

January 18, 2019

**VIA HAND DELIVERY & ELECTRONIC MAIL**

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

**RE: Docket 4513 – In Re: Proceeding to Establish a Pilot Metering Proposal for  
Municipal-Owned Streetlights  
Response to Division Data Requests – Set 5**

Dear Ms. Massaro:

Enclosed please find 10 copies of National Grid's<sup>1</sup> response to the Fifth Set of Data Requests issued by the Division of Public Utilities and Carriers (Division) in the above-referenced docket.

Thank you for your attention to this matter. If you have any questions, please contact me at 401-784-7415.

Very truly yours,



Robert J. Humm

Enclosure

cc: Docket 4513 Service List  
Christy Hetherington, Esq.  
Al Mancini, Division  
John Bell, Division

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<sup>1</sup> The Narragansett Electric Company d/b/a National Grid (National Grid or the Company).

Division R-V-1

Request:

Regarding Mr. Walter's Rebuttal Testimony, page 8, and on page 14, lines 10-13, given that the IC metering included in NLC products was designed and engineered to support LED power levels, are there barriers to using other IC metering technology, rather than the NLC technology, that is specifically designed and rated to measure higher currents than the current typically found for LED luminaires for the "...rational operating strategies..." the company envisions?

Response:

The Company is only conversant in the application use of integrated circuit (IC) meter technology within the networked lighting control (NLC) products tested during the Street Light Metering Pilot and also within the various types of standard socket style meters utilized in the electric distribution, transmission, and generation applications. These applications include the Company's use of automatic meter reading (AMR) and the future planned deployment of advanced metering infrastructure (AMI) meters.

The Company acknowledges the maturity and use of IC meter technology and is of the opinion that should a specific metering need exist that cannot be accommodated by the meters presently used by the Company or by other market available IC meters, the meter industry will respond with an appropriate metering solution to address the market demand.

Therefore, based upon the presumption that, in time, the meter industry will respond to the needs of the marketplace, any barriers associated with an appropriate meter solution to accommodate these small load ancillary devices are considered temporary. However, the Company recognizes that other electrical and physical barriers presently exist that coincide with the opportunities to use existing or customized IC meter technology for these defined electrical load conditions.

The electrical and structural design of the existing street lighting system infrastructure was specifically constructed to support the respective load conditions of each, including an appropriate margin of safety, so the anticipated addition of multiple, varied ancillary attachments to this existing infrastructure may exceed allowable design limits, thereby causing a different temporary barrier. The application of current standard socket meters for individual customer devices represents a significant electrical configuration, loading, space, cost, and aesthetic impact on existing street light infrastructure. The remediation of the infrastructure barrier would provide the opportunity to incorporate some available IC meter technology. However, the Company envisions the market development of an external or internal small form-factor metering device having similar metrology, control, and communication attributes as the tested NLCs to be used to measure the energy consumption of these small electric load ancillary

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devices. In the short term, the Company is aware of experimental hybrid NLCs utilizing current transformers to manage the electric load conditions to conform to present electrical limitations and IC meter technology.

The Company and the electric utility industry in general are experiencing an overwhelming demand for access and use of street light infrastructure to support and/or energize an array of electronic technologies. Electric service applications have requested to connect and/or attach to existing unmetered street light infrastructure, ranging from small electric load devices, such as environmental and motion sensors; increasing electric load devices like Wi-Fi, surveillance camera, and shot spotter assemblies; and the larger load electric vehicle charging stations and distributed antenna (small-cell/5G) communications facilities. It is in the context of this burgeoning technology advancement and the use of the existing street light infrastructure that the Company is attempting to address an efficient and cost effective solution to the energy consumption measurement requirements of these independent devices utilizing all available IC meter technology.

Certificate of Service

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

The paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.

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Joanne M. Scanlon

January 18, 2019

Date

**Docket No. 4513 - National Grid – Streetlight Metering Pilot Proposal  
Service List updated 1/4/2019**

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