BEFORE THE
NEW YORK STATE
PUBLIC SERVICE COMMISSION

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Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision — Case 14-M-0101

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# New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation Track One Comments on AMI

September 22, 2014

## I. EXECUTIVE SUMMARY

New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation (together the "Companies") appreciate the opportunity to comment on Advanced Metering Infrastructure ("AMI")[1] as a supplement to the Joint Utilities[2] filing on Staff's Straw Proposal. These AMI comments are applicable to numerous Staff Straw Proposal sections.[3] AMI is important because it supports the vast majority of the New York State Public Service Commission's ("Commission") stated objectives for the Reforming the Energy Vision proceeding ("REV"). The Companies therefore recommend AMI as a foundational REV investment.

The Companies recognize that AMI investment, as well as other Distributed System Platform ("DSP") investment, must reflect a balance between building functionality in anticipation of market needs and ensuring that the investment is in line with benefits. The primary objective for the evolution of the DSP should be to develop an increasingly functional platform over time that is justified by higher levels of value for all stakeholders. In recommending AMI investment, the Companies recognize that DSP timing, cost, functionality, priorities and benefits will differ by DSP, market and region.

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1 AMI is defined as "the full measurement and collection system that includes meters at the customer site, communication networks between the customer and a service provider, such as an electric, gas or water utility, and data reception and management systems that make the information available to the service provider." Elec. Power Research Inst., Advanced Metering Infrastructure (AMI), at 1 (2007) *available at* https://www.ferc.gov/EventCalendar/Files/200704239091846-ERPI%20-%20Advanced20Metering.pdf.

2 The Companies are concurrently submitting detailed comments with other utilities (the "Joint Utilities") on Staff's August 22, 2014 Staff Straw Proposal on Track One Issues ("Staff Straw Proposal"). In the Joint Utility Comments, the Companies join other utilities in endorsing many components of the Staff Straw Proposal.

3 AMI has general applicability to multiple sections of the Staff Straw Proposal including: I. Context and Overview (p.1); II. Establishing REV: DSP Market Vision (p.13); III. Enabling New Roles for Key Participants B. Customer Engagement (p. 22); and Section IV. Gauging Feasibility A. Platform Technology, 1. DSP Functional Requirements (p. 37).

In recommending AMI, the Companies draw upon the experience gained via the recent implementation of AMI by their affiliate, Central Maine Power ("CMP"). CMP's implementation of AMI in Maine has been a positive for both the utility and for Maine customers.[4]

AMI is unique in the sheer number of benefits it provides and the support it brings to the various functionalities necessary to create and operate the DSP. The Companies recognize that AMI in the context of the rapidly evolving REV framework will be a complex undertaking that will require, at a minimum, system integration, customer outreach and effective vendor partnerships. Accordingly, the Companies believe that AMI should be considered a REV foundational investment following completion of an initial demonstration project.[5]

## II. DISCUSSION

### *A. Context and Overview (p.1)*

The Staff Straw Proposal properly begins with a recitation of the Commission's six stated objectives for the REV initiative: 1) enhanced customer knowledge and tools that will support effective management of their total energy bill; 2) market animation and leverage of ratepayer contributions; 3) system wide efficiency; 4) fuel and resource diversity; 5) system reliability and resilience; and 6) reduction of carbon emissions. AMI is unique in providing direct support for five of the six objectives.[6] Thus, AMI investment by the utilities, as DSPs, is a key foundational

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[4] U.S. Dep't of Energy, Smart Meter Investments Yield Positive Results in Maine (2014) *available at* https://www.smartgrid.gov/sites/default/files/doc/files/Central%20Maine%20Power%20Case%20Study_0.pdf ("DOE Report").

[5] The Companies also support the Staff Straw Proposal's use of demonstration projects in other areas as well. Demonstration projects involve the deployment of commercial technologies in real world settings at a scale that provides reliable information to evaluate the supporting technologies.

[6] The only Commission REV objective not directly supported by AMI is fuel and resource diversity. AMI, however, provides indirect support for that objective.

investment that will provide a multi-benefit tool to support the Commission's stated REV objectives.

AMI supports the Commission's first objective (customer knowledge) by providing more granular data to greatly enhance customer information and assist customers in managing their electric bills. Customers with access to greater data will be more engaged about their energy use and their market options.[7]

The availability of customer specific granular data[8] on a timely basis will animate markets by providing transparency on usage to both individual customers and to new, value-added, market entrants while supporting increased customer segmentation and specifically targeted product development.

AMI improves system-wide efficiency through a variety of means, including achieved operational efficiencies (e.g. fewer truck rolls and a reduction in meter reading) and the fact that the multi-tiered, network communications platform underlying AMI will have the capacity to allow for future network automation, improved troubleshooting and more efficient dispatch.[9] Additional system efficiencies can be gained on the supply side, including efficiencies gained from conservation voltage reduction and AMI-based dynamic pricing.

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7 CMP's test group of 3,000 pilot-program participants received weekly use and cost reports. About 70% of the participants said they took action to reduce usage. DOE Report at 2. AMI may also allow smaller customers to have individual installed capacity tags instead of having to rely on profile data, thus making them eligible for innovative product offerings.

8 As foundational investments, AMI meters have the capability to be flexible in the granularity of interval data they can provide. For example, targeted meters could provide 15-second intervals for voltage monitoring, while other meters could have 15-minute or hourly intervals.

9 It may also be possible to utilize smart meters to monitor voltage levels. Use of customer level voltage data could assist in anticipating and avoiding distribution network issues impacting voltage.

AMI enhances system reliability and resiliency as it enables the utility to obtain immediate granular data regarding the location and nature of outages, thus creating greater visibility in the field to facilitate resolution of the outages.[10]

Finally, AMI supports carbon emission reduction by limiting or reducing the number of truck rolls required for meter reading and reconnections. Further support for carbon reductions resulting from AMI is also possible if customers, armed with new AMI derived information about their energy usage, are able to reduce their peak or total usage on a going forward basis.

*B. Establishing REV: DSP Market Vision: 1. Regulated Monopoly Functions; i. Market Operations; ii. Grid Operations; iii. Integrated System Planning (pp. 12-17)*

The Staff Straw Proposal identifies market operations, grid operations and integrated system planning as three regulated monopoly functions of the DSP under REV. AMI directly supports each of these functions. The DSP market operations need to be transparent, flexible, scalable and efficient. AMI technology will facilitate market operations by providing all stakeholders with enhanced levels of granular data useful to consumers, third parties and energy suppliers. AMI supports grid operations by facilitating grid automation and response to load down to the meter level. It also provides enhanced fault detection that will optimize reliability. Additionally, AMI provides the DSP with the ability to value the contribution of various Distributed Energy Resources ("DER") to the system at all times, thus providing the optimum value to the DER, utilities and consumers. Finally, AMI also facilitates integrated system planning by providing an increased level of information regarding circuit loading and distribution level needs, which will enable greater specificity in integrated system planning.

[10] As noted earlier, AMI does not directly support the Commission's fourth objective (fuel diversity). However, the existence of AMI may indirectly support the Commission's goal by providing customers with usage data that may result in a customer electing an alternative fuel source, such as wind or solar.

### C. *Section III. Gauging Feasibility: 1. DSP Functional Requirements*

The Staff Straw Proposal addresses DSP functions and technologies available in the market and concludes that the DSP market is "technically and realistically achievable."[11] AMI is technically and realistically achievable today and numerous utilities, including CMP, have experience with AMI technology. Foundational investment in AMI as a practical matter will directly support the vast majority of the preliminary list of DSP market functionalities identified by Staff and set forth on page 38 of the Staff Straw Proposal.[12] For example, AMI supports, among other real-time load and network monitoring, adaptive protection, enhanced fault detection, direct load control, DER power control, dynamic event notification, dynamic pricing and market-based demand response.[13] Notably, AMI supports four out of five of the "initial priority" DSP market functionalities identified by Staff's Straw Proposal.

## III. CONCLUSION

AMI provides important support for the DSP functionalities required to meet the Commission's REV objectives and should be considered a foundational investment following an initial demonstration project.

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Respectfully submitted,

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[11] Staff Straw Proposal at 36-38.

[12] Id. at 38.

[13] The DSP market functionalities supported by AMI listed are only a small example of those available.