STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

IN RE: ADOPTION OF PERFORMANCE INCENTIVES
PURSUANT TO R.I. GEN. LAWS §39-1-27.7.1(e)(3) DOCKET NO. 4857
TO APPLY TO THE ELECTRIC ISR PLAN

PREFILED DIRECT TESTIMONY OF

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DEPUTY ADMINISTRATOR

ON BEHALF OF THE
RHODE ISLAND DIVISION OF PUBLIC UTILITIES AND CARRIERS

April 10, 2019

I. INTRODUCTION

Q. Please identify yourself for the record.

A. My name is Jonathan Ernst Schrag. I am the Deputy Administrator for the Division of Public Utilities and Carriers ("Division"). I have served in that role since October 2016. In that role I have the responsibility to develop and oversee regulatory filings on behalf of the Division and to work with staff across the Division to advance regulatory policy. Over the last two years I have worked extensively on electricity and gas matters related to National Grid. I also am responsible for supervising the regulatory and rate staff and managing outside consultants hired by the Division to assist in the review of filings by the entities regulated by the Division and the Public Utilities Commission ("Commission").

Q Please describe your professional background.

A. I have worked in energy policy for the last 15 years, including as Executive Director of the Lenfest Center for Sustainable Energy at Columbia University, Executive Director of the Regional Greenhouse Gas Initiative, Senior Fellow in Energy of the Guarini Institute of NYU School of Law, and Deputy Commissioner for Energy of the Connecticut Department of Energy and Environmental Protection. From 1997 to 2002 I was a graduate fellow enrolled in the Harvard University Department of History investigating the electrification of Mexico. I received an AB degree with honors in History from Harvard University in 1993.

Q. Have you appeared previously before the Rhode Island Public Utilities Commission?

A. Yes. I have testified previously in Docket 4770, and I have participated in numerous technical meetings before the Commission related to energy efficiency, the Infrastructure, Safety and Reliability plans, power sector transformation, and cybersecurity.

Q. On whose behalf do you testify in this matter?

A. On behalf of the Division of Public Utilities and Carriers.

Q. Please explain how your testimony is organized.

A. The testimony provided here is organized into three parts. Part One is an introduction. In Part Two, the testimony explains how the proposed Capital Efficiency Mechanism (CEM) would function. In Part Three, the testimony addresses questions the Commission issued on February 4, 2019 regarding certain principles as they apply to the CEM.

Q. Is this testimony the entirety of the Division's submission in this matter?

A No, it is not. My testimony should be read in concert with the testimony of Greg Booth who focuses on the operation and review of the annual Infrastructure, Safety and Reliability plans filed by National Grid.

II PROPOSED CAPITAL EFFICIENCY MECHANISM

Q. Please describe how the proposed CEM would operate?

A. As described in the testimony of Mr. Booth, we are proposing to apply the CEM only to discretionary projects that are estimated to have a capital cost greater than $500,000. The baseline for measuring performance will be the Project Grade estimate of the project. In simple terms, the CEM will require a comparison of the final cost of the project against the Project Grade estimate after the project goes into service. From this comparison, a reward or penalty is determined.

The CEM will use a bandwidth which is +/- 1% around the Project Grade cost. To the extent the final project cost exceeds the +/- 1% bandwidth, a penalty will be triggered. Conversely, to the extent the final project cost is less than the +/- 1% bandwidth, a financial reward is earned. A descriptive proposal of the CEM is attached to this testimony as Exhibit 1.

When the final cost exceeds the Project Cost estimate by more than 1%, the CEM will calculate the difference between the Project Grade estimate and the final cost ("Overspend"). The Company would then incur a financial penalty equal to 20% of the net present value of the revenue requirement effect of such Overspend, calculated over the projected depreciated life of the asset.

Conversely, when the final cost is more than 1% lower than the Project Cost estimate, the CEM will calculate the difference between the Project Grade estimate and the final cost

("Savings"). The Company will then earn a financial reward equal to 10% of the net present value of the revenue requirement effect of such Savings, calculated over the projected depreciated life of the asset. To determine the net present value of the savings, the Company's weighted average cost of capital from the last rate case would be used as the discount rate.

A penalty would be credited to ratepayers in a single year. A reward would be collected from ratepayers over three years, or some other appropriate term that the Commission may choose.

Many capital projects larger than $500,000 will span more than one ISR fiscal year. The reward/penalty will be determined in the ISR process in the year following the date that the project goes into service. As a result, the budgets of each annual ISR Plan, which generally include projects that will come into service in a variety of future years, will not be a relevant baseline for evaluation of the CEM. Instead, the Company will prepare a separate compliance filing listing all the projects that have come into service in the previous calendar year and compare them to the Project Grade estimates that had been previously established. The CEM will apply to each annual cohort of projects that have entered service, regardless of the annual ISR Plan in which they had been authorized.

The Company will file a Project Grade estimate prior to commencement of construction. Prior to the filing, the Company will share the estimate with the Division. If the Division

disagrees with the estimate, the Division reserves the right to dispute the estimate and the Commission will make the final determination.

The Company and the Division each have the right to seek an exogenous event exemption from a penalty/reward if they believe that the final cost was materially affected by events beyond the control of the company. In other words, if the cost is higher or lower than the Project Grade estimate due to events beyond the Company's control, the Commission may grant an exemption that adjusts the baseline in extraordinary circumstances.

It is important to note that the application of the CEM has no effect on the right of the Division to challenge the prudency of any cost incurrence on any project.
In all other respects, the CEM has no effect on the ratemaking associated with projects being approved and the costs recovered through the ISR. The projects will still be placed into rate base in the ordinary ratemaking processes in effect.

Q. Please explain why the Division revised the proposal it originally made in Docket 4770.

A. The Division revised its original proposal for two main reasons. First, the original proposal was designed as a three-year capital planning tool to match the Multi-Year Rate Plan (MRP) the Division proposed in Docket 4770. The Division hoped to synchronize capital and operating revenue plans as a step in a broader shift to performance-based regulation. Once the MRP was approved without a matching three-year Capital

Efficiency Mechanism, the Division had an opportunity to rethink the time period for a CEM, including the complexities associated with some capital projects that last longer than three years. Some projects might begin in one three-year period and end in another. From that review, the Division concluded that a more project specific focus would better suit the actual goals of the incentive mechanism. The second reason the Division revised its proposal was out of a recognition that there was significant complexity within the ISR. Questions from the Commission highlighted that the ambition of the original proposal might create unexpected outcomes, particularly around the inclusion of non-discretionary projects. As a result, we now seek a more limited CEM focused only on discretionary projects as a first step.

Q. Please explain why the revised CEM proposal does not address investments in the Gas ISR.

A. The Gas ISR is largely dedicated to pipeline replacement. For pipeline replacement there are three main variables that matter in evaluation of the costs and value of investment. First, is the location of the pipe being replaced. Pipeline replacement in urban areas generally costs more than in rural areas. Second, is the topography of the existing pipeline. Pipeline replacement in rocky areas generally costs more than in looser soils. Third, is the type of pipe itself. Cast iron and steel pipe are more prone to leaks and are generally older than plastic. As a result, the benefits of replacing older iron pipe are generally greater than replacing plastic pipe. Taken together, these three variables strongly influence which pipe and how many miles of it should be replaced with a given investment. The Division is intent, in the future, to adapt the electric CEM to these

aspects of the Gas ISR in such a way as not to distort proper planning for pipeline replacement. In addition, the Division's gas pipeline technical consultant is currently engaged in other regulatory matters in Rhode Island.

III RESPONSES TO COMMISSION QUESTIONS

Q. Are you able to provide responses to the Data Requests Issued on February 4, 2019 with reference to the proposed CEM?

A. Yes.

Q. What are the specific objectives of the Capital Efficiency Mechanism as proposed here?

A. The Capital Efficiency Mechanism has as its specific objective to incentivize the utility to complete authorized capital construction projects at or below the projected cost.

Q. Does the Capital Efficiency Mechanism proposed here promote the realization of new consumer and societal benefits? Please explain.

A. Yes. the Capital Efficiency Mechanism proposed here promotes realization of more efficient execution of capital investment programs in the context of the annually reconciling Infrastructure Safety and Reliability program.

Q. Does the Capital Efficiency Mechanism promote behavior that the utility otherwise would not take? Please explain.

A. Yes. The Capital Efficiency Mechanism would create a modest penalty and incentive that the utility would incur or earn if it executed capital investment projects over or below agreed upon budgets. Without the mechanism, the utility would simply recover costs in a reconciliation proceeding. There is no natural incentive for the utility to execute projects below budget.

Q. Is there a clear nexus between the design of the Capital Efficiency Mechanism and the expected benefits? Please explain.

A. Yes. The Capital Efficiency Mechanism is designed to address multi-year projects from beginning to completion. It is the over or under spend of multi-year projects that is of greatest concern in a reconciling capital tracker.

Q. Is there a clear and stated reason why the Capital Efficiency Mechanism is needed to achieve the specific objectives? Please explain.

A. Yes. The ISR statute allows the utility to recover any prudent overspend in a reconciliation filing. The CEM tracks projects over the life of the construction process and is designed to provide budget discipline without interfering with statutory rights.

Q. Is the Capital Efficiency Mechanism designed to promote superior utility performance and significantly advance the expected benefits as efficiently as possible? Please explain.

A. Yes. The Division believes that completing projects with less capital is a metric of greater efficiency and superior performance for ratepayers and shareholders. In addition, the Division believes that through the addition of an incentive, a culture of increased construction discipline may take hold to the benefit of ratepayers and shareholders alike.

Q. Is the Capital Efficiency Mechanism designed so that customers receive most of the benefit? Please explain.

A. Yes. The mechanism is designed so that the utility receives only 10 percent of the NPV of the reduced revenue calculated over the life of the project. Therefore, for an underspend scenario, ratepayers would receive over 90% of the benefits. In an overspend scenario, ratepayers receive the penalty payment which they would not have recovered under the current ISR without the mechanism in place.

Q. Is the Capital Efficiency Mechanism designed to grant increasing levels of rewards to the utility for higher levels of performance? Please explain.

A. Yes. Because the penalty and reward are designed as a portion of the saved or excess revenue requirement, they would increase in proportion to the size of the over or underpayment. Saving more yields a greater incentive. Spending more yields a greater penalty.

Q. Will the design and implementation of the Capital Efficiency Mechanism be completely transparent and fully document and reveal inputs and methodologies to ensure no duplication of incentives across various ratepayer funded programs? Please explain.

A. It will be completely transparent because it is based on a simple comparison of the original cost estimate to the final cost. There is no duplication of incentives and the comparison of the Project Estimate and actual cost will be transparent.

Q. Is it possible to compare the cost of achieving the Capital Efficiency Mechanism to the potential benefits? Please explain.

A. Theoretically yes. However, the administrative costs are consistent with the activities that are a part of the normal capital budgeting and review processes. The Company ordinarily needs to track spending against project cost estimates, regardless of the existence of the CEM. The incremental administrative costs incurred by the Company would most likely be related to the preparation of the additional compliance filings, reporting the results and calculating the net present value of the revenue requirement. As for the Division's costs, it would mean some additional time by the Division's consultants. The Division would need to more closely review the estimates provided by the Company to assure the Project Grade estimates are reasonable. However, this results in a more granular review of the Company's capital budgeting processes – an activity that aligns with the Division's ordinary regulatory review responsibilities.

Q. Are there opportunities for National Grid to earn multiple incentives for attaining the objectives identified in the Division's response to PUC-1-1? Please explain.

A. No. The Division does not see any duplication occurring with this proposal.

Q. Please explain how the baseline set in the Capital Efficiency Mechanism was set.

A. The baseline is founded upon the Project Grade estimate. If the Division disagrees with the Project Grade estimate, the Commission will make the final determination.

Q. Please explain how the baseline set in the Capital Efficiency Mechanism is objective and not easily influenced by the Company's own inputs.

A. The baseline is set in the ordinary capital budgeting processes of the Company. While it is possible that the Company could skew its estimates, the Division's consultants have become very familiar with the Company's processes and costs. To the extent the Division is concerned with an estimate, the Division may disagree and ask the Commission to determine the final cost used for the baseline.

Q. Please explain how the baseline set in the Capital Efficiency Mechanism is measurable where there are opportunities to change the baseline during the period over which the Capital Efficiency Mechanism operates.

A. The Division has significantly refined its proposal to reduce the extent to which the baseline may change. The key improvement over that proposed in Docket 4770 is to focus on the individual projects. In fact, once the Project Grade Estimate is set for each project there would be very little opportunity for change, unless there is an exogenous event that

has caused the costs to change. If there is such an event, the party claiming the exogenous event carries the burden of proof to adjust the baseline.

Q. Please explain how the baseline set in the Capital Efficiency Mechanism accounts for deferral of projects/spending.

A. Under the Division's proposal, a project deferral has no effect on the baseline. Either the project would be cancelled or the original Project Grade estimate carries forward until the project is actually completed. A judgment would need to be made in the next ISR as to how the project should be treated – that is, a restart, cancellation, or a carry forward.

Q. Please explain how the baseline set in the Capital Efficiency Mechanism is impacted by mandatory spending fluctuations.

A. This question was relevant to the original proposal in the rate case settlement that was filed in Docket 4770, but is not relevant to this CEM because this new proposal applies only to large discretionary projects on an individual project basis.

Q. Please explain how the baseline set in the Capital Efficiency Mechanism is impacted by discretionary spending fluctuations.

A. The new mechanism applies to individual projects. This is different than the original proposal that was filed in the rate case which bundled all projects into one baseline. For that reason, I do not believe this question is relevant to the new proposal.

Q. Please explain how the comparison of actual spending to the baseline set under the Capital Efficiency Mechanism is impacted by deferrals of projects/spending.

A. The complete deferral of a project would void it from the CEM. That is, the Company could not earn a reward for a project that did not exist. In the event that design changes occur after the approval of the Project Grade estimate and such changes significantly reduce the scope of the project, it would require a review of the reasons for the design change. If the design change was an innovative way to reduce costs, the Division believes the Company should be rewarded. However, the burden will be on the Company to support it. On the other hand, if the design change increases the cost, the Company would be subject to penalty unless the Company can show it was due to an exogenous event. In any event, the use of Project Grade Estimates largely protects from this kind of risk, as the estimates only become relevant once a final design is specified. Also, the Division and Commission retain the ability to challenge prudency.

Q. Please explain how the comparison of actual spending to the baseline set under the Capital Efficiency Mechanism proposed is impacted by mandatory spending fluctuations.

A. The design of the CEM specifies that it applies only to discretionary large projects. As a result, non-discretionary projects that stem from safety or municipal needs are excluded. The Division is aware that there are special issues that stem from the mandatory nature of these projects. We would anticipate that through iteration and continued learning and collaboration we would be able to incorporate the mandatory projects in a version 2.0 of the CEM. This approach is consistent with current best practice across multiple industries

and scientific academic fields to publish or initiate a project with the minimum viable product and then to iterate based on learning and feedback from actual experience. The Division believes that this is a vital element of regulatory success and collaboration.

Q. Please explain how the comparison of actual spending to the baseline set under the Capital Efficiency Mechanism is impacted by discretionary spending fluctuations.

A. The focus on the individual Project Grade Estimate budgets rather than the aggregate ISR budget will avoid this issue.

Q. Please provide a detailed explanation of how the proposed incentives or penalties will be treated for purposes of the Company's electric earnings reports.

A. The Settlement Agreement in Docket 4770 governs any incentive earned or penalty incurred under the CEM. Specifically, in Section 6, any reward or penalty should be excluded from the calculation of "Base Earnings," as defined in Section 6(b)(ii).

Exhibit 1. Capital Efficiency Mechanism (CEM) for Large Projects in the Electric ISR

Section 1 – Applicability:

Large Projects in the categories of (i) "Asset Condition" and (ii) "System Capacity and Performance" will be subject to a capital efficiency mechanism (CEM), as set forth below. For purposes of the applicability of the CEM, the term "Large Project" shall mean a project with an estimated Project Grade capital cost of $500,000 or greater.

Section 2 – Establishing Project Grade Estimate for Measuring Performance:

For every Large Project approved in the ISR, the Company will file a Project Grade Estimate prior to the commencement of construction. Prior to filing, the Company will share the estimate with the Division to seek a mutual agreement on the estimate. If a mutual agreement cannot be obtained, the Division has the right to dispute the Project Grade Estimate if it believes it to be unreasonable and the Commission will make the final determination after considering the arguments of the Company and the Division.

Section 3 – Measuring Performance:

After construction is completed for a Large Project, the Company will file the final cost with the Commission, with a copy to the Division. If the final cost is within a range of plus/minus one percent of the Project Grade Estimate, then no reward or penalty will be earned or incurred. If the final cost is +/- 1% of the Project Grade Estimate, then a one-time penalty or reward shall be incurred, as provided below.

Section 4 – Incentive for Achieving Lower Cost:

If the final cost is less than 99% of the Project Grade estimate, the net present value of the revenue requirement savings achieved by completing the project below the Project Grade estimate shall be calculated over the projected depreciated life of the asset. (This will be the revenue requirement effect on the entire difference between the Project Grade Estimate and the final project cost.) The Company shall earn a one-time performance incentive equal to 10% of the projected lifetime savings on the revenue requirement.

Section 5 – Penalty for Spending Over Budget:

If the final cost is more than 101% of the Project Grade estimate, the net present value of the incremental revenue requirement cost incurred from exceeding the Project Grade estimate shall be calculated over the projected depreciated life of the asset. (This will be the revenue requirement effect on the entire difference between the final project cost and the Project Grade Estimate.) The Company shall incur a one-time penalty equal to 20% of such projected incremental lifetime revenue requirement cost.

Section 6 – Net Present Value Calculation

The net present value calculation shall use the Company's weighted average cost of capital from the last rate case as the discount rate.

Section 7 – Exogenous Event Exemptions:

If the final cost of a Large Project is outside of the range of +/- 5% of the Project Grade Estimate due to factors that were beyond the reasonable control of the Company, the Company or the Division may seek an exemption from the applicability of any incentive reward or penalty. In such case, the party making the claim for an exemption has the burden of showing that the exogenous factors were beyond the reasonable control of the Company.

Section 8 – Rate Treatment of Incentive/Penalty:

The full capital cost of the Large Project going into service shall be included in rate base, as provided in the established sequence of the ISR and rate case processes; provided, however, that any one-time incentive that is earned or penalty incurred under this CEM shall be applied to the applicable electric ISR rate reconciliation following the filing of the final cost with the Commission.

Section 9 – No Effect on Prudency Review:

The applicability of an incentive or penalty to any given Large Project under this CEI shall have no effect on the right of the Division to challenge the prudency of any cost expenditures and the authority of the Commission to investigate and rule on such prudency challenge, including without limitation requiring cost disallowances in the course of any prudency review, if applicable.