photoelectric control that is used to facilitate the changing dusk to dawn operating schedule throughout the year. This lighting control can be replaced with a new control device that incorporates dedicated solid state AMF meter chip technology. At a minimum, this control device can integrate with the metering mesh to transition street lighting from an unmetered to a metered billing application.

The increasing customer demand for this metering functionality is being fostered by the instant on/off and dimming capabilities of solid state lighting technology (i.e. light emitting diode (LED's)) to provide customized, variable operating schedules and illumination levels based on application needs. The additional energy savings of these tailored usage applications beyond the savings achieved through conversion from legacy lighting technologies cannot be realized through the use of limited fixed operating schedules that conform to present analytic billing methods. Additionally, these devices provide additional communication contact nodes to reinforce and strengthen data routing. Further, by virtue of the inherent elevation and location

logistics, the additional nodes can also reduce communication hop counts and minimize the urban concrete canyon effects by increasing the number of direct communications to the nearest wireless router.

Street Light AMF also has several benefits independent of the broader metering platform. These include:

- Preemptive maintenance based on:
    - Luminaire diagnostics used to identify imminent failure characteristics for; lamps, ignitor, ballast, surge suppression and photocontrol sensor for timely repairs to avoid "outages" or "day-burners";
    - Circuitry diagnostics used to identify electric operating conditions;
    - Detection of errant (stray) voltage conditions and inadequate grounding capacity;
    - Minimizes customer/company interaction for operation condition reporting;
- Promotes the application and accurate energy metering of advanced technologies such as; WiFi, surveillance and detection cameras (e.g. license plate, parking space, "red light", etc.), sensors (e.g. Motion, temperature, humidity, hazardous chemicals, radiation, etc.), distributed antenna and small cell technology, interactive parking meters, vehicle charging stations and other emergency notification systems;
- Establishes a real-time, global position for all street lighting and ancillary device locations;
- Supports active asset management of street lighting and associated infrastructure for accurate inventory and billing requirements; and
- Enhances customer accessibility of street lighting /device information through a secure interactive internet interface for: inventory information, operational scheduling/dimming, installation/removal/relocation requests and scheduling, maintenance service reporting and performance
    - Enables customer control of advanced lighting technologies facilitating dynamic use of the lights while experiencing actual energy consumption billing optimizing all energy efficiencies.

2.6.3 Gas Remote Service Valve

Gas remote service shutoff valves can be integrated with the AMF solution. Remote service valves with flood sensors that automatically shut off gas to structures that experience flooding and provide an accurate count of services impacted by the flooding - will enable improved emergency response in the event of flooding. This targeted approach shuts down only the services affected by flooding (as opposed to the larger gas service districts) and sends alerts to the customers impacted, isolating the system and alerting the Company of the loss of service to our customers in real time. This will enable improved management of storm restoration with specific focus on the affected customers. This program will also facilitate swift decision making focused upon affected regions, thus generating efficient execution of service restoration work and allowing improved customer satisfaction while further ensuring the safety and reliability of the system. Remote Service Shutoff Valves without flood sensors can also be installed, allowing for remote disconnect for safety reasons such as residential methane detection alarms, gas leaks, and customer natural gas calls.

2.6.4 Residential Methane Detectors

Residential Methane Detectors (RMD) equipped with communication devices, also known as Smart Residential Methane Devices, are currently in research and development in support of deployment. The RMD can be integrated with the AMF solution. Smart RMD's will be able to send a notification to National Grid in the event the device senses methane at a customer location through a fixed communication network, allowing National Grid to respond with or without a customer call. In conjunction with the remote service valve, National Grid will have the ability to turn off a customer service remotely when methane is detected, ensuring safety prior to a potential leak being investigated. Systematic methane detection across multiple customer locations in a common area in the event multiple devices sense methane can be investigated as well. Due to an RMD's nature to detect any type of methane, any type of leak within the residence will be detected, including customer owned equipment and piping. This is especially critical in multiple unit dwellings (i.e.-apartment buildings, multistory structures, etc.).

2.6.5 Outage Management

An additional benefit of core smart meter technology is the ability to report an outage in near real time. Although individual smart meters are electrically powered, they have enough battery life to signal the network and operational systems of a power loss. This ability has several advantages over the current system of monitoring substations for very large power changes that would indicate an outage and rely on customer calls to pinpoint. Smart meters near real-time power outage notification allow the system operators to assess outage characteristics more quickly, have more extensive situational awareness, and take steps to restore power more efficiently. Furthermore, once power has been restored, smart meters can be dynamically pinged to assess whether the entire outage has been restored or if additional work needs to be done to restore nested outages.

2.7 ECONOMIC DEVELOPMENT BENEFITS

Economic Impact offers additional benefits not captured in the Benefit Cost Calculation. The AMF program provides a positive benefit to the Rhode Island economy through a number of channels. First, the planned investment spending on this program is expected to increase local Rhode Island GDP by $47.6 million, generate $3.7 million in state and local taxes, and create 489 jobs. Moreover, the program will create $32.8 million in labor income and help build a workforce with the skills and experience required to underpin Rhode Island's future as a clean energy economy.

Table 4-17: Rhode Island Economic Impact: Years 1-4 Total

Measure	Value
Rhode Island GDP	$47.6 Million
Jobs Created	489 Job Years
Labor Income	$32.8 Million
State & Local Taxes	$3.67 Million

In addition to spending generated benefits, the AMF program will stimulate economic activity in other ways. These include the impact of reductions in customers' energy bills, as demonstrated in

the National Grid Smart Energy Solutions Pilot program. Additional bill savings are made possible through AMF's enablement of distributed energy resources (DER) and third-party energy management products. These savings will be redirected to spending in other sectors of the Rhode Island economy; generating additional jobs, output, labor income, and tax revenues. The introduction of AMI also improves National Grid's ability to manage the distribution system. Cost savings, efficiency improvements, reliability and resiliency gains all translate into economic benefits for Rhode Island as resources are allocated in an efficient manner.

Appendix 4.2

Appendix 4.2

AMF BCA Methodology

APPENDIX 4.2: AMF BCA METHODOLOGY

The following document provides detailed descriptions and calculation methodologies of the cost and benefit line items in the AMF model. Each item is identified with a number that corresponds to the AMF model.

2 – Benefit from Eliminated AMR Meter Readers

Description: National Grid currently has a fleet of automatic meter reading (AMR) meters covering its electric and gas service territory. These AMR meters have monthly reads that are acquired through radio frequency technology. These collections are done by a fleet of service vans which meter readers drive along routes to allow communication with each meter.

Starting in fiscal year 2021, National Grid will replace its current AMR meters with advanced metering functionality (AMF) meters. National Grid has estimated that the vast majority of AMF meters will utilize a built-in low-power, short-range radio to digitally communicate interval data using a two-way communication structure. This data will be communicated from meter to meter until it reaches a centralized data collection point, at which point it will be passed up to an AMF Head-End and various back-office systems. This radio frequency based communication path is referred to as a “mesh network”.

Due to topographical limitations etc., it is also expected that a small percentage of AMF meters will utilize internal cellular radios to communicate with the wireless communications infrastructure. Ultimately, utilization of the new AMF technology to include both the radio frequency mesh network and cellular communications would avoid the need for AMR meter readers. National Grid would also avoid the annual maintenance cost for the AMR meters being replaced.

Calculation Overview: This benefit calculation takes the annual cost per AMR Meter Reader and multiplies it by the number of AMR meter readers that will be eliminated, and also adds in the Annual AMR meter maintenance bill for upstate NY.

Source References: RI AMF ID: 1007, 1008

Cost/Benefit Group: AMR Meter Reading

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	33%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

3 – Benefit from Eliminated AMR Meter Reader Vehicle Costs

Description: As described under Benefit 2 and starting in fiscal year 2021, National Grid will replace its current AMR meters with AMF meters. In addition to avoiding the need for the AMR meter readers as a result of the new technology, National Grid will also be able to reduce the number of related company vehicles formerly utilized by this function.

Calculation Overview: This benefit calculation multiplies the number of full-time meter reader employee reductions by the vehicle cost per employee.

Source References: RI AMF ID: 1007

Cost/Benefit Group: AMR Meter Reading

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	33%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

4 – CO2 Benefit from Eliminated AMR Vehicle Emissions

Description: As described under Benefits 2 and 3, use of the new AMF technology will eliminate the need for meter readers to perform drive-by readings while leveraging company vehicles. The reduction in company vehicles will in turn reduce diesel fuel consumption, which reduces CO2 emissions.

Calculation Overview: This benefit generally takes the AMR reading miles driven and multiplies this total by the cost of CO2.

Source References: RI AMF ID: 1009, 1010, 1019

Cost/Benefit Group: AMR Meter Reading (CO2)

CapEx/OpEx/Other: Emissions

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	33%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

5 – Benefit from Reduction of Meter Investigations

Description: AMF meters will provide auto and on-demand meter reads and diagnostics to alert and inform the Company about anomalous situations that in-turn allows for the reduction of visits to the meter for manual meter investigations. This will reduce labor and vehicle costs. The types of manual meter investigations that can be avoided in part include Use on Inactive Electric Meter Investigations, Meter On/Off and Meter Reads.

Calculation Overview: This benefit calculation is generally comprised of two parts:

- Reduction of labor associated with performing investigations
- Reduction of vehicle costs associated with performing investigations

In aggregate, the labor and vehicle cost reductions are added together.

Source References: RI AMF ID: 1008, 1011, 1012

Cost/Benefit Group: Meter Investigations

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	33%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

6 – Benefit from Remote Metering Capabilities

Description: Advanced Metering provides the ability to connect and disconnect electric service remotely and in near real-time. This capability can be used in various service situations to avoid initial and in some cases repeat visits to the meter for manual meter connects and disconnects. The estimated savings assumes the Company would need to continue manual field connects and disconnects for dual fuel customers. With respect to collections related disconnects, the company will comply with all requirements per Title 39 of the State of Rhode Island General Laws including visits to the customer premise. Avoided meter visits will reduce labor and vehicle costs.

Calculation Overview: This benefit calculation is generally comprised of two parts:

- Reduction of vehicle costs associated with certain meter disconnects and reconnects
- Reduction of labor costs associated with certain meter disconnects and reconnects

In aggregate, these two cost reduction components are added together.

Source References: RI AMF ID: 1008, 1011, 1012

Cost/Benefit Group: Remote Connect and Disconnect

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	33%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

9 – Benefit from improvement in bad debt write-offs

Description: Bad debt is incurred when National Grid customers are unable or unwilling to pay their billing obligations. National Grid makes every reasonable attempt to collect those outstanding bills. Eventually, this unrealized revenue is classified as a loss and is written off and spread across all customers. A smart meter's ability to remotely disconnect service, within the existing approved parameters and in consideration of all consumer protection processes, will reduce these socialized costs. Although the smart meters cannot entirely eliminate bad debt write-offs, the remote disconnect function can reduce the period between when an electric customer defaults on payment to when their meter is actually disconnected, thus reducing the loss incurred. In time the impact of this functionality will prompt a change in customer behavior, resulting in a significant reduction in overall bad debt and operational expense. This will improve the customer experience due to fewer collection activities such as mailings, phone calls, and field visits.

Calculation Overview: This benefit calculation takes the cumulative AMF Deployment and multiplies it by the Total Residential and Commercial Growth in bad debt mitigation attributable to AMF data to get the total annual bad debt mitigation.

Source References: RI AMF ID: 1016

Cost/Benefit Group: Reduction in Write-Offs

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	0%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

11 - Benefit from mitigation / reduction of damage claims

Description: In the course of business, despite efforts for mindfulness and safety consciousness, accidents occasionally occur. In certain circumstances arising from driving to/from service orders, routine meter reading routes, or other day to day activities, damage to third party property can occur. As discussed during some of the previous AMF benefits, the advanced metering technologies will allow for remote interaction that will keep metering service reps off of the road and away from customers' premises. The reduction of opportunities for accidents and damage to occur will reduce damage claims.

Calculation Overview: This benefit calculation determines an approximate number of meters for Electric, and then multiplies this by the # of claims per meter, the value of damage claims and the % reduction due to AMF Meters.

Source References: RI AMF ID: 1005, 1006

Cost/Benefit Group: Reduction in Damage Claims

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	0%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

13 - Benefit from Reduction of AMR Theft / Undermetering

Description: Smart meter technology combines greater frequency of readings with sophisticated algorithms to ensure that electric and gas consumption is accurate. AMF provides tamper alarms after detecting usage that attempts to bypass the meter, and also produces customer level data that can be analyzed for reasonableness in order to identify unusual patterns that may reflect theft of service. If discrepancies are proven to be theft, the Company can take action to address the situation, thus minimizing a cost that would normally be socialized across the customer base, thereby saving other customers money.

Calculation Overview: This benefit calculation generally takes projected RI annual customer revenue and multiplies it by the percentage of revenue loss due to theft avoided by AMF.

Source References: RI AMF ID: 1023

Cost/Benefit Group: Reduction in Theft of Service

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	33%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

14 – Benefit from VVO/AMF Integration

Description: The more granular and frequent data from AMF meters enhances the effectiveness of the VVO program. In particular, a subset of AMF meters can act as end of line sensors that provide real-time information to centralized control systems to adjust grid operational characteristics. More granular metering information can also define more precise load models of individual circuits with adjustments for time of day and year or temperature correlation. For the purposes of this business case, the Company recognizes VVO benefits that would be considered incremental to those achieved by Grid Modernization.

Calculation Overview: This benefit calculation takes the cumulative pre-CVR load on circuits where CVR is to be deployed and multiplies it by the % improvement due to CVR attributable to AMF data, and then multiplies it by the cost per megawatt hour.

Source References: RI AMF ID: 1020, 1021, 1022

Cost/Benefit Group: Volt-VAR Optimization

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	0%	2%	2%	3%	3%	3%	4%	4%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
5%	5%	6%	6%	7%	8%	9%	9%	10%	11%

15 – CO2 Benefit from VVO/AMF Integration

Description: As described under benefit 14, the deployment of AMF meters enhances the effectiveness of the VVO program. In particular, a subset of AMF meters can act as end of line sensors that provide real-time information to centralized control systems to adjust grid operational characteristics. These VVO benefits will lead to a reduction in CO2 emissions.

Calculation Overview: This benefit calculation takes the cumulative pre-CVR load on circuits where CVR is to be deployed and multiplies it by the % improvement due to CVR attributable to AMF data, and then multiplies it by the price of carbon.

Source References: RI AMF ID: 1019, 1020, 1021

Cost/Benefit Group: Volt-VAR Optimization (CO2)

CapEx/OpEx/Other: Losses

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	33%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

16 – Benefit from Energy Insights/High Usage Alerts

Description: Through the deployment of AMF smart meters and associated back-office infrastructure, the Company will have access to customer usage data in near real-time, with granularity at sub-hour reading intervals. National Grid will be building an Energy Management Portal that will act as a hub for residential, commercial, and industrial customers to view their energy usage, including the smart meter interval data. This platform will allow electric customers to have access to their raw, not validated, edited and estimated ("VEE") usage data within four hours after an interval, and gas customers will have access to raw usage information within eight hours. Customers will subsequently be able to view billing quality data within 24 hours. In addition to allowing customers to view their energy consumption in near real-time, the Energy Management Portal will allow customers to compare their usage and costs against certain variables such as weather, historic consumption at the same time and dates, and neighbors' usage to understand factors that may be driving their energy use.

Armed with this information, customers can take action using the functionality that the Energy Management Portal provides. This could include enrollment in the Company's energy efficiency and demand response, as well as any pricing programs that are implemented as a part of or subsequent to the AMF deployment. In addition, customers can access the Energy Management Portal for energy savings programs and personalized energy tips and strategies to reduce their energy usage and save money. The Energy Management Portal can also be customized with alerts, notifying customers of high use or events on the electric system such as an outage.

As described in a report issued by the Electric Power Research Institute (EPRI), there is a range of potential savings that can be achieved by empowering customers with personalized energy insights. The EPRI report cites savings achieved during 35 pilot projects in the range of zero to twenty-five percent. To address the potential uncertainty of the benefit estimate for the Energy Management Portal, the Company has calculated a low and high benefit of one percent and three percent, respectively. The low savings estimate will be included with the low TVP pricing options and the high savings with the high TVP pricing options in the Company's BCA analysis.

Calculation Overview: This benefit calculation is generally comprised of two parts:

- Calculate reduction of GWh consumed

- Calculate value of avoided energy based on annual reduction

In aggregate, the electric and gas fuel savings are added together.

Source References: RI AMF ID: 1017, 1019, 1026

Cost/Benefit Group: Energy Insights/High Usage Alerts

CapEx/OpEx/Other: Revenue

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	33%	100%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

17 – CO2 Benefit from Energy Insights/High Usage Alerts

Description: As described under benefit 16, the deployment of AMF meters can enable more granular consumption data and high usage alerts etc. to be made available to customers. It is anticipated that these personalized energy insights will drive reduced consumption which in turn, will lead to a reduction in CO2 emissions.

This cost element leverages MWh energy reductions calculated in element 16 as the basis for avoided CO2 valuation in this calculation.

Calculation Overview: This benefit calculation multiplies the forecasted load reduction in MWh calculated in benefit 16 multiplied by the CO2 value in $/MWh.

Source References: RI AMF ID: 1019

Cost/Benefit Group: Energy Insights/High Usage Alerts (CO2)

CapEx/OpEx/Other: Losses

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	33%	100%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

18 – CO2 Benefit from Reduction of Meter Investigations

Description: As previously stated in benefit 5, AMF meters will provide auto and on-demand meter reads and diagnostics to alert and inform the Company about anomalous situations that in-turn allows for the reduction of visits to the meter for manual meter investigations. The reduction in visits will lead to a corresponding reduction in diesel fuel consumption, which in turn will lead to a decrease in CO2 emissions.

Calculation Overview: This benefit generally takes the meter investigation miles driven which can be avoided and multiplies it by the cost of CO2.

Source References: RI AMF ID: 1007, 1010, 1011, 1015, 1019

Cost/Benefit Group: Meter Investigation (CO2)

CapEx/OpEx/Other: Emissions

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	33%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

19 – CO2 Benefit from Remote Metering Capabilities

Description: As previously described under benefit 6, Advanced Metering provides the ability to connect and disconnect electric service remotely and in near real-time. This capability can be used in various service situations to avoid initial and in some cases repeat visits to the meter for manual meter connects and disconnects. This decrease in the number of times field employees have to drive out to meters to manually connect or disconnect them, reduces diesel fuel consumption which in turn decreases CO2 emissions.

Calculation Overview: This benefit generally takes the annual meter service stop miles that can be avoided and multiplies it by the cost of CO2.

Source References: RI AMF ID: 1007, 1010, 1015, 1019

Cost/Benefit Group: Remote Connect and Disconnect (CO2)

CapEx/OpEx/Other: Emissions

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	33%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

20 – Outage Management Operational Benefit

Description: The Company spends millions of dollars annually on storm restoration efforts to include procurement of external crews, meals and lodging, and overtime. AMF would increase visibility during major and minor storms due to the ability to contact meters remotely and determine outage status. This enhanced situational awareness creates efficiencies with crew management and deployment as well as the avoidance of false outages, thereby reducing costs.

Calculation Overview: This calculation takes the annual RI storm restoration costs and multiplies by the % improvement attributed to AMF deployment.

Source References: RI AMF ID: 1028

Cost/Benefit Group: Storm OMS Benefit

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	0%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

25 – Benefit from Electric Vehicle TVP

Description: The Company expects the introduction of AMF and TVP to enable demand savings and avoided energy charges. The estimate for the electric vehicle integration benefit assumes a certain percentage of electric vehicle charging is done during peak periods and can be displaced, thereby generating both system demand (kw) reductions/savings and avoided energy costs by charging at off-peak versus peak rates.

Calculation Overview: The below cited reference contains a model which calculates and sums the avoided demand cost from reduced demand billing rates and the avoided energy cost from shifts to off-peak charging.

Source References: RI AMF ID: 1027

Cost/Benefit Group: Electric Vehicle Pricing

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	0%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

26 – Benefit from Critical Peak Pricing (CPP) peak shaving

Description: Supply prices will increase further by time of day on a limited number of specific days (typically during high demands on the electrical system, where customers are notified in advance) designated as CPP events. CPP is designed to recover most of the costs for generation capacity in the hours that have the greatest need for peak capacity. When customers avoid consumption during the highest peak loads of the year, future generation capacity costs, as determined through ISO-NE's Forward Capacity Market auction, are reduced relative to what they otherwise might have been, resulting in capacity cost savings that are included in supply rates for customers. CPP events would be limited to a specific number of days and during specific hours of the day, which gives customers a greater level of flexibility relative to a set critical peak price period.

The benefits from the Company's illustrative TVP program will result from savings in generation capacity costs described above as well as savings in energy costs. Energy cost savings result from a reduction in energy consumption during higher-cost peak periods, and the resulting reduction in the hourly marginal generation cost.

Calculation Overview: This benefit calculation is generally comprised of a multiplication of forecasted annual peak load multiplied by an achievable load reduction percentage (based on AMF deployment and CPP adoption) multiplied by an anticipated CPP Capacity Payment $ per MW avoided.

Source References: RI AMF ID: 1018

Cost/Benefit Group: Time Varying Pricing

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	0%	33%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

27 – Benefit from Avoided Energy due to Time-of-Use Program

Description: Supply prices will vary by specific times of day, every month, with peak (higher price) and off-peak (lower price) periods defined. In response to TOU rates, customers save by reducing consumption during higher cost peak periods and/or shifting use from peak to off-peak periods.

Calculation Overview: This benefit calculation is generally comprised of a multiplication of forecasted load during peak hours multiplied by achievable load reduction percentage (based on AMF deployment and TOU adoption) multiplied by avoided average fuel costs per MWh of generation.

Source References: RI AMF ID: 1018

Cost/Benefit Group: Time Varying Pricing

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	0%	33%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

28 – CO2 Benefit from Avoided Energy due to Time-of-Use Program

Description: As described under Benefit 27, supply prices will vary by specific times of day, every month, with peak (higher price) and off-peak (lower price) periods defined. In response to TOU rates, customers save by reducing consumption during higher cost peak periods and/or shifting use from peak to off-peak periods. Based on the annual MWh reductions, a CO2 benefit can be applied.

Calculation Overview: This benefit calculation multiplies the Total benefit from Avoided Energy due to Time-of-Use Program calculated in benefit item 27 by the price of CO2 in nominal $ per MWh.

Source References: RI AMF ID: 1018, 1019

Cost/Benefit Group: Time Varying Pricing (CO2)

CapEx/OpEx/Other: Emissions

Cash Flow Impact:

FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
0%	0%	0%	33%	100%	100%	100%	100%	100%	100%
FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

30 – Benefit from Electromechanical Meter Accuracy

Description: The majority (i.e. approx. 70%) of electric meters currently deployed in the Rhode Island service territory are electromechanical by design. Electromechanical meters operate by counting the rotation of an internal metal disk, and various studies have shown that the accuracy of this count begins to decline over time. The net effect of the reduced accuracy is to understate usage, thereby decreasing revenue. The electromechanical meter benefit recognizes the ability to increase revenue through the introduction of AMF and related solid state technology which mitigates the impact of declining meter reading accuracy over time.

Calculation Overview: The below cited reference contains a model which calculates the average customer consumption and multiplies this amount by the increased accuracy percentage to derive increased revenue.

Source References: RI AMF ID: 1031

Cost/Benefit Group: Electromechanical Meter

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	29%	60%	32%	30%	27%	25%	23%	21%	18%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
16%	14%	12%	10%	8%	5%	3%	0%	0%	0%

100 – AMF electric meter equipment cost

Description: This element covers the cost of Advanced Metering equipment to be installed at electric metering locations. For electric, this equipment consists of the electric meter itself which includes all capabilities natively within the device.

The functions included in the configuration that National Grid is considering include technologies to measure interval consumption, telecommunications to interface with Advanced Metering Mesh, solid-state memory and processing allowing (for firmware upgrades, consumption recording, ping support, etc), sensors for power quality measurement (last gasp notifications, voltage violations, etc.), autonomous algorithms for abnormal operation (to identify tamper detection, improper measurement, etc.), and the ability to remotely connect and/or disconnect electrical service for customers

Calculation Overview: This cost calculation determines an approximate number of meters for residential and C&I customers and then multiplies this by the known cost per electric metering unit.

Source References: RI AMF ID: 1005, 1035, 1036, 1042

Cost/Benefit Group: AMF Electric Meter Equipment and Installation

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	33%	67%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

102 – AMF electric meter installation cost – CapEx portion

Description: In addition to the cost of electric metering units themselves, additional costs must be incurred for labor associated with installation. These efforts include labor time to travel to a given premise, remove the existing meter, install the new meter at the customer premises, and make note of all appropriate inventory and activation information.

Calculation Overview: This cost calculation is generally comprised of a multiplication of total number of electric meters by the approximate cost per each electric meter installation.

Source References: RI AMF ID: 1005, 1007, 1038

Cost/Benefit Group: AMF Electric Meter Equipment and Installation

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	33%	67%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

104 – AMF failed meter equipment replacement cost

Description: This element recognizes that over time, meters will fail. While a warranty is provided on meters for a one-year period, after this period expires, it will be National Grid's responsibility to procure replacements.

Calculation Overview: This cost calculation determines incremental AMF equipment costs and multiplies it by the annual failure rate.

Source References: RI AMF ID: 1005, 1033

Cost/Benefit Group: Equipment and Installation Refresh Cost

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	33%	100%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

105 – AMF Demonstration Period Cost

Description: This element recognizes that a pilot deployment is a best practice undertaken by many utilities throughout the industry. Through the pilot, processes and capabilities can be undertaken and improved with a smaller volume of meters to minimize negative customer experiences. Once refined, the tools, processes, and staff are better prepared to perform the expected business functions on a larger scale.

Calculation Overview: This cost calculation sums various estimated pilot program costs (e.g. System Testing Strategy, Implementation, and Infrastructure).

Source References: RI AMF ID: 1039

Cost/Benefit Group: AMF Electric Meter Equipment and Installation

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
100%	0%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

110 – AMF network engineering, design, contracting cost

Description: As a first step for implementing the AMF network, various efforts must be undertaken to engineer and design the network to ensure that it is fit for purpose and will operate efficiently and effectively. This design activity includes identification of preliminary CGR locations, access points, backhaul gateways, as well as core backhaul network design.

Calculation Overview: Sourced directly from Meter Telecom estimate.

Source References: RI AMF ID: 1041

Cost/Benefit Group: Network Equipment and Installation

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
100%	0%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

111 – Network communications equipment cost, Electric Meters

Description: Advanced meters communicate with each other through mesh technologies for local communications but rely on more robust communications equipment for backhaul to back office systems. The core piece of equipment to perform this function is a Connected Grid Router (CGR) which can aggregate data from local metering mesh clusters and convey pertinent data through publicly available cellular wireless. This cost component considers the cost of CGRs to support electric advanced metering.

Calculation Overview: This cost calculation multiplies the number of CGRs required to support Electric Meters by the known cost per CGR unit.

Source References: RI AMF ID: 1005, 1006, 1035, 1042, 1043

Cost/Benefit Group: Network Equipment and Installation

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	33%	67%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

112 – Network communications equipment cost, Gas Meters

Description: Advanced meters communicate with each other through mesh technologies for local communications but rely on more robust communications equipment for backhaul to back office systems. The core piece of equipment to perform this function is a Connected Grid Router (CGR) which can aggregate data from local metering mesh clusters and convey pertinent data through publicly available cellular wireless. This cost component considers the cost of CGRs to support gas advanced metering.

Calculation Overview: This cost calculation multiplies the number of CGRs required to support the expected quantity of Gas meters by the known cost per CGR unit.

Source References: RI AMF ID: 1035, 1043

Cost/Benefit Group: Network Equipment and Installation

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	33%	67%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

113 – Network communications installation cost, Electric Meters

Description: For Connected Grid Routers (CGRs) used to support Electric Advanced Meters (documented in cost element 111), each device must be configured and installed to properly support necessary communications. This cost element considers the installation costs.

Calculation Overview: This cost calculation multiplies the number of CGRs required to support the expected quantity of electric meters calculated in cost item 111 by the known cost per CGR unit installation.

Source References: RI AMF ID: 1041

Cost/Benefit Group: Network Equipment and Installation

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	33%	67%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

114 – Network communications installation cost, Gas Meters

Description: For Connected Grid Routers (CGRs) used to support Gas Advanced Meters (documented in cost element 112), each device must be configured and installed to properly support necessary communications. This cost element considers the installation costs.

Calculation Overview: This cost calculation multiplies the number of CGRs required to support the expected quantity of gas meters calculated in cost item 111 by the known cost per CGR unit installation.

Source References: RI AMF ID: 1041

Cost/Benefit Group: Network Equipment and Installation

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	33%	67%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

115 – Network communications LTE backhaul cost, Electric Meters

Description: For Connected Grid Routers (CGRs) used to support Electric Advanced Meters (documented in cost element 111), each device has a corresponding, annual service fee allowing it to communicate with the public cellular backhaul. This cost element considers this annual cost for operations.

Calculation Overview: This cost calculation multiplies the number of CGRs required to support the expected quantity of electric meters calculated in cost item 111 by the annual LTE service charge per CGR.

Source References: RI AMF ID: 1041

Cost/Benefit Group: Backhaul

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	33%	100%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

116 – Network communications LTE backhaul cost, Gas Meters

Description: For Connected Grid Routers (CGRs) used to support Gas Advanced Meters (documented in cost element 112), each device has a corresponding, annual service fee allowing it to communicate with the public cellular backhaul. This cost element considers this annual cost for operations.

Calculation Overview: This cost calculation multiplies the number of CGRs required to support the expected quantity of gas meters calculated in cost item 112 by the annual LTE service charge per CGR.

Source References: RI AMF ID: 1041

Cost/Benefit Group: Backhaul

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	16%	24%	31%	39%	67%	75%	82%	90%	98%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

117 – AMF meter cellular service cost, Electric Meters

Description: A subset of electric meters will be located in rural areas with insufficient density to form a stable and consistent mesh. For these electric metering locations, an electric meter with a cellular radio will be installed instead of one with a mesh radio. The difference in technology will alter the cost per meter, as seen in cost element 100. In addition, electric meters that use a cellular radio for communication do have a corresponding service fee with public cellular providers to ensure timely delivery of meter reads.

Calculation Overview: This cost calculation determines an approximate number of advanced electric meters then multiplies this by an estimated % of meters which directly use public cellular backhaul multiplied by an annual cost of service per meter.

Source References: RI AMF ID: 1005, 1006, 1041, 1042

Cost/Benefit Group: Equipment and Installation Refresh Cost

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	33%	100%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

118 – Network Communications Equipment Cost Upgrade

Description: As stated in cost elements 111 and 112, advanced meters communicate with each other through mesh technologies for local communications but rely on more robust communications equipment for backhaul to back office systems. The core piece of equipment to perform this function is a Connected Grid Router (CGR) which can aggregate data from local metering mesh clusters and convey pertinent data through publicly available cellular wireless. This cost component considers the equipment and installation cost associated with a one-time CGR upgrade to support electric and gas advanced metering.

Calculation Overview: This cost calculation is equal to the CGR equipment and installation costs for electric and gas established in cost element 111, 112, 113 and 114.

Source References: RI AMF ID: Calculated

Cost/Benefit Group: Network Equipment and Installation

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

119 – AMF communications failed equipment replacement cost

Description: Advanced meters communicate with each other through mesh technologies for local communications but rely on more robust communications equipment for backhaul to back office systems. The core piece of equipment to perform this function is a Connected Grid Router (CGR) which can aggregate data from local metering mesh clusters and convey pertinent data through publicly available cellular wireless. Cost elements 111 and 112 define the costs incurred for initial deployment of these devices.

Over time, it is expected that these devices will fail and require replacement. This cost element addresses the costs of the replacement equipment and the installation cost associated with replacing failed equipment throughout the duration of the program.

Calculation Overview: This cost calculation multiplies the total number of CGRs (supporting both electric and gas metering) by the replacement cost per CGR by an annual failure rate necessitating replacement.

Cost/Benefit Group: Equipment and Installation Refresh Cost

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	33%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

120 – AMF communications equipment O&M cost (outside warranty)

Description: Advanced meters communicate with each other through mesh technologies for local communications but rely on more robust communications equipment for backhaul to back office systems. The core piece of equipment to perform this function is a Connected Grid Router (CGR) which can aggregate data from local metering mesh clusters and convey pertinent data through publicly available cellular wireless. Cost elements 111 and 112 define the costs incurred for initial deployment of these devices.

Over time, various efforts must be undertaken to investigate and maintain these devices through their lifecycle. These costs are captured as part of this line item.

Calculation Overview: This cost calculation multiplies the total value of CGRs (supporting both electric and gas metering) by an annual operations and maintenance cost to for continued operation.

Source References: RI AMF ID: 1039

Cost/Benefit Group: Equipment and Installation Refresh Cost

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	0%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

121 – AMF External Project Management Labor Cost - CapEx portion

Description: Advanced Metering requires numerous components and systems which must be designed, configured, tested, deployed and managed. National Grid expects to augment internal efforts through external Project Management to advance project objectives. This cost element captures the external cost of contract labor to facilitate and support National Grid staff through the requisite program lifecycle.

Calculation Overview: This cost calculation multiplies the total number of external resources used for AMF project staff augmentation by an external resource annual salary.

Cost/Benefit Group: Project Management

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	50%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

123 – Cost from call center and AMO, implementation

Description: Deployment of advanced meter physical infrastructure is eventually accompanied by downstream customer impacts. Some customers may have questions about how TOU or CPP pricing works, some may have questions about changes to their bill, some may be curious about how to access their detailed consumption data on the web portal, and others may just be curious to better understand the program. National Grid fully believes that supporting customers with a robust change management program is vital to the overall successful adoption of this program. The most personal point of contact for many customers will be a call to the National Grid call center to ask these questions. It is expected that the call volumes will increase during the deployment years of the program, but will eventually return to the current, steady-state volume. A portion of this cost element addresses the incremental cost associated with increased call volumes across various call center facilities.

Installation of the AMF meters in the field will also require parallel back office support to ensure timeliness and accuracy of the initial billing on the new meter as well as regular maintenance with meter changes, new customer connections and rate programs. In addition, with the ability for AMF to detect losses or theft, the Account Maintenance team works with Revenue Assurance to backbill any lost revenue of customers in accordance with tariff regulations. National Grid has found in recent pilots that proactive review and assurance of meter installation to the point of first bill accuracy creates a successful customer program. It is expected that account maintenance resources largely increase during the installation of the meters and then begin to ramp back down after all customers are on the new meters.

Calculation Overview: This cost calculation is derived from our call center model (see cited source reference) with scaling to account for account maintenance activities.

Source References: RI AMF ID: 1046

Cost/Benefit Group: Project Management

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	37%	63%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

124 – AMF Internal Project Management Leadership Staff – CapEx portion

Description: Advanced Metering requires numerous components and systems which must be designed, configured, tested, deployed and managed. National Grid expects to have internal employees dedicated to advancing project objectives. This cost element captures the cost of National Grid Leadership Staff that will manage the program through its lifecycle.

Calculation Overview: This calculation takes the number of annual full-time National Grid employees that will be Project Management Leadership Staff and multiplies it by the internal resource annual salary.

Source References: RI AMF ID: 1040

Cost/Benefit Group: Project Management

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	100%	100%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

125 – AMF Internal Project Management Business Support – CapEx portion

Description: Advanced Metering requires numerous components and systems which must be designed, configured, tested, deployed and managed. National Grid expects to have internal employees dedicated to advancing project objectives. This cost element captures the cost of company employee labor that will support the program through its lifecycle.

Calculation Overview: This calculation takes the sum of all full-time National Grid employees that will be used for Project Management Business Support and multiplies it by the internal resource annual salary.

Source References: RI AMF ID: 1040

Cost/Benefit Group: Project Management

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
46%	50%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

126 – AMF Electric Meter Installation Cost – COR portion

Description: As previously stated in cost element 102, additional costs must be incurred for labor associated with installation of electric meters. These efforts include labor time to travel to a given premise, remove the existing meter, installing the new meter at the customer premises, and make note of all appropriate inventory and activation information. Cost element 102 captures the capital portion of the electric meter installation cost, while this cost element captures the cost to remove the existing meter.

Calculation Overview: Multiplies the AMF electric meter installation cost subtotal calculated in cost element 102 by the % of the AMF electric meter installation cost that is associated with cost of removal.

Source References: RI AMF ID: 1038

Cost/Benefit Group: AMF Electric Meter Equipment and Installation

CapEx/OpEx/Other: COR

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	33%	67%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

128 – AMF External Project Management Labor Cost – OpEx portion

Description: Advanced Metering Functionality requires numerous components and systems which must be designed, configured, tested, deployed and managed. National Grid expects to augment internal efforts through external Project Management to advance project objectives. This cost element captures the external cost of contract labor to facilitate and support National Grid staff through the requisite program lifecycle.

Calculation Overview: This cost calculation multiplies the total number of external resources used for AMF project staff augmentation by an external resource annual salary.

Cost/Benefit Group: Project Management

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
50%	0%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

129 – AMF Internal Project Management Leadership Staff – OpEx portion

Description: Advanced Metering requires numerous components and systems which must be designed, configured, tested, deployed and managed. National Grid expects to have internal employees dedicated to advancing project objectives. This cost element captures the cost of National Grid Leadership Staff that will manage the program through its lifecycle.

Calculation Overview: This calculation takes the number of annual full-time National Grid employees that will be Project Management Leadership Staff and multiplies it by the internal resource annual salary.

Source References: RI AMF ID: 1040

Cost/Benefit Group: Project Management

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
100%	0%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

130 – AMF Internal Project Management Business Support – OpEx portion

Description: Advanced Metering requires numerous components and systems which must be designed, configured, tested, deployed and managed. National Grid expects to have internal employees dedicated to advancing project objectives. This cost element captures the cost of company employee labor that will support the program through its lifecycle.

Calculation Overview: This calculation takes the sum of all full-time National Grid employees that will be used for Project Management Business Support and multiplies it by the internal resource annual salary.

Source References: RI AMF ID: 1040

Cost/Benefit Group: Project Management

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
50%	0%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

134 – AMF Inventory Equipment Cost

Description: This cost item captures the cost of electric meters that will be maintained in inventory during the meter deployment stage.

Calculation Overview: This cost calculation takes the total AMF electric meter equipment cost calculated in cost element 101 and multiplies it by a percentage of AMF equipment that needs to be held in inventory.

Source References: RI AMF ID: 1037

Cost/Benefit Group: AMF Inventory

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	33%	67%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

135 – Professional Services – Field Deployment Support Workstream cost

Description: National Grid has decided to contract to host several IS systems, most notably the Meter Data Management System (MDMS), AMF Head End System and the Network Management System. This cost element covers resources that will oversee meter and field area network deployment, as well as assist in determining the best location for CGRs. The specific resources included in this cost element are an installation manager with technical team and field engineering support.

Calculation Overview: This cost includes the sum of all Professional Services – Field Deployment costs as quoted by an external vendor.

Source References: RI AMF ID: 5003

Cost/Benefit Group: Communication Network Installation Management

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	11%	50%	40%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

136 – Professional Services – Field Deployment Support Workstream Travel Expenses cost

Description: National Grid has decided to contract to host several IS systems, most notably Meter Data Management System (MDMS), Advanced Meter Interface Head End System (AMF HE) and the Network Management System (NMS). This cost element covers travel expenses for resources that will oversee meter and field area network deployment, as well as assist in determining the best location for CGRs. The specific resources included in this cost element are an installation manager with technical team and field engineering support.

Calculation Overview: This cost calculation multiplies the sum of all Professional Services – Field Deployment costs by the travel expenses percentage.

Source References: RI AMF ID: 5003

Cost/Benefit Group: Communication Network Installation Management

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	11%	50%	40%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

203 – CMS Deployment Center, Facility cost

Description: Deployment of Advance Meters will require the coordination of a large number of personnel, dispatch activities, new meter staging, new CGR staging, and deposition of removed legacy AMR meters to facilitate disposal. While facility costs are sought to be minimized through equipment just-in time deliveries, some facility costs will be incurred as captured through this line item.

Calculation Overview: This calculation takes the annual value of facility costs and applies them to the years of meter deployment.

Source References: RI AMF ID: 1008

Cost/Benefit Group: Support Infrastructure

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	67%	33%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

204 – CMS Back Office & Clerical cost

Description: Deployment of Advance Meters will require additional staff to support back office and clerical functions associated with deployed meter characteristics, retired meter characteristics, data cleanup, asset management / customer deployment details. While some existing staff will assist with these efforts, insufficient bandwidth exists for the increased volume of activity during deployment; additional staff is required as captured through this line item.

Calculation Overview: This cost calculation determines an aggregate number of additional back office and clerical FTEs needed per year then multiplies this by the corresponding annual salary and then multiplies this by the number of years to deploy meters.

Source References: RI AMF ID: 1008

Cost/Benefit Group: Support Infrastructure

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	67%	33%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

205 – Service Representative Tools / Uniform cost

Description: Staff deploying Advance Meters will require additional tools to support Meter Asset Management activities to document meter ID numbers and locational details. Further, dedicated uniforms are anticipated for meter replacement crews to identify staff performing meter replacements. These cost estimates are captured through this line item.

Calculation Overview: This calculation takes the total cost of tools and uniforms and allocates across the meter deployment period.

Source References: RI AMF ID: 1008

Cost/Benefit Group: Support Infrastructure

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	72%	28%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

206 – Installed Meter Quality Assurance / Quality Check cost

Description: Once Advanced Meters have been deployed efforts are undertaken from the back office to ping meters and ensure that the deployment was performed correctly. This quality control check confirms that meters are able to communicate with central systems by reporting interval reads, alerts, and other functions as could be expected to be called upon through its useful life. These quality assurance labor cost estimates are captured through this line item.

Calculation Overview: This calculation multiplies the annual FTEs required for quality assurance/quality checks by the annual quality assurance salary by the number of years for meter deployment.

Source References: RI AMF ID: 1008

Cost/Benefit Group: Support Infrastructure

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	67%	33%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

207 – CMS Deployment Coordination Labor cost

Description: Teams of Advance Meter installers will require supervision and coordination. These teams will be spread throughout the service territory. The coordination labor cost is captured within this line item.

Calculation Overview: This calculation multiplies the annual Chief Foreman FTEs required for coordination by the annual Chief Foreman salary by the number of years for meter deployment.

Source References: RI AMF ID: 1008

Cost/Benefit Group: Support Infrastructure

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	67%	33%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

208 – CMS Field Installer Initial Training

Description: Teams of Advanced Meter installers will require training prior to meter deployment. This line item captures the cost of training field installers required to install AMF electric meters.

Calculation Overview: This calculation takes the number of Field Installers and multiplies it by the initial training cost per field installer.

Source References: RI AMF ID: 1007, 1008

Cost/Benefit Group: Support Infrastructure

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
50%	50%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

209 – CMS Cellular Communication Cost

Description: Staff deploying Advanced Meters will require cell phones to communicate with each other, the office and authorities for safety and to ask for assistance when encountering issues. The cost of cell phones and cellular data is captured through this line item.

Calculation Overview: This calculation takes the annual cellular communication cost and multiplies it by the number of years to deploy meters.

Source References: RI AMF ID: 1008

Cost/Benefit Group: Support Infrastructure

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	67%	33%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

210 – Handheld Devices Cost

Description: Staff deploying Advance Meters will require handheld devices to support meter installation activities. This item captures the cost these handheld devices.

Calculation Overview: Multiply the number of full-time field installers who need handheld devices by the cost per handheld device.

Source References: RI AMF ID: 1007

Cost/Benefit Group: Support Infrastructure

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	100%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

300 – AMF Additional Meter Data Services labor cost

Description: Deployment of new Advanced Meters will result in more meter data that needs to be validated, estimated, and edited to support the meter to cash process. Past experience with pilots has shown that extra labor is required to support this effort for timely data processing. This extra labor is captured within this line item.

Calculation Overview: This cost calculation multiplies the incremental Meter Data Services FTEs by the internal resource annual salary.

Source References: RI AMF ID: 1030

Cost/Benefit Group: Ongoing Business Management

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	50%	100%	50%	50%	50%	50%	50%	50%	50%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
50%	50%	50%	50%	50%	50%	50%	50%	50%	50%

301 – Billing System Development Testing

Description: Deployment of new Advanced Meters will likely result in increased questions about bill validity. Past experience with pilots has shown that extra labor is required to support this effort for timely data processing. This extra labor is captured within this line item.

Calculation Overview: This cost calculation multiplies the incremental Billing System Development Testing FTEs by the internal resource annual salary.

Source References: RI AMF ID: 1030

Cost/Benefit Group: Ongoing Business Management

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	50%	100%	50%	50%	50%	50%	50%	50%	50%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
50%	50%	50%	50%	50%	50%	50%	50%	50%	50%

302 – MDS System Development Testing

Description: During the initial years of the program, internal Meter Data Services staff will need to be dedicated to the project team to assist in reviewing configurations, testing deployed back office integrations, and overall capabilities. This extra labor is captured within this line item.

Calculation Overview: This cost calculation multiplies the incremental Meter Data Services System Development Testing FTEs by the internal resource annual salary.

Source References: RI AMF ID: 1039

Cost/Benefit Group: Support Infrastructure

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
75%	25%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

400 – Customer Engagement Plan Cost

Description: A robust customer education and outreach effort will be needed to support the AMF rollout. The objective of the Customer Engagement plan is to build customer awareness and interest in both grid modernization and the AMF that will enable it, in order to eliminate potential adoption barriers, encourage participation and facilitate transition to AMF meters. This line item captures costs related to multi-channel marketing content development and implementation, community outreach, surveys to test communications effectiveness and satisfaction, and additional support staff.

Calculation Overview: This cost calculation is derived from our customer engagement model (see cited source reference).

Source References: RI AMF ID: 1045

Cost/Benefit Group: Customer Engagement Cost

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
8%	31%	18%	9%	8%	6%	5%	4%	4%	4%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

501 – CSS Enhancements CapEx Cost

Description: The customer service system (CSS) is utilized to manage customer-facing activities. A multitude of processes pull meter data, perform billing and payment processing, support collections and various pricing program rates. As part of the AMF deployment CSS will be modified and configured to support the enhanced data requirements of smart metering. Additional configurations will be made for expanded pricing programs such as Time-of-use (TOU) and critical peak pricing (CPP). With such a prominent role in customer interaction, an effective CSS with support for AMF capabilities is critical to maintaining customer satisfaction. Moreover, as distributed energy resource (DER) penetration increases throughout Rhode Island, CSS must be adaptable to the dynamic energy environment.

CSS also possesses capabilities intended to foster our relationship with customers and assist in customer retention through personalized service. The system interfaces with various back-office resources to create personal profiles for customer engagement. CSS can be linked with an interactive voice response (IVR) system to send automated outage response notifications received from AMF meters. Additionally, CSS will present customer history and real-time meter status to the customer services representatives (CSR) providing enhanced customer service. CSRs will also have a new suite of tools to perform meter diagnostics and remote service re-connection.

Calculation Overview: This cost calculation multiplies the sum of all CSS enhancement costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5001

Cost/Benefit Group: Customer Service System

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
66%	34%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

502 – Professional Services – Head End/MDM Solution Program Management cost

Description: National Grid has decided to contract to host several IS systems, most notably the Meter Data Management System (MDMS), AMF Head End and the Network Management System. This cost element covers program management resources associated with the hosted system. The specific resources included in this cost element are a solution architect, security specialist resources, a project liaison for coordination between project teams and a software-as-a-service team upon the conclusion of the Systems Implementation Workstream (cost element 518). This cost element also covers continuous management across workstreams, as well as coordination with all National Grid program management processes.

Calculation Overview: This cost calculation multiplies the sum of all Professional Services – Solution Program Management costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5003

Cost/Benefit Group: AMF Head-end and Meter Data Management Systems

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
11%	50%	40%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

503 – Energy Monitoring Portal OpEx Cost

Description: Through the deployment of AMF smart meters and associated back-office infrastructure, the Company will have access to customer usage data in near real-time, with granularity at sub-hour reading intervals. National Grid will be building an Energy Management Portal that will act as a hub for residential, commercial, and industrial customers to view their energy usage, including the smart meter interval data. This platform will allow electric customers to have access to their raw, not validated, edited and estimated ("VEE") usage data within four hours after an interval, and gas customers will have access to raw usage information within eight hours[1]. Customers will subsequently be able to view billing quality data within 24 hours. In addition to allowing customers to view their energy consumption in near real-time, the Energy Management Portal will allow customers to compare their usage and costs against certain variables such as weather, historic consumption at the same time and dates, and neighbors' usage to understand factors that may be driving their energy use.

Calculation Overview: This cost calculation multiplies the sum of Energy Monitoring Portal costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5004

Cost/Benefit Group: Customer Engagement Products and Services

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
5%	1%	0%	0%	6%	6%	6%	6%	6%	6%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
6%	6%	6%	6%	6%	6%	6%	6%	6%	0%

[1] Gas customers will receive monthly register reads until such time that Gas ERTs are installed and interval metering becomes available.

504 – Green Button Connect CapEx Cost

Description: Many utilities, including National Grid, have implemented the Green Button Download My Data functionality. This system gives every utility customer the ability to download their personal energy consumption data directly to their computer in a secure manner. Additionally, if customers are interested, they can upload their data to a third-party application.

The Green Button Connect My Data functionality takes this process further by streamlining it to allow utility customers to automate the process. With Green Button Connect My Data customers can securely authorize both National Grid and designated third parties to send and receive data on the customer's behalf. Upon authorization, energy usage data can be transferred as required. Making this data accessible to third parties is critical to animating the market and driving innovation.

Calculation Overview: This cost calculation multiplies the sum of Green Button Connect costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5006

Cost/Benefit Group: Customer Engagement Products and Services

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
75%	25%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

513 – Telecom CapEx Cost

Description: National Grid is enhancing several of its capabilities e.g. AMF, ADMS, substation automation among others. All of these enhancements will require National Grid's network to install new backhaul and enhance its existing bandwidth to support transfer of the new data.

Calculation Overview: This cost calculation multiplies the sum of telecom costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5007

Cost/Benefit Group: IS Infrastructure

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
50%	25%	25%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

514 – ESB CapEx Cost

Description: A platform such as AMF will have highly complex data exchanges. Throughout the industry, systems integration is supported by an enabling technology known as an Enterprise Service Bus (ESB), which helps facilitate the exchange of standardized data elements between all impacted systems.

Calculation Overview: This cost calculation multiplies the sum of ESB costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5009

Cost/Benefit Group: IS Infrastructure

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
19%	30%	5%	0%	15%	0%	0%	0%	0%	15%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	15%	0%	0%	0%	0%	0%

516 – Information Management CapEx Cost

Description: In addition to the data lake functionalities described by Cost Item 517, the next level capability is to process available data to identify trends and other insights which could indicate potential areas where actions can be taken to create value for both the customers and National Grid. In some cases, algorithms to process this data may come in pre-packed software suites, while in other cases proprietary National Grid-specific approaches can be pursued. Costs in this category allow data ingestion, data quality and analytic capabilities to be configured and deployed. The big data analytics capabilities will allow for the analysis of the data gathered from existing and third-party data sources to provide valuable output reflecting current state as well as predictive and prescriptive outcomes.

Calculation Overview: This cost calculation multiplies the sum of Information Management costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5013

Cost/Benefit Group: IS Infrastructure

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
29%	33%	20%	4%	1%	1%	1%	1%	1%	1%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
1%	1%	1%	1%	1%	1%	1%	1%	1%	0%

517 – Data Lake CapEx Cost

Description: Various data management capabilities will be leveraged by the overall grid modernization program. A data lake repository will be established, with a scalable enterprise data warehouse, of all National Grid data. This will include not only Internal Data like the necessary asset and meter data, but External Data, including Remote Sensing, Land Development, Weather, and Real Estate data. The data lake will empower employees with capabilities to analyze data, create a 360 degree customer view, make data accessible to customers and external parties; not doing so will cause National Grid to lose their ability to extract value from their value chain.

Rather than hosting these data management capabilities on servers within National Grid data centers, greater efficiencies, redundancies, and security regimes can be cost effectively procured by outsourcing this function. This cost element captures the costs associated with setting up a cloud data lake environment.

Calculation Overview: This cost calculation multiplies the sum of Data Lake costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5011

Cost/Benefit Group: IS Infrastructure

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
100%	0%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

518 – Professional Services –Head End/MDM Systems Implementation Workstream cost

Description: National Grid has decided to contract to host several IS systems, most notably the Meter Data Management System (MDMS), AMF Head End and the Network Management System. This cost element covers systems implementation resources associated with the hosted system. The specific resources included in this cost element are a project manager for systems, a consulting team for business/tech consulting and testing and integration of four environments (pro, DR, dev and test).

Calculation Overview: This cost calculation multiplies the sum of all Professional Services – Head End/MDM Systems Implementation costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5003

Cost/Benefit Group: AMF Head-end and Meter Data Management Systems

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
87%	13%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

519 – SaaS Setup Fees – One Time Setup (Version upgrade and scale-up existing system) cost

Description: National Grid has decided to contract to host several IS systems, most notably the Meter Data Management System (MDMS), AMF Head End and the Network Management System. This cost element covers the initial cost to complete a version upgrade and to scale-up the existing hosted system.

Calculation Overview: This cost calculation multiplies the sum of all version upgrade costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5003

Cost/Benefit Group: AMF Head-end and Meter Data Management Systems

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
100%	0%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

520 – SaaS Fees – Headend Software (OWOCCM, OWOC PM, IEE MDM, IoT FND, FDM) cost

Description: The AMF Head-end is the command and control system that integrates the communications infrastructure in the field and the back-office systems. An AMF Head-End communicates with AMF meters to collect meter data, interval readings and events. It also can ping individual meters as necessary and push firmware updates across the network. For electrical systems, it can remotely initiate the connection and disconnection of the service at a meter level. This system serves as the main point bi-direction data transmission across the meter population.

An effective AMF platform also requires a meter data management system (MDMS). The MDMS provides data storage and archival capabilities for meter information. Additionally, the MDMS performs initial validation, editing and estimating (VEE) of the incoming meter data. Once the raw data has been processed, it can be utilized by back-office systems such as billing, customer service, and data analytics. This data can also be uploaded to the Energy Management portal and Green Button Connect for customer and authorized third party viewing and utilization.

An important function of the MDMS is the VEE process. During VEE, the MDMS reviews all incoming data from the AMF meters in an effort to validate data accuracy, estimate data and identify anomalies. Any meter with data that cannot pass initial validation is routed to a “validation queue” which is worked by support staff. From this queue missing data intervals, data integrity issues and configuration errors are resolved to produce billing quality data.

Cost estimates in this area assume the Company contracts with an outside service vendor to host these systems. The arrangement is referred to as Software as a Service (“SaaS”).

Calculation Overview: This cost calculation multiplies the sum of all SaaS Fees – Headend Software costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5003

Cost/Benefit Group: AMF Head-end and Meter Data Management Systems

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	33%	100%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

521 – Professional Services – System and Meter Firmware Upgrade cost

Description: National Grid has decided to contract to host several IS systems, most notably the Meter Data Management System (MDMS), AMF Head End and the Network Management System. This element covers a one-time cost to upgrade key software-as-a-service applications to cloud-optimized architecture. In particular, this includes an upgrade of the entire hosted system as well as a meter firmware upgrade.

Calculation Overview: This cost calculation multiplies the sum of all Professional Services – System and Meter Firmware Upgrade costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5003

Cost/Benefit Group: AMF Head-end and Meter Data Management Systems

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	0%	0%	0%	0%	0%	100%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

522 – Telecom OpEx Cost

Description: National Grid is enhancing several of its capabilities e.g. AMF, ADMS, substation automation among others. All of these enhancements will require National Grid's network to install new backhaul and enhance its existing bandwidth to support transfer of the new data.

Calculation Overview: This cost calculation multiplies the sum of telecom costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5007

Cost/Benefit Group: IS Infrastructure

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
50%	25%	25%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

523 – Telecom RTB Cost

Description: National Grid is enhancing several of its capabilities e.g. AMF, ADMS, substation automation among others. All of these enhancements will require National Grid's network to install new backhaul and enhance its existing bandwidth to support transfer of the new data.

Calculation Overview: This cost calculation multiplies the sum of telecom costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5007

Cost/Benefit Group: IS Infrastructure

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	3%	4%	6%	6%	6%	6%	6%	6%	6%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
6%	6%	6%	6%	6%	6%	6%	6%	6%	0%

524 – ESB OpEx Cost

Description: A platform such as AMF will have highly complex data exchanges. Throughout the industry, systems integration is supported by an enabling technology known as an Enterprise Service Bus (ESB), which helps facilitate the exchange of standardized data elements between all impacted systems.

Calculation Overview: This cost calculation multiplies the sum of ESB costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5009

Cost/Benefit Group: IS Infrastructure

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
36%	50%	14%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

525 – ESB RTB Cost

Description: A platform such as AMF will have highly complex data exchanges. Throughout the industry, systems integration is supported by an enabling technology known as an Enterprise Service Bus (ESB), which helps facilitate the exchange of standardized data elements between all impacted systems.

Calculation Overview: This cost calculation multiplies the sum of ESB costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5009

Cost/Benefit Group: IS Infrastructure

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	3%	5%	6%	6%	6%	6%	6%	6%	6%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
6%	6%	6%	6%	6%	6%	6%	6%	6%	0%

526 – Data Lake OpEx Cost

Description: Various data management capabilities will be leveraged by the overall grid modernization program. A data lake repository will be established, with a scalable enterprise data warehouse, of all National Grid data. This will include not only Internal Data like the necessary asset and meter data, but External Data, including Remote Sensing, Land Development, Weather, and Real Estate data. The data lake will empower employees with capabilities to analyze data, create a 360 degree customer view, make data accessible to customers and external parties; not doing so will cause National Grid to lose their ability to extract value from their value chain.

Rather than hosting these data management capabilities on servers within National Grid data centers, greater efficiencies, redundancies, and security regimes can be cost effectively procured by outsourcing this function. This cost element captures the costs associated with setting up a cloud data lake environment.

Calculation Overview: This cost calculation multiplies the sum of Data Lake costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5011

Cost/Benefit Group: IS Infrastructure

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
4%	4%	5%	5%	6%	6%	6%	6%	6%	6%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
6%	6%	6%	6%	6%	6%	6%	6%	6%	0%

527 – Professional Services – Head End/MDM Solution Program Management Travel Expenses cost

Description: National Grid has decided to contract to host several IS systems, most notably the Meter Data Management System (MDMS), AMF Head End and the Network Management System. This cost element covers travel expenses for the program management resources associated with the hosted system.

Calculation Overview: This cost calculation multiplies the sum of all Professional Services – Head End/MDM Solution Program Management costs by the travel expenses percentage.

Source References: RI AMF ID: 5003

Cost/Benefit Group: AMF Head-end and Meter Data Management Systems

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
11%	50%	40%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

528 – Professional Services – Head End/MDM Systems Implementation Workstream Travel Expenses cost

Description: National Grid has decided to contract to host several IS systems, most notably the Meter Data Management System (MDMS), AMF Head End and the Network Management System. This cost element covers the travel expenses for systems implementation resources associated with the hosted system.

Calculation Overview: This cost calculation multiplies the sum of all Professional Services – Head End/MDM Systems Implementation Workstream costs by the travel expenses percentage.

Source References: RI AMF ID: 5003

Cost/Benefit Group: AMF Head-end and Meter Data Management Systems

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
87%	13%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

529 – Green Button Connect OpEx Cost

Description: Many utilities, including National Grid, have implemented the Green Button Download My Data functionality. This system gives every utility customer the ability to download their personal energy consumption data directly to their computer in a secure manner. Additionally, if customers are interested, they can upload their data to a third-party application.

The Green Button Connect My Data functionality takes this process further by streamlining it to allow utility customers to automate the process. With Green Button Connect My Data customers can securely authorize both National Grid and designated third parties to send and receive data on the customer's behalf. Upon authorization, energy usage data can be transferred as required. Making this data accessible to third parties is critical to animating the market and driving innovation.

Calculation Overview: This cost calculation multiplies the sum of Green Button Connect costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5006

Cost/Benefit Group: Customer Engagement Products and Services

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
52%	32%	0%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

530 – Information Management OpEx Cost

Description: In addition to the data lake functionalities described by Cost Item 517, the next level capability is to process available data to identify trends and other insights which could indicate potential areas where actions can be taken to create value for both the customers and National Grid. In some cases, algorithms to process this data may come in pre-packed software suites, while in other cases proprietary National Grid-specific approaches can be pursued. Costs in this category allow data ingestion, data quality and analytic capabilities to be configured and deployed. The big data analytics capabilities will allow for the analysis of the data gathered from existing and third-party data sources to provide valuable output reflecting current state as well as predictive and prescriptive outcomes.

Calculation Overview: This cost calculation multiplies the sum of Information Management costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5013

Cost/Benefit Group: IS Infrastructure

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
3%	4%	4%	4%	6%	6%	6%	6%	6%	6%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
6%	6%	6%	6%	6%	6%	6%	6%	6%	0%

531 – Information Management RTB Cost

Description: In addition to the data lake functionalities described by Cost Item 517, the next level capability is to process available data to identify trends and other insights which could indicate potential areas where actions can be taken to create value for both the customers and National Grid. In some cases, algorithms to process this data may come in pre-packed software suites, while in other cases proprietary National Grid-specific approaches can be pursued. Costs in this category allow data ingestion, data quality and analytic capabilities to be configured and deployed. The big data analytics capabilities will allow for the analysis of the data gathered from existing and third-party data sources to provide valuable output reflecting current state as well as predictive and prescriptive outcomes.

Calculation Overview: This cost calculation multiplies the sum of Information Management costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5013

Cost/Benefit Group: IS Infrastructure

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	4%	5%	6%	6%	6%	6%	6%	6%	6%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
6%	6%	6%	6%	6%	6%	6%	6%	6%	0%

532 – Energy Monitoring Portal RTB Cost

Description: Through the deployment of AMF smart meters and associated back-office infrastructure, the Company will have access to customer usage data in near real-time, with granularity at sub-hour reading intervals. National Grid will be building an Energy Management Portal that will act as a hub for residential, commercial, and industrial customers to view their energy usage, including the smart meter interval data. This platform will allow electric customers to have access to their raw, not validated, edited and estimated ("VEE") usage data within four hours after an interval, and gas customers will have access to raw usage information within eight hours[2]. Customers will subsequently be able to view billing quality data within 24 hours. In addition to allowing customers to view their energy consumption in near real-time, the Energy Management Portal will allow customers to compare their usage and costs against certain variables such as weather, historic consumption at the same time and dates, and neighbors' usage to understand factors that may be driving their energy use.

Calculation Overview: This cost calculation multiplies the sum of Energy Monitoring Portal costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5004

Cost/Benefit Group: Customer Engagement Products and Services

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	6%	6%	6%	6%	6%	6%	6%	6%	6%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
6%	6%	6%	6%	6%	6%	6%	6%	6%	0%

[2] Gas customers will receive monthly register reads until such time that Gas ERTs are installed and interval metering becomes available.

533 – CSS Enhancements OpEx Cost

Description: The customer service system (CSS) is utilized to manage customer-facing activities. A multitude of processes pull meter data, perform billing and payment processing, support collections and various pricing program rates. As part of the AMF deployment CSS will be modified and configured to support the enhanced data requirements of smart metering. Additional configurations will be made for expanded pricing programs such as Time-of-use (TOU) and critical peak pricing (CPP). With such a prominent role in customer interaction, an effective CSS with support for AMF capabilities is critical to maintaining customer satisfaction. Moreover, as distributed energy resource (DER) penetration increases throughout Rhode Island, CSS must be adaptable to the dynamic energy environment.

CSS also possesses capabilities intended to foster our relationship with customers and assist in customer retention through personalized service. The system interfaces with various back-office resources to create personal profiles for customer engagement. CSS can be linked with an interactive voice response (IVR) system to send automated outage response notifications received from AMF meters. Additionally, CSS will present customer history and real-time meter status to the customer services representatives (CSR) providing enhanced customer service. CSRs will also have a new suite of tools to perform meter diagnostics and remote service re-connection.

Calculation Overview: This cost calculation multiplies the sum of all CSS enhancement costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5001

Cost/Benefit Group: Customer Service System

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
2%	64%	15%	7%	7%	2%	2%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

534 – CSS Enhancements RTB Cost

Description: The customer service system (CSS) is utilized to manage customer-facing activities. A multitude of processes pull meter data, perform billing and payment processing, support collections and various pricing program rates. As part of the AMF deployment CSS will be modified and configured to support the enhanced data requirements of smart metering. Additional configurations will be made for expanded pricing programs such as Time-of-use (TOU) and critical peak pricing (CPP). With such a prominent role in customer interaction, an effective CSS with support for AMF capabilities is critical to maintaining customer satisfaction. Moreover, as distributed energy resource (DER) penetration increases throughout Rhode Island, CSS must be adaptable to the dynamic energy environment.

CSS also possesses capabilities intended to foster our relationship with customers and assist in customer retention through personalized service. The system interfaces with various back-office resources to create personal profiles for customer engagement. CSS can be linked with an interactive voice response (IVR) system to send automated outage response notifications received from AMF meters. Additionally, CSS will present customer history and real-time meter status to the customer services representatives (CSR) providing enhanced customer service. CSRs will also have a new suite of tools to perform meter diagnostics and remote service re-connection.

Calculation Overview: This cost calculation multiplies the sum of all CSS enhancement costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5001

Cost/Benefit Group: Customer Service System

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	1%	2%	4%	5%	7%	10%	7%	7%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
7%	7%	7%	7%	7%	7%	7%	7%	7%	0%

535 – Green Button Connect RTB Cost

Description: Many utilities, including National Grid, have implemented the Green Button Download My Data functionality. This system gives every utility customer the ability to download their personal energy consumption data directly to their computer in a secure manner. Additionally, if customers are interested, they can upload their data to a third-party application.

The Green Button Connect My Data functionality takes this process further by streamlining it to allow utility customers to automate the process. With Green Button Connect My Data customers can securely authorize both National Grid and designated third parties to send and receive data on the customer's behalf. Upon authorization, energy usage data can be transferred as required. Making this data accessible to third parties is critical to animating the market and driving innovation.

Calculation Overview: This cost calculation multiplies the sum of Green Button Connect costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5006

Cost/Benefit Group: Customer Engagement Products and Services

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	6%	6%	6%	6%	6%	6%	6%	6%	6%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
6%	6%	6%	6%	6%	6%	6%	6%	6%	0%

536 – Data Lake RTB Cost

Description: Various data management capabilities will be leveraged by the overall grid modernization program. A data lake repository will be established, with a scalable enterprise data warehouse, of all National Grid data. This will include not only Internal Data like the necessary asset and meter data, but External Data, including Remote Sensing, Land Development, Weather, and Real Estate data. The data lake will empower employees with capabilities to analyze data, create a 360 degree customer view, make data accessible to customers and external parties; not doing so will cause National Grid to lose their ability to extract value from their value chain.

Rather than hosting these data management capabilities on servers within National Grid data centers, greater efficiencies, redundancies, and security regimes can be cost effectively procured by outsourcing this function. This cost element captures the costs associated with setting up a cloud data lake environment.

Calculation Overview: This cost calculation multiplies the sum of Data Lake costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5011

Cost/Benefit Group: IS Infrastructure

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	4%	6%	6%	6%	6%	6%	6%	6%	6%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
6%	6%	6%	6%	6%	6%	6%	6%	6%	0%

540 – Avoided FCS Costs

Description: The Field Collection System (FCS) is currently utilized to perform manual and AMR meter reading for both residential and commercial customers. With the implementation of AMF meters the FCS back-office costs will be phased out as the AMF system utilizes different back office systems to manage data collection and processing.

Calculation Overview: The calculation generally assumes the percentage of annual FCS maintenance costs allocated to RI (forecasted for historical inflation).

Source References: RI AMF ID: 1030

Cost/Benefit Group: FCS Meter Reading

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	33%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

541 – Avoided Interval Meter Reading Costs

Description: The AMF system will replace the current MV90 system. The MV90 system currently supports electric interval metering reading for Narragansett Electric, Niagara Mohawk, and Massachusetts Electric. A benefit has been developed and allocated to Narragansett Electric for the costs that will be avoided, including MV90 licensing and IS support, and avoided field visit costs.

Calculation Overview: This calculation includes avoided vendor and IS maintenance costs in addition to avoided internal meter reading service orders.

Source References: RI AMF ID: 1008, 1012, 1030

Cost/Benefit Group: Interval Meter Reading

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	100%	100%	100%	100%	100%	100%	100%	100%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

600 –Cyber Security Project CapEx Initial

Description: Advanced Metering and other grid modernization capabilities include many systems and components which each pose potential vulnerabilities to cyber threats. Various proactive and reactive capabilities are envisioned to provide protection to this new corporate infrastructure. Certain capital costs are to be incurred in the early years to establish this collection of services which include but are not limited to: Network Security Services, Data Security Services, Threat and Vulnerability Management Services, Identity & Access Management Services, etc.

Calculation Overview: This cost calculation multiplies the sum of Cyber Security Project costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5015

Cost/Benefit Group: Cyber Security

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
53%	30%	17%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

601 –Cyber Security Project OpEx (initial)

Description: Advanced Metering and other grid modernization capabilities include many systems and components which each pose potential vulnerabilities to cyber threats. Various proactive and reactive capabilities are envisioned to provide protection to this new corporate infrastructure. Certain operating expenses are to be incurred in parallel with the capital costs documented in cost element 600 during the early years to establish this collection of services. These include but are not limited to: Network Security Services, Data Security Services, Threat and Vulnerability Management Services, Identity & Access Management Services, etc.

Calculation Overview: This cost calculation multiplies the sum of Cyber Security Project costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5015

Cost/Benefit Group: Cyber Security

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
56%	28%	16%	0%	0%	0%	0%	0%	0%	0%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

602 –Cyber Security Project RTB O&M

Description: Advanced Metering and other grid modernization capabilities include many systems and components which each pose potential vulnerabilities to cyber threats. Once operational, additional costs must be incurred on an annual basis to ensure that the functions are effectively staffed, used, and maintained to run the business (RTB). These include but are not limited to: Network Security Services, Data Security Services, Threat and Vulnerability Management Services, Identity & Access Management Services, etc.

Calculation Overview: This cost calculation multiplies the sum of Cyber Security Project costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5015

Cost/Benefit Group: Cyber Security

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
6%	5%	5%	7%	4%	5%	7%	4%	4%	7%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
5%	4%	7%	4%	4%	7%	4%	4%	7%	8%

603 –Cyber Security Refresh / Removal Capital

Description: Advanced Metering and other grid modernization capabilities include many systems and components which each pose potential vulnerabilities to cyber threats. Over time, hardware and software (capital costs) must be refreshed to reflect recent advances in protective approaches and dynamics. These refresh efforts are targeted at, but are not limited to: Network Security Services, Data Security Services, Threat and Vulnerability Management Services, Identity & Access Management Services, etc.

Calculation Overview: This cost calculation multiplies the sum of Cyber Security Refresh costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5015

Cost/Benefit Group: Cyber Security

CapEx/OpEx/Other: CapEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	0%	9%	0%	12%	9%	1%	0%	9%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
12%	0%	10%	2%	0%	20%	5%	1%	9%	9%

604 –Cyber Security Refresh/Removal OpEx

Description: Advanced Metering and other grid modernization capabilities include many systems and components which each pose potential vulnerabilities to cyber threats. Over time, hardware and software must be refreshed to reflect recent advances in protective approaches and dynamics (see cost element 603). Additional operations and maintenance activities must occur to support decommissioning, disposal, and other activities applicable to the following functions: Network Security Services, Data Security Services, Threat and Vulnerability Management Services, Identity & Access Management Services, etc.

Calculation Overview: This cost calculation multiplies the sum of Cyber Security Refresh costs by an allocation factor for costs attributable to AMF.

Source References: RI AMF ID: 5015

Cost/Benefit Group: Cyber Security

CapEx/OpEx/Other: OpEx

Cash Flow Impact:

FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
0%	0%	0%	3%	0%	27%	3%	0%	0%	3%
FY 30	FY 31	FY 32	FY 33	FY 34	FY 35	FY 36	FY 37	FY 38	FY 39
27%	0%	3%	0%	0%	30%	0%	0%	3%	3%

Appendix 10.1

Appendix 10.1

Revenue Requirement Summaries

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Rhode Island Renewable Energy
Annual Revenue Requirement Summary
including shared AMI and Grid Mod

Line No.		Six Months Ended March 31, 2019	PST Year Ending March 31, 2020	PST Year Ending March 31, 2021	PST Year Ending March 31, 2022
1	Grid Mod - Electric	$943,000	$3,458,129	$6,087,543	$7,969,797
2	AMI - Electric	$2,000,000	$5,336,627	$10,992,547	$23,186,638
3	Electric Transportation	$350,000	$926,126	$1,514,562	$2,609,868
4	Electric Heat	$100,000	$383,093	$406,193	$454,646
5	Solar	$100,000	$84,218	$390,768	$1,008,132
6	Energy Storage	$100,000	$119,178	$281,112	$437,491
7	**Total Electric**	**$3,593,000**	**$10,307,371**	**$19,672,725**	**$35,666,572**
8	Grid Mod - Gas	$0	$1,432,521	$2,204,424	$3,134,369
9	AMI - Gas	$0	$1,709,697	$968,010	$1,325,454
10	**Total Gas**	**$0**	**$3,142,218**	**$3,172,434**	**$4,459,823**
11	**Total Gas and Electric**	**$3,593,000**	**$13,449,589**	**$22,845,159**	**$40,126,395**

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Rhode Island Renewable Energy
Annual Revenue Requirement Summary
including standalone RI AMI and Grid Mod

Line No.		Six Months Ended March 31, 2019	Fiscal Year Ending March 31, 2020	Fiscal Year Ending March 31, 2021	Fiscal Year Ending March 31, 2022
1	Grid Mod - Electric	$943,000	$8,964,052	$14,201,674	$17,893,205
2	AMI - Electric	$2,000,000	$9,395,171	$13,436,950	$26,262,967
3	Electric Transportation	$350,000	$926,126	$1,514,562	$2,609,868
4	Electric Heat	$100,000	$383,093	$406,193	$454,646
5	Solar	$100,000	$84,218	$390,768	$1,008,132
6	Energy Storage	$100,000	$119,178	$281,112	$437,491
7	**Total Electric**	**$3,593,000**	**$19,871,838**	**$30,231,258**	**$48,666,308**
8	Grid Mod - Gas	$0	$4,424,704	$6,613,086	$8,527,301
9	AMI - Gas	$0	$4,673,719	$5,861,568	$5,065,625
10	**Total Gas**	**$0**	**$9,098,423**	**$12,474,654**	**$13,592,926**
11	**Total Gas and Electric**	**$3,593,000**	**$28,970,261**	**$42,705,912**	**$62,259,234**

Appendix 10.2

Appendix 10.2

Revenue Requirement Modern Grid

Rhode Island Only

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Grid Mod - Electric Projects and IS Electric and IS Gas Projects
Annual Revenue Requirement Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Electric Operation and Maintenance (O&M) Expenses:				
1	System Data Portal		$ 700,000	$ 700,000	$ 700,000
2	Feeder Monitoring Sensors		$ -	$ 5,000	$ 10,000
3	RTU Separation		$ 60,000	$ 60,000	$ 60,000
4	GIS Data Enhancement		$ -	$ 1,028,000	$ 1,028,000
5	DSCADA & ADMS		$ -	$ 58,311	$ 87,467
6	GIS Data Enhancement		$ -	$ -	$ -
7	Enterprise Service Bus		$ 518,968	$ 1,264,701	$ 1,326,251
8	Data Lake		$ 546,180	$ 786,551	$ 1,063,852
9	PI Historian		$ 33,691	$ 1,329,491	$ 1,329,491
10	Advanced Analytics		$ 69,973	$ 874,017	$ 1,029,513
11	Telecommunications		$ -	$ 1,263,405	$ 1,895,108
12	Cybersecurity		$ 5,423,571	$ 2,736,730	$ 2,182,127
13	**Total Electric O&M costs**	Sum of Line 1 through Line 8	**$ 7,352,383**	**$ 10,106,205**	**$ 10,711,808**
	Gas Operation and Maintenance (O&M) Expenses:				
14	DSCADA & ADMS		$ -	$ 31,689	$ 47,534
15	GIS Data Enhancement		$ -	$ -	$ -
16	Enterprise Service Bus		$ 282,032	$ 687,299	$ 720,749
17	Data Lake		$ 296,820	$ 427,449	$ 578,148
18	PI Historian		$ 18,309	$ 722,509	$ 722,509
19	Advanced Analytics		$ 38,027	$ 474,983	$ 559,487
20	Telecommunications		$ -	$ 686,595	$ 1,029,893
21	Cybersecurity		$ 2,947,429	$ 1,487,270	$ 1,185,873
22	**Total Gas O&M costs**	Sum of Line 10 through Line 16	**$ 3,582,618**	**$ 4,517,795**	**$ 4,844,192**
23	**Total O&M Expenses**	Line 13 + Line 22	**$ 10,935,000**	**$ 14,624,000**	**$ 15,556,000**
24	Electric Capital Investment:				
25	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$1,616,881	$3,087,366	$2,784,565
26	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$1,020,176	$1,983,581
27	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$2,433,198
28	Total Electric Capital Investment Component of Revenue Requirement	Sum of Lines 25 through Line 27	$1,616,881	$4,107,542	$7,201,344
29	Gas Capital Investment:				
30	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$844,919	$1,594,730	$1,433,305
31	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$507,122	$960,550
32	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$1,300,094
33	Total Gas Capital Investment Component of Revenue Requirement	Sum of Lines 30 through Line 32	$844,919	$2,101,852	$3,693,950
34	**Total Electric Revenue Requirement**	Line 13 + Line 28	**$8,969,264**	**$14,213,747**	**$17,913,152**
35	**Total Gas Revenue Requirement**	Line 22 + Line 33	**$4,427,536**	**$6,619,647**	**$8,538,141**
36	**Total Electric & Gas Revenue Requirement**	Line 34 + Line 35	**$ 13,396,800**	**$ 20,833,394**	**$ 26,451,293**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
RI Only Grid Mod - IS
Annual Grid Mod RI Only Electric Revenue Requirement Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Operation and Maintenance (O&M) Expenses:				
1	System Data Portal		$700,000	$700,000	$700,000
2	Feeder Monitoring Sensors		$0	$5,000	$10,000
3	RTU Separation		$60,000	$60,000	$60,000
4	GIS Data Enhancement		$0	$1,028,000	$1,028,000
5	**Total O&M Expenses**	Sum of Lines 1 through 4	**$760,000**	**$1,793,000**	**$1,798,000**
	Capital Investment:				
6	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$62,145	$152,900	$147,136
7	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$87,020	$216,071
8	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$40,891
9	**Total Capital Investment Component of Revenue Requirement**	Sum of Lines 6 through 8	**$62,145**	**$239,920**	**$404,099**
10	**Total Electric Revenue Requirement**	Line 5 + Line 9	**$822,145**	**$2,032,920**	**$2,202,099**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Electric Capital Investment 12 months ending March 31, 2020
RI Only Grid Mod - Electric

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Estimated Capital Investment				
1	Feeder Monitor Sensors		$455,000	$0	$0
2	RTU Separation		$570,000	$0	$0
3	Total Estimated Capital Investment	Line 1 + Line 2	$1,025,000	$0	$0
	Depreciable Net Capital Included in Rate Base				
4	Total Allowed Capital Included in Rate Base in Current Year	Line 3	$1,025,000	$0	$0
5	Retirements	Line 4 * 0%	$0	$0	$0
6	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b and c) = Prior Year Line 6	$1,025,000	$1,025,000	$1,025,000
	Change in Net Capital Included in Rate Base				
7	Capital Included in Rate Base	Line 3	$1,025,000	$0	$0
8	Cost of Removal		$0	$0	$0
9	**Total Net Plant in Service Including Cost of Removal**	**Line 6 + Line 8**	**$1,025,000**	**$1,025,000**	**$1,025,000**
	Tax Depreciation				
10	Vintage Year Tax Depreciation:				
11	FY 2020 Spend	Page 4 of 21, Line 21	$260,414	$57,346	$53,040
12	Cumulative Tax Depreciation	Prior Year Line 12 + Current Year Line 11	$260,414	$317,760	$370,800
	Book Depreciation				
13	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	2.89%	2.89%	2.89%
14	Book Depreciation	Column (a) = Line 1 * Line 13 * 50% ; Column (b and c) = Line 1 * Line 13	$6,575	$13,150	$13,150
15	Cumulative Book Depreciation	Prior Year Line 15 + Current Year Line 14	$6,575	$19,724	$32,874
16	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	2.09%	2.09%	2.09%
17	Book Depreciation	Column (a) = Line 2 * Line 16 * 50% ; Column (b and c) = Line 2 * Line 16	$5,957	$11,913	$11,913
18	Cumulative Book Depreciation	Prior Year Line 18 + Current Year Line 17	$5,957	$17,870	$29,783
19	Total Cumulative Book Depreciation	Line 18 + Line 15	$12,531	$37,594	$62,656
	Deferred Tax Calculation:				
20	Cumulative Book / Tax Timer	Line 12 - Line 19	$247,883	$280,166	$308,144
21	Effective Tax Rate		35.00%	35.00%	35.00%
22	Deferred Tax Reserve	Line 20 * Line 21	$86,759	$98,058	$107,850
23	Less: FY 2020 Federal NOL		$ -	$ -	$ -
24	Less: Proration Adjustment	Col (a) = Page 9 of 21, Line 40; Col (b) = Page 10 of 21, Line 40; Col (c) = Page 11 of 21, Line 40	$ (47,103)	$ (6,135)	$ (5,316)
25	Net Deferred Tax Reserve	Sum of Lines 22 through 24	$39,656	$91,924	$102,534
	Rate Base Calculation:				
26	Cumulative Incremental Capital Included in Rate Base	Line 9	$ 1,025,000	$ 1,025,000	$ 1,025,000
27	Accumulated Depreciation	- Line 19	($12,531)	($37,594)	($62,656)
28	Deferred Tax Reserve	- Line 25	($39,656)	($91,924)	($102,534)
29	Year End Rate Base	Sum of Lines 26 through 28	$ 972,813	$895,483	$859,810
	Revenue Requirement Calculation:				
30	Average Rate Base	Column (a) = Current Year Line 29 ÷ 2; Column (b and c) = (Prior Year Line 29 + Current Year Line 39) ÷ 2	$486,407	$934,148	$877,646
31	Pre-Tax ROR	1/	10.20%	10.20%	10.20%
32	Return and Taxes	Line 30 * Line 31	$49,613	$95,283	$89,520
33	Book Depreciation	Line 14 - Line 17	$12,531	$25,063	$25,063
34	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b & c) Line 9 * 3.176%	$0	$32,554	$32,554
35	**Annual Revenue Requirement**	**Sum of Lines 32 through 34**	**$62,145**	**$152,900**	**$147,136**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2020 Electric Capital Investments
RI Only Grid Mod - Electric

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Capital Repairs Deduction				
1	Plant Additions	Page 3 of 21, Line 3	$1,025,000		
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%		
3	Capital Repairs Deduction	Line 1 * Line 2	$0		
	Bonus Depreciation				
4	Plant Additions	Line 1	$1,025,000		
5	Less Capital Repairs Deduction	Line 3	$0		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$1,025,000		
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$1,025,000		
9	Bonus Depreciation Rate (April 2019- December 2019)	1 * 75% * 30%	22.50%		
10	Bonus Depreciation Rate (January 2020 - Mar 2020)	1 * 25% * 00%	0.00%		
11	Total Bonus Depreciation Rate	Line 9 + Line 10	22.50%		
12	Bonus Depreciation	Line 8 * Line 11	$230,625		
	Remaining Tax Depreciation				
13	Plant Additions	Line 1	$1,025,000		
14	Less Capital Repairs Deduction	Line 3	$0		
15	Less Bonus Depreciation	Line 12	$230,625		
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$794,375	$794,375	$794,375
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%	7.219%	6.677%
18	Remaining Tax Depreciation	Line 16 * Line 17	$29,789	$57,346	$53,040
19	FY20 Loss incurred due to retirements	Per Tax Department	$0	$0	$0
20	Cost of Removal	Page 3 of 21, Line 8	$0		
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, and 20	$260,414	$57,346	$53,040

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Electric Capital Investment 12 months ending March 31, 2021
RI Only Grid Mod - Electric

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Estimated Capital Investment			
1	Feeder Monitor Sensors		$455,000	
2	RTU Separation		$950,000	
3	Total Estimated Capital Investment	Line 1 + Line 2	$1,405,000	$0
	Depreciable Net Capital Included in Rate Base			
4	Total Allowed Capital Included in Rate Base in Current Year	Line 3	$1,405,000	$0
5	Retirements	Line 4 * 0%	$0	$0
6	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$1,405,000	$1,405,000
	Change in Net Capital Included in Rate Base			
7	Capital Included in Rate Base	Line 3	$1,405,000	$0
8	Cost of Removal		$0	$0
9	**Total Net Plant in Service Including Cost of Removal**	**Line 6 + Line 8**	**$1,405,000**	**$1,405,000**
	Tax Depreciation			
10	Vintage Year Tax Depreciation:			
11	FY 2021 Spend	Page 6 of 21, Line 21	$52,688	$101,427
12	Cumulative Tax Depreciation	Prior Year Line 12 + Current Year Line 11	$52,688	$154,115
	Book Depreciation			
13	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	2.89%	2.89%
14	Book Depreciation	Column (a) = Line 1 * Line 13 * 50% ; Column (b) = Line 1 * Line 13	$6,575	$13,150
15	Cumulative Book Depreciation	Prior Year Line 15 + Current Year Line 14	$6,575	$19,724
16	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	2.09%	2.09%
17	Book Depreciation	Column (a) = Line 2 * Line 16 * 50% ; Column (b) = Line 2 * Line 16	$9,928	$19,855
18	Cumulative Book Depreciation	Prior Year Line 18 + Current Year Line 17	$9,928	$29,783
19	Total Cumulative Book Depreciation	Line 18 + Line 15	$16,502	$49,507
	Deferred Tax Calculation:			
20	Cumulative Book / Tax Timer	Line 12 - Line 19	$36,186	$104,608
21	Effective Tax Rate		35.00%	35.00%
22	Deferred Tax Reserve	Line 20 * Line 21	$12,665	$36,613
23	Less: FY 2021 Federal NOL		$0	$0
24	Less: Proration Adjustment	Col (a) = Page 10 of 21, Line 40; Col (b) = Page 11 of 21, Line 40	($6,876)	($13,002)
25	Net Deferred Tax Reserve	Sum of Lines 22 through 24	$5,789	$23,611
	Rate Base Calculation:			
26	Cumulative Incremental Capital Included in Rate Base	Line 9	$ 1,405,000	$1,405,000
27	Accumulated Depreciation	- Line 19	($16,502)	($49,507)
28	Deferred Tax Reserve	- Line 25	($5,789)	($23,611)
29	Year End Rate Base	Sum of Lines 26 through 28	$ 1,382,709	$1,331,882
	Revenue Requirement Calculation:			
30	Average Rate Base	Column (a) = Current Year Line 29 ÷ 2; Column (b) = (Prior Year Line 29 + Current Year Line 29) ÷ 2	$691,354.43	$1,357,296
31	Pre-Tax ROR		1/ 10.20%	10.20%
32	Return and Taxes	Line 30 * Line 31	$70,518	$138,444
33	Book Depreciation	Line 14 + Line 17	$16,502	$33,005
34	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b) Line 9 * 3.176%	$0	$44,623
35	**Annual Revenue Requirement**	**Sum of Lines 32 through 34**	**$87,020**	**$216,071**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2021 Electric Capital Investments
RI Only Grid Mod - Electric

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 5 of 21, Line 3	$1,405,000	
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%	
3	Capital Repairs Deduction	Line 1 * Line 2	$0	
	Bonus Depreciation			
4	Plant Additions	Line 1	$1,405,000	
5	Less Capital Repairs Deduction	Line 3	$0	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$1,405,000	
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$1,405,000	
9	Bonus Depreciation Rate (April 2020- December 2020)	0%	0.00%	
10	Bonus Depreciation Rate (January 2021 - Mar 2021)	0%	0.00%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%	
12	Bonus Depreciation	Line 8 * Line 11	$0	
	Remaining Tax Depreciation			
13	Plant Additions	Line 1	$1,405,000	
14	Less Capital Repairs Deduction	Line 3	$0	
15	Less Bonus Depreciation	Line 12	$0	
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$1,405,000	$1,405,000
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%	7.219%
18	Remaining Tax Depreciation	Line 16 * Line 17	$52,688	$101,427
19	FY21 Loss incurred due to retirements	Per Tax Department	$0	$0
20	Cost of Removal	Page 5 of 21, Line 8	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$52,688	$101,427

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Electric Capital Investment 12 months ending March 31, 2022
RI Only Grid Mod - Electric

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Estimated Capital Investment		
1	Feeder Monitor Sensors		$455,000
2	RTU Separation		$190,000
3	Total Estimated Capital Investment	Line 1 + Line 2	$645,000
	Depreciable Net Capital Included in Rate Base		
4	Total Allowed Capital Included in Rate Base in Current Year	Line 3	$645,000
5	Retirements	Line 4 * 0%	$0
6	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5	$645,000
	Change in Net Capital Included in Rate Base		
7	Capital Included in Rate Base	Line 3	$645,000
8	Cost of Removal		$0
9	**Total Net Plant in Service Including Cost of Removal**	**Line 6 + Line 8**	**$645,000**
	Tax Depreciation		
10	Vintage Year Tax Depreciation:		
11	FY 2022 Spend	Page 8 of 21, Line 21	$24,188
12	Cumulative Tax Depreciation	Prior Year Line 12 + Current Year Line 13	$24,188
	Book Depreciation		
13	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	2.89%
14	Book Depreciation	Column (a) = Line 1* Line 13 * 50%	$6,575
15	Cumulative Book Depreciation	Current Year Line 14	$6,575
16	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	2.09%
17	Book Depreciation	Column (a) = Line 2* Line 16 * 50%	$1,986
18	Cumulative Book Depreciation	Current Year Line 16	$1,986
19	Total Cumulative Book Depreciation	Line 15 + Line 18	$8,560
	Deferred Tax Calculation:		
20	Cumulative Book / Tax Timer	Line 12 - Line 19	$15,628
21	Effective Tax Rate		35.00%
22	Deferred Tax Reserve	Line 20 * Line 21	$5,470
23	Less: FY 2022 Federal NOL		$0
24	Less: Proration Adjustment	Col (a) = Page 11 of 21, Line 40	($2,970)
25	Net Deferred Tax Reserve	Sum of Lines 22 through 24	$2,500
	Rate Base Calculation:		
26	Cumulative Incremental Capital Included in Rate Base	Line 9	$ 645,000
27	Accumulated Depreciation	- Line 19	($8,560)
28	Deferred Tax Reserve	- Line 25	($2,500)
29	Year End Rate Base	Sum of Lines 26 through 28	$ 633,940
	Revenue Requirement Calculation:		
30	Average Rate Base	Column (a) = Current Year Line 29 ÷ 2	$316,970
31	Pre-Tax ROR	1/	10.20%
32	Return and Taxes	Line 30 * Line 31	$32,331
33	Book Depreciation	Line 14 + Line 17	$8,560
34	Property Taxes	Tax Rate 3.176% MAL-7	$0
35	**Annual Revenue Requirement**	**Sum of Lines 32 through 34**	**$40,891**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2022 Electric Capital Investments
RI Only Grid Mod - Electric

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Capital Repairs Deduction		
1	Plant Additions	Page 7 of 21, Line 3	$645,000
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%
3	Capital Repairs Deduction	Line 1 * Line 2	$0
	Bonus Depreciation		
4	Plant Additions	Line 1	$645,000
5	Less Capital Repairs Deduction	Line 3	$0
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$645,000
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$645,000
9	Bonus Depreciation Rate (April 2021- December 2021)	0.00%	0.00%
10	Bonus Depreciation Rate (January 2022 - Mar 2022)	0.00%	0.00%
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%
12	Bonus Depreciation	Line 8 * Line 11	$0
	Remaining Tax Depreciation		
13	Plant Additions	Line 1	$645,000
14	Less Capital Repairs Deduction	Line 3	$0
15	Less Bonus Depreciation	Line 12	$0
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$645,000
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%
18	Remaining Tax Depreciation	Line 16 * Line 17	$24,188
19	FY22 Loss incurred due to retirements	Per Tax Department	$0
20	Cost of Removal	Page 7 of 21, Line 8	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$24,188

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2020 Net Deferred Tax Reserve Electric Proration
RI Only Grid Mod - Electric

Line No.			(a)= Column (b) Total	(b) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration			
1	Book Depreciation	Page 3 of 21, Line 14 + Line 17	$12,531	$12,531
2	Bonus Depreciation	Page 4 of 21, Line 12	($230,625)	($230,625)
3	Remaining MACRS Tax Depreciation	Page 4 of 21, Line 18	($29,789)	($29,789)
4	FY20 tax (gain)/loss on retirements	Page 4 of 21, Line 19	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($247,883)	($247,883)
6	Effective Tax Rate		35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($86,759)	($86,759)
	Deferred Tax Not Subject to Proration			
8	Capital Repairs Deduction	Page 4 of 21, Line 3	$0	$0
9	Cost of Removal	Page 4 of 21, Line 20	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2020		$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0
12	Effective Tax Rate		35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	($86,759)	($86,759)
15	Net Operating Loss	Page 3 of 21, Line 23	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($86,759)	($86,759)
	Allocation of FY 2020 Estimated Federal NOL			
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($247,883)	($247,883)
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($247,883)	($247,883)
20	Total FY 2020 Federal NOL	Page 3 of 21, Line 23 / 35%	$0	$0
21	Allocated FY 2020 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0
22	Allocated FY 2020 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0
23	Effective Tax Rate	Per Tax Department	35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($86,759)	($86,759)

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l)	(l)
26	April 2019	30	91.78%	($6,636)	($6,636)
27	May 2019	31	83.29%	($6,022)	($6,022)
28	June 2019	30	75.07%	($5,427)	($5,427)
29	July 2019	31	66.58%	($4,813)	($4,813)
30	August 2019	31	58.08%	($4,199)	($4,199)
31	September 2019	30	49.86%	($3,605)	($3,605)
32	October 2019	31	41.37%	($2,991)	($2,991)
33	November 2019	30	33.15%	($2,397)	($2,397)
34	December 2019	31	24.66%	($1,783)	($1,783)
35	January 2020	31	16.16%	($1,169)	($1,169)
36	February 2020	28	8.49%	($614)	($614)
37	March 2020	31	0.00%	$0	$0
38	Total	365		($39,656)	($39,656)
39	Deferred Tax Without Proration	Line 25		($86,759)	($86,759)
40	Proration Adjustment	Line 38 - Line 39		$47,103	$47,103

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2021 Net Deferred Tax Reserve Electric Proration
RI Only Grid Mod - Electric

Line No.			(a)=Sum of (b) through (c) Total	(b) Vintage Year March 31, 2021	(c) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration				
1	Book Depreciation	Col (b) = Page 5 of 21, Line 14 + Line 17 ;Col (c) = Page 3 of 21, Line 14 + Line 17	$41,565	$16,502	$25,063
2	Bonus Depreciation	Page 6 of 21, Line 12	$0	$0	
3	Remaining MACRS Tax Depreciation	Col (b) = Page 6 of 21, Line 18 ;Col (c) = Page 4 of 21, Line 18	($110,034)	($52,688)	($57,346)
4	FY21 tax (gain)/loss on retirements	Col (b) = Page 6 of 21, Line 19 ;Col (c) = Page 4 of 21, Line 19	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($68,469)	($36,186)	($32,284)
6	Effective Tax Rate	Per Tax Department	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($23,964)	($12,665)	($11,299)
	Deferred Tax Not Subject to Proration				
8	Capital Repairs Deduction	Page 8 of 21, Line 3	$0	$0	
9	Cost of Removal	Page 8 of 21, Line 20	$0	$0	
10	Book/Tax Depreciation Timing Difference at 3/31/2021		$0	$0	
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0	
12	Effective Tax Rate		35.00%	35.00%	
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0	
14	Total Deferred Tax Reserve	Line 7 + Line 13	($23,964)	($12,665)	($11,299)
15	Net Operating Loss	Page 5 of 21, Line 23	$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($23,964)	($12,665)	($11,299)
	Allocation of FY 2021 Estimated Federal NOL				
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($36,186)	($36,186)	
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0	
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($36,186)	($36,186)	
20	Total FY 2021 Federal NOL	Col (b) = Page 5 of 21, Line 23 / 35%	$0	$0	
21	Allocated FY 2021 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0	
22	Allocated FY 2021 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0	
23	Effective Tax Rate	Per Tax Department	35.00%	35.00%	
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0	
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($23,964)	($12,665)	($11,299)

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (m)	(l)	(m)
26	April 2020	30	91.78%	($1,833)	($969)	($864)
27	May 2020	31	83.29%	($1,663)	($879)	($784)
28	June 2020	30	75.07%	($1,499)	($792)	($707)
29	July 2020	31	66.58%	($1,330)	($703)	($627)
30	August 2020	31	58.08%	($1,160)	($613)	($547)
31	September 2020	30	49.86%	($996)	($526)	($470)
32	October 2020	31	41.37%	($826)	($437)	($390)
33	November 2020	30	33.15%	($662)	($350)	($312)
34	December 2020	31	24.66%	($492)	($260)	($232)
35	January 2021	31	16.16%	($323)	($171)	($152)
36	February 2021	28	8.49%	($170)	($90)	($80)
37	March 2021	31	0.00%	$0	$0	$0
38	Total	365		($10,954)	($5,789)	($5,165)
39	Deferred Tax Without Proration	Line 25		($23,964)	($12,665)	($11,299)
40	Proration Adjustment	Line 38 - Line 39		$13,011	$6,876	$6,135

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2022 Net Deferred Tax Reserve Electric Proration
RI Only Grid Mod - Electric

Line No.			(a)=Sum of (b) through (d) Total	(b) Vintage Year March 31, 2022	(c) Vintage Year March 31, 2021	(d) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration					
1	Book Depreciation	Col (b) = Page 7 of 21, Line 14 + Line 17; Col (c) = Page 5 of 21, Line 14 + Line 17; Col (d) = Page 3 of 21, Line 14 + Line 17	$66,627	$8,560	$33,005	$25,063
2	Bonus Depreciation	Page 6 of 21, Line 12	$0	$0		
3	Remaining MACRS Tax Depreciation	Col (b) = Page 8 of 21, Line 18; Col (c) = Page 6 of 21, Line 18; Col (d) = Page 4 of 21, Line 18	($178,655)	($24,188)	($101,427)	($53,040)
4	FY22 tax (gain)/loss on retirements	Col (b) = Page 8 of 21, Line 19; Col (c) = Page 6 of 21, Line 19; Col (d) = Page 4 of 21, Line 19	$0	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($112,028)	($15,628)	($68,423)	($27,978)
6	Effective Tax Rate	Per Tax Department	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($39,210)	($5,470)	($23,948)	($9,792)
	Deferred Tax Not Subject to Proration					
8	Capital Repairs Deduction	Page 8 of 21, Line 3	$0	$0		
9	Cost of Removal	Page 8 of 21, Line 20	$0	$0		
10	Book/Tax Depreciation Timing Difference at 3/31/2022		$0	$0		
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0		
12	Effective Tax Rate		35.00%	35.00%		
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0		
14	Total Deferred Tax Reserve	Line 7 + Line 13	($39,210)	($5,470)	($23,948)	($9,792)
15	Net Operating Loss	Page 7 of 21, Line 23	$0	$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($39,210)	($5,470)	($23,948)	($9,792)
	Allocation of FY 2022 Estimated Federal NOL					
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($15,628)	($15,628)		
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0		
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($15,628)	($15,628)		
20	Total FY 2022 Federal NOL	Col (b) = Page 7 of 21, Line 23 / 35%	$0	$0		
21	Allocated FY 2022 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0		
22	Allocated FY 2022 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0		
23	Effective Tax Rate	Per Tax Department	35.00%	35.00%		
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0		
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($39,210)	($5,470)	($23,948)	($9,792)

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (n)	(l)	(m)	(n)
26	April 2021	30	91.78%	($2,999)	($418)	($1,832)	($749)
27	May 2021	31	83.29%	($2,721)	($380)	($1,662)	($680)
28	June 2021	30	75.07%	($2,453)	($342)	($1,498)	($613)
29	July 2021	31	66.58%	($2,175)	($303)	($1,329)	($543)
30	August 2021	31	58.08%	($1,898)	($265)	($1,159)	($474)
31	September 2021	30	49.86%	($1,629)	($227)	($995)	($407)
32	October 2021	31	41.37%	($1,352)	($189)	($826)	($338)
33	November 2021	30	33.15%	($1,083)	($151)	($662)	($271)
34	December 2021	31	24.66%	($806)	($112)	($492)	($201)
35	January 2022	31	16.16%	($528)	($74)	($323)	($132)
36	February 2022	28	8.49%	($278)	($39)	($169)	($69)
37	March 2022	31	0.00%	$0	$0	$0	$0
38	Total	365		($17,922)	($2,500)	($10,946)	($4,476)
39	Deferred Tax Without Proration	Line 25		($39,210)	($5,470)	($23,948)	($9,792)
40	Proration Adjustment	Line 38 - Line 39		$21,288	$2,970	$13,002	$5,316

Column Notes:
(i) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
RI Only Grid Mod - IS
Annual Grid Mod RI Only IS Revenue Requirement Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	IS Electric Operation and Maintenance (O&M) Expenses:				
1	DSCADA & ADMS		$ -	$ 58,311	$ 87,467
2	GIS Data Enhancement		$ -	$ -	$ -
3	Enterprise Service Bus		$ 518,968	$ 1,264,701	$ 1,326,251
4	Data Lake		$ 546,180	$ 786,551	$ 1,063,852
5	PI Historian		$ 33,691	$ 1,329,491	$ 1,329,491
6	Advanced Analytics		$ 69,973	$ 874,017	$ 1,029,513
7	Telecommunications		$ -	$ 1,263,405	$ 1,895,108
8	Cybersecurity		$ 5,423,571	$ 2,736,730	$ 2,182,127
9	**Total IS Electric O&M costs**	Sum of Lines 1 through 8	**$ 6,592,383**	**$ 8,313,205**	**$ 8,913,808**
	IS Gas Operation and Maintenance (O&M) Expenses:				
10	DSCADA & ADMS		$ -	$ 31,689	$ 47,534
11	GIS Data Enhancement		$ -	$ -	$ -
12	Enterprise Service Bus		$ 282,032	$ 687,299	$ 720,749
13	Data Lake		$ 296,820	$ 427,449	$ 578,148
14	PI Historian		$ 18,309	$ 722,509	$ 722,509
15	Advanced Analytics		$ 38,027	$ 474,983	$ 559,487
16	Telecommunications		$ -	$ 686,595	$ 1,029,893
17	Cybersecurity		$ 2,947,429	$ 1,487,270	$ 1,185,873
18	**Total IS Gas O&M costs**	Sum of Lines 10 through 17	**$ 3,582,618**	**$ 4,517,795**	**$ 4,844,192**
19	**Total IS O&M Expenses**	Line 9 + Line 18	**$ 10,175,000**	**$ 12,831,000**	**$ 13,758,000**
	IS Electric Capital Investment:				
20	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$1,554,737	$2,934,466	$2,637,429
21	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$933,156	$1,767,510
22	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$2,392,307
23	Total IS Electric Capital Investment Component of Revenue Requirement	Sum of Lines 20, 21, and 22	$1,554,737	$3,867,622	$6,797,245
	IS Gas Capital Investment:				
24	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$844,919	$1,594,730	$1,433,305
25	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$507,122	$960,550
26	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$1,300,094
27	Total IS Gas Capital Investment Component of Revenue Requirement	Sum of Lines 20, 21, and 22	$844,919	$2,101,852	$3,693,950
28	**Total IS Electric Revenue Requirement**	Line 9 + Line 23	**$8,147,119**	**$12,180,827**	**$15,711,053**
29	**Total IS Gas Revenue Requirement**	Line 18 + Line 27	**$ 4,427,536**	**$6,619,647**	**$8,538,141**
30	**Total IS Electric & Gas Revenue Requirement**	Line 29 + Line 28	**$12,574,655**	**$18,800,474**	**$24,249,194**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated IS Capital Investment 12 months ending March 31, 2020
RI Only Grid Mod - IS

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Estimated Capital Investment				
1	Grid Mod IS Investments		$20,720,000	$0	$0
2	Total Estimated Capital Investment	Sum of Lines 1	$20,720,000	$0	$0
	Depreciable Net Capital Included in Rate Base				
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$20,720,000	$0	$0
4	Retirements	Line 4 * 0%	$0	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 3 - Line 4; Column (b and c) = Prior Year Line 5	$20,720,000	$20,720,000	$20,720,000
	Change in Net Capital Included in Rate Base				
6	Capital Included in Rate Base	Line 2	$20,720,000	$0	$0
7	Cost of Removal		$0	$0	$0
8	**Total Net Plant in Service Including Cost of Removal**	**Line 6 + Line 7**	$20,720,000	$20,720,000	$20,720,000
	Tax Depreciation				
9	Vintage Year Tax Depreciation:				
10	FY 2020 Spend	Page 14 of 21, Line 21	$10,014,131	$7,137,781	$2,378,190
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10	$10,014,131	$17,151,912	$19,530,102
	Book Depreciation				
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	14.29%	14.29%	14.29%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b and c) = Line 1 *	$1,480,000	$2,960,000	$2,960,000
14	Cumulative Book Depreciation	Prior Year Line 14 + Current Year Line 13	$1,480,000	$4,440,000	$7,400,000
15	Total Cumulative Book Depreciation	Line 14	$1,480,000	$4,440,000	$7,400,000
	Deferred Tax Calculation:				
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$8,534,131	$12,711,912	$12,130,102
17	Effective Tax Rate		35.00%	35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$2,986,946	$4,449,169	$4,245,536
19	Less: FY 2020 Federal NOL		$0	$0	$0
20	Less: Proration Adjustment	Col (a) = Page 19 of 21, Line 40; Col (b) = Page 20 of 21, Line 40; Col (c) = Page 21 of 21, Line 40	($1,621,680)	($793,874)	$110,557
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$1,365,266	$3,655,295	$4,356,093
	Rate Base Calculation:				
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$20,720,000	$20,720,000	$20,720,000
23	Accumulated Depreciation	- Line 15	($1,480,000)	($4,440,000)	($7,400,000)
24	Deferred Tax Reserve	- Line 21	($1,365,266)	($3,655,295)	($4,356,093)
25	Year End Rate Base	Sum of Lines 22 through 24	$17,874,734	$12,624,705	$8,963,907
	Revenue Requirement Calculation:				
26	Average Rate Base	Column (a) = Current Year Line 25 ÷ 2; Column (b and c) = (Prior Year Line 25 + Current Year Line 25) ÷ 2	$8,937,366.94	$15,249,719	$10,794,306
27	Pre-Tax ROR	Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Workpaper MAL-6	10.29%	10.29%	10.29%
28	Return and Taxes	Line 26 * Line 27	$919,655	$1,569,196	$1,110,734
29	Book Depreciation	Line 13	$1,480,000	$2,960,000	$2,960,000
30	**Annual Revenue Requirement**	**Line 28 + Line 29**	**$2,399,655**	**$4,529,196**	**$4,070,734**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2020 IS Capital Investments
RI Only Grid Mod - IS

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Capital Repairs Deduction				
1	Plant Additions	Page 13 of 21, Line 2	$20,720,000		
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%		
3	Capital Repairs Deduction	Line 1 * Line 2	$0		
	Bonus Depreciation				
4	Plant Additions	Line 1	$20,720,000		
5	Less Capital Repairs Deduction	Line 3	$0		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$20,720,000		
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$20,720,000		
9	Bonus Depreciation Rate (April 2019- December 2019)	1 * 75% * 30%	22.50%		
10	Bonus Depreciation Rate (January 2020 - Mar 2020)	1 * 25% * 0%	0.00%		
11	Total Bonus Depreciation Rate	Line 9 + Line 10	22.50%		
12	Bonus Depreciation	Line 8 * Line 11	$4,662,000		
	Remaining Tax Depreciation				
13	Plant Additions	Line 1	$20,720,000		
14	Less Capital Repairs Deduction	Line 3	$0		
15	Less Bonus Depreciation	Line 12	$4,662,000		
16	Remaining Plant Additions Subject to 3 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$16,058,000	$16,058,000	$16,058,000
17	3 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	33.330%	44.450%	14.810%
18	Remaining Tax Depreciation	Line 16 * Line 17	$5,352,131	$7,137,781	$2,378,190
19	FY20 Loss incurred due to retirements		$0	$0	$0
20	Cost of Removal	Page 13 of 21, Line 7	$0	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, and 20	$10,014,131	$7,137,781	$2,378,190

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated IS Capital Investment 12 months ending March 31, 2021
RI Only Grid Mod - IS

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Estimated Capital Investment			
1	Grid Mod IS Investments		$12,305,000	
2	Total Estimated Capital Investment	Sum of Lines 1	$12,305,000	$0
	Depreciable Net Capital Included in Rate Base			
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$12,305,000	$0
4	Retirements	Line 4 * 0%	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 3 - Line 4; Column (b and c) = Prior Year Line 5	$12,305,000	$12,305,000
	Change in Net Capital Included in Rate Base			
6	Capital Included in Rate Base	Line 2	$12,305,000	$0
7	Cost of Removal		$0	$0
8	**Total Net Plant in Service Including Cost of Removal**	**Line 5 + Line 7**	**$12,305,000**	**$12,305,000**
	Tax Depreciation			
9	Vintage Year Tax Depreciation:			
10	FY 2021 Spend	Page 16 of 21, Line 21	$4,101,257	$5,469,573
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10	$4,101,257	$9,570,830
	Book Depreciation			
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	14.29%	14.29%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12	$878,929	$1,757,857
14	Cumulative Book Depreciation	Prior Year Line 14 + Current Year Line 13	$878,929	$2,636,786
15	Total Cumulative Book Depreciation	Line 14	$878,929	$2,636,786
	Deferred Tax Calculation:			
16	Cumulative Book / Tax Timer	Line 11 - Line 14	$3,222,328	$6,934,044
17	Effective Tax Rate		35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$1,127,815	$2,426,916
19	Less: FY 2021 Federal NOL		$0	$0
20	Less: Proration Adjustment	Col (a) = Page 20 of 21, Line 40; Col (b) = Page 21 of 21, Line 40	($612,316)	($705,311)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$515,499	$1,721,605
	Rate Base Calculation:			
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$12,305,000	$12,305,000
23	Accumulated Depreciation	- Line 15	($878,929)	($2,636,786)
24	Deferred Tax Reserve	- Line 21	($515,499)	($1,721,605)
25	Year End Rate Base	Sum of Lines 22 through 24	$10,910,572	$7,946,610
	Revenue Requirement Calculation:			
26	Average Rate Base	Column (a) = Current Year Line 25 ÷ 2; Column (b) = (Prior Year Line 25 + Current Year Line 25) ÷ 2	$5,455,286.22	$9,428,591
27	Pre-Tax ROR	Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Workpaper MAL-6	10.29%	10.29%
28	Return and Taxes	Line 26 * Line 27	$561,349	$970,202
29	Book Depreciation	Line 13	$878,929	$1,757,857
30	**Annual Revenue Requirement**	**Line 28 + Line 29**	**$1,440,278**	**$2,728,059**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2021 IS Capital Investments
RI Only Grid Mod - IS

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 15 of 21, Line 2	$12,305,000	
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%	
3	Capital Repairs Deduction	Line 1 * Line 2	$0	
	Bonus Depreciation			
4	Plant Additions	Line 1	$12,305,000	
5	Less Capital Repairs Deduction	Line 3	$0	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$12,305,000	
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$12,305,000	
9	Bonus Depreciation Rate (April 2020- December 2020)	0%	0.00%	
10	Bonus Depreciation Rate (January 2021 - Mar 2021)	0%	0.00%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%	
12	Bonus Depreciation	Line 8 * Line 11	$0	
	Remaining Tax Depreciation			
13	Plant Additions	Line 1	$12,305,000	
14	Less Capital Repairs Deduction	Line 3	$0	
15	Less Bonus Depreciation	Line 12	$0	
16	Remaining Plant Additions Subject to 3 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$12,305,000	$12,305,000
17	3 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	33.330%	44.450%
18	Remaining Tax Depreciation	Line 16 * Line 17	$4,101,257	$5,469,573
19	FY21 Loss incurred due to retirements	Per Tax Department	$0	$0
20	Cost of Removal	Page 15 of 21, Line 7	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$4,101,257	$5,469,573

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated IS Capital Investment 12 months ending March 31, 2022
RI Only Grid Mod - IS

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Estimated Capital Investment		
1	Grid Mod IS Investments		$31,546,000
2	Total Estimated Capital Investment	Sum of Line 1	$31,546,000
	Depreciable Net Capital Included in Rate Base		
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$31,546,000
4	Retirements	Line 4 * 0%	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 3 - Line 4	$31,546,000
	Change in Net Capital Included in Rate Base		
6	Capital Included in Rate Base	Line 2	$31,546,000
7	Cost of Removal		$0
8	**Total Net Plant in Service Including Cost of Removal**	**Line 6 + Line 8**	**$31,546,000**
	Tax Depreciation		
9	Vintage Year Tax Depreciation:		
10	FY 2022 Spend	Page 18 of 21, Line 21	$10,514,282
11	Cumulative Tax Depreciation	Current Year Line 10	$10,514,282
	Book Depreciation		
12	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	14.29%
13	Book Depreciation	Column (a) = Line 2* Line 12 * 50%	$2,253,286
14	Cumulative Book Depreciation	Current Year Line 13	$2,253,286
15	Total Cumulative Book Depreciation	Line 14	$2,253,286
	Deferred Tax Calculation:		
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$8,260,996
17	Effective Tax Rate		35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$2,891,349
19	Less: FY 2022 Federal NOL		$0
20	Less: Proration Adjustment	Col = Page 21 of 21, Line 40	($1,569,778)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$1,321,571
	Rate Base Calculation:		
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$31,546,000
23	Accumulated Depreciation	- Line 15	($2,253,286)
24	Deferred Tax Reserve	- Line 21	($1,321,571)
25	Year End Rate Base	Sum of Lines 22 through 24	$27,971,143
	Revenue Requirement Calculation:		
26	Average Rate Base	Column (a) = Current Year Line 25 ÷ 2	$13,985,571.74
27	Pre-Tax ROR	Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Workpaper MAL-6	10.29%
28	Return and Taxes	Line 26 * Line 27	$1,439,115
29	Book Depreciation	Line 13	$2,253,286
30	**Annual Revenue Requirement**	**Line 28 + Line 29**	**$3,692,401**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2022 IS Capital Investments
RI Only Grid Mod - IS

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Capital Repairs Deduction		
1	Plant Additions	Page 17 of 21, Line 2	$31,546,000
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%
3	Capital Repairs Deduction	Line 1 * Line 2	$0
	Bonus Depreciation		
4	Plant Additions	Line 1	$31,546,000
5	Less Capital Repairs Deduction	Line 3	$0
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$31,546,000
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$31,546,000
9	Bonus Depreciation Rate (April 2020- December 2020)	0%	0.00%
10	Bonus Depreciation Rate (January 2021 - Mar 2021)	0%	0.00%
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%
12	Bonus Depreciation	Line 8 * Line 11	$0
	Remaining Tax Depreciation		
13	Plant Additions	Line 1	$31,546,000
14	Less Capital Repairs Deduction	Line 3	$0
15	Less Bonus Depreciation	Line 12	$0
16	Remaining Plant Additions Subject to 3 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$31,546,000
17	3 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	33.33%
18	Remaining Tax Depreciation	Line 16 * Line 17	$10,514,282
19	FY22 Loss incurred due to retirements	Per Tax Department	$0
20	Cost of Removal	Page 17 of 21, Line 7	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$10,514,282

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2020 Net Deferred Tax Reserve IS Proration
RI Only Grid Mod - IS

Line No.			(a)= Column (b) Total	(b) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration			
1	Book Depreciation	Page 13 of 21, Line 13	$1,480,000	$1,480,000
2	Bonus Depreciation	Page 14 of 21, - Line 12	($4,662,000)	($4,662,000)
3	Remaining MACRS Tax Depreciation	Page 14 of 21, - Line 18	($5,352,131)	($5,352,131)
4	FY20 tax (gain)/loss on retirements	Page 14 of 21, - Line 19	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($8,534,131)	($8,534,131)
6	Effective Tax Rate	Per Tax Department	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($2,986,946)	($2,986,946)
	Deferred Tax Not Subject to Proration			
8	Capital Repairs Deduction	Page 14 of 21, Line 3	$0	$0
9	Cost of Removal	Page 14 of 21, Line 20	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2020		$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0
12	Effective Tax Rate		35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	($2,986,946)	($2,986,946)
15	Net Operating Loss	Page 13 of 21, Line 19	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($2,986,946)	($2,986,946)
	Allocation of FY 2020 Estimated Federal NOL			
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($8,534,131)	($8,534,131)
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($8,534,131)	($8,534,131)
20	Total FY 2020 Federal NOL	Page 13 of 21, Line 19 / 35%	$0	$0
21	Allocated FY 2020 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0
22	Allocated FY 2020 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0
23	Effective Tax Rate	Per Tax Department	35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($2,986,946)	($2,986,946)

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l)	(l)
	Proration Calculation				
26	April 2019	30	91.78%	($228,454)	($228,454)
27	May 2019	31	83.29%	($207,313)	($207,313)
28	June 2019	30	75.07%	($186,855)	($186,855)
29	July 2019	31	66.58%	($165,714)	($165,714)
30	August 2019	31	58.08%	($144,574)	($144,574)
31	September 2019	30	49.86%	($124,115)	($124,115)
32	October 2019	31	41.37%	($102,975)	($102,975)
33	November 2019	30	33.15%	($82,516)	($82,516)
34	December 2019	31	24.66%	($61,376)	($61,376)
35	January 2020	31	16.16%	($40,235)	($40,235)
36	February 2020	28	8.49%	($21,140)	($21,140)
37	March 2020	31	0.00%	$0	$0
38	Total	365		($1,365,266)	($1,365,266)
39	Deferred Tax Without Proration	Line 25		($2,986,946)	($2,986,946)
40	Proration Adjustment	Line 38 - Line 39		$1,621,680	$1,621,680

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Fiscal Year 2021 Net Deferred Tax Reserve IS Proration
RI Only Grid Mod - IS

Line No.			(a)=Sum of (b) through (c) Total	(b) Vintage Year March 31, 2021	(c) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration				
1	Book Depreciation	Col (b) = Page 15 of 21, Line 13; Col (c) = Page 13 of 21, Line 13	$3,838,929	$878,929	$2,960,000
2	Bonus Depreciation	Page 16 of 21, Line 12	$0	$0	
3	Remaining MACRS Tax Depreciation	Col (b) = Page 16 of 21, Line 18; Col (c) = Page 14 of 21, Line 18	($11,239,038)	($4,101,257)	($7,137,781)
4	FY21 tax (gain)/loss on retirements	Col (b) = Page 16 of 21, Line 19; Col (c) = Page 14 of 21, Line 19	$0	$0	
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($7,400,109)	($3,222,328)	($4,177,781)
6	Effective Tax Rate	Per Tax Department	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($2,590,038)	($1,127,815)	($1,462,223)
	Deferred Tax Not Subject to Proration				
8	Capital Repairs Deduction	Page 16 of 21, Line 3	$0	$0	
9	Cost of Removal	Page 16 of 21, Line 20	$0	$0	
10	Book/Tax Depreciation Timing Difference at 3/31/2021		$0	$0	
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0	
12	Effective Tax Rate		35.00%	35.00%	
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0	
14	Total Deferred Tax Reserve	Line 7 + Line 13	($2,590,038)	($1,127,815)	($1,462,223)
15	Net Operating Loss	Col (b) = Page 15 of 21, Line 19; Col (c) = Page 13 of 21, Line 19	$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($2,590,038)	($1,127,815)	($1,462,223)
	Allocation of FY 2021 Estimated Federal NOL				
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($7,400,109)	($3,222,328)	($4,177,781)
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($7,400,109)	($3,222,328)	($4,177,781)
20	Total FY 2021 Federal NOL	Col (b) = Page 15 of 21, Line 19; Col (c) = Page 13 of 21, Line 19 / 35%	$0	$0	$0
21	Allocated FY 2021 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0	$0
22	Allocated FY 2021 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0	$0
23	Effective Tax Rate		35.00%	35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($2,590,038)	($1,127,815)	($1,462,223)

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (m)	(l)	(m)
	Proration Calculation					
26	April 2020	30	91.78%	($198,097)	($86,260)	($111,837)
27	May 2020	31	83.29%	($179,765)	($78,278)	($101,488)
28	June 2020	30	75.07%	($162,025)	($70,553)	($91,472)
29	July 2020	31	66.58%	($143,694)	($62,571)	($81,123)
30	August 2020	31	58.08%	($125,363)	($54,588)	($70,774)
31	September 2020	30	49.86%	($107,623)	($46,864)	($60,759)
32	October 2020	31	41.37%	($89,291)	($38,881)	($50,410)
33	November 2020	30	33.15%	($71,551)	($31,157)	($40,395)
34	December 2020	31	24.66%	($53,220)	($23,174)	($30,046)
35	January 2021	31	16.16%	($34,889)	($15,192)	($19,697)
36	February 2021	28	8.49%	($18,331)	($7,982)	($10,349)
37	March 2021	31	0.00%	$0	$0	$0
38	Total	365		($1,183,849)	($515,499)	($668,350)
39	Deferred Tax Without Proration	Line 25		($2,590,038)	($1,127,815)	($1,462,223)
40	Proration Adjustment	Line 38 - Line 39		$1,406,190	$612,316	$793,874

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Fiscal Year 2022 Net Deferred Tax Reserve IS Proration
RI Only Grid Mod - IS

Line No.			(a)=Sum of (b) through (d) Total	(b) Vintage Year March 31, 2022	(c) Vintage Year March 31, 2021	(d) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration					
1	Book Depreciation	Col (b) = Page 17 of 21, Line 13; Col (c) = Page 15 of 21, Line 13; Col (d) = Page 13 of 21, Line 13	$6,971,143	$2,253,286	$1,757,857	$2,960,000
2	Bonus Depreciation	Page 18 of 21, Line 12	$0	$0		
3	Remaining MACRS Tax Depreciation	Col (b) = Page 18 of 21, Line 18; Col (c) = Page 16 of 21, Line 18; Col (d) = Page 14 of 21, Line 18	($18,362,045)	($10,514,282)	($5,469,573)	($2,378,190)
4	FY22 tax (gain)/loss on retirements	Col (b) = Page 18 of 21, Line 19; Col (c) = Page 16 of 21, Line 19; Col (d) = Page 14 of 21, Line 19	$0	$0		
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($11,390,902)	($8,260,996)	($3,711,716)	$581,810
6	Effective Tax Rate	Per Tax Department	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($3,986,816)	($2,891,349)	($1,299,101)	$203,634
	Deferred Tax Not Subject to Proration					
8	Capital Repairs Deduction	Page 18 of 21, Line 3	$0	$0		
9	Cost of Removal	Page 18 of 21, Line 20	$0	$0		
10	Book/Tax Depreciation Timing Difference at 3/31/2022		$0	$0		
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0		
12	Effective Tax Rate		35.00%	35.00%		
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0		
14	Total Deferred Tax Reserve	Line 7 + Line 13	($3,986,816)	($2,891,349)	($1,299,101)	$203,634
15	Net Operating Loss	Col (b) = Page 17 of 21, Line 19; Col (c) = Page 15 of 21, Line 19; Col (c) = Page 13 of 21, Line 19	$0	$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($3,986,816)	($2,891,349)	($1,299,101)	$203,634
	Allocation of FY 2022 Estimated Federal NOL					
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($11,390,902)	($8,260,996)	($3,711,716)	$581,810
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($11,390,902)	($8,260,996)	($3,711,716)	$581,810
20	Total FY 2022 Federal NOL	Col (b) = Page 17 of 21, Line 19; Col (c) = Page 15 of 21, Line 19; Col (c) = Page 13 of 21, Line 19 / 35%	$0	$0	$0	$0
21	Allocated FY 2022 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0	$0	$0
22	Allocated FY 2022 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0	$0	$0
23	Effective Tax Rate	Per Tax Department	35.00%	35.00%	35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($3,986,816)	($2,891,349)	($1,299,101)	$203,634

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (n)	(l)	(m)	(n)
	Proration Calculation						
26	April 2021	30	91.78%	($304,928)	($221,142)	($99,360)	$15,575
27	May 2021	31	83.29%	($276,710)	($200,678)	($90,166)	$14,133
28	June 2021	30	75.07%	($249,404)	($180,874)	($81,268)	$12,739
29	July 2021	31	66.58%	($221,186)	($160,410)	($72,073)	$11,297
30	August 2021	31	58.08%	($192,969)	($139,947)	($62,879)	$9,856
31	September 2021	30	49.86%	($165,662)	($120,143)	($53,981)	$8,461
32	October 2021	31	41.37%	($137,445)	($99,679)	($44,786)	$7,020
33	November 2021	30	33.15%	($110,138)	($79,875)	($35,888)	$5,625
34	December 2021	31	24.66%	($81,921)	($59,411)	($26,694)	$4,184
35	January 2022	31	16.16%	($53,704)	($38,947)	($17,499)	$2,743
36	February 2022	28	8.49%	($28,217)	($20,464)	($9,195)	$1,441
37	March 2022	31	0.00%	$0	$0	$0	$0
38	Total	365		($1,822,284)	($1,321,571)	($593,790)	$93,076
39	Deferred Tax Without Proration	Line 25		($3,986,816)	($2,891,349)	($1,299,101)	$203,634
40	Proration Adjustment	Line 38 - Line 39		$2,164,531	$1,569,778	$705,311	($110,557)

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

Appendix 10.3,

Revenue Requirement Modern Grid

Multi Jurisdiction

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Grid Mod - Electric Projects and IS Electric and Gas Projects
Annual Revenue Requirement Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Electric Operation and Maintenance (O&M) Expenses:				
1	System Data Portal		$700,000	$700,000	$700,000
2	Feeder Monitoring Sensors		$0	$5,000	$10,000
3	RTU Separation		$60,000	$60,000	$60,000
4	GIS Data Enhancement		$0	$1,028,000	$1,028,000
5	DSCADA & ADMS		$0	$58,311	$87,467
6	GIS Data Enhancement		$0	$0	$0
7	Enterprise Service Bus		$176,877	$402,346	$504,066
8	Data Lake		$236,484	$388,092	$545,532
9	PI Historian		$8,423	$333,669	$333,669
10	Advanced Analytics		$69,973	$299,978	$338,852
11	Telecommunications		$0	$425,022	$636,886
12	Cybersecurity		$1,569,214	$802,100	$623,280
13	**Total Electric O&M costs**	Sum of Lines 1 through 12	**$2,820,970**	**$4,502,518**	**$4,867,750**
	Gas Operation and Maintenance (O&M) Expenses:				
14	DSCADA & ADMS		$0	$31,689	$47,534
15	GIS Data Enhancement		$0	$0	$0
16	Enterprise Service Bus		$96,123	$218,654	$273,934
17	Data Lake		$128,517	$210,908	$296,468
18	PI Historian		$4,577	$181,332	$181,332
19	Advanced Analytics		$38,027	$163,022	$184,148
20	Telecommunications		$0	$230,978	$346,114
21	Cybersecurity		$852,786	$435,900	$338,720
22	**Total Gas O&M costs**	Sum of Lines 14 through 21	**$1,120,030**	**$1,472,482**	**$1,668,250**
23	**Total O&M Expenses**	Sum of Lines 13 + 22	**$3,941,000**	**$5,975,000**	**$6,536,000**
24	Electric Capital Investment:				
25	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$639,093	$1,241,853	$1,125,862
26	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$347,366	$712,635
27	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$1,271,625
28	Total Electric Capital Investment Component of Revenue Requirement	Sum of Lines 25 through 27	$639,093	$1,589,219	$3,110,122
29	Gas Capital Investment:				
30	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$313,541	$591,790	$531,886
31	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$142,431	$269,781
32	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$668,840
33	Total Gas Capital Investment Component of Revenue Requirement	Sum of Lines 30 through 32	$313,541	$734,220	$1,470,508
34	**Total Electric Revenue Requirement**	Sum of Lines 13 + 28	**$3,460,063**	**$6,091,736**	**$7,977,872**
35	**Total Gas Revenue Requirement**	Sum of Lines 22 + 33	**$1,433,572**	**$2,206,703**	**$3,138,758**
36	**Total Electric & Gas Revenue Requirement**	Sum of Lines 34 + 35	**$4,893,634**	**$8,298,439**	**$11,116,630**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Synergy Grid Mod - Electric
Annual Grid Mod Synergy Electric Revenue Requirement Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Operation and Maintenance (O&M) Expenses:				
1	System Data Portal		$700,000	$700,000	$700,000
2	Feeder Monitoring Sensors		$0	$5,000	$10,000
3	RTU Separation		$60,000	$60,000	$60,000
4	GIS Data Enhancement		$0	$1,028,000	$1,028,000
5	**Total O&M Expenses**	Sum of Lines 1 through 4	**$760,000**	**$1,793,000**	**$1,798,000**
	Capital Investment:				
6	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$62,145	$152,900	$147,136
7	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$85,278	$216,210
8	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$40,891
9	**Total Capital Investment Component of Revenue Requirement**	Sum of Lines 6 through 8	**$62,145**	**$238,178**	**$404,237**
10	**Total Electric Revenue Requirement**	Sum of Lines 5 + 9	**$822,145**	**$2,031,178**	**$2,202,237**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Electric Capital Investment 12 months ending March 31, 2020
Synergy Grid Mod - Electric

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Estimated Capital Investment				
1	Feeder Monitor Sensors		$455,000	$0	$0
2	RTU Separation		$570,000	$0	$0
3	Total Estimated Capital Investment	Sum of Lines 1 through 2	$1,025,000	$0	$0
	Depreciable Net Capital Included in Rate Base				
4	Total Allowed Capital Included in Rate Base in Current Year	Line 3	$1,025,000	$0	$0
5	Retirements	Line 4 * 0%	$0	$0	$0
6	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b and c) = Prior Year Line 6	$1,025,000	$1,025,000	$1,025,000
	Change in Net Capital Included in Rate Base				
7	Capital Included in Rate Base	Line 3	$1,025,000	$0	$0
8	Cost of Removal		$0	$0	$0
9	**Total Net Plant in Service Including Cost of Removal**	**Line 6 + Line 8**	**$1,025,000**	**$1,025,000**	**$1,025,000**
	Tax Depreciation				
10	Vintage Year Tax Depreciation:				
11	FY 2020 Spend	Page 4 of 21, Line 21	$260,414	$57,346	$53,040
12	Cumulative Tax Depreciation	Prior Year Line 12 + Current Year Line 11	$260,414	$317,760	$370,800
	Book Depreciation				
13	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	2.89%	2.89%	2.89%
14	Book Depreciation	Column (a) = Line 1 * Line 13 * 50% ; Column (b and c) = Line 1 * Line 13	$6,575	$13,150	$13,150
15	Cumulative Book Depreciation	Prior Year Line 15 + Current Year Line 14	$6,575	$19,724	$32,874
16	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	2.09%	2.09%	2.09%
17	Book Depreciation	Column (a) = Line 2 * Line 16 * 50% ; Column (b and c) = Line 2 * Line 16	$5,957	$11,913	$11,913
18	Cumulative Book Depreciation	Prior Year Line 18 + Current Year Line 17	$5,957	$17,870	$29,783
19	Total Cumulative Book Depreciation	Sum of Lines 15 + 18	$12,531	$37,594	$62,656
	Deferred Tax Calculation:				
20	Cumulative Book / Tax Timer	Line 12 - Line 19	$247,883	$280,166	$308,144
21	Effective Tax Rate		35.00%	35.00%	35.00%
22	Deferred Tax Reserve	Line 20 * Line 21	$86,759	$98,058	$107,850
23	Less: FY 2020 Federal NOL	Page 21 of 21, Line12(n)	$0	$0	$0
24	Less: Proration Adjustment	Col (a) = Page 9 of 21, Line 40; Col (b) = Page 10 of 21, Line 40; Col (c) = Page 11 of 21, Line 40	($47,103)	($6,135)	($5,316)
25	Net Deferred Tax Reserve	Sum of Lines 22 through 24	$39,656	$91,924	$102,534
	Rate Base Calculation:				
26	Cumulative Incremental Capital Included in Rate Base	Line 9	$1,025,000	$1,025,000	$1,025,000
27	Accumulated Depreciation	- Line 19	($12,531)	($37,594)	($62,656)
28	Deferred Tax Reserve	- Line 25	($39,656)	($91,924)	($102,534)
29	Year End Rate Base	Sum of Lines 26 through 28	$972,813	$895,483	$859,810
	Revenue Requirement Calculation:				
30	Average Rate Base	Column (a) = Current Year Line 29 ÷ 2; Column (b and c) = (Prior Year Line 29 + Current Year Line 29) ÷ 2	$486,407	$934,148	$877,646
31	Pre-Tax ROR	1/	10.20%	10.20%	10.20%
32	Return and Taxes	Line 30 * Line 31	$49,613	$95,283	$89,520
33	Book Depreciation	Sum of Line 14 + Line 17	$12,531	$25,063	$25,063
34	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b & c) Line 9 * 3.176%	$0	$32,554	$32,554
35	**Annual Revenue Requirement**	**Line 32 through Line 33**	**$62,145**	**$152,900**	**$147,136**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2020 Electric Capital Investments
Synergy Grid Mod - Electric

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Capital Repairs Deduction				
1	Plant Additions	Page 3 of 21, Line 3	$1,025,000		
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%		
3	Capital Repairs Deduction	Line 1 * Line 2	$0		
	Bonus Depreciation				
4	Plant Additions	Line 1	$1,025,000		
5	Less Capital Repairs Deduction	Line 3	$0		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$1,025,000		
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$1,025,000		
9	Bonus Depreciation Rate (April 2019- December 2019)	1 * 75% * 30%	22.50%		
10	Bonus Depreciation Rate (January 2020 - Mar 2020)	1 * 25% * 00%	0.00%		
11	Total Bonus Depreciation Rate	Line 9 + Line 10	22.50%		
12	Bonus Depreciation	Line 8 * Line 11	$230,625		
	Remaining Tax Depreciation				
13	Plant Additions	Line 1	$1,025,000		
14	Less Capital Repairs Deduction	Line 3	$0		
15	Less Bonus Depreciation	Line 12	$230,625		
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$794,375	$794,375	$794,375
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%	7.219%	6.677%
18	Remaining Tax Depreciation	Line 16 * Line 17	$29,789	$57,346	$53,040
19	FY20 Loss incurred due to retirements	Per Tax Department	$0	$0	$0
20	Cost of Removal	Page 3 of 21, Line 8	$0		
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$260,414	$57,346	$53,040

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Electric Capital Investment 12 months ending March 31, 2021
Synergy Grid Mod - Electric

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Estimated Capital Investment			
1	Feeder Monitor Sensors		$455,000	
2	RTU Separation		$950,000	
3	Total Estimated Capital Investment	Sum of Lines 1 through 2	$1,405,000	$0
	Depreciable Net Capital Included in Rate Base			
4	Total Allowed Capital Included in Rate Base in Current Year	Line 3	$1,405,000	$0
5	Retirements	Line 4 * 0%	$0	$0
6	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$1,405,000	$1,405,000
	Change in Net Capital Included in Rate Base			
7	Capital Included in Rate Base	Line 3	$1,405,000	$0
8	Cost of Removal		$0	$0
9	**Total Net Plant in Service Including Cost of Removal**	**Line 6 + Line 8**	**$1,405,000**	**$1,405,000**
	Tax Depreciation			
10	Vintage Year Tax Depreciation:			
11	FY 2021 Spend	Page 6 of 21, Line 21	$52,688	$101,427
12	Cumulative Tax Depreciation	Prior Year Line 15 + Current Year Line 14	$52,688	$154,115
	Book Depreciation			
13	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	2.89%	2.89%
14	Book Depreciation	Column (a) = Line 1 * Line 13 * 50% ; Column (b) = Line 1 * Line 13	$4,755	$13,150
15	Cumulative Book Depreciation	Prior Year Line 17 + Current Year Line 16	$4,755	$17,904
16	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	2.09%	2.09%
17	Book Depreciation	Column (a) = Line 1 * Line 16 * 50% ; Column (b) = Line 1 * Line 16	$9,928	$19,855
18	Cumulative Book Depreciation	Prior Year Line 17 + Current Year Line 16	$9,928	$29,783
19	Total Cumulative Book Depreciation	Sum of Lines 15 + 18	$14,682	$47,687
	Deferred Tax Calculation:			
20	Cumulative Book / Tax Timer	Line 12 - Line 18	$38,006	$106,428
21	Effective Tax Rate		35.00%	35.00%
22	Deferred Tax Reserve	Line 20 * Line 21	$13,302	$37,250
23	Less: FY 2021 Federal NOL	Page 21 of 21, Line12(n)	$0	$0
24	Less: Proration Adjustment	Col (a) = Page 10 of 21, Line 40; Col (b) = Page 11 of 21, Line 40	($7,222)	($13,002)
25	Net Deferred Tax Reserve	Sum of Lines 22 through 24	$6,080	$24,248
	Rate Base Calculation:			
26	Cumulative Incremental Capital Included in Rate Base	Line 9	$1,405,000	$1,405,000
27	Accumulated Depreciation	- Line 19	($14,682)	($47,687)
28	Deferred Tax Reserve	- Line 25	($6,080)	($24,248)
29	Year End Rate Base	Sum of Lines 26 through 28	$1,384,238	$1,333,065
	Revenue Requirement Calculation:			
30	Average Rate Base	Column (a) = Current Year Line 37 ÷ 2; Column (b) = (Prior Year Line 37 + Current Year Line 37) ÷ 2	$692,118.85	$1,358,651
31	Pre-Tax ROR	1/	10.20%	10.20%
32	Return and Taxes	Line 30 * Line 31	$70,596	$138,582
33	Book Depreciation	Line 17	$14,682	$33,005
34	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b) Line 8 * 3.176%	$0	$44,623
35	**Annual Revenue Requirement**	**Line 32 through Line 33**	**$85,278**	**$216,210**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2021 Electric Capital Investments
Synergy Grid Mod - Electric

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 5 of 21, Line 3	$1,405,000	
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%	
3	Capital Repairs Deduction	Line 1 * Line 2	$0	
	Bonus Depreciation			
4	Plant Additions	Line 1	$1,405,000	
5	Less Capital Repairs Deduction	Line 3	$0	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$1,405,000	
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$1,405,000	
9	Bonus Depreciation Rate (April 2020- December 2020)	0%	0.00%	
10	Bonus Depreciation Rate (January 2021 - Mar 2021)	0%	0.00%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%	
12	Bonus Depreciation	Line 8 * Line 11	$0	
	Remaining Tax Depreciation			
13	Plant Additions	Line 1	$1,405,000	
14	Less Capital Repairs Deduction	Line 3	$0	
15	Less Bonus Depreciation	Line 12	$0	
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$1,405,000	$1,405,000
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%	7.219%
18	Remaining Tax Depreciation	Line 16 * Line 17	$52,688	$101,427
19	FY21 Loss incurred due to retirements	Per Tax Department	$0	$0
20	Cost of Removal	Page 5 of 21, Line 8	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$52,688	$101,427

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Electric Capital Investment 12 months ending March 31, 2022
Synergy Grid Mod - Electric

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Estimated Capital Investment		
1	Feeder Monitor Sensors		$455,000
2	RTU Separation		$190,000
3	Total Estimated Capital Investment	Sum of Lines 1 through 2	$645,000
	Depreciable Net Capital Included in Rate Base		
4	Total Allowed Capital Included in Rate Base in Current Year	Line 3	$645,000
5	Retirements	Line 4 * 0%	$0
6	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$645,000
	Change in Net Capital Included in Rate Base		
7	Capital Included in Rate Base	Line 3	$645,000
8	Cost of Removal		$0
9	**Total Net Plant in Service Including Cost of Removal**	**Line 6 + Line 8**	**$645,000**
	Tax Depreciation		
10	Vintage Year Tax Depreciation:		
11	FY 2022 Spend	Page 8 of 21, Line 21	$24,188
12	Cumulative Tax Depreciation	Prior Year Line 12 + Current Year Line 13	$24,188
	Book Depreciation		
13	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	2.89%
14	Book Depreciation	Column (a) = Line 1* Line 13 * 50%	$6,575
15	Cumulative Book Depreciation	Prior Year Line 17 + Current Year Line 16	$6,575
16	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	2.09%
17	Book Depreciation	Column (a) = Line 1* Line 13 * 50%	$1,986
18	Cumulative Book Depreciation	Prior Year Line 17 + Current Year Line 16	$1,986
19	Total Cumulative Book Depreciation	Sum of Lines 15 + 18	$8,560
	Deferred Tax Calculation:		
20	Cumulative Book / Tax Timer	Line 12 - Line 19	$15,628
21	Effective Tax Rate		35.00%
22	Deferred Tax Reserve	Line 20 * Line 21	$5,470
23	Less: FY 2022 Federal NOL	Page 21 of 21, Line12(n)	$0
24	Less: Proration Adjustment	Col (a) = Page 11 of 21, Line 40	($2,970)
25	Net Deferred Tax Reserve	Sum of Lines 22 through 24	$2,500
	Rate Base Calculation:		
26	Cumulative Incremental Capital Included in Rate Base	Line 9	$645,000
27	Accumulated Depreciation	- Line 19	($8,560)
28	Deferred Tax Reserve	- Line 25	($2,500)
29	Year End Rate Base	Sum of Lines 26 through 28	$633,940
	Revenue Requirement Calculation:		
30	Average Rate Base	Column (a) = Current Year Line 27 ÷ 2	$316,970
31	Pre-Tax ROR	1/	10.20%
32	Return and Taxes	Line 30 * Line 31	$32,331
33	Book Depreciation	Line 17	$8,560
34	Property Taxes	Tax Rate 3.176% MAL-7	$0
35	**Annual Revenue Requirement**	**Line 32 through Line 33**	**$40,891**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2022 Electric Capital Investments
Synergy Grid Mod - Electric

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Capital Repairs Deduction		
1	Plant Additions	Page 7 of 21, Line 3	$645,000
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%
3	Capital Repairs Deduction	Line 1 * Line 2	$0
	Bonus Depreciation		
4	Plant Additions	Line 1	$645,000
5	Less Capital Repairs Deduction	Line 3	$0
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$645,000
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$645,000
9	Bonus Depreciation Rate (April 2021- December 2021)	0.00%	0.00%
10	Bonus Depreciation Rate (January 2022 - Mar 2022)	0.00%	0.00%
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%
12	Bonus Depreciation	Line 8 * Line 11	$0
	Remaining Tax Depreciation		
13	Plant Additions	Line 1	$645,000
14	Less Capital Repairs Deduction	Line 3	$0
15	Less Bonus Depreciation	Line 12	$0
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$645,000
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%
18	Remaining Tax Depreciation	Line 16 * Line 17	$24,188
19	FY22 Loss incurred due to retirements	Per Tax Department	$0
20	Cost of Removal	Page 7 of 21, Line 8	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$24,188

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2020 Net Deferred Tax Reserve Electric Proration
Synergy Grid Mod - Electric

Line No.			(a)=Sum of (b) through (h) Total	(b) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration			
1	Book Depreciation	Page 3 of 21, Line 14 + Line 17	$12,531	$12,531
2	Bonus Depreciation	Page 4 of 21, Line 12	($230,625)	($230,625)
3	Remaining MACRS Tax Depreciation	Page 4 of 21, Line 18	($29,789)	($29,789)
4	FY20 tax (gain)/loss on retirements	Page 4 of 21, Line 19	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($247,883)	($247,883)
6	Effective Tax Rate	Tax Department	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($86,759)	($86,759)
	Deferred Tax Not Subject to Proration			
8	Capital Repairs Deduction	Page 4 of 21, Line 3	$0	$0
9	Cost of Removal	Page 4 of 21, Line 20	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2020		$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0
12	Effective Tax Rate		35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	($86,759)	($86,759)
15	Net Operating Loss		$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($86,759)	($86,759)
	Allocation of FY 2020 Estimated Federal NOL			
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($247,883)	($247,883)
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($247,883)	($247,883)
20	Total FY 2020 Federal NOL		$0	$0
21	Allocated FY 2020 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0
22	Allocated FY 2020 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0
23	Effective Tax Rate		35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($86,759)	($86,759)

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l)	(l)
	Proration Calculation				
26	April 2019	30	91.78%	($6,636)	($6,636)
27	May 2019	31	83.29%	($6,022)	($6,022)
28	June 2019	30	75.07%	($5,427)	($5,427)
29	July 2019	31	66.58%	($4,813)	($4,813)
30	August 2019	31	58.08%	($4,199)	($4,199)
31	September 2019	30	49.86%	($3,605)	($3,605)
32	October 2019	31	41.37%	($2,991)	($2,991)
33	November 2019	30	33.15%	($2,397)	($2,397)
34	December 2019	31	24.66%	($1,783)	($1,783)
35	January 2020	31	16.16%	($1,169)	($1,169)
36	February 2020	28	8.49%	($614)	($614)
37	March 2020	31	0.00%	$0	$0
38	Total	365		($39,656)	($39,656)
39	Deferred Tax Without Proration	Line 25		($86,759)	($86,759)
40	Proration Adjustment	Line 38 - Line 39		$47,103	$47,103

Column Notes:

(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2021 Net Deferred Tax Reserve Electric Proration
Synergy Grid Mod - Electric

Line No.			(a)=Sum of (b) through (h) Total	(b) Vintage Year March 31, 2021	(c) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration				
1	Book Depreciation	Col (b) = Page 5 of 21, Line 14 + Line 17 ;Col (c) = Page 3 of 21, Line 14 + Line 17	$39,745	$14,682	$25,063
2	Bonus Depreciation	Page 6 of 21, Line 12	$0	$0	
3	Remaining MACRS Tax Depreciation	Col (b) = Page 6 of 21, Line 18 ;Col (c) = Page 4 of 21, Line 18	($110,034)	($52,688)	($57,346)
4	FY21 tax (gain)/loss on retirements	Col (b) = Page 6 of 21, Line 19 ;Col (c) = Page 4 of 21, Line 19	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($70,289)	($38,006)	($32,284)
6	Effective Tax Rate	Tax Department	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($24,601)	($13,302)	($11,299)
	Deferred Tax Not Subject to Proration				
8	Capital Repairs Deduction	Page 8 of 21, Line 3	$0	$0	
9	Cost of Removal	Page 8 of 21, Line 20	$0	$0	
10	Book/Tax Depreciation Timing Difference at 3/31/2021		$0	$0	
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0	
12	Effective Tax Rate		35.00%	35.00%	
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0	
14	Total Deferred Tax Reserve	Line 7 + Line 13	($24,601)	($13,302)	($11,299)
15	Net Operating Loss		$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($24,601)	($13,302)	($11,299)
	Allocation of FY 2021 Estimated Federal NOL				
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($38,006)	($38,006)	
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0	
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($38,006)	($38,006)	
20	Total FY 2021 Federal NOL		$0	$0	
21	Allocated FY 2021 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0	
22	Allocated FY 2021 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0	
23	Effective Tax Rate		35.00%	35.00%	
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0	
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($24,601)	($13,302)	($11,299)

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (m)	(l)	(m)
	Proration Calculation					
26	April 2020	30	91.78%	($1,882)	($1,017)	($864)
27	May 2020	31	83.29%	($1,707)	($923)	($784)
28	June 2020	30	75.07%	($1,539)	($832)	($707)
29	July 2020	31	66.58%	($1,365)	($738)	($627)
30	August 2020	31	58.08%	($1,191)	($644)	($547)
31	September 2020	30	49.86%	($1,022)	($553)	($470)
32	October 2020	31	41.37%	($848)	($459)	($390)
33	November 2020	30	33.15%	($680)	($367)	($312)
34	December 2020	31	24.66%	($506)	($273)	($232)
35	January 2021	31	16.16%	($331)	($179)	($152)
36	February 2021	28	8.49%	($174)	($94)	($80)
37	March 2021	31	0.00%	$0	$0	$0
38	Total	365		($11,245)	($6,080)	($5,165)
39	Deferred Tax Without Proration	Line 25		($24,601)	($13,302)	($11,299)
40	Proration Adjustment	Line 38 - Line 39		$13,357	$7,222	$6,135

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2022 Net Deferred Tax Reserve Electric Proration
Synergy Grid Mod - Electric

Line No.			(a)=Sum of (b) through (h) Total	(b) Vintage Year March 31, 2022	(c) Vintage Year March 31, 2021	(c) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration					
1	Book Depreciation	Col (b) = Page 7 of 21, Line 14 + Line 17; Col (c) = Page 5 of 21, Line 14 + Line 17; Col (d) = Page 3 of 21, Line 14 + Line 17	$66,627	$8,560	$33,005	$25,063
2	Bonus Depreciation	Page 6 of 21, Line 12	$0	$0		
3	Remaining MACRS Tax Depreciation	Col (b) = Page 8 of 21, Line 18; Col (c) = Page 6 of 21, Line 18; Col (d) = Page 4 of 21, Line 18	($178,655)	($24,188)	($101,427)	($53,040)
4	FY22 tax (gain)/loss on retirements	Col (b) = Page 8 of 21, Line 19; Col (c) = Page 6 of 21, Line 19; Col (d) = Page 4 of 21, Line 19	$0	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($112,028)	($15,628)	($68,423)	($27,978)
6	Effective Tax Rate	Per Tax Department	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($39,210)	($5,470)	($23,948)	($9,792)
	Deferred Tax Not Subject to Proration					
8	Capital Repairs Deduction	Page 8 of 21, Line 3	$0	$0		
9	Cost of Removal	Page 8 of 21, Line 20	$0	$0		
10	Book/Tax Depreciation Timing Difference at 3/31/2022		$0	$0		
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0		
12	Effective Tax Rate		35.00%	35.00%		
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0		
14	Total Deferred Tax Reserve	Line 7 + Line 13	($39,210)	($5,470)	($23,948)	($9,792)
15	Net Operating Loss		$0	$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($39,210)	($5,470)	($23,948)	($9,792)
	Allocation of FY 2022 Estimated Federal NOL					
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($15,628)	($15,628)		
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0		
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($15,628)	($15,628)		
20	Total FY 2022 Federal NOL		$0	$0		
21	Allocated FY 2022 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0		
22	Allocated FY 2022 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0		
23	Effective Tax Rate		35.00%	35.00%		
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0		
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($39,210)	($5,470)	($23,948)	($9,792)

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (n)	(l)	(m)	(n)
	Proration Calculation						
26	April 2021	30	91.78%	($2,999)	($418)	($1,832)	($749)
27	May 2021	31	83.29%	($2,721)	($380)	($1,662)	($680)
28	June 2021	30	75.07%	($2,453)	($342)	($1,498)	($613)
29	July 2021	31	66.58%	($2,175)	($303)	($1,329)	($543)
30	August 2021	31	58.08%	($1,898)	($265)	($1,159)	($474)
31	September 2021	30	49.86%	($1,629)	($227)	($995)	($407)
32	October 2021	31	41.37%	($1,352)	($189)	($826)	($338)
33	November 2021	30	33.15%	($1,083)	($151)	($662)	($271)
34	December 2021	31	24.66%	($806)	($112)	($492)	($201)
35	January 2022	31	16.16%	($528)	($74)	($323)	($132)
36	February 2022	28	8.49%	($278)	($39)	($169)	($69)
37	March 2022	31	0.00%	$0	$0	$0	$0
38	Total	365		($17,922)	($2,500)	($10,946)	($4,476)
39	Deferred Tax Without Proration	Line 25		($39,210)	($5,470)	($23,948)	($9,792)
40	Proration Adjustment	Line 38 - Line 39		$21,288	$2,970	$13,002	$5,316

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Annual Grid Mod Synergy IS Revenue Requirement Summary
Annual Revenue Requirement Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	IS Electric Operation and Maintenance (O&M) Expenses:				
1	DSCADA & ADMS		$0	$58,311	$87,467
2	GIS Data Enhancement		$0	$0	$0
3	Enterprise Service Bus		$176,877	$402,346	$504,066
4	Data Lake		$236,484	$388,092	$545,532
5	PI Historian		$8,423	$333,669	$333,669
6	Advanced Analytics		$69,973	$299,978	$338,852
7	Telecommunications		$0	$425,022	$636,886
8	Cybersecurity		$1,569,214	$802,100	$623,280
9	**Total IS Electric O&M costs**	**Sum of Line 1 through Line 8**	**$2,060,970**	**$2,709,518**	**$3,069,750**
	IS Gas Operation and Maintenance (O&M) Expenses:				
10	DSCADA & ADMS		$0	$31,689	$47,534
11	GIS Data Enhancement		$0	$0	$0
12	Enterprise Service Bus		$96,123	$218,654	$273,934
13	Data Lake		$128,517	$210,908	$296,468
14	PI Historian		$4,577	$181,332	$181,332
15	Advanced Analytics		$38,027	$163,022	$184,148
16	Telecommunications		$0	$230,978	$346,114
17	Cybersecurity		$852,786	$435,900	$338,720
18	**Total IS Gas O&M costs**	**Sum of Line 10 through Line 16**	**$1,120,030**	**$1,472,482**	**$1,668,250**
19	**Total IS O&M Expenses**		**$3,181,000**	**$4,182,000**	**$4,738,000**
20	IS Electric Capital Investment:				
21	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$576,948	$1,088,953	$978,725
22	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$262,087	$496,425
23	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$1,230,734
24	Total IS Electric Capital Investment Component of Revenue Requirement		$576,948	$1,351,041	$2,705,885
25	IS Gas Capital Investment:				
26	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$313,541	$591,790	$531,886
27	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$142,431	$269,781
28	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$668,840
29	Total IS Gas Capital Investment Component of Revenue Requirement		$313,541	$734,220	$1,470,508
30	**Total IS Electric Revenue Requirement**		**$2,637,918**	**$4,060,558**	**$5,775,635**
31	**Total IS Gas Revenue Requirement**		**$1,433,572**	**$2,206,703**	**$3,138,758**
32	**Total IS Electric & Gas Revenue Requirement**		**$4,071,490**	**$6,267,261**	**$8,914,393**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated IS Capital Investment 12 months ending March 31, 2020
Synergy Grid Mod - IS

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Estimated Capital Investment				
1	Grid Mod IS Investments		$7,689,000	$0	$0
2	Total Estimated Capital Investment	Sum of Line 1	$7,689,000	$0	$0
	Depreciable Net Capital Included in Rate Base				
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$7,689,000	$0	$0
4	Retirements	Line 4 * 0%	$0	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$7,689,000	$7,689,000	$7,689,000
	Change in Net Capital Included in Rate Base				
6	Capital Included in Rate Base	Line 2	$7,689,000	$0	$0
7	Cost of Removal		$0	$0	$0
8	**Total Net Plant in Service Including Cost of Removal**	**Line 6 + Line 7**	$7,689,000	$7,689,000	$7,689,000
	Tax Depreciation				
9	Vintage Year Tax Depreciation:				
10	FY 2020 Spend	Page 4 of 21, Line 21	$3,716,151	$2,648,764	$882,524
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10	$3,716,151	$6,364,915	$7,247,439
	Book Depreciation				
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	14.29%	14.29%	14.29%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12	$549,214	$1,098,429	$1,098,429
14	Cumulative Book Depreciation	Prior Year Line 14 + Current Year Line 13	$549,214	$1,647,643	$2,746,071
15	Total Cumulative Book Depreciation	Sum of Line 14	$549,214	$1,647,643	$2,746,071
	Deferred Tax Calculation:				
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$3,166,937	$4,717,272	$4,501,368
17	Effective Tax Rate		35.00%	35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$1,108,428	$1,651,045	$1,575,479
19	Less: FY 2020 Federal NOL	Page 21 of 21, Line12(n)	$0	$0	$0
20	Less: Proration Adjustment	Col (a) = Page 19 of 21, Line 40; Col (b) = Page 20 of 21, Line 40; Col (c) = Page 11 of 21, Line 40	($601,790)	($294,599)	$41,027
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$506,638	$1,356,446	$1,616,505
	Rate Base Calculation:				
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$7,689,000	$7,689,000	$7,689,000
23	Accumulated Depreciation	- Line 15	($549,214)	($1,647,643)	($2,746,071)
24	Deferred Tax Reserve	- Line 21	($506,638)	($1,356,446)	($1,616,505)
25	Year End Rate Base	Sum of Lines 22 through 24	$6,633,148	$4,684,911	$3,326,423
	Revenue Requirement Calculation:				
26	Average Rate Base	Column (a) = Current Year Line 38 ÷ 2; Column (b) = (Prior Year Line 38 + Current Year Line 38) ÷ 2	$3,316,574	$5,659,030	$4,005,667
27	Pre-Tax ROR	Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Workpaper MAL-6 1/	10.29%	10.29%	10.29%
28	Return and Taxes	Line 26 * Line 27	$341,275	$582,314	$412,183
29	Book Depreciation	Line 13	$549,214	$1,098,429	$1,098,429
30	**Annual Revenue Requirement**	**Line 28 + Line 29**	**$890,490**	**$1,680,743**	**$1,510,612**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2020 IS Capital Investments
Synergy Grid Mod - IS

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Capital Repairs Deduction				
1	Plant Additions	Page 3 of 21, Line 3	$7,689,000		
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%		
3	Capital Repairs Deduction	Line 1 * Line 2	$0		
	Bonus Depreciation				
4	Plant Additions	Line 1	$7,689,000		
5	Less Capital Repairs Deduction	Line 3	$0		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$7,689,000		
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$7,689,000		
9	Bonus Depreciation Rate (April 2019- December 2019)	1 * 75% * 30%	22.50%		
10	Bonus Depreciation Rate (January 2020 - Mar 2020)	1 * 25% * 0%	0.00%		
11	Total Bonus Depreciation Rate	Line 9 + Line 10	22.50%		
12	Bonus Depreciation	Line 8 * Line 11	$1,730,025		
	Remaining Tax Depreciation				
13	Plant Additions	Line 1	$7,689,000		
14	Less Capital Repairs Deduction	Line 3	$0		
15	Less Bonus Depreciation	Line 12	$1,730,025		
16	Remaining Plant Additions Subject to 3 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$5,958,975	$5,958,975	$5,958,975
17	3 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	33.330%	44.450%	14.810%
18	Remaining Tax Depreciation	Line 16 * Line 17	$1,986,126	$2,648,764	$882,524
19	FY20 Loss incurred due to retirements	Per Tax Department	$0	$0	$0
20	Cost of Removal	Page 3 of 21, Line 8	$0	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$3,716,151	$2,648,764	$882,524

THE NARRAGANSETT ELECTRIC COMPANY
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Power Sector Transformation (PST)
Revenue Requirement on Estimated IS Capital Investment 12 months ending March 31, 2021
Synergy Grid Mod - IS

Line No.				Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Estimated Capital Investment				
1	Grid Mod IS Investments			$3,456,000	
2	Total Estimated Capital Investment	Sum of Line 1		$3,456,000	$0
	Depreciable Net Capital Included in Rate Base				
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2		$3,456,000	$0
4	Retirements	Line 4 * 0%		$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6		$3,456,000	$3,456,000
	Change in Net Capital Included in Rate Base				
6	Capital Included in Rate Base	Line 2		$3,456,000	$0
7	Cost of Removal			$0	$0
8	**Total Net Plant in Service Including Cost of Removal**	**Line 6 + Line 8**		**$3,456,000**	**$3,456,000**
	Tax Depreciation				
9	Vintage Year Tax Depreciation:				
10	FY 2021 Spend	Page 6 of 21, Line 21		$1,151,885	$1,536,192
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10		$1,151,885	$2,688,077
	Book Depreciation				
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770		14.29%	14.29%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12		$246,857	$493,714
14	Cumulative Book Depreciation	Prior Year Line 14 + Current Year Line 13		$246,857	$740,571
15	Total Cumulative Book Depreciation	Sum of Line 14		$246,857	$740,571
	Deferred Tax Calculation:				
16	Cumulative Book / Tax Timer	Line 11 - Line 14		$905,028	$1,947,506
17	Effective Tax Rate			35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17		$316,760	$681,627
19	Less: FY 2021 Federal NOL	Page 21 of 21, Line12(n)		$0	$0
20	Less: Proration Adjustment	Col (a) = Page 20 of 21, Line 40; Col (b) = Page 21 of 21, Line 40		($171,976)	($198,095)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20		$144,784	$483,532
	Rate Base Calculation:				
22	Cumulative Incremental Capital Included in Rate Base	Line 8		$3,456,000	$3,456,000
23	Accumulated Depreciation	- Line 15		($246,857)	($740,571)
24	Deferred Tax Reserve	- Line 21		($144,784)	($483,532)
25	Year End Rate Base	Sum of Lines 22 through 24		$3,064,359	$2,231,896
	Revenue Requirement Calculation:				
26	Average Rate Base	Column (a) = Current Year Line 37 ÷ 2; Column (b) = (Prior Year Line 37 + Current Year Line 37) ÷ 2		$1,532,179.53	$2,648,128
27	Pre-Tax ROR	Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Workpaper MAL-6	1/	10.29%	10.29%
28	Return and Taxes	Line 26 * Line 27		$157,661	$272,492
29	Book Depreciation	Line 13		$246,857	$493,714
30	**Annual Revenue Requirement**	**Line 28 + Line 29**		**$404,518**	**$766,207**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2021 IS Capital Investments
Synergy Grid Mod - IS

Line No.			Fiscal Year Ending Aug 2020 (a)	Fiscal Year Ending Aug-2021 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 5 of 21, Line 3	$3,456,000	
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%	
3	Capital Repairs Deduction	Line 1 * Line 2	$0	
	Bonus Depreciation			
4	Plant Additions	Line 1	$3,456,000	
5	Less Capital Repairs Deduction	Line 3	$0	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$3,456,000	
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$3,456,000	
9	Bonus Depreciation Rate (April 2020- December 2020)	0%	0.00%	
10	Bonus Depreciation Rate (January 2021 - Mar 2021)	0%	0.00%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%	
12	Bonus Depreciation	Line 8 * Line 11	$0	
	Remaining Tax Depreciation			
13	Plant Additions	Line 1	$3,456,000	
14	Less Capital Repairs Deduction	Line 3	$0	
15	Less Bonus Depreciation	Line 12	$0	
16	Remaining Plant Additions Subject to 3 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$3,456,000	$3,456,000
17	3 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	33.330%	44.450%
18	Remaining Tax Depreciation	Line 16 * Line 17	$1,151,885	$1,536,192
19	FY21 Loss incurred due to retirements	Per Tax Department	$0	$0
20	Cost of Removal	Page 5 of 21, Line 8	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$1,151,885	$1,536,192

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated IS Capital Investment 12 months ending March 31, 2022
Synergy Grid Mod - IS

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Estimated Capital Investment		
1	Grid Mod IS Investments		$16,229,000
2	Total Estimated Capital Investment	Sum of Line 1	$16,229,000
	Depreciable Net Capital Included in Rate Base		
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$16,229,000
4	Retirements	Line 4 * 0%	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$16,229,000
	Change in Net Capital Included in Rate Base		
6	Capital Included in Rate Base	Line 2	$16,229,000
7	Cost of Removal		$0
8	**Total Net Plant in Service Including Cost of Removal**	**Line 6 + Line 8**	**$16,229,000**
	Tax Depreciation		
9	Vintage Year Tax Depreciation:		
10	FY 2022 Spend	Page 8 of 21, Line 21	$5,409,126
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10	$5,409,126
	Book Depreciation		
12	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	14.29%
13	Book Depreciation	Column (a) = Line 1* Line 12 * 50%	$1,159,214
14	Cumulative Book Depreciation	Prior Year Line 14 + Current Year Line 13	$1,159,214
15	Total Cumulative Book Depreciation	Sum of Line 14	$1,159,214
	Deferred Tax Calculation:		
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$4,249,912
17	Effective Tax Rate		35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$1,487,469
19	Less: FY 2022 Federal NOL	Page 21 of 21, Line 12(n)	$0
20	Less: Proration Adjustment	Col (a) = Page 21 of 21, Line 40	($807,580)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$679,889
	Rate Base Calculation:		
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$16,229,000
23	Accumulated Depreciation	- Line 15	($1,159,214)
24	Deferred Tax Reserve	- Line 21	($679,889)
25	Year End Rate Base	Sum of Lines 22 through 24	$14,389,897
	Revenue Requirement Calculation:		
26	Average Rate Base	Column (a) = Current Year Line 27 ÷ 2	$7,194,948.43
27	Pre-Tax ROR	Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Workpaper MAL-6 1/	10.29%
28	Return and Taxes	Line 26 * Line 27	$740,360
29	Book Depreciation	Line 13	$1,159,214
30	**Annual Revenue Requirement**	**Line 28 + Line 29**	**$1,899,574**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2022 IS Capital Investments
Synergy Grid Mod - IS

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Capital Repairs Deduction		
1	Plant Additions	Page 7 of 21, Line 3	$16,229,000
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%
3	Capital Repairs Deduction	Line 1 * Line 2	$0
	Bonus Depreciation		
4	Plant Additions	Line 1	$16,229,000
5	Less Capital Repairs Deduction	Line 3	$0
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$16,229,000
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$16,229,000
9	Bonus Depreciation Rate (April 2020- December 2020)	0%	0.00%
10	Bonus Depreciation Rate (January 2021 - Mar 2021)	0%	0.00%
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%
12	Bonus Depreciation	Line 8 * Line 11	$0
	Remaining Tax Depreciation		
13	Plant Additions	Line 1	$16,229,000
14	Less Capital Repairs Deduction	Line 3	$0
15	Less Bonus Depreciation	Line 12	$0
16	Remaining Plant Additions Subject to 3 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$16,229,000
17	3 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	33.330%
18	Remaining Tax Depreciation	Line 16 * Line 17	$5,409,126
19	FY22 Loss incurred due to retirements	Per Tax Department	$0
20	Cost of Removal	Page 7 of 21, Line 8	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$5,409,126

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2020 Net Deferred Tax Reserve IS Proration
Synergy Grid Mod - IS

Line No.			(a)=Sum of (b) through (h) Total	(b) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration			
1	Book Depreciation	Page 13 of 21, Line 13	$549,214	$549,214
2	Bonus Depreciation	Page 14 of 21, Line 12	($1,730,025)	($1,730,025)
3	Remaining MACRS Tax Depreciation	Page 14 of 21, Line 18	($1,986,126)	($1,986,126)
4	FY20 tax (gain)/loss on retirements	Page 14 of 21, Line 19	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($3,166,937)	($3,166,937)
6	Effective Tax Rate	Tax Department	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($1,108,428)	($1,108,428)
	Deferred Tax Not Subject to Proration			
8	Capital Repairs Deduction	Page 14 of 21, Line 3	$0	$0
9	Cost of Removal	Page 14 of 21, Line 20	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2020	Tax Department	$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0
12	Effective Tax Rate		35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	($1,108,428)	($1,108,428)
15	Net Operating Loss	Page 13 of 21, Line 19	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($1,108,428)	($1,108,428)
	Allocation of FY 2020 Estimated Federal NOL			
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($3,166,937)	($3,166,937)
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($3,166,937)	($3,166,937)
20	Total FY 2020 Federal NOL	Page 13 of 21, Line 19 / 35%	$0	$0
21	Allocated FY 2020 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0
22	Allocated FY 2020 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0
23	Effective Tax Rate		35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($1,108,428)	($1,108,428)

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l)	(l)
	Proration Calculation				
26	April 2019	30	91.78%	($84,777)	($84,777)
27	May 2019	31	83.29%	($76,932)	($76,932)
28	June 2019	30	75.07%	($69,340)	($69,340)
29	July 2019	31	66.58%	($61,495)	($61,495)
30	August 2019	31	58.08%	($53,650)	($53,650)
31	September 2019	30	49.86%	($46,058)	($46,058)
32	October 2019	31	41.37%	($38,213)	($38,213)
33	November 2019	30	33.15%	($30,621)	($30,621)
34	December 2019	31	24.66%	($22,776)	($22,776)
35	January 2020	31	16.16%	($14,931)	($14,931)
36	February 2020	28	8.49%	($7,845)	($7,845)
37	March 2020	31	0.00%	$0	$0
38	Total	365		($506,638)	($506,638)
39	Deferred Tax Without Proration	Line 25		($1,108,428)	($1,108,428)
40	Proration Adjustment	Line 38 - Line 39		$601,790	$601,790

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2021 Net Deferred Tax Reserve IS Proration
Synergy Grid Mod - IS

Line No.			(a)=Sum of (b) through (h) Total	(b) Vintage Year March 31, 2021	(c) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration				
1	Book Depreciation	Col (b) = Page 15 of 21, Line 13; Col (c) = Page 13 of 21, Line 13	$1,345,286	$246,857	$1,098,429
2	Bonus Depreciation	Page 16 of 21, Line 12	$0	$0	
3	Remaining MACRS Tax Depreciation	Col (b) = Page 16 of 21, Line 18; Col (c) = Page 14 of 21, Line 18	($3,800,649)	($1,151,885)	($2,648,764)
4	FY21 tax (gain)/loss on retirements	Col (b) = Page 16 of 21, Line 19; Col (c) = Page 14 of 21, Line 19	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($2,455,363)	($905,028)	($1,550,335)
6	Effective Tax Rate	Tax Department	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($859,377)	($316,760)	($542,617)
	Deferred Tax Not Subject to Proration				
8	Capital Repairs Deduction	Page 16 of 21, Line 3	$0	$0	
9	Cost of Removal	Page 16 of 21, Line 20	$0	$0	
10	Book/Tax Depreciation Timing Difference at 3/31/2021	Tax Department	$0	$0	
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0	
12	Effective Tax Rate		35.00%	35.00%	
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0	
14	Total Deferred Tax Reserve	Line 7 + Line 13	($859,377)	($316,760)	($542,617)
15	Net Operating Loss		$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($859,377)	($316,760)	($542,617)
	Allocation of FY 2021 Estimated Federal NOL				
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($2,455,363)	($905,028)	($1,550,335)
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($2,455,363)	($905,028)	($1,550,335)
20	Total FY 2021 Federal NOL		$0	$0	$0
21	Allocated FY 2021 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0	$0
22	Allocated FY 2021 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0	$0
23	Effective Tax Rate		35.00%	35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($859,377)	($316,760)	($542,617)

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (m)	(l)	(m)
26	April 2020	30	91.78%	($65,729)	($24,227)	($41,502)
27	May 2020	31	83.29%	($59,646)	($21,985)	($37,661)
28	June 2020	30	75.07%	($53,760)	($19,816)	($33,945)
29	July 2020	31	66.58%	($47,678)	($17,574)	($30,104)
30	August 2020	31	58.08%	($41,595)	($15,332)	($26,264)
31	September 2020	30	49.86%	($35,709)	($13,162)	($22,547)
32	October 2020	31	41.37%	($29,627)	($10,920)	($18,707)
33	November 2020	30	33.15%	($23,741)	($8,751)	($14,990)
34	December 2020	31	24.66%	($17,658)	($6,509)	($11,150)
35	January 2021	31	16.16%	($11,576)	($4,267)	($7,309)
36	February 2021	28	8.49%	($6,082)	($2,242)	($3,840)
37	March 2021	31	0.00%	$0	$0	$0
38	Total	365		($392,802)	($144,784)	($248,018)
39	Deferred Tax Without Proration	Line 25		($859,377)	($316,760)	($542,617)
40	Proration Adjustment	Line 38 - Line 39		$466,575	$171,976	$294,599

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2022 Net Deferred Tax Reserve IS Proration
Synergy Grid Mod - IS

Line No.			(a)=Sum of (b) through (h) Total	(b) Vintage Year March 31, 2022	(c) Vintage Year March 31, 2021	(c) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration					
1	Book Depreciation	Col (b) = Page 17 of 21, Line 13; Col (c) = Page 15 of 21, Line 13; Col (d) = Page 13 of 21, Line 13	$2,751,357	$1,159,214	$493,714	$1,098,429
2	Bonus Depreciation	Page 18 of 21, Line 12	$0	$0		
3	Remaining MACRS Tax Depreciation	Col (b) = Page 18 of 21, Line 18; Col (c) = Page 16 of 21, Line 18; Col (d) = Page 14 of 21, Line 18	($7,827,842)	($5,409,126)	($1,536,192)	($882,524)
4	FY22 tax (gain)/loss on retirements	Col (b) = Page 18 of 21, Line 19; Col (c) = Page 16 of 21, Line 19; Col (d) = Page 14 of 21, Line 19	$0	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($5,076,485)	($4,249,912)	($1,042,478)	$215,905
6	Effective Tax Rate	Tax Department	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($1,776,770)	($1,487,469)	($364,867)	$75,567
	Deferred Tax Not Subject to Proration					
8	Capital Repairs Deduction	Page 18 of 21, Line 3	$0	$0		
9	Cost of Removal	Page 18 of 21, Line 20	$0	$0		
10	Book/Tax Depreciation Timing Difference at 3/31/2022		$0	$0		
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0		
12	Effective Tax Rate		35.00%	35.00%		
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0		
14	Total Deferred Tax Reserve	Line 7 + Line 13	($1,776,770)	($1,487,469)	($364,867)	$75,567
15	Net Operating Loss		$0	$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($1,776,770)	($1,487,469)	($364,867)	$75,567
	Allocation of FY 2022 Estimated Federal NOL					
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($5,076,485)	($4,249,912)	($1,042,478)	$215,905
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($5,076,485)	($4,249,912)	($1,042,478)	$215,905
20	Total FY 2022 Federal NOL		$0	$0	$0	$0
21	Allocated FY 2022 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0	$0	$0
22	Allocated FY 2022 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0	$0	$0
23	Effective Tax Rate		35.00%	35.00%	35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($1,776,770)	($1,487,469)	($364,867)	$75,567

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (n)	(l)	(m)	(n)
	Proration Calculation						
26	April 2021	30	91.78%	($135,894)	($113,768)	($27,907)	$5,780
27	May 2021	31	83.29%	($123,319)	($103,240)	($25,324)	$5,245
28	June 2021	30	75.07%	($111,150)	($93,052)	($22,825)	$4,727
29	July 2021	31	66.58%	($98,574)	($82,524)	($20,243)	$4,192
30	August 2021	31	58.08%	($85,999)	($71,996)	($17,660)	$3,658
31	September 2021	30	49.86%	($73,829)	($61,808)	($15,161)	$3,140
32	October 2021	31	41.37%	($61,254)	($51,280)	($12,579)	$2,605
33	November 2021	30	33.15%	($49,084)	($41,092)	($10,080)	$2,088
34	December 2021	31	24.66%	($36,509)	($30,564)	($7,497)	$1,553
35	January 2022	31	16.16%	($23,934)	($20,037)	($4,915)	$1,018
36	February 2022	28	8.49%	($12,575)	($10,528)	($2,582)	$535
37	March 2022	31	0.00%	$0	$0	$0	$0
38	Total	365		($812,122)	($679,889)	($166,773)	$34,540
39	Deferred Tax Without Proration	Line 25		($1,776,770)	($1,487,469)	($364,867)	$75,567
40	Proration Adjustment	Line 38 - Line 39		$964,648	$807,580	$198,095	($41,027)

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

Appendix 10.4

Appendix 10.4

Revenue Requirement AMF

Rhode Island Only

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
AMI
Annual Revenue Requirement General Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Electric Operation and Maintenance (O&M) Expenses:				
1	AMI Costs		$ 3,975,282	$ 2,294,486	$ 4,277,539
2	CMS Costs		$ -	$ -	$ -
3	Meter Data Service Costs		$ -	$ 389,698	$ 802,778
4	Customer Engagement Plans Costs		$ 925,740	$ 3,394,245	$ 2,004,136
5	IS Costs - Electric		$ 4,364,767	$ 3,156,360	$ 4,695,673
6	**Total Electric O&M costs**	Sum of Lines 1 through 5	**$ 9,265,789**	**$ 9,234,790**	**$ 11,780,126**
	Gas Operation and Maintenance (O&M) Expenses:				
7	AMI Costs		$ 1,323,178	$ 1,999	$ 3,080
8	CMS Costs		$ -	$ -	$ -
9	Meter Data Service Costs		$ -	$ 389,698	$ 802,778
10	Customer Engagement Plans Costs		$ 925,740	$ 3,394,245	$ 2,004,136
11	IS Costs - Gas		$ 2,372,024	$ 1,368,169	$ 949,645
12	**Total Gas O&M costs**	Sum of Lines 7 through 11	**$ 4,620,942**	**$ 5,154,112**	**$ 3,759,640**
	Total O&M costs		**$ 13,886,731**	**$ 14,388,902**	**$ 15,539,766**
13	Electric Capital Investment:				
14	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$129,381	$302,197	$288,527
15	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$3,899,962	$8,791,684
16	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$5,402,629
17	**Total Electric Capital Investment Component of Revenue Requirement**	Sum of Lines 13 through 16	**$129,381**	**$4,202,159**	**$14,482,840**
18	Gas Capital Investment:				
19	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$52,777	$122,937	$117,309
20	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$584,519	$1,162,730
21	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$25,946
22	**Total Gas Capital Investment Component of Revenue Requirement**	Sum of Lines 18 through 21	**$52,777**	**$707,456**	**$1,305,985**
23	**Total Electric Revenue Requirement**	Line 6 + Line 17	**$ 9,395,171**	**$ 13,436,950**	**$ 26,262,967**
24	**Total Gas Revenue Requirement**	Line 12 + Line 22	**$ 4,673,719**	**$ 5,861,568**	**$ 5,065,625**
25	**Total Electric & Gas Revenue Requirement**	Line 23 + Line 24	**$ 14,068,890**	**$19,298,518**	**$31,328,591**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
AMI - Electric
Annual Revenue Requirement Electric Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Operation and Maintenance (O&M) Expenses:				
1	AMI Costs		$ 3,975,282	$ 2,294,486	$ 4,277,539
2	CMS Costs		$ -	$ -	$ -
3	Meter Data Service Costs		$ -	$ 389,698	$ 802,778
4	Customer Engagement Plans Costs		$ 925,740	$ 3,394,245	$ 2,004,136
5	**Total O&M costs**	Sum of Lines 1 through 4	**$ 4,901,022**	**$ 6,078,430**	**$ 7,084,454**
	Capital Investment:				
6	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$ 129,381	$ 302,197	$ 288,527
7	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$ 3,050,327	$ 7,182,372
8	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$ 5,402,629
9	**Total Capital Investment Component of Revenue Requirement**	Sum of Lines 6 through 8	**$ 129,381**	**$ 3,352,524**	**$ 12,873,529**
10	**Total Revenue Requirement**	Line 5 + Line 9	**$ 5,030,404**	**$ 9,430,954**	**$ 19,957,982**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
AMI - Gas
Annual Revenue Requirement Gas Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Operation and Maintenance (O&M) Expenses:				
1	AMI Costs		$1,323,178	$1,999	$3,080
2	CMS Costs		$0	$0	$0
3	Meter Data Service Costs		$0	$389,698	$802,778
4	Customer Engagement Plans Costs		$925,740	$3,394,245	$2,004,136
5	**Total O&M costs**	Sum of Lines 1 through 4	**$2,248,918**	**$3,785,943**	**$2,809,995**
6	Capital Investment:				
7	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$52,777	$122,937	$117,309
8	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$122,787	$288,152
9	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$25,946
10	**Total Capital Investment Component of Revenue Requirement**	Sum of Lines 7 through 9	**$52,777**	**$245,724**	**$431,408**
11	**Total Revenue Requirement**	Line 5 + Line 10	**$2,301,695**	**$4,031,667**	**$3,241,402**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
AMI - IS
Annual Revenue Requirement IS Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	IS Operation and Maintenance (O&M) Expenses:				
1	IS Costs - Electric		$ 4,364,767	$ 3,156,360	$ 4,695,673
2	IS Costs - Gas		$ 2,372,024	$ 1,368,169	$ 949,645
3	**Total IS O&M costs**	Sum of Lines 1 through 2	**$ 6,736,791**	**$ 4,524,529**	**$ 5,645,318**
4	IS Electric Capital Investment:				
5	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$0	$0	$0
6	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$849,635	$1,609,312
7	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$0
8	**Total IS Electric Capital Investment Component of Revenue Requirement**	Sum of Lines 5 through 7	**$0**	**$849,635**	**$1,609,312**
9	IS Gas Capital Investment:				
10	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$0	$0	$0
11	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$461,733	$874,577
12	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$0
13	**Total IS Gas Capital Investment Component of Revenue Requirement**	Sum of Lines 10 through 12	**$0**	**$461,733**	**$874,577**
14	**Total IS Electric Revenue Requirement**	Line 1 + Line 8	**$4,364,767**	**$4,005,996**	**$6,304,984**
15	**Total IS Gas Revenue Requirement**	Line 2 + Line 13	**$2,372,024**	**$1,829,901**	**$1,824,222**
16	**Total IS Electric & Gas Revenue Requirement**	Line 14 + Line 15	**$6,736,791**	**$5,835,897**	**$8,129,206**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Electric Capital Investment 12 months ending March 31, 2020
AMI - Electric

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Estimated Capital Investment				
1	Electric AMI Investments		$1,641,097	$0	$0
2	Total Estimated Capital Investment	Line 1	$1,641,097	$0	$0
	Depreciable Net Capital Included in Rate Base				
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$1,641,097	$0	$0
4	Retirements	Line 4 * 0%	$0	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$1,641,097	$1,641,097	$1,641,097
	Change in Net Capital Included in Rate Base				
6	Capital Included in Rate Base	Line 2	$1,641,097	$0	$0
7	Cost of Removal		$0	$0	$0
8	**Total Plant in Service Including Cost of Removal**	**Line 6 + Line 7**	**$1,641,097**	**$1,641,097**	**$1,641,097**
	Tax Depreciation				
9	Vintage Year Tax Depreciation:				
10	FY 2020 Spend	Page 6 of 31, Line 21	$416,941	$91,815	$84,921
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$416,941	$508,756	$593,677
	Book Depreciation				
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	6.25%	6.25%	6.25%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12	$51,284	$102,569	$102,569
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$51,284	$153,853	$256,421
15	Total Cumulative Book Depreciation	Sum of Lines 14	$51,284	$153,853	$256,421
	Deferred Tax Calculation:				
16	Cumulative Book / Tax Timer	Line 11 through Line 15	$365,657	$354,903	$337,256
17	Effective Tax Rate		35.00%	35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$127,980	$124,216	$118,039
19	Less: FY 2020 Federal NOL		$0	$0	$0
20	Less: Proration Adjustment	Col (a) = Page 11 of 31, Line 40; Col (b) = , Line 40; Col (c) = Page 13 of 31, Line 40	($69,483)	$2,043	$3,353
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$58,497	$126,260	$121,393
	Rate Base Calculation:				
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$1,641,097	$1,641,097	$1,641,097
23	Accumulated Depreciation	- Line 15	($51,284)	($153,853)	($256,421)
24	Deferred Tax Reserve	- Line 21	($58,497)	($126,260)	($121,393)
25	Year End Rate Base	Sum of Lines 22 through 24	$1,531,316	$1,360,985	$1,263,283
	Revenue Requirement Calculation:				
26	Average Rate Base	Column (a) = Current Year Line 38 ÷ 2; Column (b) = (Prior Year Line 38 + Current Year Line 38) ÷ 2	$765,658	$1,446,151	$1,312,134
27	Pre-Tax ROR		1/ 10.20%	10.20%	10.20%
28	Return and Taxes	Line 26 * Line 27	$78,097	$147,507	$133,838
29	Book Depreciation	Line 13	$51,284	$102,569	$102,569
30	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b & c) Line 8 * 3.176%	$0	$52,121	$52,121
31	**Annual Revenue Requirement**	**Line 28 through Line 29**	**$129,381**	**$302,197**	**$288,527**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2020 Electric Capital Investments
AMI - Electric

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Capital Repairs Deduction				
1	Plant Additions	Page 5 of 31, Line 2	$1,641,097		
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%		
3	Capital Repairs Deduction	Line 1 * Line 2	$0		
	Bonus Depreciation				
4	Plant Additions	Line 1	$1,641,097		
5	Less Capital Repairs Deduction	Line 3	$0		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$1,641,097		
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$1,641,097		
9	Bonus Depreciation Rate (April 2019- December 2019)	1 * 75% * 30%	22.50%		
10	Bonus Depreciation Rate (January 2020 - Mar 2020)	1 * 25% * 00%	0.00%		
11	Total Bonus Depreciation Rate	Line 9 + Line 10	22.50%		
12	Bonus Depreciation	Line 8 * Line 11	$369,247		
	Remaining Tax Depreciation				
13	Plant Additions	Line 1	$1,641,097		
14	Less Capital Repairs Deduction	Line 3	$0		
15	Less Bonus Depreciation	Line 12	$369,247		
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$1,271,850	$1,271,850	$1,271,850
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%	7.219%	6.677%
18	Remaining Tax Depreciation	Line 16 * Line 17	$47,694	$91,815	$84,921
19	FY20 Loss incurred due to retirements	Per Tax Department	$0	$0	$0
20	Cost of Removal	Page 5 of 31, Line 7	$0	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$416,941	$91,815	$84,921

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Electric Capital Investment 12 months ending March 31, 2021
AMI - Electric

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Estimated Capital Investment			
1	AMI Electric Investments	Section 2, Page 27 of 27, Chart 11	$37,725,154	
2	Total Estimated Capital Investment	Line 1	$37,725,154	$0
	Depreciable Net Capital Included in Rate Base			
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$37,725,154	$0
4	Retirements	Line 4 * 0%	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$37,725,154	$37,725,154
	Change in Net Capital Included in Rate Base			
6	Capital Included in Rate Base	Line 2	$37,725,154	$0
7	Cost of Removal		$286,011	$0
8	**Total Plant in Service Including Cost of Removal**	**Line 6 + Line 7**	$38,011,165	$37,725,154
	Tax Depreciation			
9	Vintage Year Tax Depreciation:			
10	FY 2021 Spend	Page 8 of 31, Line 21	$1,700,704	$2,723,379
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$1,700,704	$4,424,083
	Book Depreciation			
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	6.25%	6.25%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12	$1,178,911	$2,357,822
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$1,178,911	$3,536,733
15	Total Cumulative Book Depreciation	Sum of Lines 14	$1,178,911	$3,536,733
	Deferred Tax Calculation:			
16	Cumulative Book / Tax Timer	Line 11 - Line 14	$521,793	$887,350
17	Effective Tax Rate		35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$182,628	$310,572
19	Less: FY 2021 Federal NOL		$0	$0
20	Less: Proration Adjustment	Col (a) = , Line 40; Col (b) = Page 13 of 31, Line 40	($44,804)	($69,464)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$137,824	$241,108
	Rate Base Calculation:			
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$38,011,165	$38,011,165
23	Accumulated Depreciation	- Line 15	($1,178,911)	($3,536,733)
24	Deferred Tax Reserve	- Line 21	($137,824)	($241,108)
25	Year End Rate Base	Sum of Lines 22 through 24	$36,694,430	$34,233,323
	Revenue Requirement Calculation:			
26	Average Rate Base	Column (a) = Current Year Line 37 ÷ 2; Column (b) = (Prior Year Line 37 + Current Year Line 37) ÷ 2	$18,347,215	$35,463,877
27	Pre-Tax ROR	1/	10.20%	10.20%
28	Return and Taxes	Line 26 * Line 27	$1,871,416	$3,617,315
29	Book Depreciation	Line 13	$1,178,911	$2,357,822
30	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b) Line 8 * 3.176%	$0	$1,207,235
31	**Annual Revenue Requirement**	**Line 28 through Line 29**	**$3,050,327**	**$7,182,372**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2021 Electric Capital Investments
AMI - Electric

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 7 of 31, Line 2	$37,725,154	
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%	
3	Capital Repairs Deduction	Line 1 * Line 2	$0	
	Bonus Depreciation			
4	Plant Additions	Line 1	$37,725,154	
5	Less Capital Repairs Deduction	Line 3	$0	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$37,725,154	
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$37,725,154	
9	Bonus Depreciation Rate (April 2020- December 2020)	0%	0.00%	
10	Bonus Depreciation Rate (January 2021 - Mar 2021)	0%	0.00%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%	
12	Bonus Depreciation	Line 8 * Line 11	$0	
	Remaining Tax Depreciation			
13	Plant Additions	Line 1	$37,725,154	
14	Less Capital Repairs Deduction	Line 3	$0	
15	Less Bonus Depreciation	Line 12	$0	
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$37,725,154	$37,725,154
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%	7.219%
18	Remaining Tax Depreciation	Line 16 * Line 17	$1,414,693	$2,723,379
19	FY21 Loss incurred due to retirements	Per Tax Department	$0	$0
20	Cost of Removal	Page 7 of 31, Line 7	$286,011	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$1,700,704	$2,723,379

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Electric Capital Investment 12 months ending March 31, 2022
AMI - Electric

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Estimated Capital Investment		
1	AMI Electric Investments	Section 2, Page 27 of 27, Chart 11	$66,783,096
2	Total Estimated Capital Investment	Line 1	$66,783,096
	Depreciable Net Capital Included in Rate Base		
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$66,783,096
4	Retirements	Line 4 * 0%	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5	$66,783,096
	Change in Net Capital Included in Rate Base		
6	Capital Included in Rate Base	Line 2	$66,783,096
7	Cost of Removal		$590,067
8	**Total Plant in Service Including Cost of Removal**	**Line 6 + Line 7**	$67,373,163
	Tax Depreciation		
9	Vintage Year Tax Depreciation:		
10	FY 2022 Spend	Page 10 of 31, Line 21	$3,094,433
11	Cumulative Tax Depreciation	Prior Year Line 12 + Current Year Line 13	$3,094,433
	Book Depreciation		
12	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	6.25%
13	Book Depreciation	Column (a) = Line 1* Line 12 * 50%	$2,086,972
14	Cumulative Book Depreciation	Prior Year Line 17 + Current Year Line 16	$2,086,972
15	Total Cumulative Book Depreciation	Sum of Lines 14	$2,086,972
	Deferred Tax Calculation:		
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$1,007,461
17	Effective Tax Rate		35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$352,611
19	Less: FY 2022 Federal NOL		$0
20	Less: Proration Adjustment	Col (a) = Page 13 of 31, Line 40	($79,314)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$273,297
	Rate Base Calculation:		
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$67,373,163
23	Accumulated Depreciation	- Line 15	($2,086,972)
24	Deferred Tax Reserve	- Line 21	($273,297)
25	Year End Rate Base	Sum of Lines 22 through 24	$65,012,894
	Revenue Requirement Calculation:		
26	Average Rate Base	Column (a) = Current Year Line 27 ÷ 2	$32,506,447
27	Pre-Tax ROR		1/ 10.20%
28	Return and Taxes	Line 26 * Line 27	$3,315,658
29	Book Depreciation	Line 13	$2,086,972
30	Property Taxes	Tax Rate 3.176% MAL-7	$0
31	**Annual Revenue Requirement**	**Line 28 through Line 29**	**$5,402,629**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2022 Electric Capital Investments
AMI - Electric

Line No.			Fiscal Year March 31, 2022 (a)
	Capital Repairs Deduction		
1	Plant Additions	Page 9 of 31, Line 2	$66,783,096
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%
3	Capital Repairs Deduction	Line 1 * Line 2	$0
	Bonus Depreciation		
4	Plant Additions	Line 1	$66,783,096
5	Less Capital Repairs Deduction	Line 3	$0
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$66,783,096
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$66,783,096
9	Bonus Depreciation Rate (April 2021- December 2021)	0.00%	0.00%
10	Bonus Depreciation Rate (January 2022 - Mar 2022)	0.00%	0.00%
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%
12	Bonus Depreciation	Line 8 * Line 11	$0
	Remaining Tax Depreciation		
13	Plant Additions	Line 1	$66,783,096
14	Less Capital Repairs Deduction	Line 3	$0
15	Less Bonus Depreciation	Line 12	$0
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$66,783,096
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%
18	Remaining Tax Depreciation	Line 16 * Line 17	$2,504,366
19	FY22 Loss incurred due to retirements	Per Tax Department	$0
20	Cost of Removal		$590,067
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$3,094,433

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2020 Net Deferred Tax Reserve Electric Proration
AMI - Electric

Line No.			(a)= Column (b) Total	(b) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration			
1	Book Depreciation	Page 5 of 31, Line 13	$51,284	$51,284
2	Bonus Depreciation	Page 6 of 31, Line 12	($369,247)	($369,247)
3	Remaining MACRS Tax Depreciation	Page 6 of 31, Line 18	($47,694)	($47,694)
4	FY20 tax (gain)/loss on retirements	Page 6 of 31, Line 19	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($365,657)	($365,657)
6	Effective Tax Rate	Tax Department	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($127,980)	($127,980)
	Deferred Tax Not Subject to Proration			
8	Capital Repairs Deduction	Page 6 of 31, Line 3	$0	$0
9	Cost of Removal	Page 6 of 31, Line 20	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2020		$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0
12	Effective Tax Rate		35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	($127,980)	($127,980)
15	Net Operating Loss		$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($127,980)	($127,980)
	Allocation of FY 2020 Estimated Federal NOL			
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($365,657)	($365,657)
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($365,657)	($365,657)
20	Total FY 2020 Federal NOL		$0	$0
21	Allocated FY 2020 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0
22	Allocated FY 2020 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0
23	Effective Tax Rate		35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($127,980)	($127,980)

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l)	(l)
	Proration Calculation				
26	April 2019	30	91.78%	($9,788)	($9,788)
27	May 2019	31	83.29%	($8,883)	($8,883)
28	June 2019	30	75.07%	($8,006)	($8,006)
29	July 2019	31	66.58%	($7,100)	($7,100)
30	August 2019	31	58.08%	($6,194)	($6,194)
31	September 2019	30	49.86%	($5,318)	($5,318)
32	October 2019	31	41.37%	($4,412)	($4,412)
33	November 2019	30	33.15%	($3,536)	($3,536)
34	December 2019	31	24.66%	($2,630)	($2,630)
35	January 2020	31	16.16%	($1,724)	($1,724)
36	February 2020	28	8.49%	($906)	($906)
37	March 2020	31	0.00%	$0	$0
38	Total	365		($58,497)	($58,497)
39	Deferred Tax Without Proration	Line 25		($127,980)	($127,980)
40	Proration Adjustment	Line 38 - Line 39		$69,483	$69,483

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2021 Net Deferred Tax Reserve Electric Proration
AMI - Electric

Line No.			(a)=Sum of (b) through (c) Total	(b) Vintage Year March 31, 2021	(c) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration				
1	Book Depreciation	Col (b) = Page 7 of 31, Line 13; Col (c) = Page 5 of 31, Line 13	$1,281,480	$1,178,911	$102,569
2	Bonus Depreciation	Page 8 of 31, Line 12	$0	$0	
3	Remaining MACRS Tax Depreciation	Col (b) = Page 8 of 31, Line 18; Col (c) = Page 6 of 31, Line 18	($1,506,508)	($1,414,693)	($91,815)
4	FY21 tax (gain)/loss on retirements	Col (b) = Page 8 of 31, Line 19; Col (c) = Page 6 of 31, Line 19	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines No. through 3	($225,028)	($235,782)	$10,754
6	Effective Tax Rate	Tax Department	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($78,760)	($82,524)	$3,764
	Deferred Tax Not Subject to Proration				
8	Capital Repairs Deduction	Page 8 of 31, Line 3	$0	$0	
9	Cost of Removal	Page 8 of 31, Line 20	($286,011)	($286,011)	
10	Book/Tax Depreciation Timing Difference at 3/31/2021		$0	$0	
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	($286,011)	($286,011)	
12	Effective Tax Rate		35.00%	35.00%	
13	Deferred Tax Reserve	Line 11 * Line 12	($100,104)	($100,104)	
14	Total Deferred Tax Reserve	Line 7 + Line 13	($178,864)	($182,628)	$3,764
15	Net Operating Loss		$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($178,864)	($182,628)	$3,764
	Allocation of FY 2021 Estimated Federal NOL				
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($235,782)	($235,782)	
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	($286,011)	($286,011)	
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($521,793)	($521,793)	
20	Total FY 2021 Federal NOL		$0	$0	
21	Allocated FY 2021 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0	
22	Allocated FY 2021 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0	
23	Effective Tax Rate		35.00%	35.00%	
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0	
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($78,760)	($82,524)	$3,764

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (m)	(l)	(m)
26	April 2020	30	91.78%	($6,024)	($6,312)	$288
27	May 2020	31	83.29%	($5,466)	($5,728)	$261
28	June 2020	30	75.07%	($4,927)	($5,162)	$235
29	July 2020	31	66.58%	($4,370)	($4,578)	$209
30	August 2020	31	58.08%	($3,812)	($3,994)	$182
31	September 2020	30	49.86%	($3,273)	($3,429)	$156
32	October 2020	31	41.37%	($2,715)	($2,845)	$130
33	November 2020	30	33.15%	($2,176)	($2,280)	$104
34	December 2020	31	24.66%	($1,618)	($1,696)	$77
35	January 2021	31	16.16%	($1,061)	($1,112)	$51
36	February 2021	28	8.49%	($557)	($584)	$27
37	March 2021	31	0.00%	$0	$0	$0
38	Total	365		($35,999)	($37,720)	$1,720
39	Deferred Tax Without Proration	Line 25		($78,760)	($82,524)	$3,764
40	Proration Adjustment	Line 38 - Line 39		$42,761	$44,804	($2,043)

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2022 Net Deferred Tax Reserve Electric Proration
AMI - Electric

Line No.			(a)=Sum of (b) through (d) Total	(b) Vintage Year March 31, 2022	(c) Vintage Year March 31, 2021	(d) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration					
1	Book Depreciation	Col (b) = Page 9 of 31, Line 13; Col (c) = Page 7 of 31, Line 13; Col (d) = Page 5 of 31, Line 13	$4,547,362	$2,086,972	$2,357,822	$102,569
2	Bonus Depreciation	Page 10 of 31, Line 12	$0	$0		
3	Remaining MACRS Tax Depreciation	Col (b) = Page 10 of 31, Line 18; Col (c) = Page 8 of 31, Line 18; Col (d) = Page 6 of 31, Line 18	($5,312,666)	($2,504,366)	($2,723,379)	($84,921)
4	FY22 tax (gain)/loss on retirements	Col (b) = Page 10 of 31, Line 19; Col (c) = Page 8 of 31, Line 19; Col (d) = Page 6 of 31, Line 19	$0	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines No. through 3	($765,304)	($417,394)	($365,557)	$17,648
6	Effective Tax Rate	Tax Department	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($267,856)	($146,088)	($127,945)	$6,177
	Deferred Tax Not Subject to Proration					
8	Capital Repairs Deduction	Page 10 of 31, Line 19	$0	$0		
9	Cost of Removal	Page 10 of 31, Line 20	($590,067)	($590,067)		
10	Book/Tax Depreciation Timing Difference at 3/31/2022		$0	$0		
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	($590,067)	($590,067)		
12	Effective Tax Rate		35.00%	35.00%		
13	Deferred Tax Reserve	Line 11 * Line 12	($206,524)	($206,524)		
14	Total Deferred Tax Reserve	Line 7 + Line 13	($474,380)	($352,611)	($127,945)	$6,177
15	Net Operating Loss		$0	$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($474,380)	($352,611)	($127,945)	$6,177
	Allocation of FY 2022 Estimated Federal NOL					
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($417,394)	($417,394)		
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	($590,067)	($590,067)		
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($1,007,461)	($1,007,461)		
20	Total FY 2022 Federal NOL		$0	$0		
21	Allocated FY 2022 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0		
22	Allocated FY 2022 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0		
23	Effective Tax Rate		35.00%	35.00%		
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0		
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($267,856)	($146,088)	($127,945)	$6,177

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (n)	(l)	(m)	(n)
	Proration Calculation						
26	April 2021	30	91.78%	($20,487)	($11,173)	($9,786)	$472
27	May 2021	31	83.29%	($18,591)	($10,139)	($8,880)	$429
28	June 2021	30	75.07%	($16,756)	($9,139)	($8,004)	$386
29	July 2021	31	66.58%	($14,861)	($8,105)	($7,098)	$343
30	August 2021	31	58.08%	($12,965)	($7,071)	($6,193)	$299
31	September 2021	30	49.86%	($11,130)	($6,070)	($5,316)	$257
32	October 2021	31	41.37%	($9,234)	($5,036)	($4,411)	$213
33	November 2021	30	33.15%	($7,400)	($4,036)	($3,535)	$171
34	December 2021	31	24.66%	($5,504)	($3,002)	($2,629)	$127
35	January 2022	31	16.16%	($3,608)	($1,968)	($1,723)	$83
36	February 2022	28	8.49%	($1,896)	($1,034)	($906)	$44
37	March 2022	31	0.00%	$0	$0	$0	$0
38	Total	365		($122,431)	($66,774)	($58,481)	$2,823
39	Deferred Tax Without Proration	Line 25		($267,856)	($146,088)	($127,945)	$6,177
40	Proration Adjustment	Line 38 - Line 39		$145,425	$79,314	$69,464	($3,353)

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Gas Capital Investment 12 months ending March 31, 2020
AMI - Gas

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Estimated Capital Investment				
1	AMI Gas Investments		$659,941	$0	$0
2	Total Estimated Capital Investment	Sum of Line 1	$659,941	$0	$0
	Depreciable Net Capital Included in Rate Base				
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$659,941	$0	$0
4	Retirements	Line 4 * 0%	$0	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$659,941	$659,941	$659,941
	Change in Net Capital Included in Rate Base				
6	Capital Included in Rate Base	Line 2	$659,941	$0	$0
7	Cost of Removal		$0	$0	$0
8	**Total Net Plant in Service**	**Line 6 + Line 7**	**$659,941**	**$659,941**	**$659,941**
	Tax Depreciation				
9	Vintage Year Tax Depreciation:				
10	FY 2020 Spend	Page 6 of 31, Line 21	$167,667	$36,922	$34,150
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$167,667	$204,589	$238,739
	Book Depreciation				
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	6.25%	6.25%	6.25%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12	$20,623	$41,246	$41,246
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$20,623	$61,869	$103,116
15	Total Cumulative Book Depreciation	Sum of Lines 14	$20,623	$61,869	$103,116
	Deferred Tax Calculation:				
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$147,044	$142,720	$135,623
17	Effective Tax Rate		35.00%	35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$51,465	$49,952	$47,468
19	Less: FY 2020 Federal NOL		$0	$0	$0
20	Less: Proration Adjustment	Col (a) = Page 20 of 31, Line 40; Col (b) = , Line 40; Col (c) = Page 22 of 31, Line 40	($27,942)	$822	$1,348
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$23,524	$50,774	$48,817
	Rate Base Calculation:				
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$659,941	$659,941	$659,941
23	Accumulated Depreciation	- Line 15	($20,623)	($61,869)	($103,116)
24	Deferred Tax Reserve	- Line 21	($23,524)	($50,774)	($48,817)
25	Year End Rate Base	Sum of Lines 22 through 24	$615,794	$547,298	$508,009
	Revenue Requirement Calculation:				
26	Average Rate Base	Column (a) = Current Year Line 38 ÷ 2; Column (b) = (Prior Year Line 38 + Current Year Line 38) ÷ 2	$307,897	$581,546	$527,653
27	Pre-Tax ROR	1/	10.44%	10.44%	10.44%
28	Return and Taxes	Line 26 * Line 27	$32,154	$60,731	$55,103
29	Book Depreciation	Line 13	$20,623	$41,246	$41,246
30	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b & c) Line 8 * 3.176%	$0	$20,960	$20,960
31	**Annual Revenue Requirement**	**Line 28 through Line 29**	**$52,777**	**$122,937**	**$117,309**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-GAS

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	5.18%	2.51%		2.51%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.67%	2.77%	10.44%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2020 Gas Capital Investments
AMI - Gas

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Capital Repairs Deduction				
1	Plant Additions	Page 14 of 31, Line 2	$659,941		
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%		
3	Capital Repairs Deduction	Line 1 * Line 2	$0		
	Bonus Depreciation				
4	Plant Additions	Line 1	$659,941		
5	Less Capital Repairs Deduction	Line 3	$0		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$659,941		
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$659,941		
9	Bonus Depreciation Rate (April 2019- December 2019)	1 * 75% * 30%	22.50%		
10	Bonus Depreciation Rate (January 2020 - Mar 2020)	0%	0.00%		
11	Total Bonus Depreciation Rate	Line 9 + Line 10	22.50%		
12	Bonus Depreciation	Line 8 * Line 11	$148,487		
	Remaining Tax Depreciation				
13	Plant Additions	Line 1	$659,941		
14	Less Capital Repairs Deduction	Line 3	$0		
15	Less Bonus Depreciation	Line 12	$148,487		
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$511,454	$511,454	$511,454
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%	7.219%	6.677%
18	Remaining Tax Depreciation	Line 16 * Line 17	$19,180	$36,922	$34,150
19	FY20 Loss incurred due to retirements	Per Tax Department	$0	$0	$0
20	Cost of Removal	Page 14 of 31, Line 7	$0	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$167,667	$36,922	$34,150

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Gas Capital Investment 12 months ending March 31, 2021
AMI - Gas

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Estimated Capital Investment			
1	AMI Gas Investments		$1,501,671	
2	Total Estimated Capital Investment	Sum of Line 1	$1,501,671	$0
	Depreciable Net Capital Included in Rate Base			
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$1,501,671	$0
4	Retirements	Line 4 * 0%	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$1,501,671	$1,501,671
	Change in Net Capital Included in Rate Base			
6	Capital Included in Rate Base	Line 2	$1,501,671	$0
7	Cost of Removal		$0	$0
8	**Total Net Plant in Service**	**Line 6 + Line 7**	**$1,501,671**	**$1,501,671**
	Tax Depreciation			
9	Vintage Year Tax Depreciation:			
10	FY 2021 Spend	Page 8 of 31, Line 21	$56,313	$108,406
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$56,313	$164,719
	Book Depreciation			
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	6.25%	6.25%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12	$46,927	$93,854
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$46,927	$140,782
15	Total Cumulative Book Depreciation	Sum of Lines 14	$46,927	$140,782
	Deferred Tax Calculation:			
16	Cumulative Book / Tax Timer	Line 11 - Line 14	$9,386	$23,937
17	Effective Tax Rate		35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$3,285	$8,378
19	Less: FY 2021 Federal NOL		$0	$0
20	Less: Proration Adjustment	Col (a) = , Line 40; Col (b) = Page 22 of 31, Line 40	($1,784)	($2,765)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$1,502	$5,613
	Rate Base Calculation:			
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$1,501,671	$1,501,671
23	Accumulated Depreciation	- Line 15	($46,927)	($140,782)
24	Deferred Tax Reserve	- Line 21	($1,502)	($5,613)
25	Year End Rate Base	Sum of Lines 22 through 24	$1,453,243	$1,355,277
	Revenue Requirement Calculation:			
26	Average Rate Base	Column (a) = Current Year Line 37 ÷ 2; Column (b) = (Prior Year Line 37 + Current Year Line 37) ÷ 2	$726,621	$1,404,260
27	Pre-Tax ROR	1/	10.44%	10.44%
28	Return and Taxes	Line 26 * Line 27	$75,859	$146,605
29	Book Depreciation	Line 13	$46,927	$93,854
30	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b) Line 8 * 3.176%	$0	$47,693
31	**Annual Revenue Requirement**	**Line 28 through Line 29**	**$122,787**	**$288,152**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-GAS

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	5.18%	2.51%		2.51%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.67%	2.77%	10.44%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2021 Gas Capital Investments
AMI - Gas

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 16 of 31, Line 2	$1,501,671	
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%	
3	Capital Repairs Deduction	Line 1 * Line 2	$0	
	Bonus Depreciation			
4	Plant Additions	Line 1	$1,501,671	
5	Less Capital Repairs Deduction	Line 3	$0	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$1,501,671	
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$1,501,671	
9	Bonus Depreciation Rate (April 2020- December 2020)	0%	0.00%	
10	Bonus Depreciation Rate (January 2021 - Mar 2021)	0%	0.00%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%	
12	Bonus Depreciation	Line 8 * Line 11	$0	
	Remaining Tax Depreciation			
13	Plant Additions	Line 1	$1,501,671	
14	Less Capital Repairs Deduction	Line 3	$0	
15	Less Bonus Depreciation	Line 12	$0	
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$1,501,671	$1,501,671
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%	7.219%
18	Remaining Tax Depreciation	Line 16 * Line 17	$56,313	$108,406
19	FY21 Loss incurred due to retirements	Per Tax Department	$0	$0
20	Cost of Removal	Page 16 of 31, Line 7	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$56,313	$108,406

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Gas Capital Investment 12 months ending March 31, 2022
AMI - Gas

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Estimated Capital Investment		
1	AMI Gas Investments		$317,321
2	Total Estimated Capital Investment	Sum of Line 1	$317,321
	Depreciable Net Capital Included in Rate Base		
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$317,321
4	Retirements	Line 4 * 0%	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5	$317,321
	Change in Net Capital Included in Rate Base		
6	Capital Included in Rate Base	Line 2	$317,321
7	Cost of Removal		$0
8	**Total Net Plant in Service**	**Line 6 + Line 7**	$317,321
	Tax Depreciation		
9	Vintage Year Tax Depreciation:		
10	FY 2022 Spend	Page 10 of 31, Line 21	$11,900
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$11,900
	Book Depreciation		
12	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	6.25%
13	Book Depreciation	Column (a) = Line 1* Line 12 * 50%	$9,916
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$9,916
15	Total Cumulative Book Depreciation	Sum of Lines 14	$9,916
	Deferred Tax Calculation:		
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$1,984
17	Effective Tax Rate		35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$694
19	Less: FY 2022 Federal NOL		$0
20	Less: Proration Adjustment	Col (a) = Page 22 of 31, Line 40	($377)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$317
	Rate Base Calculation:		
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$317,321
23	Accumulated Depreciation	- Line 15	($9,916)
24	Deferred Tax Reserve	- Line 21	($317)
25	Year End Rate Base	Sum of Lines 22 through 24	$307,088
	Revenue Requirement Calculation:		
26	Average Rate Base	Column (a) = Current Year Line 27 ÷ 2	$153,544
27	Pre-Tax ROR	1/	10.44%
28	Return and Taxes	Line 26 * Line 27	$16,030
29	Book Depreciation	Line 13	$9,916
30	Property Taxes	Tax Rate 3.176% MAL-7	$0
31	**Annual Revenue Requirement**	**Line 28 through Line 29**	**$25,946**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-GAS

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	5.18%	2.51%		2.51%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.67%	2.77%	10.44%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2022 Gas Capital Investments
AMI - Gas

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Capital Repairs Deduction		
1	Plant Additions	Page 18 of 31, Line 2	$317,321
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%
3	Capital Repairs Deduction	Line 1 * Line 2	$0
	Bonus Depreciation		
4	Plant Additions	Line 1	$317,321
5	Less Capital Repairs Deduction	Line 3	$0
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$317,321
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$317,321
9	Bonus Depreciation Rate (April 2021- December 2021)	0%	0.00%
10	Bonus Depreciation Rate (January 2022 - Mar 2022)	0%	0.00%
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%
12	Bonus Depreciation	Line 8 * Line 11	$0
	Remaining Tax Depreciation		
13	Plant Additions	Line 1	$317,321
14	Less Capital Repairs Deduction	Line 3	$0
15	Less Bonus Depreciation	Line 12	$0
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$317,321
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%
18	Remaining Tax Depreciation	Line 16 * Line 17	$11,900
19	FY22 Loss incurred due to retirements	Per Tax Department	$0
20	Cost of Removal	Page 18 of 31, Line 7	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$11,900

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2020 Net Deferred Tax Reserve Gas Proration
AMI - Gas

Line No.			(a)= Column (b) Total	(b) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration			
1	Book Depreciation	Page 14 of 31, Line 13	$20,623	$20,623
2	Bonus Depreciation	Page 15 of 31, Line 12	($148,487)	($148,487)
3	Remaining MACRS Tax Depreciation	Page 15 of 31, Line 18	($19,180)	($19,180)
4	FY20 tax (gain)/loss on retirements	Page 15 of 31, Line 19	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($147,044)	($147,044)
6	Effective Tax Rate	Tax Department	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($51,465)	($51,465)
	Deferred Tax Not Subject to Proration			
8	Capital Repairs Deduction	Page 15 of 31, Line 3	$0	$0
9	Cost of Removal	Page 15 of 31, Line 20	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2020		$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0
12	Effective Tax Rate		35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	($51,465)	($51,465)
15	Net Operating Loss		$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($51,465)	($51,465)
	Allocation of FY 2020 Estimated Federal NOL			
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($147,044)	($147,044)
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($147,044)	($147,044)
20	Total FY 2020 Federal NOL		$0	$0
21	Allocated FY 2020 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0
22	Allocated FY 2020 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0
23	Effective Tax Rate		35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($51,465)	($51,465)

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l)	(l)
	Proration Calculation				
26	April 2019	30	91.78%	($3,936)	($3,936)
27	May 2019	31	83.29%	($3,572)	($3,572)
28	June 2019	30	75.07%	($3,220)	($3,220)
29	July 2019	31	66.58%	($2,855)	($2,855)
30	August 2019	31	58.08%	($2,491)	($2,491)
31	September 2019	30	49.86%	($2,139)	($2,139)
32	October 2019	31	41.37%	($1,774)	($1,774)
33	November 2019	30	33.15%	($1,422)	($1,422)
34	December 2019	31	24.66%	($1,058)	($1,058)
35	January 2020	31	16.16%	($693)	($693)
36	February 2020	28	8.49%	($364)	($364)
37	March 2020	31	0.00%	$0	$0
38	Total	365		($23,524)	($23,524)
39	Deferred Tax Without Proration	Line 25		($51,465)	($51,465)
40	Proration Adjustment	Line 38 - Line 39		$27,942	$27,942

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2021 Net Deferred Tax Reserve Gas Proration
AMI - Gas

Line No.			(a)=Sum of (b) through (c) Total	(b) Vintage Year March 31, 2021	(c) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration				
1	Book Depreciation	Col (b) = Page 16 of 31, Line 13; Col (c) = Page 14 of 31, Line 13	$88,174	$46,927	$41,246
2	Bonus Depreciation	Page 17 of 31, Line 12	$0	$0	
3	Remaining MACRS Tax Depreciation	Col (b) = Page 17 of 31, Line 18; Col (c) = Page 15 of 31, Line 18	($93,235)	($56,313)	($36,922)
4	FY21 tax (gain)/loss on retirements	Col (b) = Page 17 of 31, Line 19; Col (c) = Page 15 of 31, Line 19	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines No. through 3	($5,061)	($9,386)	$4,324
6	Effective Tax Rate	Tax Department	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($1,772)	($3,285)	$1,514
	Deferred Tax Not Subject to Proration				
8	Capital Repairs Deduction	Page 17 of 31, Line 3	$0	$0	$0
9	Cost of Removal	Page 17 of 31, Line 20	$0	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2021		$0	$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0	$0
12	Effective Tax Rate		35.00%	35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	($1,772)	($3,285)	$1,514
15	Net Operating Loss		$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($1,772)	($3,285)	$1,514
	Allocation of FY 2021 Estimated Federal NOL				
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($9,386)	($9,386)	
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0	
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($9,386)	($9,386)	
20	Total FY 2021 Federal NOL		$0	$0	
21	Allocated FY 2021 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0	
22	Allocated FY 2021 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0	
23	Effective Tax Rate		35.00%	35.00%	
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0	
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($1,772)	($3,285)	$1,514

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (m)	(l)	(m)
26	April 2020	30	91.78%	($135)	($251)	$116
27	May 2020	31	83.29%	($123)	($228)	$105
28	June 2020	30	75.07%	($111)	($206)	$95
29	July 2020	31	66.58%	($98)	($182)	$84
30	August 2020	31	58.08%	($86)	($159)	$73
31	September 2020	30	49.86%	($74)	($137)	$63
32	October 2020	31	41.37%	($61)	($113)	$52
33	November 2020	30	33.15%	($49)	($91)	$42
34	December 2020	31	24.66%	($36)	($68)	$31
35	January 2021	31	16.16%	($24)	($44)	$20
36	February 2021	28	8.49%	($13)	($23)	$11
37	March 2021	31	0.00%	$0	$0	$0
38	Total	365		($810)	($1,502)	$692
39	Deferred Tax Without Proration	Line 25		($1,772)	($3,285)	$1,514
40	Proration Adjustment	Line 38 - Line 39		$962	$1,784	($822)

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2022 Net Deferred Tax Reserve Gas Proration
AMI - Gas

Line No.			(a)=Sum of (b) through (d) Total	(b) Vintage Year March 31, 2022	(c) Vintage Year March 31, 2021	(d) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration					
1	Book Depreciation	Col (b) = Page 18 of 31, Line 13; Col (c) = Page 16 of 31, Line 13; Col (d) = Page 14 of 31, Line 13	$145,017	$9,916	$93,854	$41,246
2	Bonus Depreciation	Page 19 of 31, Line 12	$0	$0		
3	Remaining MACRS Tax Depreciation	Col (b) = Page 19 of 31, Line 18; Col (c) = Page 17 of 31, Line 18; Col (d) = Page 15 of 31, Line 18	($154,456)	($11,900)	($108,406)	($34,150)
4	FY22 tax (gain)/loss on retirements	Col (b) = Page 19 of 31, Line 19; Col (c) = Page 17 of 31, Line 19; Col (d) = Page 15 of 31, Line 19	$0	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines No. through 3	($9,439)	($1,984)	($14,552)	$7,096
6	Effective Tax Rate	Tax Department	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($3,304)	($694)	($5,093)	$2,484
	Deferred Tax Not Subject to Proration					
8	Capital Repairs Deduction	Page 19 of 31, Line 3	$0	$0	$0	$0
9	Cost of Removal	Page 19 of 31, Line 20	$0	$0	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2022		$0	$0	$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0	$0	$0
12	Effective Tax Rate		35.00%	35.00%	35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	($3,304)	($694)	($5,093)	$2,484
15	Net Operating Loss		$0	$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($3,304)	($694)	($5,093)	$2,484
	Allocation of FY 2022 Estimated Federal NOL					
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($1,984)	($1,984)		
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0		
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($1,984)	($1,984)		
20	Total FY 2022 Federal NOL		$0	$0		
21	Allocated FY 2022 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0		
22	Allocated FY 2022 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0		
23	Effective Tax Rate		35.00%	35.00%		
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0		
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($3,304)	($694)	($5,093)	$2,484

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (n)	(l)	(m)	(n)
26	April 2021	30	91.78%	($253)	($53)	($390)	$190
27	May 2021	31	83.29%	($229)	($48)	($353)	$172
28	June 2021	30	75.07%	($207)	($43)	($319)	$155
29	July 2021	31	66.58%	($183)	($39)	($283)	$138
30	August 2021	31	58.08%	($160)	($34)	($247)	$120
31	September 2021	30	49.86%	($137)	($29)	($212)	$103
32	October 2021	31	41.37%	($114)	($24)	($176)	$86
33	November 2021	30	33.15%	($91)	($19)	($141)	$69
34	December 2021	31	24.66%	($68)	($14)	($105)	$51
35	January 2022	31	16.16%	($45)	($9)	($69)	$33
36	February 2022	28	8.49%	($23)	($5)	($36)	$18
37	March 2022	31	0.00%	$0	$0	$0	$0
38	Total	365		($1,510)	($317)	($2,328)	$1,135
39	Deferred Tax Without Proration	Line 25		($3,304)	($694)	($5,093)	$2,484
40	Proration Adjustment	Line 38 - Line 39		$1,794	$377	$2,765	($1,348)

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated IS Capital Investment 12 months ending March 31, 2020
AMI - IS

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Estimated Capital Investment				
1	AMI IS Investments		$0	$0	$0
2	Total Estimated Capital Investment	Sum of Line 1	$0	$0	$0
	Depreciable Net Capital Included in Rate Base				
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$0	$0	$0
4	Retirements	Line 4 * 0%	$0	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$0	$0	$0
	Change in Net Capital Included in Rate Base				
6	Capital Included in Rate Base	Line 2	$0	$0	$0
7	Cost of Removal		$0	$0	$0
8	**Total Net Plant in Service**	**Line 6 + Line 7**	$0	$0	$0
	Tax Depreciation				
9	Vintage Year Tax Depreciation:				
10	FY 2020 Spend	Page 6 of 31, Line 21	$0	$0	$0
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$0	$0	$0
	Book Depreciation				
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	14.29%	14.29%	14.29%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12	$0	$0	$0
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$0	$0	$0
15	Total Cumulative Book Depreciation	Sum of Lines 14	$0	$0	$0
	Deferred Tax Calculation:				
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$0	$0	$0
17	Effective Tax Rate		35.00%	35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$0	$0	$0
19	Less: FY 2020 Federal NOL		$0	$0	$0
20	Less: Proration Adjustment	Col (a) = Page 29 of 31, Line 40; Col (b) = , Line 40; Col (c) = Page 31 of 31, Line 40	$0	$0	$0
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$0	$0	$0
	Rate Base Calculation:				
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$0	$0	$0
23	Accumulated Depreciation	- Line 15	$0	$0	$0
24	Deferred Tax Reserve	- Line 21	$0	$0	$0
25	Year End Rate Base	Sum of Lines 22 through 24	$0	$0	$0
	Revenue Requirement Calculation:				
26	Average Rate Base	Column (a) = Current Year Line 38 ÷ 2; Column (b) = (Prior Year Line 38 + Current Year Line 38) ÷ 2	$0	$0	$0
27	Pre-Tax ROR	Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Workpaper MAL-6	10.29%	10.29%	10.29%
28	Return and Taxes	Line 26 * Line 27	$0	$0	$0
29	Book Depreciation	Line 13	$0	$0	$0
30	**Annual Revenue Requirement**	**Line 28 + Line 29**	**$0**	**$0**	**$0**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2020 IS Capital Investments
AMI - IS

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Capital Repairs Deduction				
1	Plant Additions	Page 23 of 31, Line 2	$0		
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%		
3	Capital Repairs Deduction	Line 1 * Line 2	$0		
	Bonus Depreciation				
4	Plant Additions	Line 1	$0		
5	Less Capital Repairs Deduction	Line 3	$0		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$0		
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$0		
9	Bonus Depreciation Rate (April 2019- December 2019)	1 * 75% * 30%	22.50%		
10	Bonus Depreciation Rate (January 2020 - Mar 2020)	0%	0.00%		
11	Total Bonus Depreciation Rate	Line 9 + Line 10	22.50%		
12	Bonus Depreciation	Line 8 * Line 11	$0		
	Remaining Tax Depreciation				
13	Plant Additions	Line 1	$0		
14	Less Capital Repairs Deduction	Line 3	$0		
15	Less Bonus Depreciation	Line 12	$0		
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$0	$0	$0
17	3 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	33.33%	44.45%	14.81%
18	Remaining Tax Depreciation	Line 16 * Line 17	$0	$0	$0
19	FY20 Loss incurred due to retirements	Per Tax Department	$0	$0	$0
20	Cost of Removal	Page 23 of 31, Line 7	$0	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$0	$0	$0

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated IS Capital Investment 12 months ending March 31, 2021
AMI - IS

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Estimated Capital Investment			
1	AMI IS Investments		$11,203,661	
2	Total Estimated Capital Investment	Sum of Line 1	$11,203,661	$0
	Depreciable Net Capital Included in Rate Base			
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$11,203,661	$0
4	Retirements	Line 4 * 0%	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$11,203,661	$11,203,661
	Change in Net Capital Included in Rate Base			
6	Capital Included in Rate Base	Line 2	$11,203,661	$0
7	Cost of Removal		$0	$0
8	**Total Net Plant in Service**	**Line 6 + Line 7**	$11,203,661	$11,203,661
	Tax Depreciation			
9	Vintage Year Tax Depreciation:			
10	FY 2021 Spend	Page 8 of 31, Line 21	$3,734,180	$4,980,027
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$3,734,180	$8,714,207
	Book Depreciation			
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	14.29%	14.29%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12	$800,262	$1,600,523
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$800,262	$2,400,785
15	Total Cumulative Book Depreciation	Sum of Lines 14	$800,262	$2,400,785
	Deferred Tax Calculation:			
16	Cumulative Book / Tax Timer	Line 11 - Line 14	$2,933,918	$6,313,422
17	Effective Tax Rate		35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$1,026,871	$2,209,698
19	Less: FY 2021 Federal NOL		$0	$0
20	Less: Proration Adjustment	Col (a) = , Line 40; Col (b) = Page 31 of 31, Line 40	($557,511)	($642,183)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$469,360	$1,567,515
	Rate Base Calculation:			
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$11,203,661	$11,203,661
23	Accumulated Depreciation	- Line 15	($800,262)	($2,400,785)
24	Deferred Tax Reserve	- Line 21	($469,360)	($1,567,515)
25	Year End Rate Base	Sum of Lines 22 through 24	$9,934,040	$7,235,362
	Revenue Requirement Calculation:			
26	Average Rate Base	Column (a) = Current Year Line 37 ÷ 2; Column (b) = (Prior Year Line 37 + Current Year Line 37) ÷ 2	$4,967,020	$8,584,701
27	Pre-Tax ROR	Weighted Average Cost of Capital as filed in R.I.P.U.C. Docket No. 4770, Workpaper MAL-6	10.29%	10.29%
28	Return and Taxes	Line 26 * Line 27	$511,106	$883,366
29	Book Depreciation	Line 13	$800,262	$1,600,523
30	**Annual Revenue Requirement**	**Line 28 + Line 29**	**$1,311,368**	**$2,483,889**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2021 IS Capital Investments
AMI - IS

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 25 of 31, Line 2	$11,203,661	
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%	
3	Capital Repairs Deduction	Line 1 * Line 2	$0	
	Bonus Depreciation			
4	Plant Additions	Line 1	$11,203,661	
5	Less Capital Repairs Deduction	Line 3	$0	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$11,203,661	
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$11,203,661	
9	Bonus Depreciation Rate (April 2020- December 2020)	0%	0.00%	
10	Bonus Depreciation Rate (January 2021 - Mar 2021)	0%	0.00%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%	
12	Bonus Depreciation	Line 8 * Line 11	$0	
	Remaining Tax Depreciation			
13	Plant Additions	Line 1	$11,203,661	
14	Less Capital Repairs Deduction	Line 3	$0	
15	Less Bonus Depreciation	Line 12	$0	
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$11,203,661	$11,203,661
17	3 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	33.33%	44.45%
18	Remaining Tax Depreciation	Line 16 * Line 17	$3,734,180	$4,980,027
19	FY21 Loss incurred due to retirements	Per Tax Department	$0	$0
20	Cost of Removal	Page 25 of 31, Line 7	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$3,734,180	$4,980,027

THE NARRAGANSETT ELECTRIC COMPANY
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Power Sector Transformation (PST)
Revenue Requirement on Estimated IS Capital Investment 12 months ending March 31, 2022
AMI - IS

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Estimated Capital Investment		
1	AMI IS Investments		$0
2	Total Estimated Capital Investment	Sum of Line 1	$0
	Depreciable Net Capital Included in Rate Base		
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$0
4	Retirements	Line 4 * 0%	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5	$0
	Change in Net Capital Included in Rate Base		
6	Capital Included in Rate Base	Line 2	$0
7	Cost of Removal		$0
8	**Total Net Plant in Service**	**Line 6 + Line 7**	$0
	Tax Depreciation		
9	Vintage Year Tax Depreciation:		
10	FY 2022 Spend	Page 10 of 31, Line 21	$0
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$0
	Book Depreciation		
12	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	14.29%
13	Book Depreciation	Column (a) = Line 1* Line 12 * 50%	$0
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$0
15	Total Cumulative Book Depreciation	Sum of Lines 14	$0
	Deferred Tax Calculation:		
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$0
17	Effective Tax Rate		35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$0
19	Less: FY 2022 Federal NOL		$0
20	Less: Proration Adjustment	Col (a) = Page 31 of 31, Line 40	$0
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$0
	Rate Base Calculation:		
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$0
23	Accumulated Depreciation	- Line 15	$0
24	Deferred Tax Reserve	- Line 21	$0
25	Year End Rate Base	Sum of Lines 22 through 24	$0
	Revenue Requirement Calculation:		
26	Average Rate Base	Column (a) = Current Year Line 27 ÷ 2	$0
27	Pre-Tax ROR	Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Workpaper MAL-6	10.29%
28	Return and Taxes	Line 26 * Line 27	$0
29	Book Depreciation	Line 13	$0
30	**Annual Revenue Requirement**	**Line 28 + Line 29**	**$0**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2022 IS Capital Investments
AMI - IS

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Capital Repairs Deduction		
1	Plant Additions	Page 27 of 31, Line 2	$0
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%
3	Capital Repairs Deduction	Line 1 * Line 2	$0
	Bonus Depreciation		
4	Plant Additions	Line 1	$0
5	Less Capital Repairs Deduction	Line 3	$0
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$0
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$0
9	Bonus Depreciation Rate (April 2021- December 2021)	0.00%	0.00%
10	Bonus Depreciation Rate (January 2022 - Mar 2022)	0.00%	0.00%
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%
12	Bonus Depreciation	Line 8 * Line 11	$0
	Remaining Tax Depreciation		
13	Plant Additions	Line 1	$0
14	Less Capital Repairs Deduction	Line 3	$0
15	Less Bonus Depreciation	Line 12	$0
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$0
17	3 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	33.33%
18	Remaining Tax Depreciation	Line 16 * Line 17	$0
19	FY22 Loss incurred due to retirements	Per Tax Department	$0
20	Cost of Removal	Page 27 of 31, Line 7	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$0

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2020 Net Deferred Tax Reserve IS Proration
AMI - IS

Line No.			(a)= Column (b) Total	(b) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration			
1	Book Depreciation	Page 23 of 31, Line 13	$0	$0
2	Bonus Depreciation	Page 24 of 31, Line 12	$0	$0
3	Remaining MACRS Tax Depreciation	Page 24 of 31, Line 18	$0	$0
4	FY20 tax (gain)/loss on retirements	Page 24 of 31, Line 19	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	$0	$0
6	Effective Tax Rate	Tax Department	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	$0	$0
	Deferred Tax Not Subject to Proration			
8	Capital Repairs Deduction	Page 24 of 31, Line 3	$0	$0
9	Cost of Removal	Page 24 of 31, Line 20	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2020		$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0
12	Effective Tax Rate		35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	$0	$0
15	Net Operating Loss		$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	$0	$0
	Allocation of FY 2020 Estimated Federal NOL			
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	$0	$0
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	$0	$0
20	Total FY 2020 Federal NOL		$0	$0
21	Allocated FY 2020 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	0.00
22	Allocated FY 2020 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0
23	Effective Tax Rate	Tax Department	35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	$0	$0

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l)	(l)
26	April 2019	30	91.78%	$0	$0
27	May 2019	31	83.29%	$0	$0
28	June 2019	30	75.07%	$0	$0
29	July 2019	31	66.58%	$0	$0
30	August 2019	31	58.08%	$0	$0
31	September 2019	30	49.86%	$0	$0
32	October 2019	31	41.37%	$0	$0
33	November 2019	30	33.15%	$0	$0
34	December 2019	31	24.66%	$0	$0
35	January 2020	31	16.16%	$0	$0
36	February 2020	28	8.49%	$0	$0
37	March 2020	31	0.00%	$0	$0
38	Total	365		$0	$0
39	Deferred Tax Without Proration	Line 25		$0	$0
40	Proration Adjustment	Line 38 - Line 39		$0	$0

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2021 Net Deferred Tax Reserve IS Proration
AMI - IS

Line No.			(a)=Sum of (b) through (c) Total	(b) Vintage Year March 31, 2021	(c) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration				
1	Book Depreciation	Col (b) = Page 25 of 31, Line 13; Col (c) = Page 23 of 31, Line 13	$800,262	$800,262	$0
2	Bonus Depreciation	Page 26 of 31, Line 12	$0	$0	
3	Remaining MACRS Tax Depreciation	Col (b) = Page 26 of 31, Line 18; Col (c) = Page 24 of 31, Line 18	($3,734,180)	($3,734,180)	$0
4	FY21 tax (gain)/loss on retirements	Col (b) = Page 26 of 31, Line 19; Col (c) = Page 24 of 31, Line 19	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines No. through 3	($2,933,918)	($2,933,918)	$0
6	Effective Tax Rate	Tax Department	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($1,026,871)	($1,026,871)	$0
	Deferred Tax Not Subject to Proration				
8	Capital Repairs Deduction	Page 26 of 31, Line 3	$0	$0	
9	Cost of Removal	Page 26 of 31, Line 20	$0	$0	
10	Book/Tax Depreciation Timing Difference at 3/31/2021		$0	$0	
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0	
12	Effective Tax Rate		35.00%	35.00%	
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0	
14	Total Deferred Tax Reserve	Line 7 + Line 13	($1,026,871)	($1,026,871)	$0
15	Net Operating Loss		$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($1,026,871)	($1,026,871)	$0
	Allocation of FY 2021 Estimated Federal NOL				
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($2,933,918)	($2,933,918)	
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0	
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($2,933,918)	($2,933,918)	
20	Total FY 2021 Federal NOL		$0	$0	
21	Allocated FY 2021 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0	
22	Allocated FY 2021 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0	
23	Effective Tax Rate		35.00%	35.00%	
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0	
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($1,026,871)	($1,026,871)	$0

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (m)	(l)	(m)
26	April 2020	30	91.78%	($78,539)	($78,539)	$0
27	May 2020	31	83.29%	($71,271)	($71,271)	$0
28	June 2020	30	75.07%	($64,238)	($64,238)	$0
29	July 2020	31	66.58%	($56,970)	($56,970)	$0
30	August 2020	31	58.08%	($49,702)	($49,702)	$0
31	September 2020	30	49.86%	($42,669)	($42,669)	$0
32	October 2020	31	41.37%	($35,401)	($35,401)	$0
33	November 2020	30	33.15%	($28,368)	($28,368)	$0
34	December 2020	31	24.66%	($21,100)	($21,100)	$0
35	January 2021	31	16.16%	($13,832)	($13,832)	$0
36	February 2021	28	8.49%	($7,268)	($7,268)	$0
37	March 2021	31	0.00%	$0	$0	$0
38	Total	365		($469,360)	($469,360)	$0
39	Deferred Tax Without Proration	Line 25		($1,026,871)	($1,026,871)	$0
40	Proration Adjustment	Line 38 - Line 39		$557,511	$557,511	$0

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
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Power Sector Transformation (PST)
Calculation of Fiscal Year 2022 Net Deferred Tax Reserve IS Proration
AMI - IS

Line No.			(a)=Sum of (b) through (d) Total	(b) Vintage Year March 31, 2022	(c) Vintage Year March 31, 2021	(d) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration					
1	Book Depreciation	Col (b) = Page 27 of 31, Line 13; Col (c) = Page 25 of 31, Line 13; Col (d) = Page 23 of 31, Line 13	$1,600,523	$0	$1,600,523	$0
2	Bonus Depreciation	Page 28 of 31, Line 12	$0	$0		
3	Remaining MACRS Tax Depreciation	Col (b) = Page 28 of 31, Line 18; Col (c) = Page 26 of 31, Line 18; Col (d) = Page 24 of 31, Line 18	($4,980,027)	$0	($4,980,027)	$0
4	FY22 tax (gain)/loss on retirements	Col (b) = Page 28 of 31, Line 19; Col (c) = Page 26 of 31, Line 19; Col (d) = Page 24 of 31, Line 19	$0	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines No. through 3	($3,379,504)	$0	($3,379,504)	$0
6	Effective Tax Rate	Tax Department	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($1,182,826)	$0	($1,182,826)	$0
	Deferred Tax Not Subject to Proration					
8	Capital Repairs Deduction	Page 28 of 31, Line 3	$0	$0		
9	Cost of Removal	Page 26 of 31, Line 20	$0	$0		
10	Book/Tax Depreciation Timing Difference at 3/31/2022		$0	$0		
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0		
12	Effective Tax Rate		35.00%	35.00%		
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0		
14	Total Deferred Tax Reserve	Line 7 + Line 13	($1,182,826)	$0	($1,182,826)	$0
15	Net Operating Loss		$0	$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($1,182,826)	$0	($1,182,826)	$0
	Allocation of FY 2022 Estimated Federal NOL					
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	$0	$0		
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0		
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	$0	$0		
20	Total FY 2022 Federal NOL		$0	$0		
21	Allocated FY 2022 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0		
22	Allocated FY 2022 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0		
23	Effective Tax Rate		35.00%	35.00%		
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0		
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($1,182,826)	$0	($1,182,826)	$0

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (n)	(l)	(m)	(n)
	Proration Calculation						
26	April 2021	30	91.78%	($90,467)	$0	($90,467)	$0
27	May 2021	31	83.29%	($82,096)	$0	($82,096)	$0
28	June 2021	30	75.07%	($73,994)	$0	($73,994)	$0
29	July 2021	31	66.58%	($65,623)	$0	($65,623)	$0
30	August 2021	31	58.08%	($57,251)	$0	($57,251)	$0
31	September 2021	30	49.86%	($49,149)	$0	($49,149)	$0
32	October 2021	31	41.37%	($40,778)	$0	($40,778)	$0
33	November 2021	30	33.15%	($32,676)	$0	($32,676)	$0
34	December 2021	31	24.66%	($24,305)	$0	($24,305)	$0
35	January 2022	31	16.16%	($15,933)	$0	($15,933)	$0
36	February 2022	28	8.49%	($8,372)	$0	($8,372)	$0
37	March 2022	31	0.00%	$0	$0	$0	$0
38	Total	365		($540,643)	$0	($540,643)	$0
39	Deferred Tax Without Proration	Line 25		($1,182,826)	$0	($1,182,826)	$0
40	Proration Adjustment	Line 38 - Line 39		$642,183	$0	$642,183	$0

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

Appendix 10.5

Appendix 10.5

Revenue Requirement AMF

Multi Jurisdiction

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
AMI
Annual Revenue Requirement General Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Electric Operation and Maintenance (O&M) Expenses:				
1	AMI Costs		$ 3,180,226	$ 2,285,684	$ 4,235,568
2	CMS Costs		$ -	$ -	$ -
3	Meter Data Service Costs		$ -	$ 389,698	$ 802,778
4	Customer Engagement Plans Costs		$ 925,740	$ 3,394,245	$ 2,004,136
5	IS Costs - Electric		$ 1,114,327	$ 1,452,916	$ 3,117,347
6	**Total Electric O&M costs**	Sum of Lines 1 through 5	**$ 5,220,293**	**$ 7,522,544**	**$ 10,159,829**
	Gas Operation and Maintenance (O&M) Expenses:				
7	AMI Costs		$ 1,058,542	$ 1,999	$ 3,080
8	CMS Costs		$ -	$ -	$ -
9	Meter Data Service Costs		$ -	$ 119,534	$ 246,239
10	Customer Engagement Plans Costs		$ -	$ -	$ -
11	IS Costs - Gas		$ 605,579	$ 524,139	$ 496,453
12	**Total Gas O&M costs**	Sum of Lines 7 through 11	**$ 1,664,121**	**$ 645,672**	**$ 745,772**
	Total O&M costs		**$ 6,884,414**	**$ 8,168,216**	**$ 10,905,601**
13	Electric Capital Investment:				
14	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$116,334	$271,721	$259,430
15	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$3,198,281	$7,432,853
16	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$5,334,525
17	**Total Electric Capital Investment Component of Revenue Requirement**	Sum of Lines 13 through 16	**$116,334**	**$3,470,003**	**$13,026,809**
18	Gas Capital Investment:				
19	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$45,576	$106,167	$101,308
20	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$216,171	$454,945
21	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$23,430
22	**Total Gas Capital Investment Component of Revenue Requirement**	Sum of Lines 18 through 21	**$45,576**	**$322,338**	**$579,682**
23	**Total Electric Revenue Requirement**	Line 6 + Line 17	**$ 5,336,627**	**$ 10,992,547**	**$ 23,186,638**
24	**Total Gas Revenue Requirement**	Line 12 + Line 22	**$ 1,709,697**	**$ 968,010**	**$ 1,325,454**
25	**Total Electric & Gas Revenue Requirement**	Line 23 + Line 24	**$ 7,046,324**	**$11,960,557**	**$24,512,092**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
AMI - Electric
Annual Revenue Requirement Electric Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Operation and Maintenance (O&M) Expenses:				
1	AMI Costs		$ 3,180,226	$ 2,285,684	$ 4,235,568
2	CMS Costs		$ -	$ -	$ -
3	Meter Data Service Costs		$ -	$ 389,698	$ 802,778
4	Customer Engagement Plans Costs		$ 925,740	$ 3,394,245	$ 2,004,136
5	**Total O&M costs**	Sum of Lines 1 through 4	**$ 4,105,966**	**$ 6,069,628**	**$ 7,042,482**
	Capital Investment:				
6	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$ 116,334	$ 271,721	$ 259,430
7	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$ 2,985,433	$ 7,029,694
8	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$ 5,334,525
9	**Total Capital Investment Component of Revenue Requirement**	Sum of Lines 6 through 8	**$ 116,334**	**$ 3,257,155**	**$ 12,623,650**
10	**Total Revenue Requirement**	Line 5 + Line 9	**$ 4,222,300**	**$ 9,326,783**	**$ 19,666,132**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
AMI - Gas
Annual Revenue Requirement Gas Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Operation and Maintenance (O&M) Expenses:				
1	AMI Costs		$1,058,542	$1,999	$3,080
2	CMS Costs		$0	$0	$0
3	Meter Data Service Costs		$0	$119,534	$246,239
4	Customer Engagement Plans Costs		$0	$0	$0
5	**Total O&M costs**	Sum of Lines 1 through 4	**$1,058,542**	**$121,533**	**$249,320**
6	Capital Investment:				
7	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$45,576	$106,167	$101,308
8	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$100,499	$235,849
9	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$23,430
10	**Total Capital Investment Component of Revenue Requirement**	Sum of Lines 7 through 9	**$45,576**	**$206,666**	**$360,586**
11	**Total Revenue Requirement**	Line 5 + Line 10	**$1,104,118**	**$328,199**	**$609,905**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
AMI - IS
Annual Revenue Requirement IS Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	IS Operation and Maintenance (O&M) Expenses:				
1	IS Costs - Electric		$ 1,114,327	$ 1,452,916	$ 3,117,347
2	IS Costs - Gas		$ 605,579	$ 524,139	$ 496,453
3	**Total IS O&M costs**	Sum of Lines 1 through 2	**$ 1,719,906**	**$ 1,977,055**	**$ 3,613,799**
4	IS Electric Capital Investment:				
5	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$0	$0	$0
6	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$212,848	$403,159
7	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$0
8	**Total IS Electric Capital Investment Component of Revenue Requirement**	Sum of Lines 5 through 7	**$0**	**$212,848**	**$403,159**
9	IS Gas Capital Investment:				
10	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment		$0	$0	$0
11	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			$115,672	$219,096
12	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				$0
13	**Total IS Gas Capital Investment Component of Revenue Requirement**	Sum of Lines 10 through 12	**$0**	**$115,672**	**$219,096**
14	**Total IS Electric Revenue Requirement**	Line 1 + Line 8	**$1,114,327**	**$1,665,764**	**$3,520,506**
15	**Total IS Gas Revenue Requirement**	Line 2 + Line 13	**$605,579**	**$639,810**	**$715,549**
16	**Total IS Electric & Gas Revenue Requirement**	Line 14 + Line 15	**$1,719,906**	**$2,305,574**	**$4,236,054**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Electric Capital Investment 12 months ending March 31, 2020
AMI - Electric - Electric Vehicle Charging Stations

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Estimated Capital Investment				
1	Electric AMI Investments		$1,475,598	$0	$0
2	Total Estimated Capital Investment	Line 1	$1,475,598	$0	$0
	Depreciable Net Capital Included in Rate Base				
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$1,475,598	$0	$0
4	Retirements	Line 4 * 0%	$0	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$1,475,598	$1,475,598	$1,475,598
	Change in Net Capital Included in Rate Base				
6	Capital Included in Rate Base	Line 2	$1,475,598	$0	$0
7	Cost of Removal		$0	$0	$0
8	**Total Plant in Service Including Cost of Removal**	**Line 6 + Line 7**	**$1,475,598**	**$1,475,598**	**$1,475,598**
	Tax Depreciation				
9	Vintage Year Tax Depreciation:				
10	FY 2020 Spend	Page 6 of 31, Line 21	$374,895	$82,556	$76,357
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$374,895	$457,451	$533,808
	Book Depreciation				
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	6.25%	6.25%	6.25%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12	$46,112	$92,225	$92,225
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$46,112	$138,337	$230,562
15	Total Cumulative Book Depreciation	Line 14	$46,112	$138,337	$230,562
	Deferred Tax Calculation:				
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$328,783	$319,114	$303,246
17	Effective Tax Rate		35.00%	35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$115,074	$111,690	$106,136
19	Less: FY 2020 Federal NOL		$0	$0	$0
20	Less: Proration Adjustment	Col (a) = Page 11 of 31, Line 40; Col (b) = , Line 40; Col (c) = Page 13 of 31, Line 40	($62,476)	$1,837	$3,015
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$52,598	$113,527	$109,151
	Rate Base Calculation:				
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$1,475,598	$1,475,598	$1,475,598
23	Accumulated Depreciation	- Line 15	($46,112)	($138,337)	($230,562)
24	Deferred Tax Reserve	- Line 21	($52,598)	($113,527)	($109,151)
25	Year End Rate Base	Sum of Lines 22 through 24	$1,376,888	$1,223,733	$1,135,884
	Revenue Requirement Calculation:				
26	Average Rate Base	Column (a) = Current Year Line 38 ÷ 2; Column (b) = (Prior Year Line 38 + Current Year Line 38) ÷ 2	$688,444	$1,300,310	$1,179,809
27	Pre-Tax ROR	1/	10.20%	10.20%	10.20%
28	Return and Taxes	Line 26 * Line 27	$70,221	$132,632	$120,340
29	Book Depreciation	Line 13	$46,112	$92,225	$92,225
30	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b & c) Line 8 * 3.176%	$0	$46,865	$46,865
31	**Annual Revenue Requirement**	**Line 28 through Line 29**	**$116,334**	**$271,721**	**$259,430**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2020 Electric Capital Investments

####

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Capital Repairs Deduction				
1	Plant Additions	Page 5 of 31, Line 2	$1,475,598		
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%		
3	Capital Repairs Deduction	Line 1 * Line 2	$0		
	Bonus Depreciation				
4	Plant Additions	Line 1	$1,475,598		
5	Less Capital Repairs Deduction	Line 3	$0		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$1,475,598		
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$1,475,598		
9	Bonus Depreciation Rate (April 2019- December 2019)	1 * 75% * 30%	22.50%		
10	Bonus Depreciation Rate (January 2020 - Mar 2020)	1 * 25% * 00%	0.00%		
11	Total Bonus Depreciation Rate	Line 9 + Line 10	22.50%		
12	Bonus Depreciation	Line 8 * Line 11	$332,010		
	Remaining Tax Depreciation				
13	Plant Additions	Line 1	$1,475,598		
14	Less Capital Repairs Deduction	Line 3	$0		
15	Less Bonus Depreciation	Line 12	$332,010		
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$1,143,588	$1,143,588	$1,143,588
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%	7.219%	6.677%
18	Remaining Tax Depreciation	Line 16 * Line 17	$42,885	$82,556	$76,357
19	FY20 Loss incurred due to retirements	Per Tax Department	$0	$0	$0
20	Cost of Removal	Page 5 of 31, Line 7	$0	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$374,895	$82,556	$76,357

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Electric Capital Investment 12 months ending March 31, 2021
AMI - Electric

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Estimated Capital Investment			
1	AMI Electric Investments		$36,920,075	
2	Total Estimated Capital Investment	Line 1	$36,920,075	$0
	Depreciable Net Capital Included in Rate Base			
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$36,920,075	$0
4	Retirements	Line 4 * 0%	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$36,920,075	$36,920,075
	Change in Net Capital Included in Rate Base			
6	Capital Included in Rate Base	Line 2	$36,920,075	$0
7	Cost of Removal		$286,011	$0
8	**Total Plant in Service Including Cost of Removal**	**Line 6 + Line 7**	$37,206,086	$36,920,075
	Tax Depreciation			
9	Vintage Year Tax Depreciation:			
10	FY 2021 Spend	Page 8 of 31, Line 21	$1,670,514	$2,665,260
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$1,670,514	$4,335,774
	Book Depreciation			
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	6.25%	6.25%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12	$1,153,752	$2,307,505
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$1,153,752	$3,461,257
15	Total Cumulative Book Depreciation	Line 14	$1,153,752	$3,461,257
	Deferred Tax Calculation:			
16	Cumulative Book / Tax Timer	Line 11 - Line 14	$516,762	$874,517
17	Effective Tax Rate		35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$180,867	$306,081
19	Less: FY 2021 Federal NOL		$0	$0
20	Less: Proration Adjustment	Col (a) = , Line 40; Col (b) = Page 13 of 31, Line 40	($43,848)	($67,982)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$137,019	$238,099
	Rate Base Calculation:			
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$37,206,086	$37,206,086
23	Accumulated Depreciation	- Line 15	($1,153,752)	($3,461,257)
24	Deferred Tax Reserve	- Line 21	($137,019)	($238,099)
25	Year End Rate Base	Sum of Lines 22 through 24	$35,915,315	$33,506,730
	Revenue Requirement Calculation:			
26	Average Rate Base	Column (a) = Current Year Line 37 ÷ 2; Column (b) = (Prior Year Line 37 + Current Year Line 37) ÷ 2	$17,957,657	$34,711,022
27	Pre-Tax ROR	1/	10.20%	10.20%
28	Return and Taxes	Line 26 * Line 27	$1,831,681	$3,540,524
29	Book Depreciation	Line 13	$1,153,752	$2,307,505
30	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b) Line 8 * 3.176%	$0	$1,181,665
31	**Annual Revenue Requirement**	**Line 28 through Line 29**	**$2,985,433**	**$7,029,694**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2021 Electric Capital Investments
AMI - Electric

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 7 of 31, Line 2	$36,920,075	
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%	
3	Capital Repairs Deduction	Line 1 * Line 2	$0	
	Bonus Depreciation			
4	Plant Additions	Line 1	$36,920,075	
5	Less Capital Repairs Deduction	Line 3	$0	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$36,920,075	
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$36,920,075	
9	Bonus Depreciation Rate (April 2020- December 2020)	0%	0.00%	
10	Bonus Depreciation Rate (January 2021 - Mar 2021)	0%	0.00%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%	
12	Bonus Depreciation	Line 8 * Line 11	$0	
	Remaining Tax Depreciation			
13	Plant Additions	Line 1	$36,920,075	
14	Less Capital Repairs Deduction	Line 3	$0	
15	Less Bonus Depreciation	Line 12	$0	
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$36,920,075	$36,920,075
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%	7.219%
18	Remaining Tax Depreciation	Line 16 * Line 17	$1,384,503	$2,665,260
19	FY21 Loss incurred due to retirements	Per Tax Department	$0	$0
20	Cost of Removal	Page 7 of 31, Line 7	$286,011	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$1,670,514	$2,665,260

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Electric Capital Investment 12 months ending March 31, 2022
AMI - Electric

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Estimated Capital Investment		
1	AMI Electric Investments		$65,938,185
2	Total Estimated Capital Investment	Line 1	$65,938,185
	Depreciable Net Capital Included in Rate Base		
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$65,938,185
4	Retirements	Line 4 * 0%	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5	$65,938,185
	Change in Net Capital Included in Rate Base		
6	Capital Included in Rate Base	Line 2	$65,938,185
7	Cost of Removal		$590,067
8	**Total Plant in Service Including Cost of Removal**	**Line 6 + Line 7**	$66,528,252
	Tax Depreciation		
9	Vintage Year Tax Depreciation:		
10	FY 2022 Spend	Page 10 of 31, Line 21	$3,062,749
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$3,062,749
	Book Depreciation		
12	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	6.25%
13	Book Depreciation	Column (a) = Line 1* Line 12 * 50%	$2,060,568
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$2,060,568
15	Total Cumulative Book Depreciation	Line 14	$2,060,568
	Deferred Tax Calculation:		
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$1,002,181
17	Effective Tax Rate		35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$350,763
19	Less: FY 2022 Federal NOL		$0
20	Less: Proration Adjustment	Col (a) = Page 13 of 31, Line 40	($78,311)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$272,452
	Rate Base Calculation:		
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$66,528,252
23	Accumulated Depreciation	- Line 15	($2,060,568)
24	Deferred Tax Reserve	- Line 21	($272,452)
25	Year End Rate Base	Sum of Lines 22 through 24	$64,195,231
	Revenue Requirement Calculation:		
26	Average Rate Base	Column (a) = Current Year Line 27 ÷ 2	$32,097,616
27	Pre-Tax ROR		1/ 10.20%
28	Return and Taxes	Line 26 * Line 27	$3,273,957
29	Book Depreciation	Line 13	$2,060,568
30	Property Taxes	Tax Rate 3.176% MAL-7	$0
31	**Annual Revenue Requirement**	**Line 28 through Line 29**	**$5,334,525**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2022 Electric Capital Investments
AMI - Electric

Line No.			Fiscal Year March 31, 2022 (a)
	Capital Repairs Deduction		
1	Plant Additions	Page 9 of 31, Line 2	$65,938,185
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%
3	Capital Repairs Deduction	Line 1 * Line 2	$0
	Bonus Depreciation		
4	Plant Additions	Line 1	$65,938,185
5	Less Capital Repairs Deduction	Line 3	$0
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$65,938,185
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$65,938,185
9	Bonus Depreciation Rate (April 2021- December 2021)	0.00%	0.00%
10	Bonus Depreciation Rate (January 2022 - Mar 2022)	0.00%	0.00%
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%
12	Bonus Depreciation	Line 8 * Line 11	$0
	Remaining Tax Depreciation		
13	Plant Additions	Line 1	$65,938,185
14	Less Capital Repairs Deduction	Line 3	$0
15	Less Bonus Depreciation	Line 12	$0
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$65,938,185
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%
18	Remaining Tax Depreciation	Line 16 * Line 17	$2,472,682
19	FY22 Loss incurred due to retirements	Per Tax Department	$0
20	Cost of Removal	Page 9 of 31, Line 7	$590,067
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$3,062,749

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2020 Net Deferred Tax Reserve Electric Proration
AMI - Electric

Line No.			(a)= Column (b) Total	(b) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration			
1	Book Depreciation	Page 5 of 31, Line 13	$46,112	$46,112
2	Bonus Depreciation	Page 6 of 31, Line 12	($332,010)	($332,010)
3	Remaining MACRS Tax Depreciation	Page 6 of 31, Line 18	($42,885)	($42,885)
4	FY20 tax (gain)/loss on retirements	Page 6 of 31, Line 19	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($328,783)	($328,783)
6	Effective Tax Rate	Tax Department	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($115,074)	($115,074)
	Deferred Tax Not Subject to Proration			
8	Capital Repairs Deduction	Page 6 of 31, Line 3	$0	$0
9	Cost of Removal	Page 6 of 31, Line 20	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2020	Tax Department	$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0
12	Effective Tax Rate		35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	($115,074)	($115,074)
15	Net Operating Loss		$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($115,074)	($115,074)
	Allocation of FY 2020 Estimated Federal NOL			
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($328,783)	($328,783)
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($328,783)	($328,783)
20	Total FY 2020 Federal NOL		$0	$0
21	Allocated FY 2020 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0
22	Allocated FY 2020 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0
23	Effective Tax Rate		35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($115,074)	($115,074)

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l)	(l)
26	April 2019	30	91.78%	($8,801)	($8,801)
27	May 2019	31	83.29%	($7,987)	($7,987)
28	June 2019	30	75.07%	($7,199)	($7,199)
29	July 2019	31	66.58%	($6,384)	($6,384)
30	August 2019	31	58.08%	($5,570)	($5,570)
31	September 2019	30	49.86%	($4,782)	($4,782)
32	October 2019	31	41.37%	($3,967)	($3,967)
33	November 2019	30	33.15%	($3,179)	($3,179)
34	December 2019	31	24.66%	($2,365)	($2,365)
35	January 2020	31	16.16%	($1,550)	($1,550)
36	February 2020	28	8.49%	($814)	($814)
37	March 2020	31	0.00%	$0	$0
38	Total	365		($52,598)	($52,598)
39	Deferred Tax Without Proration	Line 25		($115,074)	($115,074)
40	Proration Adjustment	Line 38 - Line 39		$62,476	$62,476

Column Notes:

(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2021 Net Deferred Tax Reserve Electric Proration
AMI - Electric

Line No.			(a)=Sum of (b) through (c) Total	(b) Vintage Year March 31, 2021	(c) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration				
1	Book Depreciation	Col (b) = Page 7 of 31, Line 13; Col (c) = Page 5 of 31, Line 13	$1,245,977	$1,153,752	$92,225
2	Bonus Depreciation	Page 8 of 31, Line 12	$0	$0	
3	Remaining MACRS Tax Depreciation	Col (b) = Page 8 of 31, Line 18; Col (c) = Page 6 of 31, Line 18	($1,467,059)	($1,384,503)	($82,556)
4	FY21 tax (gain)/loss on retirements	Col (b) = Page 8 of 31, Line 19; Col (c) = Page 6 of 31, Line 19	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines No. through 3	($221,082)	($230,751)	$9,669
6	Effective Tax Rate	Tax Department	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($77,379)	($80,763)	$3,384
	Deferred Tax Not Subject to Proration				
8	Capital Repairs Deduction	Page 8 of 31, Line 3	$0	$0	
9	Cost of Removal	Page 8 of 31, Line 20	($286,011)	($286,011)	
10	Book/Tax Depreciation Timing Difference at 3/31/2021	Tax Department	$0	$0	
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	($286,011)	($286,011)	
12	Effective Tax Rate		35.00%	35.00%	
13	Deferred Tax Reserve	Line 11 * Line 12	($100,104)	($100,104)	
14	Total Deferred Tax Reserve	Line 7 + Line 13	($177,482)	($180,867)	$3,384
15	Net Operating Loss		$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($177,482)	($180,867)	$3,384
	Allocation of FY 2021 Estimated Federal NOL				
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($230,751)	($230,751)	
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	($286,011)	($286,011)	
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($516,762)	($516,762)	
20	Total FY 2021 Federal NOL		$0	$0	
21	Allocated FY 2021 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0	
22	Allocated FY 2021 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0	
23	Effective Tax Rate		35.00%	35.00%	
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0	
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($77,379)	($80,763)	$3,384

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (m)	(l)	(m)
26	April 2020	30	91.78%	($5,918)	($6,177)	$259
27	May 2020	31	83.29%	($5,371)	($5,605)	$235
28	June 2020	30	75.07%	($4,841)	($5,052)	$212
29	July 2020	31	66.58%	($4,293)	($4,481)	$188
30	August 2020	31	58.08%	($3,745)	($3,909)	$164
31	September 2020	30	49.86%	($3,215)	($3,356)	$141
32	October 2020	31	41.37%	($2,668)	($2,784)	$117
33	November 2020	30	33.15%	($2,138)	($2,231)	$93
34	December 2020	31	24.66%	($1,590)	($1,660)	$70
35	January 2021	31	16.16%	($1,042)	($1,088)	$46
36	February 2021	28	8.49%	($548)	($572)	$24
37	March 2021	31	0.00%	$0	$0	$0
38	Total	365		($35,368)	($36,915)	$1,547
39	Deferred Tax Without Proration	Line 25		($77,379)	($80,763)	$3,384
40	Proration Adjustment	Line 38 - Line 39		$42,011	$43,848	($1,837)

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2022 Net Deferred Tax Reserve Electric Proration
AMI - Electric

Line No.			(a)=Sum of (b) through (d) Total	(b) Vintage Year March 31, 2022	(c) Vintage Year March 31, 2021	(d) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration					
1	Book Depreciation	Col (b) = Page 9 of 31, Line 13; Col (c) = Page 7 of 31, Line 13; Col (d) = Page 5 of 31, Line 13	$4,460,298	$2,060,568	$2,307,505	$92,225
2	Bonus Depreciation	Page 10 of 31, Line 12	$0	$0		
3	Remaining MACRS Tax Depreciation	Col (b) = Page 10 of 31, Line 18; Col (c) = Page 8 of 31, Line 18; Col (d) = Page 6 of 31, Line 18	($5,214,299)	($2,472,682)	($2,665,260)	($76,357)
4	FY22 tax (gain)/loss on retirements	Col (b) = Page 10 of 31, Line 19; Col (c) = Page 8 of 31, Line 19; Col (d) = Page 6 of 31, Line 19	$0	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines No. through 3	($754,001)	($412,114)	($357,755)	$15,868
6	Effective Tax Rate	Tax Department	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($263,900)	($144,240)	($125,214)	$5,554
	Deferred Tax Not Subject to Proration					
8	Capital Repairs Deduction	Page 10 of 31, Line 19	$0	$0		
9	Cost of Removal	Page 10 of 31, Line 20	($590,067)	($590,067)		
10	Book/Tax Depreciation Timing Difference at 3/31/2022	Tax Department	$0	$0		
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	($590,067)	($590,067)		
12	Effective Tax Rate		35.00%	35.00%		
13	Deferred Tax Reserve	Line 11 * Line 12	($206,524)	($206,524)		
14	Total Deferred Tax Reserve	Line 7 + Line 13	($470,424)	($350,763)	($125,214)	$5,554
15	Net Operating Loss		$0	$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($470,424)	($350,763)	($125,214)	$5,554
	Allocation of FY 2022 Estimated Federal NOL					
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($412,114)	($412,114)		
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	($590,067)	($590,067)		
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($1,002,181)	($1,002,181)		
20	Total FY 2022 Federal NOL		$0	$0		
21	Allocated FY 2022 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0		
22	Allocated FY 2022 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0		
23	Effective Tax Rate		35.00%	35.00%		
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0		
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($263,900)	($144,240)	($125,214)	$5,554

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (n)	(l)	(m)	(n)
	Proration Calculation						
26	April 2021	30	91.78%	($20,184)	($11,032)	($9,577)	$425
27	May 2021	31	83.29%	($18,316)	($10,011)	($8,691)	$385
28	June 2021	30	75.07%	($16,509)	($9,023)	($7,833)	$347
29	July 2021	31	66.58%	($14,641)	($8,002)	($6,947)	$308
30	August 2021	31	58.08%	($12,773)	($6,981)	($6,061)	$269
31	September 2021	30	49.86%	($10,966)	($5,994)	($5,203)	$231
32	October 2021	31	41.37%	($9,098)	($4,973)	($4,317)	$191
33	November 2021	30	33.15%	($7,290)	($3,985)	($3,459)	$153
34	December 2021	31	24.66%	($5,423)	($2,964)	($2,573)	$114
35	January 2022	31	16.16%	($3,555)	($1,943)	($1,687)	$75
36	February 2022	28	8.49%	($1,868)	($1,021)	($886)	$39
37	March 2022	31	0.00%	$0	$0	$0	$0
38	Total	365		($120,623)	($65,929)	($57,233)	$2,538
39	Deferred Tax Without Proration	Line 25		($263,900)	($144,240)	($125,214)	$5,554
40	Proration Adjustment	Line 38 - Line 39		$143,277	$78,311	$67,982	($3,015)

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Gas Capital Investment 12 months ending March 31, 2020
AMI - Gas

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Estimated Capital Investment				
1	AMI Gas Investments		$570,001	$0	$0
2	Total Estimated Capital Investment	Sum of Line 1	$570,001	$0	$0
	Depreciable Net Capital Included in Rate Base				
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$570,001	$0	$0
4	Retirements	Line 4 * 0%	$0	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$570,001	$570,001	$570,001
	Change in Net Capital Included in Rate Base				
6	Capital Included in Rate Base	Line 2	$570,001	$0	$0
7	Cost of Removal		$0	$0	$0
8	**Total Net Plant in Service**	**Line 6 + Line 7**	**$570,001**	**$570,001**	**$570,001**
	Tax Depreciation				
9	Vintage Year Tax Depreciation:				
10	FY 2020 Spend	Page 6 of 31, Line 21	$144,816	$31,890	$29,496
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$144,816	$176,706	$206,202
	Book Depreciation				
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	6.25%	6.25%	6.25%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12	$17,813	$35,625	$35,625
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$17,813	$53,438	$89,063
15	Total Cumulative Book Depreciation	Line 14	$17,813	$53,438	$89,063
	Deferred Tax Calculation:				
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$127,003	$123,268	$117,139
17	Effective Tax Rate		35.00%	35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$44,451	$43,144	$40,999
19	Less: FY 2020 Federal NOL		$0	$0	$0
20	Less: Proration Adjustment	Col (a) = Page 20 of 31, Line 40; Col (b) = , Line 40; Col (c) = Page 22 of 31, Line 40	($24,134)	$710	$1,165
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$20,318	$43,854	$42,163
	Rate Base Calculation:				
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$570,001	$570,001	$570,001
23	Accumulated Depreciation	- Line 15	($17,813)	($53,438)	($89,063)
24	Deferred Tax Reserve	- Line 21	($20,318)	($43,854)	($42,163)
25	Year End Rate Base	Sum of Lines 22 through 24	$531,870	$472,709	$438,775
	Revenue Requirement Calculation:				
26	Average Rate Base	Column (a) = Current Year Line 25 ÷ 2; Column (b) = (Prior Year Line 25 + Current Year Line 25) ÷ 2	$265,935	$502,290	$455,742
27	Pre-Tax ROR	1/	10.44%	10.44%	10.44%
28	Return and Taxes	Line 26 * Line 27	$27,764	$52,439	$47,579
29	Book Depreciation	Line 13	$17,813	$35,625	$35,625
30	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b & c) Line 8 * 3.176%	$0	$18,103	$18,103
31	**Annual Revenue Requirement**	**Line 28 through Line 29**	**$45,576**	**$106,167**	**$101,308**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-GAS

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	5.18%	2.51%		2.51%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.67%	2.77%	10.44%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2020 Gas Capital Investments
AMI - Gas

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Capital Repairs Deduction				
1	Plant Additions	Page 14 of 31, Line 2	$570,001		
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%		
3	Capital Repairs Deduction	Line 1 * Line 2	$0		
	Bonus Depreciation				
4	Plant Additions	Line 1	$570,001		
5	Less Capital Repairs Deduction	Line 3	$0		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$570,001		
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$570,001		
9	Bonus Depreciation Rate (April 2019- December 2019)	1 * 75% * 30%	22.50%		
10	Bonus Depreciation Rate (January 2020 - Mar 2020)	0%	0.00%		
11	Total Bonus Depreciation Rate	Line 9 + Line 10	22.50%		
12	Bonus Depreciation	Line 8 * Line 11	$128,250		
	Remaining Tax Depreciation				
13	Plant Additions	Line 1	$570,001		
14	Less Capital Repairs Deduction	Line 3	$0		
15	Less Bonus Depreciation	Line 12	$128,250		
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$441,751	$441,751	$441,751
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%	7.219%	6.677%
18	Remaining Tax Depreciation	Line 16 * Line 17	$16,566	$31,890	$29,496
19	FY20 Loss incurred due to retirements	Per Tax Department	$0	$0	$0
20	Cost of Removal	Page 14 of 31, Line 7	$0	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$144,816	$31,890	$29,496

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Gas Capital Investment 12 months ending March 31, 2021
AMI - Gas

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Estimated Capital Investment			
1	AMI Gas Investments		$1,229,097	
2	Total Estimated Capital Investment	Sum of Line 1	$1,229,097	$0
	Depreciable Net Capital Included in Rate Base			
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$1,229,097	$0
4	Retirements	Line 4 * 0%	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$1,229,097	$1,229,097
	Change in Net Capital Included in Rate Base			
6	Capital Included in Rate Base	Line 2	$1,229,097	$0
7	Cost of Removal		$0	$0
8	**Total Net Plant in Service**	**Line 6 + Line 7**	**$1,229,097**	**$1,229,097**
	Tax Depreciation			
9	Vintage Year Tax Depreciation:			
10	FY 2021 Spend	Page 8 of 31, Line 21	$46,091	$88,729
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$46,091	$134,820
	Book Depreciation			
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	6.25%	6.25%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12	$38,409	$76,819
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$38,409	$115,228
15	Total Cumulative Book Depreciation	Line 14	$38,409	$115,228
	Deferred Tax Calculation:			
16	Cumulative Book / Tax Timer	Line 11 - Line 14	$7,682	$19,592
17	Effective Tax Rate		35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$2,689	$6,857
19	Less: FY 2021 Federal NOL		$0	$0
20	Less: Proration Adjustment	Col (a) = , Line 40; Col (b) = Page 22 of 31, Line 40	($1,460)	($2,263)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$1,229	$4,594
	Rate Base Calculation:			
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$1,229,097	$1,229,097
23	Accumulated Depreciation	- Line 15	($38,409)	($115,228)
24	Deferred Tax Reserve	- Line 21	($1,229)	($4,594)
25	Year End Rate Base	Sum of Lines 22 through 24	$1,189,459	$1,109,275
	Revenue Requirement Calculation:			
26	Average Rate Base	Column (a) = Current Year Line 25 ÷ 2; Column (b) = (Prior Year Line 25 + Current Year Line 25) ÷ 2	$594,729	$1,149,367
27	Pre-Tax ROR	1/	10.44%	10.44%
28	Return and Taxes	Line 26 * Line 27	$62,090	$119,994
29	Book Depreciation	Line 13	$38,409	$76,819
30	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b) Line 8 * 3.176%	$0	$39,036
31	**Annual Revenue Requirement**	**Line 28 through Line 29**	**$100,499**	**$235,849**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-GAS

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	5.18%	2.51%		2.51%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.67%	2.77%	10.44%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2021 Gas Capital Investments
AMI - Gas

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 16 of 31, Line 2	$1,229,097	
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%	
3	Capital Repairs Deduction	Line 1 * Line 2	$0	
	Bonus Depreciation			
4	Plant Additions	Line 1	$1,229,097	
5	Less Capital Repairs Deduction	Line 3	$0	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$1,229,097	
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$1,229,097	
9	Bonus Depreciation Rate (April 2020- December 2020)	0%	0.00%	
10	Bonus Depreciation Rate (January 2021 - Mar 2021)	0%	0.00%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%	
12	Bonus Depreciation	Line 8 * Line 11	$0	
	Remaining Tax Depreciation			
13	Plant Additions	Line 1	$1,229,097	
14	Less Capital Repairs Deduction	Line 3	$0	
15	Less Bonus Depreciation	Line 12	$0	
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$1,229,097	$1,229,097
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%	7.219%
18	Remaining Tax Depreciation	Line 16 * Line 17	$46,091	$88,729
19	FY21 Loss incurred due to retirements	Per Tax Department	$0	$0
20	Cost of Removal	Page 16 of 31, Line 7	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$46,091	$88,729

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated Gas Capital Investment 12 months ending March 31, 2022
AMI - Gas

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Estimated Capital Investment		
1	AMI Gas Investments		$286,541
2	Total Estimated Capital Investment	Sum of Line 1	$286,541
	Depreciable Net Capital Included in Rate Base		
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$286,541
4	Retirements	Line 4 * 0%	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5	$286,541
	Change in Net Capital Included in Rate Base		
6	Capital Included in Rate Base	Line 2	$286,541
7	Cost of Removal		$0
8	**Total Net Plant in Service**	**Line 6 + Line 7**	$286,541
	Tax Depreciation		
9	Vintage Year Tax Depreciation:		
10	FY 2022 Spend	Page 10 of 31, Line 21	$10,745
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$10,745
	Book Depreciation		
12	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	6.25%
13	Book Depreciation	Column (a) = Line 1* Line 12 * 50%	$8,954
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$8,954
15	Total Cumulative Book Depreciation	Line 14	$8,954
	Deferred Tax Calculation:		
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$1,791
17	Effective Tax Rate		35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$627
19	Less: FY 2022 Federal NOL		$0
20	Less: Proration Adjustment	Col (a) = Page 22 of 31, Line 40	($340)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$286
	Rate Base Calculation:		
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$286,541
23	Accumulated Depreciation	- Line 15	($8,954)
24	Deferred Tax Reserve	- Line 21	($286)
25	Year End Rate Base	Sum of Lines 22 through 24	$277,301
	Revenue Requirement Calculation:		
26	Average Rate Base	Column (a) = Current Year Line 25 ÷ 2	$138,650
27	Pre-Tax ROR		1/ 10.44%
28	Return and Taxes	Line 26 * Line 27	$14,475
29	Book Depreciation	Line 13	$8,954
30	Property Taxes	Tax Rate 3.176% MAL-7	$0
31	**Annual Revenue Requirement**	**Line 28 through Line 29**	**$23,430**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-GAS

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	5.18%	2.51%		2.51%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.67%	2.77%	10.44%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2022 Gas Capital Investments
AMI - Gas

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Capital Repairs Deduction		
1	Plant Additions	Page 18 of 31, Line 2	$286,541
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%
3	Capital Repairs Deduction	Line 1 * Line 2	$0
	Bonus Depreciation		
4	Plant Additions	Line 1	$286,541
5	Less Capital Repairs Deduction	Line 3	$0
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$286,541
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$286,541
9	Bonus Depreciation Rate (April 2021- December 2021)	0%	0.00%
10	Bonus Depreciation Rate (January 2022 - Mar 2022)	0%	0.00%
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%
12	Bonus Depreciation	Line 8 * Line 11	$0
	Remaining Tax Depreciation		
13	Plant Additions	Line 1	$286,541
14	Less Capital Repairs Deduction	Line 3	$0
15	Less Bonus Depreciation	Line 12	$0
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$286,541
17	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	3.750%
18	Remaining Tax Depreciation	Line 16 * Line 17	$10,745
19	FY22 Loss incurred due to retirements	Per Tax Department	$0
20	Cost of Removal	Page 18 of 31, Line 7	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$10,745

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2020 Net Deferred Tax Reserve Gas Proration
AMI - Gas

Line No.			(a)= Column (b) Total	(b) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration			
1	Book Depreciation	Page 14 of 31, Line 13	$17,813	$17,813
2	Bonus Depreciation	Page 15 of 31, Line 12	($128,250)	($128,250)
3	Remaining MACRS Tax Depreciation	Page 15 of 31, Line 18	($16,566)	($16,566)
4	FY20 tax (gain)/loss on retirements	Page 15 of 31, Line 19	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($127,003)	($127,003)
6	Effective Tax Rate	Tax Department	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($44,451)	($44,451)
	Deferred Tax Not Subject to Proration			
8	Capital Repairs Deduction	Page 15 of 31, Line 3	$0	$0
9	Cost of Removal	Page 15 of 31, Line 20	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2020		$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0
12	Effective Tax Rate		35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	($44,451)	($44,451)
15	Net Operating Loss		$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($44,451)	($44,451)
	Allocation of FY 2020 Estimated Federal NOL			
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($127,003)	($127,003)
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($127,003)	($127,003)
20	Total FY 2020 Federal NOL		$0	$0
21	Allocated FY 2020 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0
22	Allocated FY 2020 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0
23	Effective Tax Rate		35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($44,451)	($44,451)

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l)	(l)
	Proration Calculation				
26	April 2019	30	91.78%	($3,400)	($3,400)
27	May 2019	31	83.29%	($3,085)	($3,085)
28	June 2019	30	75.07%	($2,781)	($2,781)
29	July 2019	31	66.58%	($2,466)	($2,466)
30	August 2019	31	58.08%	($2,152)	($2,152)
31	September 2019	30	49.86%	($1,847)	($1,847)
32	October 2019	31	41.37%	($1,532)	($1,532)
33	November 2019	30	33.15%	($1,228)	($1,228)
34	December 2019	31	24.66%	($913)	($913)
35	January 2020	31	16.16%	($599)	($599)
36	February 2020	28	8.49%	($315)	($315)
37	March 2020	31	0.00%	$0	$0
38	Total	365		($20,318)	($20,318)
39	Deferred Tax Without Proration	Line 25		($44,451)	($44,451)
40	Proration Adjustment	Line 38 - Line 39		$24,134	$24,134

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2021 Net Deferred Tax Reserve Gas Proration
AMI - Gas

Line No.			(a)=Sum of (b) through (c) Total	(b) Vintage Year March 31, 2021	(c) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration				
1	Book Depreciation	Col (b) = Page 16 of 31, Line 13; Col (c) = Page 14 of 31, Line 13	$74,034	$38,409	$35,625
2	Bonus Depreciation	Page 17 of 31, Line 12	$0	$0	
3	Remaining MACRS Tax Depreciation	Col (b) = Page 17 of 31, Line 18; Col (c) = Page 15 of 31, Line 18	($77,981)	($46,091)	($31,890)
4	FY21 tax (gain)/loss on retirements	Col (b) = Page 17 of 31, Line 19; Col (c) = Page 15 of 31, Line 19	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines No. through 3	($3,947)	($7,682)	$3,735
6	Effective Tax Rate	Tax Department	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($1,381)	($2,689)	$1,307
	Deferred Tax Not Subject to Proration				
8	Capital Repairs Deduction	Page 17 of 31, Line 3	$0	$0	$0
9	Cost of Removal	Page 17 of 31, Line 20	$0	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2021		$0	$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0	$0
12	Effective Tax Rate		35.00%	35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	($1,381)	($2,689)	$1,307
15	Net Operating Loss		$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($1,381)	($2,689)	$1,307
	Allocation of FY 2021 Estimated Federal NOL				
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($7,682)	($7,682)	
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0	
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($7,682)	($7,682)	
20	Total FY 2021 Federal NOL		$0	$0	
21	Allocated FY 2021 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0	
22	Allocated FY 2021 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0	
23	Effective Tax Rate		35.00%	35.00%	
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0	
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($1,381)	($2,689)	$1,307

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (m)	(l)	(m)
	Proration Calculation					
26	April 2020	30	91.78%	($106)	($206)	$100
27	May 2020	31	83.29%	($96)	($187)	$91
28	June 2020	30	75.07%	($86)	($168)	$82
29	July 2020	31	66.58%	($77)	($149)	$73
30	August 2020	31	58.08%	($67)	($130)	$63
31	September 2020	30	49.86%	($57)	($112)	$54
32	October 2020	31	41.37%	($48)	($93)	$45
33	November 2020	30	33.15%	($38)	($74)	$36
34	December 2020	31	24.66%	($28)	($55)	$27
35	January 2021	31	16.16%	($19)	($36)	$18
36	February 2021	28	8.49%	($10)	($19)	$9
37	March 2021	31	0.00%	$0	$0	$0
38	Total	365		($631)	($1,229)	$598
39	Deferred Tax Without Proration	Line 25		($1,381)	($2,689)	$1,307
40	Proration Adjustment	Line 38 - Line 39		$750	$1,460	($710)

Column Notes:

(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2022 Net Deferred Tax Reserve Gas Proration
AMI - Gas

Line No.			(a)=Sum of (b) through (d) Total	(b) Vintage Year March 31, 2022	(c) Vintage Year March 31, 2021	(d) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration					
1	Book Depreciation	Col (b) = Page 18 of 31, Line 13; Col (c) = Page 16 of 31, Line 13; Col (d) = Page 14 of 31, Line 13	$121,398	$8,954	$76,819	$35,625
2	Bonus Depreciation	Page 19 of 31, Line 12	$0	$0		
3	Remaining MACRS Tax Depreciation	Col (b) = Page 19 of 31, Line 18; Col (c) = Page 17 of 31, Line 18; Col (d) = Page 15 of 31, Line 18	($128,970)	($10,745)	($88,729)	($29,496)
4	FY22 tax (gain)/loss on retirements	Col (b) = Page 19 of 31, Line 19; Col (c) = Page 17 of 31, Line 19; Col (d) = Page 15 of 31, Line 19	$0	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines No. through 3	($7,572)	($1,791)	($11,910)	$6,129
6	Effective Tax Rate	Tax Department	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($2,650)	($627)	($4,169)	$2,145
	Deferred Tax Not Subject to Proration					
8	Capital Repairs Deduction	Page 19 of 31, Line 3	$0	$0	$0	$0
9	Cost of Removal	Page 19 of 31, Line 20	$0	$0	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2022		$0	$0	$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0	$0	$0
12	Effective Tax Rate		35.00%	35.00%	35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	($2,650)	($627)	($4,169)	$2,145
15	Net Operating Loss		$0	$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($2,650)	($627)	($4,169)	$2,145
	Allocation of FY 2022 Estimated Federal NOL					
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($1,791)	($1,791)		
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0		
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($1,791)	($1,791)		
20	Total FY 2022 Federal NOL		$0	$0		
21	Allocated FY 2022 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0		
22	Allocated FY 2022 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0		
23	Effective Tax Rate		35.00%	35.00%		
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0		
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($2,650)	($627)	($4,169)	$2,145

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (n)	(l)	(m)	(n)
26	April 2021	30	91.78%	($203)	($48)	($319)	$164
27	May 2021	31	83.29%	($184)	($43)	($289)	$149
28	June 2021	30	75.07%	($166)	($39)	($261)	$134
29	July 2021	31	66.58%	($147)	($35)	($231)	$119
30	August 2021	31	58.08%	($128)	($30)	($202)	$104
31	September 2021	30	49.86%	($110)	($26)	($173)	$89
32	October 2021	31	41.37%	($91)	($22)	($144)	$74
33	November 2021	30	33.15%	($73)	($17)	($115)	$59
34	December 2021	31	24.66%	($54)	($13)	($86)	$44
35	January 2022	31	16.16%	($36)	($8)	($56)	$29
36	February 2022	28	8.49%	($19)	($4)	($30)	$15
37	March 2022	31	0.00%	$0	$0	$0	$0
38	Total	365		($1,211)	($286)	($1,905)	$981
39	Deferred Tax Without Proration	Line 25		($2,650)	($627)	($4,169)	$2,145
40	Proration Adjustment	Line 38 - Line 39		$1,439	$340	$2,263	($1,165)

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated IS Capital Investment 12 months ending March 31, 2020
AMI - IS

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Estimated Capital Investment				
1	AMI IS Investments		$0	$0	$0
2	Total Estimated Capital Investment	Sum of Line 1	$0	$0	$0
	Depreciable Net Capital Included in Rate Base				
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$0	$0	$0
4	Retirements	Line 4 * 0%	$0	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$0	$0	$0
	Change in Net Capital Included in Rate Base				
6	Capital Included in Rate Base	Line 2	$0	$0	$0
7	Cost of Removal		$0	$0	$0
8	**Total Net Plant in Service**	**Line 6 + Line 7**	$0	$0	$0
	Tax Depreciation				
9	Vintage Year Tax Depreciation:				
10	FY 2020 Spend	Page 6 of 31, Line 21	$0	$0	$0
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$0	$0	$0
	Book Depreciation				
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	14.29%	14.29%	14.29%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12	$0	$0	$0
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$0	$0	$0
15	Total Cumulative Book Depreciation	Line 14	$0	$0	$0
	Deferred Tax Calculation:				
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$0	$0	$0
17	Effective Tax Rate		35.00%	35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$0	$0	$0
19	Less: FY 2020 Federal NOL		$0	$0	$0
20	Less: Proration Adjustment	Col (a) = Page 29 of 31, Line 40; Col (b) = , Line 40; Col (c) = Page 31 of 31, Line 40	$0	$0	$0
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$0	$0	$0
	Rate Base Calculation:				
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$0	$0	$0
23	Accumulated Depreciation	- Line 15	$0	$0	$0
24	Deferred Tax Reserve	- Line 21	$0	$0	$0
25	Year End Rate Base	Sum of Lines 22 through 24	$0	$0	$0
	Revenue Requirement Calculation:				
26	Average Rate Base	Column (a) = Current Year Line 25 ÷ 2; Column (b) = (Prior Year Line 25 + Current Year Line 25) ÷ 2	$0	$0	$0
27	Pre-Tax ROR	Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Workpaper MAL-6	10.29%	10.29%	10.29%
28	Return and Taxes	Line 26 * Line 27	$0	$0	$0
29	Book Depreciation	Line 13	$0	$0	$0
30	**Annual Revenue Requirement**	**Line 28 + Line 29**	**$0**	**$0**	**$0**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2020 IS Capital Investments
AMI - IS

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Capital Repairs Deduction				
1	Plant Additions	Page 23 of 31, Line 2	$0		
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%		
3	Capital Repairs Deduction	Line 1 * Line 2	$0		
	Bonus Depreciation				
4	Plant Additions	Line 1	$0		
5	Less Capital Repairs Deduction	Line 3	$0		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$0		
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$0		
9	Bonus Depreciation Rate (April 2019- December 2019)	1 * 75% * 30%	22.50%		
10	Bonus Depreciation Rate (January 2020 - Mar 2020)	0%	0.00%		
11	Total Bonus Depreciation Rate	Line 9 + Line 10	22.50%		
12	Bonus Depreciation	Line 8 * Line 11	$0		
	Remaining Tax Depreciation				
13	Plant Additions	Line 1	$0		
14	Less Capital Repairs Deduction	Line 3	$0		
15	Less Bonus Depreciation	Line 12	$0		
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$0	$0	$0
17	3 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	33.33%	44.45%	14.81%
18	Remaining Tax Depreciation	Line 16 * Line 17	$0	$0	$0
19	FY20 Loss incurred due to retirements	Per Tax Department	$0	$0	$0
20	Cost of Removal	Page 23 of 31, Line 7	$0	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$0	$0	$0

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated IS Capital Investment 12 months ending March 31, 2021
AMI - IS

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Estimated Capital Investment			
1	AMI IS Investments		$2,806,703	
2	Total Estimated Capital Investment	Sum of Line 1	$2,806,703	$0
	Depreciable Net Capital Included in Rate Base			
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$2,806,703	$0
4	Retirements	Line 4 * 0%	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$2,806,703	$2,806,703
	Change in Net Capital Included in Rate Base			
6	Capital Included in Rate Base	Line 2	$2,806,703	$0
7	Cost of Removal		$0	$0
8	**Total Net Plant in Service**	**Line 6 + Line 7**	$2,806,703	$2,806,703
	Tax Depreciation			
9	Vintage Year Tax Depreciation:			
10	FY 2021 Spend	Page 8 of 31, Line 21	$935,474	$1,247,579
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$935,474	$2,183,053
	Book Depreciation			
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	14.29%	14.29%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12	$200,479	$400,958
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$200,479	$601,436
15	Total Cumulative Book Depreciation	Line 14	$200,479	$601,436
	Deferred Tax Calculation:			
16	Cumulative Book / Tax Timer	Line 11 - Line 14	$734,995	$1,581,617
17	Effective Tax Rate		35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$257,248	$553,566
19	Less: FY 2021 Federal NOL		$0	$0
20	Less: Proration Adjustment	Col (a) = , Line 40; Col (b) = Page 31 of 31, Line 40	($139,666)	($160,877)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$117,582	$392,688
	Rate Base Calculation:			
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$2,806,703	$2,806,703
23	Accumulated Depreciation	- Line 15	($200,479)	($601,436)
24	Deferred Tax Reserve	- Line 21	($117,582)	($392,688)
25	Year End Rate Base	Sum of Lines 22 through 24	$2,488,642	$1,812,578
	Revenue Requirement Calculation:			
26	Average Rate Base	Column (a) = Current Year Line 25 ÷ 2; Column (b) = (Prior Year Line 25 + Current Year Line 25) ÷ 2	$1,244,321	$2,150,610
27	Pre-Tax ROR	Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Workpaper MAL-6	10.29%	10.29%
28	Return and Taxes	Line 26 * Line 27	$128,041	$221,298
29	Book Depreciation	Line 13	$200,479	$400,958
30	**Annual Revenue Requirement**	**Line 28 + Line 29**	**$328,519**	**$622,255**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2021 IS Capital Investments
AMI - IS

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 25 of 31, Line 2	$2,806,703	
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%	
3	Capital Repairs Deduction	Line 1 * Line 2	$0	
	Bonus Depreciation			
4	Plant Additions	Line 1	$2,806,703	
5	Less Capital Repairs Deduction	Line 3	$0	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$2,806,703	
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$2,806,703	
9	Bonus Depreciation Rate (April 2020- December 2020)	0%	0.00%	
10	Bonus Depreciation Rate (January 2021 - Mar 2021)	0%	0.00%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%	
12	Bonus Depreciation	Line 8 * Line 11	$0	
	Remaining Tax Depreciation			
13	Plant Additions	Line 1	$2,806,703	
14	Less Capital Repairs Deduction	Line 3	$0	
15	Less Bonus Depreciation	Line 12	$0	
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$2,806,703	$2,806,703
17	3 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	33.33%	44.45%
18	Remaining Tax Depreciation	Line 16 * Line 17	$935,474	$1,247,579
19	FY21 Loss incurred due to retirements	Per Tax Department	$0	$0
20	Cost of Removal	Page 25 of 31, Line 7	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$935,474	$1,247,579

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Revenue Requirement on Estimated IS Capital Investment 12 months ending March 31, 2022
AMI - IS

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Estimated Capital Investment		
1	AMI IS Investments		$0
2	Total Estimated Capital Investment	Sum of Line 1	$0
	Depreciable Net Capital Included in Rate Base		
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$0
4	Retirements	Line 4 * 0%	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$0
	Change in Net Capital Included in Rate Base		
6	Capital Included in Rate Base	Line 2	$0
7	Cost of Removal		$0
8	**Total Net Plant in Service**	**Line 6 + Line 7**	$0
	Tax Depreciation		
9	Vintage Year Tax Depreciation:		
10	FY 2022 Spend	Page 10 of 31, Line 21	$0
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$0
	Book Depreciation		
12	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	14.29%
13	Book Depreciation	Column (a) = Line 1* Line 12 * 50%	$0
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$0
15	Total Cumulative Book Depreciation	Line 14	$0
	Deferred Tax Calculation:		
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$0
17	Effective Tax Rate		35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$0
19	Less: FY 2022 Federal NOL		$0
20	Less: Proration Adjustment	Col (a) = Page 31 of 31, Line 40	$0
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$0
	Rate Base Calculation:		
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$0
23	Accumulated Depreciation	- Line 15	$0
24	Deferred Tax Reserve	- Line 21	$0
25	Year End Rate Base	Sum of Lines 22 through 24	$0
	Revenue Requirement Calculation:		
26	Average Rate Base	Column (a) = Current Year Line 25 ÷ 2	$0
27	Pre-Tax ROR	Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Workpaper MAL-6	10.29%
28	Return and Taxes	Line 26 * Line 27	$0
29	Book Depreciation	Line 13	$0
30	**Annual Revenue Requirement**	**Line 28 + Line 29**	**$0**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2022 IS Capital Investments
AMI - IS

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Capital Repairs Deduction		
1	Plant Additions	Page 27 of 31, Line 2	$0
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%
3	Capital Repairs Deduction	Line 1 * Line 2	$0
	Bonus Depreciation		
4	Plant Additions	Line 1	$0
5	Less Capital Repairs Deduction	Line 3	$0
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$0
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$0
9	Bonus Depreciation Rate (April 2021- December 2021)	0.00%	0.00%
10	Bonus Depreciation Rate (January 2022 - Mar 2022)	0.00%	0.00%
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%
12	Bonus Depreciation	Line 8 * Line 11	$0
	Remaining Tax Depreciation		
13	Plant Additions	Line 1	$0
14	Less Capital Repairs Deduction	Line 3	$0
15	Less Bonus Depreciation	Line 12	$0
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$0
17	3 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	33.33%
18	Remaining Tax Depreciation	Line 16 * Line 17	$0
19	FY22 Loss incurred due to retirements	Per Tax Department	$0
20	Cost of Removal	Page 27 of 31, Line 7	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$0

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2020 Net Deferred Tax Reserve IS Proration
AMI - IS

Line No.			(a)= Column (b) Total	(b) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration			
1	Book Depreciation	Page 23 of 31, Line 13	$0	$0
2	Bonus Depreciation	Page 24 of 31, Line 12	$0	$0
3	Remaining MACRS Tax Depreciation	Page 24 of 31, Line 18	$0	$0
4	FY20 tax (gain)/loss on retirements	Page 24 of 31, Line 19	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	$0	$0
6	Effective Tax Rate	Tax Department	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	$0	$0
	Deferred Tax Not Subject to Proration			
8	Capital Repairs Deduction	Page 24 of 31, Line 3	$0	$0
9	Cost of Removal	Page 24 of 31, Line 20	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2020		$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0
12	Effective Tax Rate		35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	$0	$0
15	Net Operating Loss		$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	$0	$0
	Allocation of FY 2020 Estimated Federal NOL			
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	$0	$0
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	$0	$0
20	Total FY 2020 Federal NOL		$0	$0
21	Allocated FY 2020 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	0.00
22	Allocated FY 2020 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0
23	Effective Tax Rate	Tax Department	35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	$0	$0

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l)	(l)
26	April 2019	30	91.78%	$0	$0
27	May 2019	31	83.29%	$0	$0
28	June 2019	30	75.07%	$0	$0
29	July 2019	31	66.58%	$0	$0
30	August 2019	31	58.08%	$0	$0
31	September 2019	30	49.86%	$0	$0
32	October 2019	31	41.37%	$0	$0
33	November 2019	30	33.15%	$0	$0
34	December 2019	31	24.66%	$0	$0
35	January 2020	31	16.16%	$0	$0
36	February 2020	28	8.49%	$0	$0
37	March 2020	31	0.00%	$0	$0
38	Total	365		$0	$0
39	Deferred Tax Without Proration	Line 25		$0	$0
40	Proration Adjustment	Line 38 - Line 39		$0	$0

Column Notes:

(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2021 Net Deferred Tax Reserve IS Proration
AMI - IS

Line No.			(a)=Sum of (b) through (c) Total	(b) Vintage Year March 31, 2021	(c) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration				
1	Book Depreciation	Col (b) = Page 25 of 31, Line 13; Col (c) = Page 23 of 31, Line 13	$200,479	$200,479	$0
2	Bonus Depreciation	Page 26 of 31, Line 12	$0	$0	
3	Remaining MACRS Tax Depreciation	Col (b) = Page 26 of 31, Line 18; Col (c) = Page 24 of 31, Line 18	($935,474)	($935,474)	$0
4	FY21 tax (gain)/loss on retirements	Col (b) = Page 26 of 31, Line 19; Col (c) = Page 24 of 31, Line 19	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines No. through 3	($734,995)	($734,995)	$0
6	Effective Tax Rate	Tax Department	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($257,248)	($257,248)	$0
	Deferred Tax Not Subject to Proration				
8	Capital Repairs Deduction	Page 26 of 31, Line 3	$0	$0	
9	Cost of Removal	Page 26 of 31, Line 20	$0	$0	
10	Book/Tax Depreciation Timing Difference at 3/31/2021		$0	$0	
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0	
12	Effective Tax Rate		35.00%	35.00%	
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0	
14	Total Deferred Tax Reserve	Line 7 + Line 13	($257,248)	($257,248)	$0
15	Net Operating Loss		$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($257,248)	($257,248)	$0
	Allocation of FY 2021 Estimated Federal NOL				
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($734,995)	($734,995)	
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0	
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($734,995)	($734,995)	
20	Total FY 2021 Federal NOL		$0	$0	
21	Allocated FY 2021 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0	
22	Allocated FY 2021 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0	
23	Effective Tax Rate		35.00%	35.00%	
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0	
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($257,248)	($257,248)	$0

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (m)	(l)	(m)
	Proration Calculation					
26	April 2020	30	91.78%	($19,675)	($19,675)	$0
27	May 2020	31	83.29%	($17,855)	($17,855)	$0
28	June 2020	30	75.07%	($16,093)	($16,093)	$0
29	July 2020	31	66.58%	($14,272)	($14,272)	$0
30	August 2020	31	58.08%	($12,451)	($12,451)	$0
31	September 2020	30	49.86%	($10,689)	($10,689)	$0
32	October 2020	31	41.37%	($8,869)	($8,869)	$0
33	November 2020	30	33.15%	($7,107)	($7,107)	$0
34	December 2020	31	24.66%	($5,286)	($5,286)	$0
35	January 2021	31	16.16%	($3,465)	($3,465)	$0
36	February 2021	28	8.49%	($1,821)	($1,821)	$0
37	March 2021	31	0.00%	$0	$0	$0
38	Total	365		($117,582)	($117,582)	$0
39	Deferred Tax Without Proration	Line 25		($257,248)	($257,248)	$0
40	Proration Adjustment	Line 38 - Line 39		$139,666	$139,666	$0

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
Power Sector Transformation (PST)
Calculation of Fiscal Year 2022 Net Deferred Tax Reserve IS Proration
AMI - IS

Line No.			(a)=Sum of (b) through (d) Total	(b) Vintage Year March 31, 2022	(c) Vintage Year March 31, 2021	(d) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration					
1	Book Depreciation	Col (b) = Page 27 of 31, Line 13; Col (c) = Page 25 of 31, Line 13; Col (d) = Page 23 of 31, Line 13	$400,958	$0	$400,958	$0
2	Bonus Depreciation	Page 28 of 31, Line 12	$0	$0		
3	Remaining MACRS Tax Depreciation	Col (b) = Page 28 of 31, Line 18; Col (c) = Page 26 of 31, Line 18; Col (d) = Page 24 of 31, Line 18	($1,247,579)	$0	($1,247,579)	$0
4	FY22 tax (gain)/loss on retirements	Col (b) = Page 28 of 31, Line 19; Col (c) = Page 26 of 31, Line 19; Col (d) = Page 24 of 31, Line 19	$0	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines No. through 3	($846,621)	$0	($846,621)	$0
6	Effective Tax Rate	Tax Department	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($296,318)	$0	($296,318)	$0
	Deferred Tax Not Subject to Proration					
8	Capital Repairs Deduction	Page 28 of 31, Line 3	$0	$0		
9	Cost of Removal	Page 26 of 31, Line 20	$0	$0		
10	Book/Tax Depreciation Timing Difference at 3/31/2022		$0	$0		
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0		
12	Effective Tax Rate		35.00%	35.00%		
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0		
14	Total Deferred Tax Reserve	Line 7 + Line 13	($296,318)	$0	($296,318)	$0
15	Net Operating Loss		$0	$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($296,318)	$0	($296,318)	$0
	Allocation of FY 2022 Estimated Federal NOL					
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	$0	$0		
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0		
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	$0	$0		
20	Total FY 2022 Federal NOL		$0	$0		
21	Allocated FY 2022 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0		
22	Allocated FY 2022 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0		
23	Effective Tax Rate		35.00%	35.00%		
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0		
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($296,318)	$0	($296,318)	$0

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (n)	(l)	(m)	(n)
26	April 2021	30	91.78%	($22,664)	$0	($22,664)	$0
27	May 2021	31	83.29%	($20,566)	$0	($20,566)	$0
28	June 2021	30	75.07%	($18,537)	$0	($18,537)	$0
29	July 2021	31	66.58%	($16,440)	$0	($16,440)	$0
30	August 2021	31	58.08%	($14,342)	$0	($14,342)	$0
31	September 2021	30	49.86%	($12,313)	$0	($12,313)	$0
32	October 2021	31	41.37%	($10,216)	$0	($10,216)	$0
33	November 2021	30	33.15%	($8,186)	$0	($8,186)	$0
34	December 2021	31	24.66%	($6,089)	$0	($6,089)	$0
35	January 2022	31	16.16%	($3,991)	$0	($3,991)	$0
36	February 2022	28	8.49%	($2,097)	$0	($2,097)	$0
37	March 2022	31	0.00%	$0	$0	$0	$0
38	Total	365		($135,440)	$0	($135,440)	$0
39	Deferred Tax Without Proration	Line 25		($296,318)	$0	($296,318)	$0
40	Proration Adjustment	Line 38 - Line 39		$160,877	$0	$160,877	$0

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

Appendix 10.6

Appendix 10.6

Revenue Requirement - Electric Transportation

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Electric Transportation Initiative
Annual Revenue Requirement Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Operation and Maintenance (O&M) Expenses:				
1	PMO Labor and Other O&M		$192,563	$228,382	$318,270
2	EVSE Rebate Cost for Make-Ready Sites		$72,500	$181,250	$471,250
3	Station O&M for Utility-Operated Sites		$10,780	$37,730	$107,800
4	Charging Demonstration Marketing		$113,000	$93,000	$111,000
5	Education and Outreach		$113,970	$164,959	$220,468
6	Total O&M costs	Sum of Lines 1 through 5	$502,813	$705,321	$1,228,788
7	Other O&M Expenses and Program Administration Costs:				
8	Program Administration Costs - NG Heavy Duty Fleet Lease and O&M		$64,000	$128,000	$192,000
9	Program Administration Costs - Off-Peak Rebate		$178,745	$244,420	$332,567
10	Program Administration Costs - Commercial Rate Discount		$103,622	$170,650	$264,488
11	Program Administration Costs - Evaluation		$30,000	$30,000	$30,000
12	Total Other O&M Expenses and Program Administration Costs	Sum of Lines 8 through 11	$376,367	$573,070	$819,055
13	**Total O&M Costs, Other O&M Costs and Program Administration Costs**	Line 6 + Line 12	**$879,180**	**$1,278,391**	**$2,047,843**
14	Participation Payment Offset		($40,000)	($100,000)	($260,000)
15	**Total Net O&M Expense Component of Revenue Requirement**	Line 13 + Line 14	**$839,180**	**$1,178,391**	**$1,787,843**
16	Capital Investment:				
17	Estimated Revenue Requirement on Rate Year Capital investment		$86,946	$202,473	$186,930
18	Estimated Revenue Requirement on Data Year 1 Capital investment			$133,698	$313,704
19	Estimated Revenue Requirement on Data Year 2 Capital investment				$321,391
20	**Total Capital Investment Component of Revenue Requirement**	Sum of Lines 17 through 19	**$86,946**	**$336,172**	**$822,025**
21	**Total Revenue Requirement**	Line 15 + Line 20	**$926,126**	**$1,514,562**	**$2,609,868**

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Revenue Requirement on Estimated Capital Investment 12 months ending March 31, 2020
Electric Transportation Initiative

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Estimated Capital Investment				
1	EDC Costs (Make-Ready & Utility-Operated)		$147,899	$0	$0
2	Premise Work Costs (Make-Ready & Utility-Operated)		$352,617	$0	$0
3	EVSE Costs (Utility-Operated Charging Program Sites, and Company Fleet EVSE)		$322,633	$0	$0
4	Total Capitalized Labor & Tool Costs		$365,321	$0	$0
5	Total Estimated Capital Investment	Sum of Lines 1 through 4	$1,188,470	$0	$0
	Depreciable Net Capital Included in Rate Base				
6	Total Allowed Capital Included in Rate Base in Current Year	Line 5	$1,188,470	$0	$0
7	Retirements	Line 4 * 0%	$0	$0	$0
8	Net Depreciable Capital Included in Rate Base	Column (a) = Line 6 - Line 7; Column (b) = Prior Year Line 6	$1,188,470	$1,188,470	$1,188,470
	Change in Net Capital Included in Rate Base				
9	Capital Included in Rate Base	Line 5	$1,188,470	$0	$0
10	Cost of Removal		$0	$0	$0
11	**Total Net Plant in Service Including Cost of Removal**	**Line 8 + Line 10**	**$1,188,470**	**$1,188,470**	**$1,188,470**
	Tax Depreciation				
12	Vintage Year Tax Depreciation:				
13	2020 Spend	Page 3 of 10, Line 21	$451,619	$294,741	$176,844
14	Cumulative Tax Depreciation	Previous Year Line 14 + Current Year Line 13	$451,619	$746,360	$923,204
	Book Depreciation				
15	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	2.50%	2.50%	2.50%
16	Book Depreciation	Column (a) = Line 1 * Line 15 * 50% ; Column (b) = Line 1 * Line 15	$1,849	$3,697	$3,697
17	Cumulative Book Depreciation	Previous Year Line 17 + Current Year Line 16	$1,849	$5,546	$9,244
18	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	5.00%	5.00%	5.00%
19	Book Depreciation	Column (a) = Line 2 * Line 18 * 50% ; Column (b) = Line 2 * Line 18	$8,815	$17,631	$17,631
20	Cumulative Book Depreciation	Previous Year Line 20 + Current Year Line 19	$8,815	$26,446	$44,077
21	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	10.00%	10.00%	10.00%
22	Book Depreciation	Column (a) = Line 3 * Line 21 * 50% ; Column (b) = Line 3 * Line 21	$16,132	$32,263	$32,263
23	Cumulative Book Depreciation	Previous Year Line 23 + Current Year Line 22	$16,132	$48,395	$80,658
24	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	2.50%	2.50%	2.50%
25	Book Depreciation	Column (a) = Line 4 * Line 24 * 50% ; Column (b) = Line 4 * Line 24	$4,567	$9,133	$9,133
26	Cumulative Book Depreciation	Previous Year Line 26 + Current Year Line 25	$4,567	$13,700	$22,833
27	Total Cumulative Book Depreciation	Line 17 + Line 20 + Line 23 + Line 26	$31,362	$94,087	$156,812
	Deferred Tax Calculation:				
28	Cumulative Book / Tax Timer	Line 14 - Line 27	$420,257	$652,273	$766,392
29	Effective Tax Rate		35.00%	35.00%	35.00%
30	Deferred Tax Reserve	Line 28 * Line 29	$147,090	$228,296	$268,237
31	Less: FY 2020 Federal NOL		$0	$0	$0
32	Less: Proration Adjustment	Col (a) = Page 8 of 10, Line 40; Col (b) = , Line 40; Col (c) = , Line 40	($79,858)	($44,088)	($21,685)
33	Net Deferred Tax Reserve	Sum of Lines 30 through 32	$67,231	$184,207	$246,552
	Rate Base Calculation:				
34	Cumulative Incremental Capital Included in Rate Base	Line 11	$1,188,470	$1,188,470	$1,188,470
35	Accumulated Depreciation	- Line 27	($31,362)	($94,087)	($156,812)
36	Deferred Tax Reserve	- Line 33	($67,231)	($184,207)	($246,552)
37	Year End Rate Base	Sum of Lines 34 through 36	$1,089,877	$910,176	$785,107
	Revenue Requirement Calculation:				
38	Average Rate Base	Column (a) = Current Year Line 37 ÷ 2; Column (b & c) = (Prior Year Line 26 + Current Year Line 26) ÷ 2	$544,938	$1,000,026	$847,641
39	Pre-Tax ROR	1/	10.20%	10.20%	10.20%
40	Return and Taxes	Line 38 * Line 39	$55,584	$102,003	$86,459
41	Book Depreciation	Line 16 + Line 19 + Line 22 + Line 25	$31,362	$62,725	$62,725
42	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b & c) Line 8 * 3.176%	$0	$37,746	$37,746
43	**Annual Revenue Requirement**	**Line 40 through Line 42**	**$86,946**	**$202,473**	**$186,930**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2020 Capital Investments
Electric Transportation Initiative

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Capital Repairs Deduction				
1	Plant Additions	Page 2 of 10, Line 5	$1,188,470		
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%		
3	Capital Repairs Deduction	Line 1 * Line 2	$0		
	Bonus Depreciation				
4	Plant Additions	Line 1	$1,188,470		
5	Less Capital Repairs Deduction	Line 3	$0		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$1,188,470		
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$1,188,470		
9	Bonus Depreciation Rate (April 2019- December 2019)	1 * 75% * 30%	22.50%		
10	Bonus Depreciation Rate (January 2020 - Mar 2020)	1 * 25% * 00%	0.00%		
11	Total Bonus Depreciation Rate	Line 9 + Line 10	22.50%		
12	Bonus Depreciation	Line 8 * Line 11	$267,406		
	Remaining Tax Depreciation				
13	Plant Additions	Line 1	$1,188,470		
14	Less Capital Repairs Deduction	Line 3	$0		
15	Less Bonus Depreciation	Line 12	$267,406		
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$921,064	$921,064	$921,064
17	5 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	20.00%	32.00%	19.20%
18	Remaining Tax Depreciation	Line 16 * Line 17	$184,213	$294,741	$176,844
19	FY20 Loss incurred due to retirements	Per Tax Department			
20	Cost of Removal	Page 2 of 10, Line 10	$0		
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$451,619	$294,741	$176,844

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Revenue Requirement on Estimated Capital Investment 12 months ending March 31, 2021
Electric Transportation Initiative

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Estimated Capital Investment			
1	EDC Costs (Make-Ready & Utility-Operated)		$369,748	
2	Premise Work Costs (Make-Ready & Utility-Operated)		$881,543	
3	EVSE Costs (Utility-Operated Only)		$306,583	
4	Total Capitalized Labor & Tool Costs		$270,627	
5	Total Estimated Capital Investment	Line 1 + Line 4	$1,828,501	$0
	Depreciable Net Capital Included in Rate Base			
6	Total Allowed Capital Included in Rate Base in Current Year	Line 5	$1,828,501	$0
7	Retirements	Line 4 * 0%	$0	$0
8	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$1,828,501	$1,828,501
	Change in Net Capital Included in Rate Base			
9	Capital Included in Rate Base	Line 5	$1,828,501	$0
10	Cost of Removal	Section 2, Page 27 of 27, Chart 11	$0	$0
11	**Total Net Plant in Service Including Cost of Removal**	**Line 8 + Line 10**	**$1,828,501**	**$1,828,501**
	Tax Depreciation			
12	Vintage Year Tax Depreciation:			
13	2021 Spend	Page 5 of 10, Line 21	$365,700	$585,120
14	Cumulative Tax Depreciation	Previous Year Line 14 + Current Year Line 13	$365,700	$950,820
	Book Depreciation			
15	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	2.50%	2.50%
16	Book Depreciation	Column (a) = Line 1 * Line 15 * 50% ; Column (b) = Line 1 * Line 15	$4,622	$9,244
17	Cumulative Book Depreciation	Previous Year Line 17 + Current Year Line 16	$4,622	$13,866
18	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	5.00%	5.00%
19	Book Depreciation	Column (a) = Line 2 * Line 18 * 50% ; Column (b) = Line 2 * Line 18	$22,039	$44,077
20	Cumulative Book Depreciation	Previous Year Line 20 + Current Year Line 19	$22,039	$66,116
21	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	10.00%	10.00%
22	Book Depreciation	Column (a) = Line 3 * Line 21 * 50% ; Column (b) = Line 3 * Line 21	$15,329	$30,658
23	Cumulative Book Depreciation	Previous Year Line 23 + Current Year Line 22	$15,329	$45,987
24	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	2.50%	2.50%
25	Book Depreciation	Column (a) = Line 4 * Line 26 * 50% ; Column (b) = Line 4 * Line 26	$3,383	$6,766
26	Cumulative Book Depreciation	Previous Year Line 26 + Current Year Line 25	$3,383	$10,149
27	Total Cumulative Book Depreciation	Line 17 + Line 20 + Line 23 + Line 26	$45,372	$136,117
	Deferred Tax Calculation:			
28	Cumulative Book / Tax Timer	Line 14 - Line 17	$320,328	$814,703
29	Effective Tax Rate		35.00%	35.00%
30	Deferred Tax Reserve	Line 28 * Line 29	$112,115	$285,146
31	Less: FY 2021 Federal NOL		$0	$0
32	Less: Proration Adjustment	Col (a) = Page 8 of 10, Line 40; Col (b) = Page 9 of 10, Line 40	($60,870)	($93,943)
33	Net Deferred Tax Reserve	Sum of Lines 30 through 32	$51,245	$191,203
	Rate Base Calculation:			
34	Cumulative Incremental Capital Included in Rate Base	Line 11	$1,828,501	$ 1,828,501
35	Accumulated Depreciation	- Line 27	($45,372)	($136,117)
36	Deferred Tax Reserve	- Line 33	($51,245)	($191,203)
37	Year End Rate Base	Sum of Lines 34 through 36	$1,731,883	$1,501,180
	Revenue Requirement Calculation:			
38	Average Rate Base	Column (a) = Current Year Line 37 ÷ 2; Column (b) = (Prior Year Line 37 + Current Year Line 37) ÷ 2	$865,941.71	$1,616,532
39	Pre-Tax ROR		1/ 10.20%	10.20%
40	Return and Taxes	Line 38 * Line 39	$88,326	$164,886
41	Book Depreciation	Line 16 + Line 19 + Line 22 + Line 25	$45,372	$90,745
42	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b) Line 8 * 3.176%	$0	$58,073
43	**Annual Revenue Requirement**	**Line 38 through Line 42**	**$133,698**	**$313,704**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2021 Capital Investments
Electric Transportation Initiative

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 4 of 10, Line 5	$1,828,501	
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%	
3	Capital Repairs Deduction	Line 1 * Line 2	$0	
	Bonus Depreciation			
4	Plant Additions	Line 1	$1,828,501	
5	Less Capital Repairs Deduction	Line 3	$0	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$1,828,501	
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$1,828,501	
9	Bonus Depreciation Rate (April 2020- December 2020)	0%	0.00%	
10	Bonus Depreciation Rate (January 2021 - Mar 2021)	0%	0.00%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%	
12	Bonus Depreciation	Line 8 * Line 11	$0	
	Remaining Tax Depreciation			
13	Plant Additions	Line 1	$1,828,501	
14	Less Capital Repairs Deduction	Line 3	$0	
15	Less Bonus Depreciation	Line 12	$0	
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$1,828,501	$1,828,501
17	5 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	20.000%	32.000%
18	Remaining Tax Depreciation	Line 16 * Line 17	$365,700	$585,120
19	FY21 Loss incurred due to retirements	Per Tax Department	$0	$0
20	Cost of Removal	Page 4 of 10, Line 10	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$365,700	$585,120

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Revenue Requirement on Estimated Capital Investment 12 months ending March 31, 2022
Electric Transportation Initiative

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Estimated Capital Investment		
1	EDC Costs (Make-Ready & Utility-Operated)		$961,344
2	Premise Work Costs (Make-Ready & Utility-Operated)		$2,292,011
3	EVSE Costs (Utility-Operated Only)		$797,116
4	Total Capitalized Labor & Tool Costs		$276,040
5	Total Estimated Capital Investment	Line 1 + Line 4	$4,326,511
	Depreciable Net Capital Included in Rate Base		
6	Total Allowed Capital Included in Rate Base in Current Year	Line 5	$4,326,511
7	Retirements	Line 4 * 0%	$0
8	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 6	$4,326,511
	Change in Net Capital Included in Rate Base		
9	Capital Included in Rate Base	Line 5	$4,326,511
10	Cost of Removal	Section 2, Page 27 of 27, Chart 11	$0
11	**Total Net Plant in Service Including Cost of Removal**	**Line 8 + Line 10**	**$4,326,511**
	Tax Depreciation		
12	Vintage Year Tax Depreciation:		
13	2022 Spend	Page 7 of 10, Line 21	$865,302
14	Cumulative Tax Depreciation	Previous Year Line 14 + Current Year Line 13	$865,302
	Book Depreciation		
15	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	2.50%
16	Book Depreciation	Column (a) = Line 1* Line 15 * 50%	$12,017
17	Cumulative Book Depreciation	Previous Year Line 17 + Current Year Line 16	$12,017
18	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	5.00%
19	Book Depreciation	Column (a) = Line 2 * Line 18 * 50%	$57,300
20	Cumulative Book Depreciation	Previous Year Line 20 + Current Year Line 19	$57,300
21	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	10.00%
22	Book Depreciation	Column (a) = Line 3 * Line 21 * 50%	$39,856
23	Cumulative Book Depreciation	Previous Year Line 23 + Current Year Line 22	$39,856
24	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	2.50%
25	Book Depreciation	Column (a) = Line 4 * Line 24 * 50%	$3,451
26	Cumulative Book Depreciation	Previous Year Line 26 + Current Year Line 25	$3,451
27	Total Cumulative Book Depreciation	Line 17 + Line 20 + Line 23 + Line 26	$112,623
	Deferred Tax Calculation:		
28	Cumulative Book / Tax Timer	Line 14 - Line 27	$752,679
29	Effective Tax Rate		35.00%
30	Deferred Tax Reserve	Line 28 * Line 29	$263,438
31	Less: FY 2022 Federal NOL		-
32	Less: Proration Adjustment	Col (a) = Page 8 of 10, Line 40; Col = Page 9 of 10, Line 40	($143,026)
33	Net Deferred Tax Reserve	Sum of Lines 30 through 32	$120,411
	Rate Base Calculation:		
34	Cumulative Incremental Capital Included in Rate Base	Line 11	$4,326,511
35	Accumulated Depreciation	- Line 27	($112,623)
36	Deferred Tax Reserve	- Line 33	($120,411)
37	Year End Rate Base	Sum of Lines 34 through 36	$4,093,476
	Revenue Requirement Calculation:		
38	Average Rate Base	Column (a) = Current Year Line 27 ÷ 2	$2,046,738.16
39	Pre-Tax ROR		1/ 10.20%
40	Return and Taxes	Line 38 * Line 39	$208,767
41	Book Depreciation	Line 16 + Line 19 + Line 22 + Line 25	$112,623
42	Property Taxes	Tax Rate 3.176% MAL-7	$0
43	**Annual Revenue Requirement**	**Line 40 through Line 42**	**$321,391**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2022 Capital Investments
Electric Transportation Initiative

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Capital Repairs Deduction		
1	Plant Additions	Page 6 of 10, Line 5	$4,326,511
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%
3	Capital Repairs Deduction	Line 1 * Line 2	$0
	Bonus Depreciation		
4	Plant Additions	Line 1	$4,326,511
5	Less Capital Repairs Deduction	Line 3	$0
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$4,326,511
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$4,326,511
9	Bonus Depreciation Rate (April 2021- December 2021)	0.00%	0.00%
10	Bonus Depreciation Rate (January 2022 - Mar 2022)	0.00%	0.00%
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%
12	Bonus Depreciation	Line 8 * Line 11	$0
	Remaining Tax Depreciation		
13	Plant Additions	Line 1	$4,326,511
14	Less Capital Repairs Deduction	Line 3	$0
15	Less Bonus Depreciation	Line 12	$0
16	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$4,326,511
17	5 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	20.000%
18	Remaining Tax Depreciation	Line 16 * Line 17	$865,302
19	FY22 Loss incurred due to retirements	Per Tax Department	$0
20	Cost of Removal	Page 6 of 10, Line 10	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, 19, and 20	$865,302

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Fiscal Year 2020 Net Deferred Tax Reserve Proration
Electric Transportation Initiative

Line No.	**Deferred Tax Subject to Proration**		(a)=Sum of (b) Total	(b) Vintage Year March 31, 2020
1	Book Depreciation	Page 2 of 10, Line 16 + Line 19 + Line 22 + Line 25	$31,362	$31,362
2	Bonus Depreciation	Page 3 of 10, Line 12	($267,406)	($267,406)
3	Remaining MACRS Tax Depreciation	Page 3 of 10, Line 18	($184,213)	($184,213)
4	FY20 tax (gain)/loss on retirements	Page 3 of 10, Line 19	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($420,257)	($420,257)
6	Effective Tax Rate		35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($147,090)	($147,090)
	Deferred Tax Not Subject to Proration			
8	Capital Repairs Deduction	Page 3 of 10, Line 3	$0	$0
9	Cost of Removal	Page 3 of 10, Line 20	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2020		$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0
12	Effective Tax Rate		35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	($147,090)	($147,090)
15	Net Operating Loss	Page 2 of 10, Line 31	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($147,090)	($147,090)
	Allocation of FY 2020 Estimated Federal NOL			
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($420,257)	($420,257)
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($420,257)	($420,257)
20	Total FY 2020 Federal NOL	(Page 2 of 10, Line 31) / 35%	$0	$0
21	Allocated FY 2020 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0
22	Allocated FY 2020 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0
23	Effective Tax Rate		35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($147,090)	($147,090)

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l)	(l)
26	April 2019	30	91.78%	($11,250)	($11,250)
27	May 2019	31	83.29%	($10,209)	($10,209)
28	June 2019	30	75.07%	($9,202)	($9,202)
29	July 2019	31	66.58%	($8,160)	($8,160)
30	August 2019	31	58.08%	($7,119)	($7,119)
31	September 2019	30	49.86%	($6,112)	($6,112)
32	October 2019	31	41.37%	($5,071)	($5,071)
33	November 2019	30	33.15%	($4,063)	($4,063)
34	December 2019	31	24.66%	($3,022)	($3,022)
35	January 2020	31	16.16%	($1,981)	($1,981)
36	February 2020	28	8.49%	($1,041)	($1,041)
37	March 2020	31	0.00%	$0	$0
38	Total	365		($67,231)	($67,231)
39	Deferred Tax Without Proration	Line 25		($147,090)	($147,090)
40	Proration Adjustment	Line 38 - Line 39		$79,858	$79,858

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Fiscal Year 2021 Net Deferred Tax Reserve Proration
Electric Transportation Initiative

Line No.			(a)=Sum of (b) through (c) Total	(b) Vintage Year March 31, 2021	(c) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration				
1	Book Depreciation	Page 4 of 10, Line 16 + Line 18 + Line 22 + Line 25	$108,097	$45,372	$62,725
2	Bonus Depreciation	Page 5 of 10, Line 12	$0	$0	$0
3	Remaining MACRS Tax Depreciation	Page 4 of 10, Line 18	($660,441)	($365,700)	($294,741)
4	FY21 tax (gain)/loss on retirements	Page 5 of 10, Line 19	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($552,344)	($320,328)	($232,016)
6	Effective Tax Rate		35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($193,320)	($112,115)	($81,206)
	Deferred Tax Not Subject to Proration				
8	Capital Repairs Deduction	Page 5 of 10, Line 3	$0	$0	
9	Cost of Removal	Page 5 of 10, Line 20	$0	$0	
10	Book/Tax Depreciation Timing Difference at 3/31/2021		$0	$0	
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0	
12	Effective Tax Rate		35.00%	35.00%	
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0	
14	Total Deferred Tax Reserve	Line 7 + Line 13	($193,320)	($112,115)	($81,206)
15	Net Operating Loss		$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($193,320)	($112,115)	($81,206)
	Allocation of FY 2021 Estimated Federal NOL				
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($320,328)	($320,328)	
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0	
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($320,328)	($320,328)	
20	Total FY 2021 Federal NOL		$0	$0	
21	Allocated FY 2021 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0	
22	Allocated FY 2021 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0	
23	Effective Tax Rate		35.00%	35.00%	
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0	
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($193,320)	($112,115)	($81,206)

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (m)	(l)	(m)
26	April 2020	30	91.78%	($14,786)	($8,575)	($6,211)
27	May 2020	31	83.29%	($13,418)	($7,781)	($5,636)
28	June 2020	30	75.07%	($12,094)	($7,014)	($5,080)
29	July 2020	31	66.58%	($10,725)	($6,220)	($4,505)
30	August 2020	31	58.08%	($9,357)	($5,427)	($3,931)
31	September 2020	30	49.86%	($8,033)	($4,659)	($3,374)
32	October 2020	31	41.37%	($6,665)	($3,865)	($2,800)
33	November 2020	30	33.15%	($5,341)	($3,097)	($2,243)
34	December 2020	31	24.66%	($3,972)	($2,304)	($1,669)
35	January 2021	31	16.16%	($2,604)	($1,510)	($1,094)
36	February 2021	28	8.49%	($1,368)	($794)	($575)
37	March 2021	31	0.00%	$0	$0	$0
38	Total	365		($88,362)	($51,245)	($37,117)
39	Deferred Tax Without Proration	Line 25		($193,320)	($112,115)	($81,206)
40	Proration Adjustment	Line 38 - Line 39		$104,958	$60,870	$44,088

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Fiscal Year 2022 Net Deferred Tax Reserve Proration
Electric Transportation Initiative

Line No.			(a)=Sum of (b) through (d) Total	(b) Vintage Year March 31, 2022	(c) Vintage Year March 31, 2021	(d) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration					
1	Book Depreciation	Page 6 of 10, Line 16 + Line 19 + Line 22 + Line 25	$266,093	$112,623	$90,745	$62,725
2	Bonus Depreciation	Page 7 of 10, Line 12	$0	$0	$0	$0
3	Remaining MACRS Tax Depreciation	Page 7 of 10, Line 18	($1,627,266)	($865,302)	($585,120)	($176,844)
4	FY22 tax (gain)/loss on retirements	Page 7 of 10, Line 19	$0	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($1,361,173)	($752,679)	($494,375)	($114,119)
6	Effective Tax Rate		35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($476,411)	($263,438)	($173,031)	($39,942)
	Deferred Tax Not Subject to Proration					
8	Capital Repairs Deduction	Page 7 of 10, Line 3	$0	$0		
9	Cost of Removal	Page 7 of 10, Line 20	$0	$0		
10	Book/Tax Depreciation Timing Difference at 3/31/2022		$0	$0		
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0		
12	Effective Tax Rate		35.00%	35.00%		
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0		
14	Total Deferred Tax Reserve	Line 7 + Line 13	($476,411)	($263,438)	($173,031)	($39,942)
15	Net Operating Loss		$0	-		
16	Net Deferred Tax Reserve	Line 14 + Line 15	($476,411)	($263,438)	($173,031)	($39,942)
	Allocation of FY 2022 Estimated Federal NOL					
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($752,679)	($752,679)		
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0		
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($752,679)	($752,679)		
20	Total FY 2022 Federal NOL		$0	$0		
21	Allocated FY 2022 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0		
22	Allocated FY 2022 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0		
23	Effective Tax Rate		35.00%	35.00%		
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0		
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($476,411)	($263,438)	($173,031)	($39,942)

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (n)	(l)	(m)	(n)
26	April 2021	30	91.78%	($36,438)	($20,149)	($13,234)	($3,055)
27	May 2021	31	83.29%	($33,066)	($18,284)	($12,009)	($2,772)
28	June 2021	30	75.07%	($29,803)	($16,480)	($10,824)	($2,499)
29	July 2021	31	66.58%	($26,431)	($14,615)	($9,600)	($2,216)
30	August 2021	31	58.08%	($23,059)	($12,751)	($8,375)	($1,933)
31	September 2021	30	49.86%	($19,796)	($10,946)	($7,190)	($1,660)
32	October 2021	31	41.37%	($16,424)	($9,082)	($5,965)	($1,377)
33	November 2021	30	33.15%	($13,161)	($7,278)	($4,780)	($1,103)
34	December 2021	31	24.66%	($9,789)	($5,413)	($3,555)	($821)
35	January 2022	31	16.16%	($6,417)	($3,549)	($2,331)	($538)
36	February 2022	28	8.49%	($3,372)	($1,865)	($1,225)	($283)
37	March 2022	31	0.00%	$0	$0	$0	$0
38	Total	365		($217,757)	($120,411)	($79,089)	($18,256)
39	Deferred Tax Without Proration	Line 25		($476,411)	($263,438)	($173,031)	($39,942)
40	Proration Adjustment	Line 38 - Line 39		$258,654	$143,026	$93,943	$21,685

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

Appendix 10.7

Appendix 10.7

Revenue Requirement Electric Heat

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Electric Heat Initiative
Annual Revenue Requirement Summary

Line No.			Fiscal Year 2020 (a)	Fiscal Year 2021 (b)	Fiscal Year 2022 (c)
	Operation and Maintenance (O&M) Expenses:				
1	Incentives - Systems & Community Programs		$241,953	$265,053	$313,506
2	Program Admin Costs		$44,640	$44,640	$44,640
3	Program Admin, Marketing & Consulting - Community Programs		$35,500	$35,500	$35,500
4	Program Admin, Marketing & Consulting - Oil Dealer Training & Support		$61,000	$61,000	$61,000
5	Total O&M costs	Sum of Lines 1 through 4	$383,093	$406,193	$454,646
6	**Total Revenue Requirement**		**$383,093**	**$406,193**	**$454,646**

Appendix 10.8

Revenue Requirement Energy Storage

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Energy Storage Iniative
Annual Revenue Requirement Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Operation and Maintenance (O&M) Expenses:				
1	Operation & Maintenance Expense		$0	$11,500	$28,750
2	Lease Charge		$5,000	$12,500	$12,500
3	**Total O&M costs**	Sum of Lines 1 through 2	**$5,000**	**$24,000**	**$41,250**
4	Less Research & Development Tax Incentive applicable to O&M costs	14% of Line 1	$0	($1,610)	($4,025)
5	**Total O&M Costs Net of R&D Tax Incentives**	Line 3 + Line 4	**$5,000**	**$22,390**	**$37,225**
	Capital Investment:				
6	Estimated Revenue Requirement on Rate Year Capital investment		$114,178	$138,988	$128,540
7	Estimated Revenue Requirement on Data Year 1 Capital investment			$119,734	$271,726
8	Estimated Revenue Requirement on Data Year 2 Capital investment				$0
9	**Total Capital Investment Component of Revenue Requirement**	Sum of Lines 6 through 8	**$114,178**	**$258,722**	**$400,266**
10	**Total Revenue Requirement**	Line 5 + Line 9	**$119,178**	**$281,112**	**$437,491**

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Revenue Requirement on Estimated Capital Investment 12 months ending March 31, 2020
Energy Storage

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Estimated Capital Investment				
1	Energy Storage		$894,375	$0	$0
2	Total Estimated Capital Investment	Sum of Line 1	$894,375	$0	$0
	Depreciable Net Capital Included in Rate Base				
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$894,375	$0	$0
4	Retirements	Line 3 * 0%	$0	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 3 - Line 4; Column (b and c) = Prior Year Line 5	$894,375	$894,375	$894,375
	Change in Net Capital Included in Rate Base				
6	Capital Included in Rate Base	Line 2	$894,375	$0	$0
7	Cost of Removal		$0	$0	$0
8	**Total Net Plant in Service Including Cost of Removal**	**Line 5 + Line 7**	**$894,375**	**$894,375**	**$894,375**
	Tax Depreciation				
9	Vintage Year Tax Depreciation:				
10	2020 Spend	Page 3 of 10, Line 21	$339,862	$221,805	$133,083
11	Cumulative Tax Depreciation	Previous Year Line 11 + Current Year Line 10	$339,862	$561,667	$694,750
	Book Depreciation				
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	8.33%	8.33%	8.33%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b and c) = Line 1 * Line 12	$74,531	$37,266	$37,266
14	Cumulative Book Depreciation	Previous Year Line 14 + Current Year Line 13	$74,531	$111,797	$149,063
15	Total Cumulative Book Depreciation	Line 14	$74,531	$111,797	$149,063
	Deferred Tax Calculation:				
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$265,331	$449,870	$545,688
17	Effective Tax Rate		35.00%	35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$92,866	$157,455	$190,991
19	Less: FY 2020 Federal NOL		$0	$0	$0
20	Less: Proration Adjustment	Col (a) = Page 8 of 10, Line 40; Col (b) = Page 9 of 10, Line 40; Col (c) = Page 10 of 10, Line 40	($50,419)	($35,067)	($18,207)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$42,447	$122,388	$172,783
	Rate Base Calculation:				
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$894,375	$894,375	$894,375
23	Accumulated Depreciation	- Line 15	($74,531)	($111,797)	($149,063)
24	Deferred Tax Reserve	- Line 21	($42,447)	($122,388)	($172,783)
25	Year End Rate Base	Sum of Lines 22 through 24	$777,397	$660,190	$572,529
	Revenue Requirement Calculation:				
26	Average Rate Base	Column (a) = Current Year Line 25 ÷ 2; Column (b & c) = (Prior Year Line 25 + Current Year Line 25) ÷ 2	$388,698.44	$718,794	$616,360
27	Pre-Tax ROR	1/	10.20%	10.20%	10.20%
28	Return and Taxes	Line 26 * Line 27	$39,647	$73,317	$62,869
29	Book Depreciation	Line 13	$74,531	$37,266	$37,266
30	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b & c) Line 8 * 3.176%	$0	$28,405	$28,405
31	**Annual Revenue Requirement**	**Line 28 + Line 29 + Line 30**	**$114,178**	**$138,988**	**$128,540**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2020 Capital Investments
Energy Storage

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Capital Repairs Deduction				
1	Plant Additions	Page 2 of 10, Line 2	$894,375		
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%		
3	Capital Repairs Deduction	Line 1 * Line 2	$0		
	Bonus Depreciation				
4	Plant Additions	Line 1	$894,375		
5	Less Capital Repairs Deduction	Line 3	$0		
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$894,375		
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%		
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$894,375		
9	Bonus Depreciation Rate (April 2019- December 2019)	1 * 75% * 30%	22.50%		
10	Bonus Depreciation Rate (January 2020 - Mar 2020)	1 * 25% * 0%	0.00%		
11	Total Bonus Depreciation Rate	Line 9 + Line 10	22.50%		
12	Bonus Depreciation	Line 8 * Line 11	$201,234		
	Remaining Tax Depreciation				
13	Plant Additions	Line 1	$894,375		
14	Less Capital Repairs Deduction	Line 3	$0		
15	Less Bonus Depreciation	Line 12	$201,234		
16	Remaining Plant Additions Subject to 5 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$693,141	$693,141	$693,141
17	5 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	20.00%	32.00%	19.20%
18	Remaining Tax Depreciation	Line 16 * Line 17	$138,628	$221,805	$133,083
19	FY20 Loss incurred due to retirements	Per Tax Department	$0	$0	$0
20	Cost of Removal	Page 2 of 10, Line 7	$0	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, and 20	$339,862	$221,805	$133,083

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Revenue Requirement on Estimated Capital Investment 12 months ending March 31, 2021
Energy Storage

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Estimated Capital Investment			
1	Energy Storage		$1,341,563	
2	Total Estimated Capital Investment	Sum of Line 1	$1,341,563	$0
	Depreciable Net Capital Included in Rate Base			
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$1,341,563	$0
4	Retirements	Line 3 * 0%	$0	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 3 - Line 4; Column (b) = Prior Year Line 5	$1,341,563	$1,341,563
	Change in Net Capital Included in Rate Base			
6	Capital Included in Rate Base	Line 2	$1,341,563	$0
7	Cost of Removal		$0	$0
8	**Total Net Plant in Service Including Cost of Removal**	**Line 5 + Line 7**	**$1,341,563**	**$1,341,563**
	Tax Depreciation			
9	Vintage Year Tax Depreciation:			
10	2021 Spend	Page 5 of 10, Line 21	$268,313	$429,300
11	Cumulative Tax Depreciation	Prior Year Line 11 + Current Year Line 10	$268,313	$697,613
	Book Depreciation			
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	8.33%	8.33%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50% ; Column (b) = Line 1 * Line 12	$55,898	$111,797
14	Cumulative Book Depreciation	Prior Year Line 14 + Current Year Line 13	$55,898	$167,695
15	Total Cumulative Book Depreciation	Line 14	$55,898	$167,695
	Deferred Tax Calculation:			
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$212,415	$529,918
17	Effective Tax Rate		35.00%	35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$74,345	$185,471
19	Less: FY 2021 Federal NOL		$0	$0
20	Less: Proration Adjustment	Col (a) = Page 9 of 10, Line 39; Col (b) = Page 10 of 10, Line 40	($40,364)	($60,333)
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$33,981	$125,138
	Rate Base Calculation:			
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$1,341,563	$1,341,563
23	Accumulated Depreciation	- Line 15	($55,898)	($167,695)
24	Deferred Tax Reserve	- Line 21	($33,981)	($125,138)
25	Year End Rate Base	Sum of Lines 22 through 24	$1,251,683	$1,048,729
	Revenue Requirement Calculation:			
26	Average Rate Base	Column (a) = Current Year Line 25 ÷ 2; Column (b) = (Prior Year Line 25 + Current Year Line 25) ÷ 2	$625,841.53	$1,150,206
27	Pre-Tax ROR	1/	10.20%	10.20%
28	Return and Taxes	Line 26 * Line 27	$63,836	$117,321
29	Book Depreciation	Line 13	$55,898	$111,797
30	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b) Line 8 * 3.176%	$0	$42,608
31	**Annual Revenue Requirement**	**Line 28 + Line 29 + Line 30**	**$119,734**	**$271,726**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2021 Capital Investments
Energy Storage

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 4 of 10, Line 2	$1,341,563	
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%	
3	Capital Repairs Deduction	Line 1 * Line 2	$0	
	Bonus Depreciation			
4	Plant Additions	Line 1	$1,341,563	
5	Less Capital Repairs Deduction	Line 3	$0	
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$1,341,563	
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$1,341,563	
9	Bonus Depreciation Rate (April 2020- December 2020)	0%	0.00%	
10	Bonus Depreciation Rate (January 2021 - Mar 2021)	0%	0.00%	
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%	
12	Bonus Depreciation	Line 8 * Line 11	$0	
	Remaining Tax Depreciation			
13	Plant Additions	Line 1	$1,341,563	
14	Less Capital Repairs Deduction	Line 3	$0	
15	Less Bonus Depreciation	Line 12	$0	
16	Remaining Plant Additions Subject to 5 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$1,341,563	$1,341,563
17	5 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	20.00%	32.00%
18	Remaining Tax Depreciation	Line 16 * Line 17	$268,313	$429,300
19	FY21 Loss incurred due to retirements	Per Tax Department	$0	$0
20	Cost of Removal	Page 4 of 10, Line 7	$0	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, and 20	$268,313	$429,300

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Revenue Requirement on Estimated Capital Investment 12 months ending March 31, 2022
Energy Storage

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Estimated Capital Investment		
1	Energy Storage		$0
2	Total Estimated Capital Investment	Sum Line 1	$0
	Depreciable Net Capital Included in Rate Base		
3	Total Allowed Capital Included in Rate Base in Current Year	Line 2	$0
4	Retirements	Line 3* 0%	$0
5	Net Depreciable Capital Included in Rate Base	Column (a) = Line 3 - Line 4	$0
	Change in Net Capital Included in Rate Base		
6	Capital Included in Rate Base	Line 2	$0
7	Cost of Removal		$0
8	**Total Net Plant in Service Including Cost of Removal**	**Line 5 + Line 7**	**$0**
	Tax Depreciation		
9	Vintage Year Tax Depreciation:		
10	2022 Spend	Page 7 of 10, Line 21	$0
11	Cumulative Tax Depreciation	Current Year Line 10	$0
	Book Depreciation		
12	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	8.33%
13	Book Depreciation	Column (a) = Line 1 * Line 12 * 50%	$0
14	Cumulative Book Depreciation	Current Year Line 13	$0
15	Total Cumulative Book Depreciation	Line 14	$0
	Deferred Tax Calculation:		
16	Cumulative Book / Tax Timer	Line 11 - Line 15	$0
17	Effective Tax Rate		35.00%
18	Deferred Tax Reserve	Line 16 * Line 17	$0
19	Less: FY 2022 Federal NOL		$0
20	Less: Proration Adjustment	Col (a) = Page 10 of 10, Line 40	$0
21	Net Deferred Tax Reserve	Sum of Lines 18 through 20	$0
	Rate Base Calculation:		
22	Cumulative Incremental Capital Included in Rate Base	Line 8	$0
23	Accumulated Depreciation	- Line 15	$0
24	Deferred Tax Reserve	- Line 21	$0
25	Year End Rate Base	Sum of Lines 22 through 24	$0
	Revenue Requirement Calculation:		
26	Average Rate Base	Column (a) = Current Year Line 25 ÷ 2	$0
27	Pre-Tax ROR	1/	10.20%
28	Return and Taxes	Line 26 * Line 27	$0
29	Book Depreciation	Line 13	$0
30	Property Taxes	Tax Rate 3.176% MAL-7	$0
32	**Annual Revenue Requirement**	**Line 28 + Line 29 + Line 30**	**$0**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2022 Capital Investments
Energy Storage

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Capital Repairs Deduction		
1	Plant Additions	Page 6 of 10, Line 2	$0
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%
3	Capital Repairs Deduction	Line 1 * Line 2	$0
	Bonus Depreciation		
4	Plant Additions	Line 1	$0
5	Less Capital Repairs Deduction	Line 3	$0
6	Plant Additions Net of Capital Repairs Deduction	Line 4 - Line 5	$0
7	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%
8	Plant Eligible for Bonus Depreciation	Line 6 * Line 7	$0
9	Bonus Depreciation Rate (April 2021- December 2021)	0%	0.00%
10	Bonus Depreciation Rate (January 2022 - Mar 2022)	0%	0.00%
11	Total Bonus Depreciation Rate	Line 9 + Line 10	0.00%
12	Bonus Depreciation	Line 8 * Line 11	$0
	Remaining Tax Depreciation		
13	Plant Additions	Line 1	$0
14	Less Capital Repairs Deduction	Line 3	$0
15	Less Bonus Depreciation	Line 12	$0
16	Remaining Plant Additions Subject to 5 YR MACRS Tax Depreciation	Line 13 - Line 14 - Line 15	$0
17	5 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	20.00%
18	Remaining Tax Depreciation	Line 16 * Line 17	$0
19	FY22 Loss incurred due to retirements	Per Tax Department	$0
20	Cost of Removal	Page 6 of 10, Line 7	$0
21	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 12, 18, and 20	$0

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Fiscal Year 2020 Net Deferred Tax Reserve Proration
Energy Storage

Line No.			(a)= column (b) Total	(b) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration			
1	Book Depreciation	Page 2 of 10, Line 13	$74,531	$74,531
2	Bonus Depreciation	Page 3 of 10, Line 12	($201,234)	($201,234)
3	Remaining MACRS Tax Depreciation	Page 3 of 10, Line 18	($138,628)	($138,628)
4	FY20 tax (gain)/loss on retirements	Page 3 of 10, Line 19	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($265,331)	($265,331)
6	Effective Tax Rate	Per Tax Department	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($92,866)	($92,866)
	Deferred Tax Not Subject to Proration			
8	Capital Repairs Deduction	Page 3 of 10, Line 3	$0	$0
9	Cost of Removal	Page 3 of 10, Line 20	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2020		$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0
12	Effective Tax Rate		35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	($92,866)	($92,866)
15	Net Operating Loss	Page 2 of 10, Line 19	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($92,866)	($92,866)
	Allocation of FY 2020 Estimated Federal NOL			
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($265,331)	($265,331)
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($265,331)	($265,331)
20	Total FY 2020 Federal NOL	Line 15 * 35%	$0	$0
21	Allocated FY 2020 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0
22	Allocated FY 2020 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0
23	Effective Tax Rate	Per Tax Department	35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($92,866)	($92,866)

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l)	(l)
	Proration Calculation				
26	April 2019	30	91.78%	($7,103)	($7,103)
27	May 2019	31	83.29%	($6,445)	($6,445)
28	June 2019	30	75.07%	($5,809)	($5,809)
29	July 2019	31	66.58%	($5,152)	($5,152)
30	August 2019	31	58.08%	($4,495)	($4,495)
31	September 2019	30	49.86%	($3,859)	($3,859)
32	October 2019	31	41.37%	($3,202)	($3,202)
33	November 2019	30	33.15%	($2,565)	($2,565)
34	December 2019	31	24.66%	($1,908)	($1,908)
35	January 2020	31	16.16%	($1,251)	($1,251)
36	February 2020	28	8.49%	($657)	($657)
37	March 2020	31	0.00%	$0	$0
38	Total	365		($42,447)	($42,447)
39	Deferred Tax Without Proration	Line 25		($92,866)	($92,866)
40	Proration Adjustment	Line 38 - Line 39		$50,419	$50,419

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Fiscal Year 2021 Net Deferred Tax Reserve Proration
Energy Storage

Line No.			(a)= Sum of (b) through (c) Total	(b) Vintage Year March 31, 2021	(c) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration				
1	Book Depreciation	Col (b) = Page 4 of 10, Line 13 ;Col (c) = Page 2 of 10, Line 13	$93,164	$55,898	$37,266
2	Bonus Depreciation	Page 5 of 10, Line 12	$0	$0	
3	Remaining MACRS Tax Depreciation	Col (b) = Page 5 of 10, Line 18; Col (c) = Page 3 of 10, Line 18	($490,118)	($268,313)	($221,805)
4	FY21 tax (gain)/loss on retirements	Col (b) = Page 5 of 10, Line 19; Col (c) = Page 3 of 10, Line 19	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($396,954)	($212,415)	($184,539)
6	Effective Tax Rate	Per Tax Department	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($138,934)	($74,345)	($64,589)
	Deferred Tax Not Subject to Proration				
8	Capital Repairs Deduction	Page 5 of 10, Line 3	$0	$0	
9	Cost of Removal	Page 5 of 10, Line 20	$0	$0	
10	Book/Tax Depreciation Timing Difference at 3/31/2021		$0	$0	
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0	
12	Effective Tax Rate		35.00%	35.00%	
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0	
14	Total Deferred Tax Reserve	Line 7 + Line 13	($138,934)	($74,345)	($64,589)
15	Net Operating Loss		$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($138,934)	($74,345)	($64,589)
	Allocation of FY 2021 Estimated Federal NOL				
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($212,415)	($212,415)	
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0	
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($212,415)	($212,415)	
20	Total FY 2021 Federal NOL		$0	$0	
21	Allocated FY 2021 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0	
22	Allocated FY 2021 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0	
23	Effective Tax Rate	Per Tax Department	35.00%	35.00%	
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0	
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($138,934)	($74,345)	($64,589)

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (m)	(l)	(m)
26	April 2020	30	91.78%	($10,626)	($5,686)	($4,940)
27	May 2020	31	83.29%	($9,643)	($5,160)	($4,483)
28	June 2020	30	75.07%	($8,691)	($4,651)	($4,040)
29	July 2020	31	66.58%	($7,708)	($4,125)	($3,583)
30	August 2020	31	58.08%	($6,725)	($3,598)	($3,126)
31	September 2020	30	49.86%	($5,773)	($3,089)	($2,684)
32	October 2020	31	41.37%	($4,790)	($2,563)	($2,227)
33	November 2020	30	33.15%	($3,838)	($2,054)	($1,784)
34	December 2020	31	24.66%	($2,855)	($1,528)	($1,327)
35	January 2021	31	16.16%	($1,871)	($1,001)	($870)
36	February 2021	28	8.49%	($983)	($526)	($457)
37	March 2021	31	0.00%	$0	$0	$0
38	Total	365		($63,504)	($33,981)	($29,522)
39	Deferred Tax Without Proration	Line 25		($138,934)	($74,345)	($64,589)
40	Proration Adjustment	Line 38 - Line 39		$75,430	$40,364	$35,067

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Fiscal Year 2022 Net Deferred Tax Reserve Electric Proration
Energy Storage

Line No.			(a)=Sum of (b) through (d) Total	(b) Vintage Year March 31, 2022	(c) Vintage Year March 31, 2021	(d) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration					
1	Book Depreciation	Col (b) = Page 6 of 10, Line 13; Col (c) = Page 4 of 10, Line 13 ;Col (d) = Page 2 of 10, Line 13	$149,063	$0	$111,797	$37,266
2	Bonus Depreciation	Page 7 of 10, Line 12	$0	$0		
3	Remaining MACRS Tax Depreciation	Col (b) = Page 7 of 10, Line 18; Col (c) = Page 5 of 10, Line 18; Col (c) = Page 3 of 10, Line 18	($562,383)	$0	($429,300)	($133,083)
4	FY22 tax (gain)/loss on retirements	Page 7 of 10, Line 19	$0	$0		
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($413,320)	$0	($317,503)	($95,817)
6	Effective Tax Rate	Per Tax Department	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($144,662)	$0	($111,126)	($33,536)
	Deferred Tax Not Subject to Proration					
8	Capital Repairs Deduction	Page 5 of 10, Line 3	$0	$0		
9	Cost of Removal	Page 5 of 10, Line 20	$0	$0		
10	Book/Tax Depreciation Timing Difference at 3/31/2022		$0	$0		
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0		
12	Effective Tax Rate		35.00%	35.00%		
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0		
14	Total Deferred Tax Reserve	Line 7 + Line 13	($144,662)	$0	($111,126)	($33,536)
15	Net Operating Loss		$0	$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($144,662)	$0	($111,126)	($33,536)
	Allocation of FY 2022 Estimated Federal NOL					
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	$0	$0		
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0		
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	$0	$0		
20	Total FY 2022 Federal NOL		$0	$0		
21	Allocated FY 2022 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0		
22	Allocated FY 2022 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0		
23	Effective Tax Rate	Per Tax Department	35.00%	35.00%		
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0		
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($144,662)	$0	($111,126)	($33,536)

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (n)	(l)	(m)	(n)
	Proration Calculation						
26	April 2021	30	91.78%	($11,064)	$0	($8,499)	($2,565)
27	May 2021	31	83.29%	($10,040)	$0	($7,713)	($2,328)
28	June 2021	30	75.07%	($9,050)	$0	($6,952)	($2,098)
29	July 2021	31	66.58%	($8,026)	$0	($6,165)	($1,861)
30	August 2021	31	58.08%	($7,002)	$0	($5,379)	($1,623)
31	September 2021	30	49.86%	($6,011)	$0	($4,618)	($1,394)
32	October 2021	31	41.37%	($4,987)	$0	($3,831)	($1,156)
33	November 2021	30	33.15%	($3,996)	$0	($3,070)	($926)
34	December 2021	31	24.66%	($2,973)	$0	($2,283)	($689)
35	January 2022	31	16.16%	($1,949)	$0	($1,497)	($452)
36	February 2022	28	8.49%	($1,024)	$0	($787)	($237)
37	March 2022	31	0.00%	$0	$0	$0	$0
38	Total	365		($66,122)	$0	($50,793)	($15,329)
39	Deferred Tax Without Proration	Line 25		($144,662)	$0	($111,126)	($33,536)
40	Proration Adjustment	Line 38 - Line 39		$78,540	$0	$60,333	$18,207

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

Appendix 10.9

Appendix 10.9

Revenue Requirement Solar

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Solar Initiative
Annual Revenue Requirement Summary

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	SOLAR INFRASTRUCTURE PROGRAM				
	Operation and Maintenance (O&M) Expenses:				
1	Operation & Maintenance Expense		$0	$15,125	$39,375
2	Lease Charge		$8,750	$23,750	$68,750
3	**Total O&M costs**	Sum of Lines 1 through 2	**$8,750**	**$38,875**	**$108,125**
4	Less Research & Development Tax Incentive applicable to O&M costs	14% of Line 1	$0	($2,118)	($5,513)
5	**Total O&M Costs Net of R&D Tax Incentives**	Line 3 + Line 4	**$8,750**	**$36,758**	**$102,613**
	Capital Investment:				
6	Estimated Revenue Requirement on Rate Year Capital investment		$75,468	$204,826	$189,596
7	Estimated Revenue Requirement on Data Year 1 Capital investment			$147,066	$399,384
8	Estimated Revenue Requirement on Data Year 2 Capital investment				$311,028
9	**Total Capital Investment Component of Revenue Requirement**	Sum of Lines 6 through 8	**$75,468**	**$351,893**	**$900,007**
10	**Total Revenue Requirement**	Line 5 + Line 9	**$84,218**	**$390,768**	**$1,008,132**

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Revenue Requirement on Estimated Capital Investment 12 months ending March 31, 2020
Solar Initiative

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Estimated Capital Investment				
1	Solar Panels		$1,070,000	$0	$0
2	Inverters		$267,500	$0	$0
3	Total Estimated Capital Investment	Line 1 + Line 2	$1,337,500	$0	$0
	Depreciable Net Capital Included in Rate Base				
4	Total Allowed Capital Included in Rate Base in Current Year	Line 3	$1,337,500	$0	$0
5	Retirements	Line 4 * 0%	$0	$0	$0
6	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b and c) = Prior Year Line 5	$1,337,500	$1,337,500	$1,337,500
	Change in Net Capital Included in Rate Base				
7	Capital Included in Rate Base	Line 4	$1,337,500	$0	$0
8	Cost of Removal		$0	$0	$0
9	**Total Net Plant in Service Including Cost of Removal**	**Line 6 + Line 8**	**$1,337,500**	**$1,337,500**	**$1,337,500**
	Tax Depreciation				
10	Vintage Year Tax Depreciation:				
11	2020 Spend	Page 3 of 10, Line 30	$432,013	$281,945	$169,167
12	Cumulative Tax Depreciation	Previous Year Line 12 + Current Year Line 11	$432,013	$713,958	$883,125
	Investment Tax Credit				
13	Unamortized Investment Tax Credit	Page 3 of 10, Line 8	$401,250	$401,250	$401,250
	Book Depreciation				
14	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	4.00%	4.00%	4.00%
15	Book Depreciation	Column (a) = Line 1 * Line 13 * 50% ; Column (b) = Line 1 * Line 13	$21,400	$42,800	$42,800
16	Cumulative Book Depreciation	Previous Year Line 16 + Current Year Line 15	$21,400	$64,200	$107,000
17	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	8.33%	8.33%	8.33%
18	Book Depreciation	Column (a) = Line 2 * Line 24 * 50% ; Column (b) = Line 2 * Line 24	$11,146	$22,292	$22,292
19	Cumulative Book Depreciation	Previous Year Line 19 + Current Year Line 18	$11,146	$33,438	$55,729
20	Total Cumulative Book Depreciation	Line 19 + Line 16	$32,546	$97,638	$162,729
	Deferred Tax Calculation:				
21	Cumulative Book / Tax Timer	Line 12 - Line 20	$399,467	$616,321	$720,396
22	Effective Tax Rate		35.00%	35.00%	35.00%
23	Deferred Tax Reserve	Line 21 * Line 22	$139,814	$215,712	$252,139
24	Less: FY 2020 Federal NOL		$0	$0	$0
25	Less: Proration Adjustment	Col (a) = Page 8 of 10, Line 40; Col (b) = Page 9 of 10, Line 40; Col (c) = Page 10 of 10, Line 40	($75,908)	($41,207)	($19,777)
26	Net Deferred Tax Reserve	Sum of Lines 23 through 25	$63,906	$174,505	$232,362
	Rate Base Calculation:				
27	Cumulative Incremental Capital Included in Rate Base	Line 9	$1,337,500	$1,337,500	$1,337,500
28	Accumulated Depreciation	- Line 20	($32,546)	($97,638)	($162,729)
29	Deferred Tax Reserve	- Line 26	($63,906)	($174,505)	($232,362)
30	Year End Rate Base	Sum of Lines 27 through 29	$1,241,049	$1,065,357	$942,409
	Revenue Requirement Calculation:				
31	Average Rate Base	Column (a) = Current Year Line 27 ÷ 2; Column (b & c) = (Prior Year Line 27 + Current Year Line 27) ÷ 2	$620,524	$1,153,203	$1,003,883
32	Pre-Tax ROR	1/	10.20%	10.20%	10.20%
33	Return and Taxes	Line 31 * Line 32	$63,293	$117,627	$102,396
34	Book Depreciation	Line 15	$32,546	$65,092	$65,092
35	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b & c) Line 8 * 3.176%	$0	$42,479	$42,479
36	Investment Tax Credit	Line 13 / 25 Years / (1 - 35%)	($24,692)	($24,692)	($24,692)
37	Tax Effect on ITC Flowthrough Items	Line 9 * 15% * 35% / (1-35%) * Line 14	4,321	4,321	4,321
38	**Annual Revenue Requirement**	**Sum of Lines 33 through 37**	**$75,468**	**$204,826**	**$189,596**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2020 Capital Investments
Solar Initiative

Line No.			Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Capital Repairs Deduction				
1	Plant Additions	Page 2 of 10, Line 3	$1,337,500		
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%		
3	Capital Repairs Deduction	Line 1 * Line 2	$0		
	Investment Tax Credit				
4	Plant Additions	Line 1	$1,337,500		
5	Investment Tax Credit Rate	Per Tax Department	30.00%		
6	Investment Tax Credit	Line 4 * Line 5	$401,250		
7	ITC Amortization	Per Tax Department	$0		
8	Unamortized ITC	Line 6 - Line 7	$401,250	$401,250	$401,250
	Bonus Depreciation				
9	Plant Additions	Line 1	$1,337,500		
10	Reduction of 50% of ITC Credit	Per Tax Department	85.00%		
11	Plant Additions eligible for Bonus Depreciation	Line 9 * Line 10	$1,136,875		
12	Less Capital Repairs Deduction	Line 3	$0		
13	Plant Additions Net of Capital Repairs Deduction	Line 9 - Line 12	$1,136,875		
14	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%		
15	Plant Eligible for Bonus Depreciation	Line 13 * Line 14	$1,136,875		
16	Bonus Depreciation Rate (April 2019 - December 2019)	1 * 75% * 30%	22.50%		
17	Bonus Depreciation Rate (January 2020 - March 2020)	1 * 25% * 0%	0.00%		
18	Total Bonus Depreciation Rate	Line 16 + Line 17	22.50%		
19	Bonus Depreciation	Line 15 * Line 18	$255,797		
	Remaining Tax Depreciation				
20	Plant Additions	Line 1	$1,337,500		
21	Reduction of 50% of ITC Credit	Per Tax Department	85.00%		
22	Plant Additions eligible for Bonus Depreciation	Line 20 * Line 21	$1,136,875		
23	Less Capital Repairs Deduction	Line 3	$0		
24	Less Bonus Depreciation	Line 19	$255,797		
25	Remaining Plant Additions Subject to 5 YR MACRS Tax Depreciation	Line 20 - Line 23 - Line 24	$881,078	$881,078	$881,078
26	5 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	20.00%	32.00%	19.20%
27	Remaining Tax Depreciation	Line 25 * Line 26	$176,216	$281,945	$169,167
28	FY20 Loss incurred due to retirements	Per Tax Department	$0		
29	Cost of Removal	Page 2 of 10, Line 8	$0		
30	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 19, 27, and 29	$432,013	$281,945	$169,167

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Revenue Requirement on Estimated Capital Investment 12 months ending March 31, 2021
Solar Initiative

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Estimated Capital Investment			
1	Solar Panels		$2,040,000	
2	Inverters		$510,000	
3	Total Estimated Capital Investment	Line 1 + Line 2	$2,550,000	$0
	Depreciable Net Capital Included in Rate Base			
4	Total Allowed Capital Included in Rate Base in Current Year	Line 3	$2,550,000	$0
5	Retirements	Line 4 * 0%	$0	$0
6	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 5	$2,550,000	$2,550,000
	Change in Net Capital Included in Rate Base			
7	Capital Included in Rate Base	Line 4	$2,550,000	$0
8	Cost of Removal		$0	$0
9	**Total Net Plant in Service Including Cost of Removal**	**Line 6 + Line 8**	**$2,550,000**	**$2,550,000**
	Tax Depreciation			
10	Vintage Year Tax Depreciation:			
11	2021 Spend	Page 5 of 10, Line 30	$433,500	$693,600
12	Cumulative Tax Depreciation	Previous Year Line 12 + Current Year Line 11	$433,500	$1,127,100
	Investment Tax Credit			
13	Unamortized Investment Tax Credit	Page 5 of 10, Line 8	$765,000	$765,000
	Book Depreciation			
14	Composite Book Depreciation Rate	As filed per R.I.P.U.C. Docket No. 4770	4.00%	4.00%
15	Book Depreciation	Column (a) = Line 1 * Line 13 * 50% ; Column (b) = Line 1 * Line 13	$40,800	$81,600
16	Cumulative Book Depreciation	Previous Year Line 16 + Current Year Line 15	$40,800	$122,400
17	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	8.33%	8.33%
18	Book Depreciation	Column (a) = Line 2 * Line 18 * 50% ; Column (b) = Line 2 * Line 18	$21,250	$42,500
19	Cumulative Book Depreciation	Previous Year Line 19 + Current Year Line 18	$21,250	$63,750
20	Total Cumulative Book Depreciation	Line 16	$62,050	$186,150
	Deferred Tax Calculation:			
21	Cumulative Book / Tax Timer	Line 12 - Line 20	$371,450	$940,950
22	Effective Tax Rate		35.00%	35.00%
23	Deferred Tax Reserve	Line 21 * Line 22	$130,008	$329,333
24	Less: FY 2021 Federal NOL		$0	$0
25	Less: Proration Adjustment	Col (a) = Page 9 of 10, Line 40; Col (b) = Page 10 of 10, Line 40	($70,584)	($108,218)
26	Net Deferred Tax Reserve	Sum of Lines 23 through 25	$59,424	$221,114
	Rate Base Calculation:			
27	Cumulative Incremental Capital Included in Rate Base	Line 9	$2,550,000	$2,550,000
28	Accumulated Depreciation	- Line 20	($62,050)	($186,150)
29	Deferred Tax Reserve	- Line 26	($59,424)	($221,114)
30	Year End Rate Base	Sum of Lines 27 through 29	$2,428,526	$2,142,736
	Revenue Requirement Calculation:			
31	Average Rate Base	Column (a) = Current Year Line 26 ÷ 2; Column (b) = (Prior Year Line 26 + Current Year Line 26) ÷ 2	$1,214,263	$2,285,631
32	Pre-Tax ROR	1/	10.20%	10.20%
33	Return and Taxes	Line 31 * Line 32	$123,855	$233,134
34	Book Depreciation	Line 15	$62,050	$124,100
35	Property Taxes	Tax Rate 3.176% MAL-7 - Columns (b) Line 8 * 3.176%	$0	$80,988
36	Investment Tax Credit	Line 13 / 25 Years / (1 - 35%)	($47,077)	($47,077)
37	Tax Effect on ITC Flowthrough Items	Line 9 * 15% * 35% / (1-35%) * Line 14	$8,238	$8,238
38	**Annual Revenue Requirement**	**Sum of Lines 33 through 37**	**$147,066**	**$399,384**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2021 Capital Investments
Solar Initiative

Line No.			Fiscal Year Ending March 31, 2021 (a)	Fiscal Year Ending March 31, 2022 (b)
	Capital Repairs Deduction			
1	Plant Additions	Page 4 of 10, Line 3	$2,550,000	
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%	
3	Capital Repairs Deduction	Line 1 * Line 2	$0	
	Investment Tax Credit			
4	Plant Additions	Line 1	$2,550,000	
5	Investment Tax Credit Rate	Per Tax Department	30.00%	
6	Investment Tax Credit	Line 4 * Line 5	$765,000	
7	ITC Amortization	Per Tax Department	$0	
8	Unamortized ITC	Line 6 - Line 7	$765,000	$765,000
	Bonus Depreciation			
9	Plant Additions	Line 1	$2,550,000	
10	Reduction of 50% of ITC Credit	Per Tax Department	85.00%	
11	Plant Additions eligible for Bonus Depreciation	Line 9 * Line 10	$2,167,500	
12	Less Capital Repairs Deduction	Line 3	$0	
13	Plant Additions Net of Capital Repairs Deduction	Line 9 - Line 12	$2,167,500	
14	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%	
15	Plant Eligible for Bonus Depreciation	Line 13 * Line 14	$2,167,500	
16	Bonus Depreciation Rate (April 2020 - December 2020)	0%	0.00%	
17	Bonus Depreciation Rate (January 2021 - March 2021)	0%	0.00%	
18	Total Bonus Depreciation Rate	Line 16 + Line 17	0.00%	
19	Bonus Depreciation	Line 15 * Line 18	$0	
	Remaining Tax Depreciation			
20	Plant Additions	Line 1	$2,550,000	
21	Reduction of 50% of ITC Credit	Per Tax Department	85.00%	
22	Plant Additions eligible for Bonus Depreciation	Line 20 * Line 21	$2,167,500	
23	Less Capital Repairs Deduction	Line 3	$0	
24	Less Bonus Depreciation	Line 19	$0	
25	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 20 - Line 23 - Line 24	$2,167,500	$2,167,500
26	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	20.00%	32.00%
27	Remaining Tax Depreciation	Line 25 * Line 26	$433,500	$693,600
28	FY21 Loss incurred due to retirements	Per Tax Department	$0	$0
29	Cost of Removal	Page 4 of 10, Line 8	$0	$0
30	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 19, 27, and 29	$433,500	$693,600

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Revenue Requirement on Estimated Capital Investment 12 months ending March 31, 2022
Solar Initiative

Line No.			Data Year 2 March 31, 2022 (a)
	Estimated Capital Investment		
1	Solar Panels		$4,140,000
2	Inverters		$1,035,000
3	Total Estimated Capital Investment	Line 1 + Line 2	$5,175,000
	Depreciable Net Capital Included in Rate Base		
4	Total Allowed Capital Included in Rate Base in Current Year	Line 3	$5,175,000
5	Retirements	Line 4 * 0%	$0
6	Net Depreciable Capital Included in Rate Base	Column (a) = Line 4 - Line 5; Column (b) = Prior Year Line 5	$5,175,000
	Change in Net Capital Included in Rate Base		
7	Capital Included in Rate Base	Line 4	$5,175,000
8	Cost of Removal		$0
9	**Total Net Plant in Service Including Cost of Removal**	**Line 6 + Line 8**	$5,175,000
	Tax Depreciation		
10	Vintage Year Tax Depreciation:		
11	2022 Spend	Page 5 of 10, Line 30	$900,450
12	Cumulative Tax Depreciation	Previous Year Line 12 + Current Year Line 11	$900,450
	Investment Tax Credit		
13	Unamortized Investment Tax Credit	Page 5 of 10, Line 8	$1,345,500
	Book Depreciation		
14	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	4.00%
15	Book Depreciation	Column (a) = Line 1* Line 12 * 50%	$82,800
16	Cumulative Book Depreciation	Previous Year Line 16 + Current Year Line 15	$82,800
17	Composite Book Depreciation Rate	As approved per R.I.P.U.C. Docket No. 4770	8.33%
18	Book Depreciation	Column (a) = Line 2 * Line 12 * 50%	$43,125
19	Cumulative Book Depreciation	Previous Year Line 19 + Current Year Line 18	$43,125
20	Total Cumulative Book Depreciation	Line 16	$125,925
	Deferred Tax Calculation:		
21	Cumulative Book / Tax Timer	Line 12 - Line 20	$774,525
22	Effective Tax Rate		35.00%
23	Deferred Tax Reserve	Line 21 * Line 22	$271,084
24	Less: FY 2022 Federal NOL		$0
25	Less: Proration Adjustment	Col (a) = Page 10 of 10, Line 40	($147,177)
26	Net Deferred Tax Reserve	Sum of Lines 23 through 25	$123,906
	Rate Base Calculation:		
27	Cumulative Incremental Capital Included in Rate Base	Line 9	$5,175,000
28	Accumulated Depreciation	- Line 20	($125,925)
29	Deferred Tax Reserve	- Line 26	($123,906)
30	Year End Rate Base	Sum of Lines 27 through 29	$4,925,169
	Revenue Requirement Calculation:		
31	Average Rate Base	Column (a) = Current Year Line 26 ÷ 2	$2,462,584
32	Pre-Tax ROR		1/ 10.20%
33	Return and Taxes	Line 31 * Line 32	$251,184
34	Book Depreciation	Line 15	$125,925
35	Property Taxes	Tax Rate 3.176% MAL-7	$0
36	Investment Tax Credit	Line 13 / 25 Years / (1 - 35%)	($82,800)
37	Tax Effect on ITC Flowthrough Items	Line 9 * 15% * 35% / (1-35%) * Line 14	$16,719
38	**Annual Revenue Requirement**	**Sum of Lines 33 through 37**	**$311,028**

1/ Weighted Average Cost of Capital as file in R.I.P.U.C. Docket No. 4770, Schedule MAL-1-ELEC

	Ratio	Rate	Rate	Taxes	Return
Long Term Debt	48.47%	4.69%	2.27%		2.27%
Short Term Debt	0.45%	1.76%	0.01%		0.01%
Preferred Stock	0.11%	4.50%	0.00%		0.00%
Common Equity	50.97%	10.10%	5.15%	2.77%	7.92%
	100.00%		7.43%	2.77%	10.20%

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Tax Depreciation and Repairs Deduction on Fiscal Year 2022 Capital Investments
Solar Initiative

Line No.			Fiscal Year Ending March 31, 2022 (a)
	Capital Repairs Deduction		
1	Plant Additions	Page 6 of 10, Line 3	$5,175,000
2	Capital Repairs Deduction Rate	Per Tax Department	0.00%
3	Capital Repairs Deduction	Line 1 * Line 2	$0
	Investment Tax Credit		
4	Plant Additions	Line 1	$5,175,000
5	Investment Tax Credit Rate	Per Tax Department	26.00%
6	Investment Tax Credit	Line 4 * Line 5	$1,345,500
7	ITC Amortization	Per Tax Department	$0
8	Unamortized ITC	Line 6 - Line 7	$1,345,500
	Bonus Depreciation		
9	Plant Additions	Line 1	$5,175,000
10	Reduction of 50% of ITC Credit	Per Tax Department	87.00%
11	Plant Additions eligible for Bonus Depreciation	Line 9 * Line 10	$4,502,250
12	Less Capital Repairs Deduction	Line 3	$0
13	Plant Additions Net of Capital Repairs Deduction	Line 9 - Line 12	$4,502,250
14	Percent of Plant Eligible for Bonus Depreciation	Per Tax Department	100.00%
15	Plant Eligible for Bonus Depreciation	Line 13 * Line 14	$4,502,250
16	Bonus Depreciation Rate (April 2021 - December 2021)	0%	0.00%
17	Bonus Depreciation Rate (January 2022 - March 2022)	0%	0.00%
18	Total Bonus Depreciation Rate	Line 16 + Line 17	0.00%
19	Bonus Depreciation	Line 15 * Line 18	$0
	Remaining Tax Depreciation		
20	Plant Additions	Line 1	$5,175,000
21	Reduction of 50% of ITC Credit	Per Tax Department	87.00%
22	Plant Additions eligible for Bonus Depreciation	Line 20 * Line 21	$4,502,250
23	Less Capital Repairs Deduction	Line 3	$0
24	Less Bonus Depreciation	Line 19	$0
25	Remaining Plant Additions Subject to 20 YR MACRS Tax Depreciation	Line 20 - Line 23 - Line 24	$4,502,250
26	20 YR MACRS Tax Depreciation Rates	Per IRS Publication 946	20.00%
27	Remaining Tax Depreciation	Line 25 * Line 26	$900,450
28	FY22 Loss incurred due to retirements	Per Tax Department	$0
29	Cost of Removal	Page 6 of 10, Line 8	$0
30	Total Tax Depreciation and Repairs Deduction	Sum of Lines 3, 19, 27, and 29	$900,450

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Fiscal Year 2020 Net Deferred Tax Reserve Proration
Solar Initiative

Line No.			(a)= Column (b) Total	(b) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration			
1	Book Depreciation	Page 2 of 10, Line 15 + Line 18	$32,546	$32,546
2	Bonus Depreciation	Page 3 of 10, Line 19	($255,797)	($255,797)
3	Remaining MACRS Tax Depreciation	Page 3 of 10, Line 27	($176,216)	($176,216)
4	FY20 tax (gain)/loss on retirements	Page 3 of 10, Line 28	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($399,467)	($399,467)
6	Effective Tax Rate	Per Tax Department	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($139,814)	($139,814)
	Deferred Tax Not Subject to Proration			
8	Capital Repairs Deduction	Page 3 of 10, Line 3	$0	$0
9	Cost of Removal	Page 3 of 10, Line 29	$0	$0
10	Book/Tax Depreciation Timing Difference at 3/31/2020		$0	$0
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0
12	Effective Tax Rate		35.00%	35.00%
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0
14	Total Deferred Tax Reserve	Line 7 + Line 13	($139,814)	($139,814)
15	Net Operating Loss	Page 2 of 10, Line 24	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($139,814)	($139,814)
	Allocation of FY 2020 Estimated Federal NOL			
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($399,467)	($399,467)
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($399,467)	($399,467)
20	Total FY 2020 Federal NOL	Page 2 of 10, Line 24 / 35%	$0	$0
21	Allocated FY 2020 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0
22	Allocated FY 2020 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0
23	Effective Tax Rate	Per Tax Department	35.00%	35.00%
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($139,814)	($139,814)

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l)	(l)
	Proration Calculation				
26	April 2019	30	91.78%	($10,693)	($10,693)
27	May 2019	31	83.29%	($9,704)	($9,704)
28	June 2019	30	75.07%	($8,746)	($8,746)
29	July 2019	31	66.58%	($7,757)	($7,757)
30	August 2019	31	58.08%	($6,767)	($6,767)
31	September 2019	30	49.86%	($5,810)	($5,810)
32	October 2019	31	41.37%	($4,820)	($4,820)
33	November 2019	30	33.15%	($3,862)	($3,862)
34	December 2019	31	24.66%	($2,873)	($2,873)
35	January 2020	31	16.16%	($1,883)	($1,883)
36	February 2020	28	8.49%	($990)	($990)
37	March 2020	31	0.00%	$0	$0
38	Total	365		($63,906)	($63,906)
39	Deferred Tax Without Proration	Line 25		($139,814)	($139,814)
40	Proration Adjustment	Line 38 - Line 39		$75,908	$75,908

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Fiscal Year 2021 Net Deferred Tax Reserve Proration
Solar Initiative

Line No.			(a)=Sum of (b) through (c) Total	(b) Vintage Year March 31, 2021	(c) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration				
1	Book Depreciation	Col (b) = Page 4 of 10, Line 15 + Line 18 ;Col (c) = Page 2 of 10, Line 15 + Line 18	$127,142	$62,050	$65,092
2	Bonus Depreciation	Page 5 of 10, Line 19	$0	$0	
3	Remaining MACRS Tax Depreciation	Col (b) Page 5 of 10, Line 27; Col (c) , Line 27	($715,445)	($433,500)	($281,945)
4	FY21 tax (gain)/loss on retirements	Col (b) Page 5 of 10, Line 28; Col (c) , Line 28	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($588,303)	($371,450)	($216,853)
6	Effective Tax Rate	Per Tax Department	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($205,906)	($130,008)	($75,899)
	Deferred Tax Not Subject to Proration				
8	Capital Repairs Deduction	Page 5 of 10, Line 3	$0	$0	
9	Cost of Removal	Page 5 of 10, Line 29	$0	$0	
10	Book/Tax Depreciation Timing Difference at 3/31/2021		$0	$0	
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0	
12	Effective Tax Rate		35.00%	35.00%	
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0	
14	Total Deferred Tax Reserve	Line 7 + Line 13	($205,906)	($130,008)	($75,899)
15	Net Operating Loss	Page 4 of 10, Line 24	$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($205,906)	($130,008)	($75,899)
	Allocation of FY 2021 Estimated Federal NOL				
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($371,450)	($371,450)	
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0	
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($371,450)	($371,450)	
20	Total FY 2021 Federal NOL		$0	$0	
21	Allocated FY 2021 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0	
22	Allocated FY 2021 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0	
23	Effective Tax Rate	Per Tax Department	35.00%	35.00%	
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0	
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($205,906)	($130,008)	($75,899)

	Proration Calculation	(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (m)	(l)	(m)
26	April 2020	30	91.78%	($15,749)	($9,943)	($5,805)
27	May 2020	31	83.29%	($14,291)	($9,023)	($5,268)
28	June 2020	30	75.07%	($12,881)	($8,133)	($4,748)
29	July 2020	31	66.58%	($11,424)	($7,213)	($4,211)
30	August 2020	31	58.08%	($9,966)	($6,293)	($3,674)
31	September 2020	30	49.86%	($8,556)	($5,402)	($3,154)
32	October 2020	31	41.37%	($7,099)	($4,482)	($2,617)
33	November 2020	30	33.15%	($5,688)	($3,592)	($2,097)
34	December 2020	31	24.66%	($4,231)	($2,671)	($1,560)
35	January 2021	31	16.16%	($2,774)	($1,751)	($1,022)
36	February 2021	28	8.49%	($1,457)	($920)	($537)
37	March 2021	31	0.00%	$0	$0	$0
38	Total	365		($94,115)	($59,424)	($34,692)
39	Deferred Tax Without Proration	Line 25		($205,906)	($130,008)	($75,899)
40	Proration Adjustment	Line 38 - Line 39		$111,791	$70,584	$41,207

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

The Narragansett Electric Company
d/b/a National Grid
Power Sector Transformation (PST)
Calculation of Fiscal Year 2022 Net Deferred Tax Reserve Proration
Solar Initiative

Line No.			(a)=Sum of (b) through (d) Total	(b) Vintage Year March 31, 2022	(c) Vintage Year March 31, 2021	(d) Vintage Year March 31, 2020
	Deferred Tax Subject to Proration					
1	Book Depreciation	Col (b) = Page 6 of 10, Line 15 + Line 18; Col (c) = Page 4 of 10, Line 15 + Line 18; Col (d) = Page 2 of 10, Line 15 + Line 18	$315,117	$125,925	$124,100	$65,092
2	Bonus Depreciation	Page 7 of 10, Line 19	$0	$0		
3	Remaining MACRS Tax Depreciation	Col (b) Page 7 of 10, Line 27; Col (d) Page 5 of 10, Line 27; Col (d) Page 3 of 10, Line 27	($1,763,217)	($900,450)	($693,600)	($169,167)
4	FY22 tax (gain)/loss on retirements	Col (b) Page 7 of 10, Line 28; Col (c) Page 5 of 10, Line 28; Col (d) Page 3 of 10, Line 28	$0	$0	$0	$0
5	Cumulative Book / Tax Timer	Sum of Lines 1 through 4	($1,448,100)	($774,525)	($569,500)	($104,075)
6	Effective Tax Rate	Per Tax Department	35.00%	35.00%	35.00%	35.00%
7	Deferred Tax Reserve	Line 5 * Line 6	($506,835)	($271,084)	($199,325)	($36,426)
	Deferred Tax Not Subject to Proration					
8	Capital Repairs Deduction	Page 7 of 10, Line 3	$0	$0		
9	Cost of Removal	Page 7 of 10, Line 29	$0	$0		
10	Book/Tax Depreciation Timing Difference at 3/31/2022		$0	$0		
11	Cumulative Book / Tax Timer	Line 8 + Line 9 + Line 10	$0	$0		
12	Effective Tax Rate	Per Tax Department	35.00%	35.00%		
13	Deferred Tax Reserve	Line 11 * Line 12	$0	$0		
14	Total Deferred Tax Reserve	Line 7 + Line 13	($506,835)	($271,084)	($199,325)	($36,426)
15	Net Operating Loss	, Line 24	$0	$0	$0	$0
16	Net Deferred Tax Reserve	Line 14 + Line 15	($506,835)	($271,084)	($199,325)	($36,426)
	Allocation of FY 2022 Estimated Federal NOL					
17	Cumulative Book/Tax Timer Subject to Proration	Col (b) = Line 5	($774,525)	($774,525)		
18	Cumulative Book/Tax Timer Not Subject to Proration	Line 11	$0	$0		
19	Total Cumulative Book/Tax Timer	Line 17 + Line 18	($774,525)	($774,525)		
20	Total FY 2022 Federal NOL		$0	$0		
21	Allocated FY 2022 Federal NOL Not Subject to Proration	(Line 18 / Line 19) * Line 20	$0	$0		
22	Allocated FY 2022 Federal NOL Subject to Proration	(Line 17 / Line 19) * Line 20	$0	$0		
23	Effective Tax Rate	Per Tax Department	35.00%	35.00%		
24	Deferred Tax Benefit subject to proration	Line 22 * Line 23	$0	$0		
25	Net Deferred Tax Reserve subject to proration	Line 7 + Line 24	($506,835)	($271,084)	($199,325)	($36,426)

		(i) Number of Days in Month	(j) Proration Percentage	(k)= Sum of (l) through (n)	(l)	(m)	(n)
	Proration Calculation						
26	April 2021	30	91.78%	($38,765)	($20,734)	($15,245)	($2,786)
27	May 2021	31	83.29%	($35,178)	($18,815)	($13,834)	($2,528)
28	June 2021	30	75.07%	($31,706)	($16,958)	($12,469)	($2,279)
29	July 2021	31	66.58%	($28,119)	($15,040)	($11,058)	($2,021)
30	August 2021	31	58.08%	($24,532)	($13,121)	($9,648)	($1,763)
31	September 2021	30	49.86%	($21,060)	($11,264)	($8,282)	($1,514)
32	October 2021	31	41.37%	($17,473)	($9,346)	($6,872)	($1,256)
33	November 2021	30	33.15%	($14,002)	($7,489)	($5,506)	($1,006)
34	December 2021	31	24.66%	($10,414)	($5,570)	($4,096)	($748)
35	January 2022	31	16.16%	($6,827)	($3,652)	($2,685)	($491)
36	February 2022	28	8.49%	($3,587)	($1,919)	($1,411)	($258)
37	March 2022	31	0.00%	$0	$0	$0	$0
38	Total	365		($231,663)	($123,906)	($91,107)	($16,650)
39	Deferred Tax Without Proration	Line 25		($506,835)	($271,084)	($199,325)	($36,426)
40	Proration Adjustment	Line 38 - Line 39		$275,172	$147,177	$108,218	$19,777

Column Notes:
(j) Sum of remaining days in the year (Col (i)) ÷ 365
(l) through (r) = Current Year Line 25 ÷ 12 * Current Month Col (j)

Appendix 10.10

Appendix 10.10

Power Sector Transformation Provision

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The prices for Retail Delivery Service contained in each of the Company's rate class tariffs are subject to adjustment to reflect Power Sector Transformation ("PST") Factors, designed to recover the Company's costs incurred as a result of the operation of this PST Provision.

1.0 GENERAL

1.1 Purpose

The PST Provision provides for the recovery by the Company of forecasted and actual capital investment and operations and maintenance ("O&M") expense, subject to full reconciliation, as defined herein, for the following PST Initiatives:

(1) PST Expansion of Grid Modernization;

(2) Electric Transportation Initiative;

(3) Electric Heat Initiative;

(4) Energy Storage System Program;

(5) Solar Demonstration Program; and

(6) Income Eligible Customer Rewards Program.

The PST Provision also provides the Company an opportunity to earn performance incentives associated with the PST Initiatives and to recover earned performance incentives through the PST Factors.

1.2 Applicability

The PST Provision provides for the recovery of incremental costs associated with the Company's PST Plan approved by the Commission. To be eligible for recovery, PST Plan costs must: (1) be pre-authorized by the Commission; (2) include only costs of investing in PST Initiatives; (3) be incremental to those costs that the Company currently recovers through any other rate, charge, or factor; and (4) be prudently incurred.

The Company's rates for Retail Delivery Service are subject to adjustment to reflect the operation of this PST Provision. The PST Factors, as defined herein, shall be applied to all retail delivery service bills as determined in accordance with the provisions of Section 4.0 and Section 5.0 below. The PST Factors shall be adjusted annually, subject to the Commission's review and approval.

2.0. ANNUAL PST PLAN

By January 1 of each year, the Company shall submit to the Commission for review and approval its proposed PST Plan for the upcoming PST Plan Year. The PST Plan shall consist of Forecasted Capital Investment, Forecasted O&M Expense, and, if mutually agreed upon by the Division and the Company,

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any other capital or O&M expense relating to PST Initiatives, accompanied by the revenue requirement determined by the costs presented in the PST Plan.

Subject to Commission approval, the first PST Plan Year shall be the period ending March 31, 2019. The Company shall not implement PST Factors effective April 1, 2018, unless otherwise approved by the Commission. The Company shall include the Annual Revenue Requirement, or portion thereof, on Actual CapEx and Actual O&M Expense for the first PST Plan Year in its annual PST Reconciliation Filing by August 1 following the completion of the first PST Plan Year, and shall recover the Annual Revenue Requirement, or portion thereof, as approved by the Commission, through PST Reconciliation Factors effective the following October 1.

3.0. ANNUAL REPORT ON PST PLAN ACTIVITIES

By August 1 of each year as part of the annual PST Reconciliation Filing, the Company shall include a report on the prior PST Plan Year's PST activities. In implementing its PST Plan, the circumstances encountered during the preceding PST Plan Year may require reasonable deviations from the original PST Plan for the PST Plan Year approved by the Commission. In such cases, for each PST Initiative, the Company shall include in the report an explanation of (1) Actual Capital Investment in excess of Forecasted Capital Investment by ten (10) percent, and (2) Actual O&M Expense in excess of Forecasted O&M Expense by ten (10) percent. For cost recovery purposes, the Company has the burden to show that any such deviations were due to circumstances out of its reasonable control or, if within its control, were reasonable and prudent.

4.0 DEFINITIONS

"Accumulated Deferred Income Taxes" shall mean the net reduction in Federal income taxes associated with the use of accelerated depreciation allowed for income tax purposes.

"Accumulated Reserve for Depreciation" shall mean the cumulative net credit balance arising from the provision for Depreciation Expense.

"Actual CapEx" shall mean all capital investment associated with each PST Initiative listed in Section 1.1, plus cost of removal, for a PST Plan Year, and not included in the Company's Infrastructure, Safety, and Reliability ("ISR") Plan.

"Actual O&M Expense" shall mean the O&M expense recorded by the Company for a given PST Plan Year associated with its PST Initiatives, not otherwise recovered through any other rates, charges, or factors.

"Annual Revenue Requirement" shall mean the return and taxes on year-end Rate Base, at a rate equal to the pre-tax weighted average cost of capital as approved by the Commission in the most recent general rate case, plus the annual depreciation expense on Cumulative CapEx as defined below, plus the annual municipal property taxes on Cumulative CapEx. For the purpose of calculating the PST Reconciliation Factors, the Company will use the sum of Actual CapEx for all PST Plan Years through the prior PST Plan Year in place of Cumulative CapEx.

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"Cumulative CapEx" shall mean the cumulative Actual CapEx for years prior to the PST Plan Year plus Forecasted CapEx for the PST Plan Year.

"Depreciation Expense" shall mean the return of the Company's in-service PST investment in Rate Base at established depreciation rates as approved by the Commission.

"Forecasted CapEx" shall mean the estimated capital investment and cost of removal anticipated to be recorded as plant in service by the Company for a given PST Plan Year associated with distribution system infrastructure consistent with its capital forecast, and not included in the Company's ISR Plan.

"Forecasted kWh" shall mean the forecasted amount of electricity, as measured in kilowatt-hours ("kWh"), to be delivered to the Company's retail delivery service customers for the period during which the per-kWh PST Factors and per-kWh PST Reconciliation Factors will be in effect.

"Forecasted Number of Bills" shall mean the forecasted number of bills to be issued to the Company's retail delivery service customers for the period during which the per-bill PST Factors and per-bill PST Reconciliation Factors will be in effect. Where applicable, the Company shall use estimated number of street lighting fixtures for the street lighting rate classes in lieu of forecasted number of bills.

"Forecasted O&M Expense" shall mean the estimated incremental O&M expense for a given PST Plan Year associated with its PST Initiatives, and not otherwise recovered through any the Company's other rates, charges, or factors.

"O&M" shall mean operation and maintenance expenses recorded in FERC accounts 580 through 598 and administrative and general expenses recorded in FERC accounts 920 through 935, pursuant to FERC's Code of Federal Regulations. O&M shall also mean the amortization of capital investment in system development and/or enhancements recorded on the general ledger of an affiliate of the Company and charged to the Company by the affiliate, with the Company recording the charge as an expense.

"PST Factors" shall mean the sum of the per-kWh and per-bill factors, as applicable, for each rate class designed to recover the total of the Annual Revenue Requirement on Cumulative CapEx and the Forecasted O&M Expense for each PST Initiative, based on Forecasted kWh and Forecasted Number of Bills, as applicable, for a PST Plan Year. PST Factors shall consist of the following factors, as defined below: GMEFs, ETFs, EHFs, ESSFs, SPFs, RAFs, and PIFs.

"PST Plan Year" shall mean the year beginning April 1 of the current year and running through March 31 of the subsequent year during which the proposed PST Factors will be in effect.

"PST Reconciliation Factors" shall mean the sum of the per-kWh and per-bill factors, as applicable, designed to recover or credit the over or under billing of the total of the Annual Revenue Requirement on the sum of Actual CapEx for all PST Plan Years through the prior PST Plan Year and Actual O&M Expense for each PST Initiative, based on Forecasted kWh or Forecasted Number of Bills, as applicable, for the recovery/refund period beginning October 1. PST Reconciliation Factors shall consist of the following factors, as defined below: GMERFs, ETRFs, EHRFs, ESSRFs, SPRFs, RARFs, and PIRFs.

"Rate Base" shall mean the investment value upon which the Company is permitted to earn its authorized rate of return and shall include Cumulative CapEx, Accumulated Reserve for Depreciation, and

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Accumulated Deferred Income Taxes for the purpose of calculating the Annual Revenue Requirement included in the determination of the PST Factors. For the purpose of calculating the PST Reconciliation Factors, the Company will use the sum of Actual CapEx for all PST Plan Years through the prior PST Plan Year in place of Cumulative CapEx.

5.0 PST RECOVERY

The Company shall recover the PST capital investment, including associated cost of removal, and O&M expense pursuant to this PST Provision and subject to the review and approval of the Commission, only for PST Initiatives the Company is authorized to undertake by the Commission. Capital investment, including associated cost of removal, recovered through this PST Provision shall be excluded from recovery through the Company's ISR Plan. The Company shall be allowed to recover the revenue requirement on Cumulative CapEx and O&M Expense incurred through the date upon which new base distribution rates begin recovering the revenue requirement of PST capital investment and ongoing O&M expense. All amounts earned and incurred by the Company prior to the date on which new base distribution rates, which include ongoing recovery of PST costs, take effect and as approved by the Commission for recovery, shall be recovered through this PST Provision.

The factors for each PTS Initiative, as defined below, shall recover the total of the Annual Revenue Requirement on Cumulative CapEx, included Forecasted CapEx, and Forecasted O&M Expense, as approved by the Commission in the Company's annual PST Plan Filings. The factors shall be effective during the PST Plan Year, coincident with the PST Plan upon which they are calculated. The Company shall calculate separate revenue requirements to which it will add the estimate of O&M expense for each PST Initiative and shall calculated separate factors for each PST Initiative. For billing purposes, the Company shall aggregate the factors for all PST Initiatives into the PST Factors.

PST capital investment and O&M expense recovery for each PST Initiative shall include separate annual reconciliations of each PST Initiative's Annual Revenue Requirement on the sum of Actual CapEx for all PTS Plan Years plus Actual O&M Expense to actual billed revenue generated from the PST Initiative's factors for the applicable PTS Plan Year. The reconciliation of the recovery shall accrue interest monthly at the same rate as that paid on customer deposits. The recovery or credit of the reconciliation amounts, including interest, shall be reflected in the PST Reconciliation Factors. The Company shall submit a filing by August 1 of each year ("Reconciliation Filing"), in which the Company shall propose the PTS Reconciliation Factors to become effective for the 12 months beginning October 1. The amounts approved for recovery or refund through the PTS Reconciliation Factors shall be subject to reconciliation with amounts billed through the PTS Reconciliation Factors, and shall accrue interest monthly at the same rate as that paid on customer deposits, and any difference, including interest, reflected in future PTS Reconciliation Factors. For billing purposes, the Company shall calculate reconciliation factors for each PST Initiative, and aggregate the reconciliation factors for all PST Initiatives into the PST Reconciliation Factors.

6.0 PST EXPANSION OF GRID MODERNIZATION

The PST Grid Modernization Expansion ("GME") activities consist of the following functionalities to be deployed over a period of five years commencing with the Commission's approval of the Company's PST Program:

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(1) System Data Portal: Distributed Energy Resources Provider Data and Information, a Grid Data Portal, Locational Value Analysis capability, and Hosting Capacity;
(2) Advanced Metering Functionality ("AMF"): a Customer Portal, Customer Choice Decision Support Analytics capability, Customer Energy Information and Analytics capability, Smart Meters, and Advanced Meters;
(3) Feeder Monitoring Sensors: Sensing and Measurement Technology;
(4) Control Center Enhancements: Distribution Management System ("DMS"), Geographic Information System ("GIS"), Network Model, and the Supervisory Control and Data Acquisition ("SCADA") system;
(5) Operational Data Management;
(6) Telecommunications: Operational Communications; and
(7) Cybersecurity.

The GME Factors ("GMEFs") are designed to recover the Company's investment in and ongoing O&M expense incurred as a result of the Company deploying its GME activities as approved by the Commission.

GME capital costs shall consist of the Company's capitalized cost, plus cost of removal and municipal property taxes, of all assets and systems deployed pursuant to a plan approved by the Commission and recorded as plant in-service. The Company shall calculate two Annual Revenue Requirements: a Customer-Related Annual Revenue Requirement based on Customer-Related Cumulative CapEx and a Distribution/Shared Annual Revenue Requirement based on Distribution/Shared Cumulative CapEx.

GME capital costs shall be categorized as Customer-Related and Distribution/Shared. Customer-Related capital costs shall be the capitalized costs of assets and systems placed into service as approved by the Commission associated with AMF as part of the GME within a PST Plan. Distribution/Shared capital costs shall be all other GME capital costs associated within a PST Plan as approved by the Commission that is not specifically categorized as Customer-Related.

O&M expense shall consist of the Company's incremental O&M expense incurred by the Company as a result of deploying its GME pursuant to a PST Plan approved by the Commission and not recovered through any of the Company's other rates or charges. O&M expense shall be categorized as Customer-Related O&M expense and Distribution/Shared O&M expense. Customer-Related O&M expense shall be the incremental O&M expense approved by the Commission associated with AMF as part of the GME within a PST Plan. Distribution/Shared O&M expense shall be all other GME O&M expense within a PST Plan as approved by the Commission that is not specifically categorized as Customer-Related.

The Company shall allocate the Customer-Related Annual Revenue Requirement for the purpose of calculating rate-class specific per-bill charges applicable to all Retail Delivery Service customers except those receive service on the Company's streetlighting rate classes to the extent streetlighting customers are receiving unmetered service. The Company shall allocate the Customer-Related Annual Revenue Requirement to each rate class based on the Meter/Billing Allocator below, which represents the percentage of meter-related rate base and customer billing expense allocated to each rate class as determined from the Company's most recent general rate case as follows:

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Rate A-16/A-60	60.41%
Rate C-06	27.29%
Rate G-02	9.46%
Rate G-32/X-01	2.84%

The Company shall allocate the Customer-Related Forecasted O&M Expense for the purpose of calculating rate-class specific per-bill charges applicable to all Retail Delivery Service customers except those receive service on the Company's streetlighting rate classes to the extent streetlighting customers are receiving unmetered service. The Company shall allocate the Customer-Related Forecasted O&M Expense to each rate class based on the Meter/Customer Expense Allocator below, which represents the percentage of meter-related and customer service O&M expense allocated to each rate class as determined from the Company's most recent general rate case as follows:

Rate A-16/A-60	73.38%
Rate C-06	19.24%
Rate G-02	5.78%
Rate G-32/X-01	1.60%

The Company shall combine the per-bill Customer-Related GMEFs calculated above for billing purposes.

The Company shall allocate the Distribution/Shared Annual Revenue Requirement for the purpose of calculating rate-class specific per-kWh rates applicable to all Retail Delivery Service customers. The Company shall allocate the Distribution/Shared Annual Revenue Requirement to each rate class based on the Rate Base Allocator below, which represents the percentage of total rate base allocated to each rate class as determined from the Company's most recent general rate case as follows:

Rate A-16/A-60	53.37%
Rate C-06	10.27%
Rate G-02	16.03%
Rate G-32	17.17%
Rate X-01	0.03%
Streetlighting	1.13%

The Company shall allocate the Distribution/Shared Forecasted O&M Expense for purposes of calculating rate-class specific per-kWh rates applicable to all Retail Delivery Service customers. The Company shall allocate the Distribution/Shared Forecasted O&M Expense to each rate class based on the Distribution Revenue Allocator below, which represents the percentage of final revenue requirement allocated to each rate class as determined in the Company's most recent general rate case as follows:

Rate A-16/A-60	56.33%
Rate C-06	10.81%
Rate G-02	14.87%
Rate G-32	15.11%
Rate X-01	0.22%
Streetlighting	2.66%

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The Company shall combine the per-kWh Distribution/Shared GMEFs calculated above for billing purposes.

In the Reconciliation Filing, the Company shall reconcile the Annual Revenue Requirement on actual Cumulative CapEx through the prior PST Plan Year and Actual O&M Expense incurred during the prior PST Plan Year to the actual amount of revenue billed to customers through the GMEFs. The Company shall prepare separate reconciliations for each of the four categories of recovery identified above. The excess or deficiency, including interest at the interest rate paid on customer deposits, shall be allocated to the Company's rate classes based upon the applicable allocators stated above, and shall be the basis for the GME Reconciliation Factors ("GMERFs"), calculated consistent with the calculation of the GMEFs described above.

7.0 ELECTRIC TRANSPORTATION INITIATIVE

The Electric Transportation Factor ("ETF") is designed to recover the Company's investment in and incremental O&M expense, pursuant to the Company's Electric Transportation Initiative ("ETI"), as approved by the Commission, consisting of the following:

(1) Charging Station Demonstration Program: (a) ownership and O&M expense of Electric Vehicle Supply Equipment ("EVSE") constructed, owned, and operated by the Company; (b) the capital costs of typical distribution infrastructure required to provide service to EVSEs, including for customer-operated EVSE and Company-operated EVSE; (c) the capital costs of electrical equipment on the customer's property required to install EVSE, with the equipment constructed, owned, and operated by the Company; (d) rebates paid to customers who purchase eligible EVSEs; (e) the capital cost and O&M expense of developing and/or enhancing systems to bill the charging rates for Company-owned and operated EVSEs;
(2) Off-Peak Charging Rebate Pilot: (a) rebates paid to eligible Electric Vehicle ("EV") drivers for charging their EV's during defined off-peak hours; (b) the cost of monitoring devices or other technology for the collection of EV data; (c) the cost of developing and/or enhancing systems or otherwise administering the pilot; and (d) the cost of other incentives for EV drivers exhibiting desired EV behavior;
(3) Discount Pilot for Direct Current Fast Charging ("DCFC") Accounts: the bill discount provided on electric bills for eligible customers installing DCFC stations, the cost of billing system modifications, marketing, and other administrative costs to provide the discount;
(4) Company Fleet Expansion: the cost of incremental heavy-duty electrified trucks used by the Company in its daily activities;
(5) Transportation Education and Outreach ("E&O"): the cost of E&O activities; and
(6) Evaluation: the cost of evaluating the above programs and pilots.

ETI capital costs shall consist of the Company's capitalized cost, plus municipal property taxes, on ESVE, distribution system infrastructure, and electrical equipment installed on participating customers' property, along with any capitalized enhancements to the Company's CSS or other systems, and recorded as plant in-service on the Company's general ledger.

ETI O&M expense shall represent incremental O&M expense that is not recorded as a capital investment of the Company, less Site Host Participation Payments from customers having a Company-owned ESVE at their service location, consisting of:

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(1) O&M expense incurred to operate and maintain Company-owned EVSEs;
(2) any enhancements to the Company's CSS or other systems not eligible to be capitalized;
(3) rebates paid to eligible customers for their installation of Level 2 EVSEs;
(4) rebates, incentives, and monitoring equipment provided through the Off-Peak Charging Rebate Pilot;
(5) bill discounts provided to eligible customers through the Discount Pilot for DCFC Accounts;
(6) incremental lease or vehicle modification costs of heavy-duty electrified trucks and ongoing O&M expense through the Company Fleet Expansion;
(7) E&O, marketing, and evaluation costs; and
(8) program management and administration.

The Company shall recover the Annual Revenue Requirement on Cumulative CapEx plus Forecasted O&M Expense through the ETF. The ETF shall be a uniform per-kWh rate applicable to all Retail Delivery Service customers based on kWh deliveries.

In the Reconciliation Filing, the Company shall reconcile the Annual Revenue Requirement on actual Cumulative CapEx through the prior PST Plan Year and Actual O&M Expense incurred during the prior PST Plan Year to the actual amount of revenue billed to customers through the ETF and actual Site Host Participation Payments received during the prior PST Plan Year. The excess or deficiency, including interest at the interest rate paid on customer deposits, shall be the basis for the ET Reconciliation Factor ("ETRF"). The Company shall calculate the ETRF based on Forecasted kWh for the period October 1 through the following September 30.

8.0 ELECTRIC HEAT INITIATIVE

The Electric Heat Factor ("EHF") is designed to recover the Company's investment in ground heat exchangers constructed, owned, and operated by the Company, any ongoing O&M expense on such ground heat exchangers, plus expenses associated with the other elements under the Company's EH Initiative as identified below.

EH capital costs shall consist of the Company's capitalized cost, plus municipal property taxes, on Company-installed ground heat exchangers through the GSHP Program of the EH Initiative and recorded as plant in-service.

EH O&M expense shall represent incremental O&M expenses of:

(1) GSHP Program costs consisting of program administration, consultant costs for system design, project management, ongoing O&M, and evaluation costs;
(2) Equipment Incentives Program costs consisting of equipment incentives paid to eligible customers, outreach and marketing cost, and program administration costs;
(3) Community-Based Outreach costs consisting of program administration, consultant costs for program design and evaluation, and marketing costs ; and
(4) Oil/Propane Dealer Training Program costs consisting of incremental costs to develop and market the program, including consultant costs for developing the training program and delivering the training, and program administration costs.

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The Company shall recover the Annual Revenue Requirement on Cumulative CapEx plus Forecasted O&M Expense through the EHF. The EHF shall be a uniform per-kWh rate applicable to all Retail Delivery Service customers based on kWh deliveries.

In the Reconciliation Filing, the Company shall reconcile the Annual Revenue Requirement on actual Cumulative CapEx through the prior PST Plan Year and Actual O&M Expense incurred during the prior PST Plan Year to the actual amount of revenue billed to customers through the EHF. The excess or deficiency, including interest at the interest rate paid on customer deposits, shall be the basis for the EH Reconciliation Factor ("EHRF"). The Company shall calculate the EHRF based on Forecasted kWh for the period October 1 through the following September 30.

9.0 ENERGY STORAGE SYSTEM PROGRAM

The Energy Storage System Factor ("ESSF") is designed to recover the Company's investment in and ongoing O&M expense of ESS constructed, owned, and operated by the Company under the Company's ESS Program.

ESS capital costs shall consist of the Company's capitalized cost of construction plus municipal property taxes on the ESS recorded as plant in-service.

ESS O&M expense shall represent incremental O&M expenses, net of any research and development tax incentives claimed by the Company, of:

(1) annual ESS O&M to operate and maintain ESS equipment;
(2) ESS site maintenance;
(3) project management of maintenance;
(4) oversight, reporting and analysis;
(5) property rental or lease payments; and
(6) any other incremental O&M costs associated with the upkeep of the ESS sites.

Oversight and reporting costs shall consist of the oversight of annual ESS maintenance, reporting to state and local agencies of ESS performance, and research and testing costs at the ESS sites.

The Company shall recover the Annual Revenue Requirement on Cumulative CapEx plus Forecasted O&M Expense through the ESSF. The ESSF shall be a uniform per-kWh rate applicable to all Retail Delivery Service customers based on kWh deliveries.

In the Reconciliation Filing, the Company shall reconcile the Annual Revenue Requirement on actual Cumulative CapEx through the prior PST Plan Year plus Actual O&M Expense incurred during the prior PST Plan Year to the actual amount of revenue billed to customers through the ESSF. The excess or deficiency, including interest at the interest rate paid on customer deposits, shall be the basis for the ESS Reconciliation Factor ("ESSRF"). The Company shall calculate the ESSRF based on Forecasted kWh for the period October 1 through the following September 30.

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10.0 SOLAR DEMONSTRATION PROGRAM

The Solar Program Factor ("SPF") is designed to recover the Company's investment in and ongoing O&M expense of up to 3.75 mega-watts of solar generating facilities constructed, owned, and operated by the Company under the Company's Solar Demonstration Program.

Solar generating facility capital costs shall consist of the Company's capitalized cost of construction plus municipal property taxes on the solar generating facilities recorded as plant in-service.

Solar generating facility O&M expense shall represent incremental O&M expenses, net of any research and development tax incentives claimed by the Company, of:

(1) annual solar generating facilities' O&M;
(2) the solar generating facilities' site maintenance;
(3) project management of maintenance;
(4) oversight, reporting and analysis;
(5) property rental or least payments; and
(6) any other incremental O&M costs associated with the upkeep of the solar generating facility sites.

Oversight and reporting costs consists of the oversight of annual solar generating facility maintenance, reporting of solar generating facility performance, and research and testing costs at the solar generating facility sites.

The Company shall recover the Annual Revenue Requirement on Cumulative CapEx and Forecasted O&M Expense through the SPF. The SPF shall be a uniform per-kWh rate applicable to all Retail Delivery Service customers based on kWh deliveries.

In the Reconciliation Filing, the Company shall reconcile the Annual Revenue Requirement on actual Cumulative CapEx through the prior PST Plan Year and Actual O&M Expense incurred during the prior PST Plan Year to:

(1) the actual amount of revenue billed to customers through the SPF; and
(2) the market value of RECs used to comply with the Renewable Energy Standard established in R.I.G.L. Section 39-26-1.

The excess or deficiency, including interest at the interest rate paid on customer deposits, shall be the basis for the Solar Program Reconciliation Factor ("SPRF"). The Company shall calculate the SPRF based on Forecasted kWh for the period October 1 through the following September 30.

11.0 INCOME ELIGIBLE CUSTOMER REWARDS PROGRAM

The Rewards Account Factor ("RAF") is designed to recover the Company's investment in and ongoing O&M expense of its Income Eligible Customer Rewards ("IECR") Program.

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IECR capital costs shall consist of the Company's capitalized cost of assets and systems recorded as plant in-service and approved by the Commission associated with enhancements to the Company's CSS.

IECR O&M expense shall represent incremental O&M expenses of:

(1) program development, training, marketing, and administration;
(2) any enhancements to the Company's CSS or other systems not eligible to be capitalized;
(3) technology development for administration of IECR accounts, bill design and presentation, and system interfaces; and
(4) IECR account funding.

The Company shall recover the Annual Revenue Requirement on Cumulative CapEx plus Forecasted O&M Expense through the RAF. The RAF shall be a uniform per-kWh rate applicable to all Retail Delivery Service customers based on kWh deliveries.

In the Reconciliation Filing, the Company shall reconcile the Annual Revenue Requirement on actual Cumulative CapEx through the prior PST Plan Year and Actual O&M Expense incurred during the prior PST Plan Year to the actual amount of revenue billed to customers through the RAF. The excess or deficiency, including interest at the interest rate paid on customer deposits, shall be the basis for the Rewards Account Reconciliation Factor ("RARF"). The Company shall calculate the RARF based on Forecasted kWh for the period October 1 through the following September 30.

12.0 PERFORMANCE INCENTIVES

The Performance Incentive Factor ("PIF") shall recover the performance incentives earned by the Company as a result of the Company achieving specific performance metrics pertaining to the efficient delivery of the Company's capital program ("Capital Efficiency") and the achievement of objectives in the system efficiency, distributed energy resources, and network support services. Except otherwise noted in Appendix A, the Company shall measure actual performance against the performance metrics identified below during the calendar years shown.

12.1 Value of Performance Incentives

The performance incentives defined below and detailed in Appendix A shall allow the Company to earn incentives based on actual performance. With the exception of one performance metric, Complex Capital Projects Capital Cost Efficiency, actual performance measured against each the performance metrics will result in a basis point value earned by the Company. The Company shall aggregate the basis point values for all applicable performance metrics to determine the total basis point value earned by the Company for performance in the prior calendar year. The Company shall convert the total basis point value to a dollar value of performance incentives allowed for recovery through the PIF by multiplying the total basis point value by the equity portion of distribution rate base as determined at the end of each calendar year as part of the Company's annual earnings report filed with the PUC by May 1 annually.

The Company shall not earn a performance incentive for actual performance which falls below the minimum performance level identified for each performance metric. The Company shall use linear

interpolation to calculate the basis point value of any performance incentive earned that falls between the target level and minimum value, and target value and maximum value.

The Company shall measure performance against the Complex Capital Projects Capital Cost Efficiency performance metric consistent with the annual ISR Plan period of April 1 through March 31 of the following year. Actual performance against this performance metric will result in a dollar value of performance incentive earned during the applicable PST Plan Year. The Company shall add the performance incentive earned through the Complex Capital Projects Capital Cost Efficiency performance metric to the total performance incentives determined above for all other performance metrics, and recover, on an annual basis, the total performance incentives through the PIF.

12.2 Capital Efficiency Incentives

Capital Efficiency Incentives shall include the opportunity for the Company to earn performance incentives when:

(1) Complex Capital Projects Capital Cost Efficiency: the actual cost of certain projects proposed in the Company's ISR Plan is less than the estimated cost of those projects as identified in the Company's documents which are developed to authorize the projects to proceed to construction ("First Full Sanction"), measured during a PST Year; and

(2) Construction Cost per Mile: a metric to be developed that is intended to represent the cost of overhead distribution line construction as proposed in the Company's ISR Plan, converted to a composite per-mile construction cost measured against an applicable benchmark..

Appendix A to this PST Provision provides the metrics and the incentive value associated with a range of outcomes.

12.3 System Efficiency Incentives

System Efficiency Incentives shall include the opportunity for the Company to earn performance incentives, based on actual performance during a calendar year, in the areas of:

(1) Peak Demand Reduction: (a) measured reductions in the sum of the Company's monthly peak demand included in the transmission bills from New England Power Company ("NEP") to the Company over a calendar year, measured on a weather-normalized basis and normalized for new load added during the same calendar year; and (b) measured reductions in the Company's annual peak demand for a calendar year as included in NEP's transmission bills to the Company, measured on a weather-normalized basis and normalized for new load added during the same calendar year; and

(2) Off-Peak Charging Rebate Pilot Participation: measured against the assumed participation rates represented in the targeted participation level deriving the pilot's budget of 500.

Appendix A to this PST Provision provides the metrics and the incentive value associated with a range of outcomes. The incentives associated with performance between minimum and target levels or maximum and target levels will be determined linearly.

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12.4 Distributed Energy Resources Incentives

Distributed Energy Resources Incentives shall include the opportunity for the Company to earn performance incentives, based on actual performance during a calendar year, in the areas of:

(1) Distributed Generation ("DG") – Friendly Substations: the number of substations that have ground fault detection (3V0) installed and that are capable of readily installing DG where significant amounts of DG have been proposed;

(2) Demand Response – Residential Participation: measured by the number of residential customers participating in the Company's Connected Solutions program;

(3) Demand Response – C&I Participation: measured by the contracted MWs in the Company's C&I demand response programs;

(4) Electric Heat Program: measured reductions in carbon in short tons per year;

(5) Electric Vehicles: EV ownership, measured by EVs registered after commencement of program, in excess of projections based on Annual Energy Outlook 2017 forecast EV sales growth for New England;

(6) Behind the Meter Storage: measured by the annual MW growth in energy storage installed at customer locations behind a meter used to register electric load; and

(7) Company-Owned Storage: measured by the installed MW of Company-owned in energy storage, inclusive of the ESS Program above, used to support peak load reduction and verified using interval metering.

Appendix A to this PST Provision provides the metrics and the incentive value associated with a range of outcomes. The incentives associated with performance between minimum and target levels or maximum and target levels will be determined linearly.

12.5 Network Support Services Incentives

Network Support Services Incentives shall include the opportunity for the Company to earn performance incentives, based on actual performance during a calendar year, in the areas of:

a. AMF Customer Engagement and Deployment: measured based on achievement of stated milestones with documentation evidencing achievement provided by the Company;

b. Volt/Var Optimization ("VVO") Pilot Delivery: (a) timely delivery measured by date project is in service; and (b) delivery of expected results of VVO deployment measured by a 1 percent reduction in energy consumption and peak demand from that expected from primary VVO optimization that would not include AMF technology of 3 percent;

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c. Interconnection Support – Time to ISA: the actual average time to provide executable Interconnection Service Agreements, measured from the date on which the Company receives the interconnection application to the date the ISAs are provided to customers for execution, during a calendar year, against total time allowed in the required time frames identified in the Company's Standards for Interconnecting Distributed Generation tariff, stated as a percentage;

d. Interconnection Support – Average Days to System Modification: the actual average time to complete system modifications, measured from the date ISAs are executed to the date on which system modifications are completed, during a calendar year, against total time allowed in the required time frames identified in the Company's Standards for Interconnecting Distributed Generation tariff, stated as a percentage; and

e. Interconnection Support – Estimate versus Actual Costs: the difference, measured as a percentage, between the sum of the costs estimated by the Company for interconnecting DG, during a calendar year, and the sum of the actual costs paid by those customers for the interconnection of DG where interconnection was completed in the same calendar year.

Appendix A to this PST Provision provides the metrics and the incentive value associated with a range of outcomes. The incentives associated with performance between minimum and target levels or maximum and target levels will be determined linearly.

13.0. ADJUSTMENTS TO RATES

Modifications to the factors contained in this PST Provision shall be in accordance with a notice filed with the Commission setting forth the amount(s) of the revised factor(s) and the amount(s) of the increase(s) or decrease(s). The notice shall further specify the effective date of such charges.

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APPENDIX A

I. Capital Efficiency Incentives

a. Complex Capital Project Capital Cost Efficiency

For a Complex Capital Project that is reported as closed in an annual ISR Plan Reconciling Filing, due to the Commission no later than August 1 following the completion of the prior year's ISR Plan on March 31, and has been recorded as plant in-service, if actual total capital costs are less than the first full sanctioned capital costs, the incentive shall be 50 percent of the difference.

b. Construction Cost per Mile

To be developed.

II. System Efficiency Incentives

a. Monthly Peak Demand Reduction

Sum of Monthly Peak Demand Reduction Targets (MWs)				
	CY 2019	CY 2020	CY 2021	Basis Points
Minimum	28	23	26	1.00
Target	36	34	36	1.75
Maximum	47	44	46	2.25

b. Annual Peak Demand Reduction

Annual Peak Demand Reduction Targets (MWs)				
	CY 2019	CY 2020	CY 2021	Basis Points
Minimum	22	18	19	6.00
Target	29	26	26	12.00
Maximum	38	31	31	18.00

c. Off-Peak Charging Rebate Pilot Participation

Off-Peak Charging Rebate Pilot Participation (No. of Participants)				
	CY 2019	CY 2020	CY 2021	Basis Points
Minimum	80	188	400	2.00
Target	100	250	500	2.50
Maximum	120	300	600	3.00

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III. Distributed Energy Resources Incentives

a. Distributed Generation ("DG") – Friendly Substations

DG-Friendly Substation Transformer Target (Cumulative Transformers with 3VO Installations)				
	CY 2019	CY 2020	CY 2021	Basis Points
Minimum	1	2	3	1.00
Target	3	6	12	6.00
Maximum	5	10	15	10.00

b. Demand Response – Residential Participation

Demand Response – Residential Participation in Connected Solutions (No. of Participants)				
	CY 2019	CY 2020	CY 2021	Basis Points
Minimum	Targets to be developed in 2019 Energy Efficiency Program Plan			1.00
Target				3.00
Maximum				5.00

c. Demand Response – C&I Participation

Demand Response – C&I Participation in Demand Response Programs (No. of Participants)				
	CY 2019	CY 2020	CY 2021	Basis Points
Minimum	Targets to be developed in 2019 Energy Efficiency Program Plan			1.00
Target				3.00
Maximum				5.00

d. Electric Heat Program

Carbon Reduction from Electric Heat Initiative (Short Tons/Year)				
	CY 2019	CY 2020	CY 2021	Basis Points
Minimum	119	178	156	0.00
Target	149	223	195	1.00
Maximum	179	268	234	2.00

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e. Electric Vehicles

Incremental EVs In Excess of Expected Growth Based on Forecast				
	CY 2019	CY 2020	CY 2021	Basis Points
Minimum	130	176	239	1.00
Target	259	352	477	2.00
Maximum	519	703	954	3.50

f. Behind the Meter Storage

Behind the Meter Storage Targets (in MWs)				
	CY 2019	CY 2020	CY 2021	Basis Points
Minimum	1	1	1	0.33
Target	3	3	3	1.00
Maximum	6	6	6	2.00

g. Company-Owned Storage

Company-Owned Storage Targets (in MWs)				
	CY 2019	CY 2020	CY 2021	Basis Points
Minimum	1	1	1	0.33
Target	3	3	3	1.00
Maximum	6	6	6	2.00

IV. Network Support Services Incentives

a. AMF Customer Engagement and Deployment

AMF Customer Engagement and Deployment		
CY End	Milestone	Basis Points
2019	Deliver customer engagement plan	2.00
2020	Conduct and report on customer awareness survey	1.00
2020	Commence mass scale meter deployment	1.00
2021	Achieve 30% deployment and customer portal access	2.00

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b. VVO Pilot Delivery

VVO Pilot Delivery		
CY End	Milestone	Basis Points
2019	Project in service	2.00
2020	Achievement of enhanced VVO/CVR impacts 1 percent reduction in energy consumption and peak demand from that expected from primary VVO optimization	2.00
2021	Achievement of enhanced VVO/CVR impacts 1 percent reduction in energy consumption and peak demand from that expected from primary VVO optimization	2.00

c. Interconnection Support – Time to ISA

Interconnection Support – Time to ISA Targets (% Actual Average Business Days Below Tariff Business Day Requirement)				
	CY 2019	CY 2020	CY 2021	Basis Points
Minimum	5%	5%	5%	2.00
Target	10%	10%	10%	4.00
Maximum	15%	15%	15%	6.00

d. Interconnection Support – Average Days to System Modification

Interconnection Support – Time to System Modifications (% Actual Average Business Days Below Tariff Business Day Requirement)				
	CY 2019	CY 2020	CY 2021	Basis Points
Minimum	5%	5%	5%	2.00
Target	10%	10%	10%	4.00
Maximum	15%	15%	15%	6.00

e. Interconnection Support – Estimate versus Actual Costs

Interconnection Support – Estimated versus Actual Costs (% Annual Actual Costs Below Associated Estimated Costs)				
	CY 2019	CY 2020	CY 2021	Basis Points
Minimum	10%	10%	10%	0.00
Target	6%	6%	6%	4.00
Maximum	4%	4%	4%	6.00

Appendix 10.11

Appendix 10.11

Power Sector Transformation Plan, Distribution Adjustment Charge

3.10 Power Sector Transformation Plan

3.10.1 Power Sector Transformation Plan Filing:

By January 1 of each year, the Company shall submit to the PUC for review and approval its proposed Power Sector Transformation ("PST") Plan for the upcoming PST Plan Year. The PST Plan shall consist of Forecasted Capital Investment, Forecasted O&M Expense, and, if mutually agreed upon by the Division and the Company, any other capital or O&M expense relating to PST Initiatives, accompanied by the revenue requirement determined by the costs presented in the PST Plan.

Subject to PUC approval, the first PST Plan Year shall be the period ending March 31, 2019. The Company shall not implement PST Factors effective April 1, 2018, unless otherwise approved by the Commission. The Company shall include the Annual Revenue Requirement, or portion thereof, on Actual CapEx and Actual O&M Expense for the first PST Plan Year in its annual PST Reconciliation Filing by August 1 following the completion of the first PST Plan Year, and shall recover the Annual Revenue Requirement, or portion thereof, as approved by the Commission, through PST Reconciliation Factors effective the following October 1.

3.10.2 Power Sector Transformation Factors:

The PST Factor shall recover the forecasted and actual capital investment and operations and maintenance ("O&M") expense, subject to full reconciliation, as defined herein, for the following components of PST Initiatives contained in the Company's PST Plan:

(1) Advanced Metering Functionality ("AMF");

(2) Company Fleet Expansion as part of the Electric Transportation Initiative; and

(3) Income Eligible Customer Rewards Program.

Effective April 1 of each year, the Company shall recover through a change in Distribution Adjustment Charge rates the PST capital investment, including associated cost of removal, and O&M expense pursuant to this PST Provision and subject to the review and approval of the PUC, only for PST Initiatives the Company is authorized to undertake by the PUC and benefit the Company's customers. Capital investment, including associated cost of removal, recovered through this PST Provision shall be excluded from recovery through the Company's ISR Plan. The Company shall be allowed to recover the revenue requirement on Cumulative CapEx and O&M Expense incurred through the date upon which new base distribution rates begin recovering the revenue requirement of PST capital investment and ongoing O&M expense. All amounts earned and incurred by the Company prior to the date on which new base distribution rates, which include ongoing recovery of PST costs, take effect and as approved by the PUC for recovery, shall be recovered through this PST Provision.

The factors for each PTS Initiative, as defined below, shall recover the total of the Annual Revenue Requirement on Cumulative CapEx, included Forecasted CapEx, and Forecasted O&M Expense, as approved by the PUC in the Company's annual PST Plan Filings. The factors shall be effective during the PST Plan Year, coincident with the PST Plan upon which they are calculated. The Company shall calculate separate revenue requirements to which it will add the

estimate of O&M expense for each PST Initiative and shall calculated separate factors for each PST Initiative.

The Company shall allocate the AMF Annual Revenue Requirement to each customer class based on the Meter/Billing Allocator below, which represents the percentage of meter-related rate base and customer billing expense allocated to each customer class as determined from the Company's most recent general rate case as follows:

Residential Heating/Non-Heating	xx.xx%
Small C&I	xx.xx%
Medium C&I	x.xx%
Large/Extra-Large C&I	x.xx%

The Company shall allocate the AMF Forecasted O&M Expense to each customer class based on the Meter/Customer Expense Allocator below, which represents the percentage of meter-related and customer service O&M expense allocated to each customer class as determined from the Company's most recent general rate case as follows:

Residential Heating/Non-Heating	xx.xx%
Small C&I	xx.xx%
Medium C&I	x.xx%
Large/Extra-Large C&I	x.xx%

3.10.3 Annual Report on PST Plan Activities:

By August 1 of each year as part of the annual PST Reconciliation Filing, the Company shall include a report on the prior PST Plan Year's PST activities. In implementing its PST Plan, the circumstances encountered during the preceding PST Plan Year may require reasonable deviations from the original PST Plan for the PST Plan Year approved by the PUC. In such cases, for each PST Initiative, the Company shall include in the report an explanation of (1) Actual Capital Investment in excess of Forecasted Capital Investment by ten (10) percent, and (2) Actual O&M Expense in excess of Forecasted O&M Expense by ten (10) percent. For cost recovery purposes, the Company has the burden to show that any such deviations were due to circumstances out of its reasonable control or, if within its control, were reasonable and prudent.

3.10.4 PST Reconciliation Factors:

PST capital investment and O&M expense recovery for each PST Initiative shall include separate annual reconciliations of each PST Initiative's Annual Revenue Requirement on the sum of Actual CapEx for all PTS Plan Years plus Actual O&M Expense to actual billed revenue generated from the PST Initiative's factors for the applicable PTS Plan Year. The reconciliation of the recovery shall accrue interest monthly at the Bank of America Prime minus 200 basis points. The recovery or credit of the reconciliation amounts, including interest, shall be reflected in the PST Reconciliation Factors.

The Company shall submit a filing by August 1 of each year ("Reconciliation Filing"), in which the Company shall present the Annual Revenue Requirement on Actual CapEx plus Actual O&M Expense.

As part of its annual DAC filing, the Company shall submit by August 1 proposed PTS Reconciliation Factors to become effective for the 12 months beginning November 1. The amounts approved for recovery or refund through the PTS Reconciliation Factors shall be subject to reconciliation with amounts billed through the PTS Reconciliation Factors, and shall accrue interest monthly at the Bank of America Prime minus 200 basis points, and any difference, including interest, reflected in future PTS Reconciliation Factors.

3.10.5 PST Factor Definitions:

"Accumulated Deferred Income Taxes" shall mean the net reduction in Federal income taxes associated with the use of accelerated depreciation allowed for income tax purposes.

"Accumulated Reserve for Depreciation" shall mean the cumulative net credit balance arising from the provision for Depreciation Expense.

"Actual CapEx" shall mean all capital investment associated with each PST Initiative listed in Section 3.10.2, plus cost of removal, for a PST Plan Year, and not included in the Company's Infrastructure, Safety, and Reliability ("ISR") Plan.

"Actual O&M Expense" shall mean the O&M expense recorded by the Company for a given PST Plan Year associated with its PST Initiatives, not otherwise recovered through any other rates, charges, or factors.

"Annual Revenue Requirement" shall mean the return and taxes on year-end Rate Base, at a rate equal to the pre-tax weighted average cost of capital as approved by the Commission in the most recent general rate case, plus the annual depreciation expense on Cumulative CapEx as defined below, plus the annual municipal property taxes on Cumulative CapEx. For the purpose of calculating the PST Reconciliation Factors, the Company will use the sum of Actual CapEx for all PST Plan Years through the prior PST Plan Year in place of Cumulative CapEx.

"Cumulative CapEx" shall mean the cumulative Actual CapEx for years prior to the PST Plan Year plus Forecasted CapEx for the PST Plan Year.

"Depreciation Expense" shall mean the return of the Company's in-service PST investment in Rate Base at established depreciation rates as approved by the Commission.

"Forecasted CapEx" shall mean the estimated capital investment and cost of removal anticipated to be recorded as plant in service by the Company for a given PST Plan Year associated with distribution system infrastructure consistent with its capital forecast, and not included in the Company's ISR Plan.

"Forecasted Number of Bills" shall mean the forecasted number of bills to be issued to the Company's firm customers for the period during which the per-bill PST Factors and per-bill PST Reconciliation Factors will be in effect.

"Forecasted O&M Expense" shall mean the estimated incremental O&M expense for a given PST Plan Year associated with its PST Initiatives, and not otherwise recovered through any the Company's other rates, charges, or factors.

"Forecasted Therms" shall mean the forecasted amount of gas, as measured in therms, to be delivered to the Company's firm customers for the period during which the per-therm PST Factors and per-therm PST Reconciliation Factors will be in effect.

"O&M" shall mean operation and maintenance expenses recorded in FERC accounts 871 through 894, customer accounts expense and customer service and informational expenses recorded in FERC accounts 901 through 910, sales expense recorded in FERC accounts 911 through 916, and administrative and general expenses recorded in FERC accounts 920 through 935, pursuant to FERC's Code of Federal Regulations. O&M shall also mean the amortization of capital investment in system development and/or enhancements recorded on the general ledger of an affiliate of the Company and charged to the Company by the affiliate, with the Company recording the charge as an expense.

"PST Factors" shall mean the sum of the per-therm and per-bill factors, as applicable, for each rate class designed to recover the total of the Annual Revenue Requirement on Cumulative CapEx and the Forecasted O&M Expense for each PST Initiative, based on Forecasted Therms and Forecasted Number of Bills, as applicable, for a PST Plan Year. PST Factors shall consist of the following factors, as defined below: AMFFs, ETFs, and RAFs.

"PST Plan Year" shall mean the year beginning April 1 of the current year and running through March 31 of the subsequent year during which the proposed PST Factors will be in effect.

"PST Reconciliation Factors" shall mean the sum of the per-therm and per-bill factors, as applicable, designed to recover or credit the over or under billing of the total of the Annual Revenue Requirement on the sum of Actual CapEx for all PST Plan Years through the prior PST Plan Year and Actual O&M Expense for each PST Initiative, based on Forecasted Therms or Forecasted Number of Bills, as applicable, for the recovery/refund period beginning October 1. PST Reconciliation Factors shall consist of the following factors, as defined below: AMFRFs, ETRFs, and RARFs.

"Rate Base" shall mean the investment value upon which the Company is permitted to earn its authorized rate of return and shall include Cumulative CapEx, Accumulated Reserve for Depreciation, and Accumulated Deferred Income Taxes for the purpose of calculating the Annual Revenue Requirement included in the determination of the PST Factors. For the purpose of calculating the PST Reconciliation Factors, the Company will use the sum of Actual CapEx for all PST Plan Years through the prior PST Plan Year in place of Cumulative CapEx.

3.10.6 AMF Recovery:

The AMF component of PST consists of the deployed over a period of five years commencing with the PUC's approval of the Company's PST Plan which includes: a Customer Portal, Customer Choice Decision Support Analytics capability, Customer Energy Information and Analytics capability, and Advanced Meters; Telecommunications; and Cybersecurity.

The AMF Factors ("AMFFs") are designed to recover the Company's investment in and ongoing O&M expense incurred as a result of the Company deploying AMF as approved by the PUC.

AMF capital costs shall consist of the Company's capitalized cost, plus cost of removal and municipal property taxes, of all assets and systems deployed as part of AMF pursuant to a plan approved by the PUC and recorded as plant in-service.

AMF O&M expense shall consist of the Company's incremental O&M expense incurred by the Company as a result of deploying AMF pursuant to a PST Plan approved by the PUC and not recovered through any of the Company's other rates or charges.

The Company shall combine the customer class Annual Revenue Requirement and Forecasted O&M Expense and calculate per-bill AMFFs based upon the Forecasted Number of Bills for the PST Plan Year. The Company shall reconcile the recovery of Annual Revenue Requirement on Actual CapEx and Actual O&M Expense to billed revenue from the AMFFs and allocate the over or under-recovery balance by the Meter/Billing Allocator for the purpose of calculating AMF Reconciliation Factors.

3.10.7 Company Fleet Expansion:

The Electric Transportation Factor ("ETF") is designed to recover the incremental O&M expense, as approved by the PUC, associated with the cost of incremental heavy-duty electrified trucks used by the Company in providing gas service to its customers.

ETI O&M expense shall represent incremental lease or vehicle modification costs of heavy-duty electrified trucks and ongoing O&M expense through the Company Fleet Expansion for trucks used by the Company in providing gas service to its customers.

The Company shall recover the Forecasted O&M Expense through the ETF. The ETF shall be a uniform per-therm rate applicable to all firm customers based on volumes delivered.

3.10.8 Income Eligible Customer Rewards Program:

The Rewards Account Factor ("RAF") is designed to recover the Company's investment in and ongoing O&M expense of its Income Eligible Customer Rewards ("IECR") Program.

IECR capital costs shall consist of the Company's capitalized cost of assets and systems recorded as plant in-service and approved by the Commission associated with enhancements to the Company's billing system, CSS.

IECR O&M expense shall represent incremental O&M expenses of:

(1) program development, training, marketing, and administration;
(2) any enhancements to the Company's CSS or other systems not eligible to be capitalized;
(3) technology development for administration of IECR accounts, bill design and presentation, and system interfaces; and
(4) IECR account funding.

The Company shall recover the Annual Revenue Requirement on Cumulative CapEx plus Forecasted O&M Expense through the RAF. The RAF shall be a uniform per-therm rate applicable to all firm customers based on volumes delivered.

3.10.9 Performance Incentives:

The Performance Incentive Factor ("PIF") shall recover the performance incentives earned by the Company as a result of the Company achieving specific performance metrics pertaining to the achievement of objectives in the deployment of AMF. The Company shall measure actual performance against the performance metric identified below during the calendar years shown.

The Company shall convert the basis point value earned to a dollar value of performance incentive allowed for recovery through the PIF by multiplying the basis point value by the equity portion of distribution rate base as determined at the end of each calendar year as part of the Company's annual earnings report filed with the PUC by May 1 annually.

The Company shall not earn a performance incentive for actual performance which falls below the minimum performance level identified. The Company shall use linear interpolation to calculate the basis point value of performance incentive earned that falls between the target level and minimum value, and target value and maximum value.

Performance Metric:

AMF Customer Engagement and Deployment: measured based on achievement of stated milestones with documentation evidencing achievement provided by the Company;

AMF Customer Engagement and Deployment

AMF Customer Engagement and Deployment		
CY End	Milestone	Basis Points
2019	Deliver customer engagement plan	2.00
2020	Conduct and report on customer awareness survey	1.00
2020	Commence mass scale meter deployment	1.00
2021	Achieve 30% deployment and customer portal access	2.00