nationalgrid

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December 7, 2007

Honorable Jaclyn A. Brilling
Secretary
State of New York
Public Service Commission
Three Empire State Plaza, 19th Floor
Albany, NY 12223-1350

Re: Case 94-E-0952, In the Matter of Competitive Opportunities Regarding Electric Service; Case 00-E-0165, In the Matter of Competitive Metering; Proceeding on Motion of the Commission to Investigate; Case 02-M-0514 Competitive Metering for Gas Service; *Notice Seeking Comment* (issued October 10, 2007)

Initial Comments of National Grid In Response to Notice Seeking Comments Relating to Advanced Metering Infrastructure Standards

Dear Secretary Brilling:

Niagara Mohawk Power Corporation d/b/a National Grid, KeySpan Energy Delivery New York and KeySpan Energy Delivery Long Island hereby respectfully submit an original and five copies of the enclosed initial comments relating to advanced metering infrastructure standards in response to the October 10, 2007 "Notice Seeking Comments" in Case Nos. 94-E-0952, 00-E-0165 and 02-M-0514. Copies of the filing also are being served via regular and electronic mail upon the parties identified on the Active Parties list provided by the Commission in this proceeding.

Kindly acknowledge receipt of this filing by stamping the enclosed additional copy, and returning said copy in the enclosed, postage-paid envelope.

Please address any questions regarding this filing to the undersigned.

Respectfully submitted,

Jeremy J. Euto

cc: Sue Pelkey
Robert Visalli/Denise Gerbsch/Patrick Piscatelli
Active Parties (via regular and electronic mail)

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STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of Competitive Opportunities Regarding Electric Service	**Case No. 94-E-0952**
In the Matter of Competitive Metering	**Case No. 00-E-0165**
Proceeding on Motion of the Commission to Investigate Competitive Metering for Gas Service	**Case No. 02-M-0514**

INITIAL COMMENTS OF NATIONAL GRID IN RESPONSE TO NOTICE SEEKING COMMENTS RELATING TO ADVANCED METERING INFRASTRUCTURE STANDARDS

NIAGARA MOHAWK POWER CORPORATION
d/b/a NATIONAL GRID
KEYSPAN ENERGY DELIVERY NEW YORK
KEYSPAN ENERGY DELIVERY LONG ISLAND

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Dated: December 7, 2007

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of Competitive Opportunities Regarding Electric Service	**Case No. 94-E-0952**
In the Matter of Competitive Metering	**Case No. 00-E-0165**
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INITIAL COMMENTS OF NATIONAL GRID IN RESPONSE TO NOTICE SEEKING COMMENTS RELATING TO ADVANCED METERING INFRASTRUCTURE STANDARDS

Introduction

Niagara Mohawk Power Corporation d/b/a National Grid, KeySpan Energy Delivery New York, and KeySpan Energy Delivery Long Island (hereinafter collectively "National Grid" or "Company"), submit the enclosed as their initial comments in response to the "Notice Seeking Comment" (the "Notice") issued by the New York State Public Service Commission (the "Commission") in the above-referenced proceedings.[1]

In the Notice, the Commission notes that during the review of the utilities' various plans for advanced metering infrastructure ("AMI") deployment; it became apparent that the utilities do not have a consistent understanding of what physical and/or functional characteristics an AMI system should include. Notwithstanding this, the Commission recognized that the various AMI filings should be considered using a consistent standard;

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1 Case 94-E-0952, In the Matter of Competitive Opportunities Regarding Electronic Service; Case 00-E-0165, In the Matter of Competitive Metering; and Case 02-M-0154, Proceeding on Motion of the Commission to Investigate Competitive Metering for Natural Gas Service, *Notice Seeking Comment* (October 10, 2007).

and thus, AMI proposals should be measured against clear and comprehensive standards for the functions they are intended to achieve. The Commission acknowledges that full AMI deployment represents a large technical undertaking involving millions of devices that must integrate with a variety of utility processes and that success of AMI systems further requires an open standard that enables multi-vendor, interoperable equipment.

In light of these goals, the Notice seeks comments from parties concerning the features and functions of AMI systems that should be considered as standard. The Notice includes a list of AMI features and functions assembled by Department of Public Service Staff ("Staff") for potential inclusion in an AMI standard and parties were specifically invited to submit comments on the proposed list.

Background

National Grid has a long history of proactively deploying and making available advanced electric and gas metering systems to its customers to enable them to fully participate in electric demand response, electric supply time-differentiated pricing, NYPA power allocation, gas daily balancing and other beneficial programs. The Company offers voluntary time of use metering for residential customers, enhanced metering for large commercial and industrial customers (i.e., mandatory hourly pricing customers) and optional enhanced metering for other commercial and industrial customers, web-based meter data access, and meter pulse contacts for electric and gas customers to facilitate better management of their energy usage.

Advanced Metering Definition

Numerous definitions for advanced metering and advanced metering infrastructure are used interchangeably throughout the industry by utilities, meter manufacturers, vendors, consultants, customers, regulators, and others. In its response to the Commission's August 1, 2006 Order[2] in this proceeding (the "August Order"), the Company stated that "we interpret the definition of advanced metering to mean one-way communication, fixed network automated meter reading (i.e., basic advanced metering)".[3] Expanded advanced metering broadens the definition to include additional functionality beyond energy measurements, such as outage management, voltage measurements at the point of service, remote disconnect, tamper detection, interface to load control devices, etc.[4] As noted in National Grid's earlier filing in this proceeding, the term Advanced Metering Infrastructure ("AMI") as used in this filing means the systems, software, communications, and data warehousing required to support advanced metering functions.[5]

National Grid Initial Comments

In its August Order, the Commission intended to refrain from including requirements that might favor one manufacturer's product over another, or that might limit

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[2] Case 94-E-0952, In the Matter of Competitive Opportunities Regarding Electronic Service; Case 00-E-0165, In the Matter of Competitive Metering; and Case 02-M-0154, Proceeding on Motion of the Commission to Investigate Competitive Metering for Natural Gas Service, *Order Relating to Electric and Gas Metering Services* (the "August Order"), stating at footnote 1, "advanced metering includes metering systems capable of recording and reporting consumption and other measurements at more frequent intervals than the customer's billing cycle (generally monthly) and may encompass several different components: meters, communications technology, automated meter reading systems, and data warehouses." (August 1, 2006)

[3] Case Nos. 98-M-1343 and 00-E-0165 and Niagara Mohawk Power Corporation d/b/a National Grid, "Compliance Filing of National Grid Relating to Electric and Gas Metering Services," at pp. 6-7 (January 31, 2007).

[4] *Id.*

[5] *Id.*

innovative solutions not previously considered.[6] AMI standards to be instituted by the Commission must preserve this ability for flexible deployment of AMI systems which do not stymie ingenuity, or limit adoption of technologies in the future, which are not currently available. It is in this vein that National Grid proposes the list of features and functions for inclusion in a standard for AMI system be modified as follows:

a) *ANSI compliant (must meet all ANSI standards).*

National Grid Response: Currently all revenue meters used by Investor Owned Utilities in New York State must be approved by the Commission. Approvals are based upon compliance with ANSI C.12; so long as this approval process is retained, the proposed standard is redundant and unnecessary.

b) *Bi-directional registration (supports net metering).*

National Grid Response: National Grid concurs that an AMI system should support net metering; however, only customers with on-site generation require meters with net metering capability. The standards should not mandate deployment of such meters for customers without on-site generation. Net metering should be allowed to be accomplished utilizing meters that record forward and reverse energy flows (import and export), with reconciliation (netting) in the meter data management system – net metering within the meter should not be mandated. Subject to the conditions that utilities are permitted to use the meter data management system for netting and that net metering is required only for customers with on-site generation, National Grid endorses this standard.

[6] *See,* Case 94-E-0952, *Notice Seeking Comment* at p. 1 (October 10, 2007).

c) *Visual read capability for cumulative usage.*

National Grid Response: Customers should have access to meter data throughout the billing cycle; however, options other than visual read capability at the meter should be allowed. Subject to the condition that such options are allowed, National Grid endorses this standard.

d) *Ability to provide time-stamped interval data, at hourly or shorter time intervals.*

National Grid Response: National Grid endorses this standard. The methodology for time-stamping the interval data should not be specified in the standard.

e) *On-board meter memory capable of storing at least 60 days of readings.*

National Grid Response: National Grid believes that the standard should require that the AMI system be capable of storing a minimum amount of usage data to ensure data is not lost in the event of a prolonged communication failure. Based on the current state of technology and operational experience it's premature to establish a standard in this area at this time. A standard in this area should be revisited after additional experience is gained, including that from the AMI pilots contemplated within the State. Subject to removing the specific timeframe for on-board memory, National Grid endorses this standard.

f) *Direct, real-time (defined as a time lag of five minutes or less) remote read-only access for customers and/or competitive providers to meter data.*

National Grid Response: Subject to the condition that this feature should apply strictly to electricity metering, National Grid endorses this standard. Customers and/or competitive

providers should be given access to this meter data; however, remote read-only access to the meter must not be a requirement, as it poses cyber security concerns and increases meter data management administration complexity and cost. Additionally, battery management is a concern for gas meters – enabling the ability to communicate with these meters on a near real-time basis would seriously impact the battery life.

g) *Capability to remotely read meters on-demand.*

National Grid Response: National Grid interprets this to mean the Utility has the capability to remotely read meters on-demand and endorses this standard subject to this interpretation.

h) *Utilizes open standards-based communication protocols and platforms, e.g., broadband, PLC, internet, XML, MV-90, Zigbee, DNP3, etc.*

National Grid Response: Subject to revising or removing the list of examples, which may tend to restrict innovation, National Grid endorses this standard to the extent such open protocols and platforms are economically and technologically feasible.

i) *Two-way communications capability, including ability to remotely upgrade meter firmware.*

National Grid Response: This item should be re-written to add the words "with electricity meters" after the word "capability" on the first line and to delete the phrase "including the ability to remotely upgrade meter firmware." Subject to these modifications, National Grid endorses this standard. Two-way communications capability is understood to mean that both the meter and the AMI data collection system are capable of independently initiating communications with each other. There should not be a requirement for two-way communications with gas meters. Upgrading of meters remotely is further addressed in item (m) below.

j) *Ability to send signals to customer equipment to trigger demand response functions, and/or connect with a home area network (HAN) to provide direct or customer-activated load control.*

National Grid Response: National Grid believes the ability to send signals for demand response is an important function of an AMI system; however, it needs to be clear that the meter is not required to be the gateway/interface to the HAN. Utility meters must be highly cost effective and mandating this feature may price the meters as too high for a mass deployment. Subject to the condition that the meter not be required to be the gateway/interface to the HAN, National Grid endorses this standard.

k) *Positive notification of outage/restoration.*

National Grid Response: National Grid endorses a standard that AMI provide the capability to detect and provide notification of electric outages and restoration; however, positive notification of all events cannot be assured and is not a necessary requirement to effectively manage outage restoration. Subject to modifying the phrase "Positive notification of" to read "Notification of", National Grid endorses this standard.

l) *Self diagnostics, including tamper flagging capability.*

National Grid Response: National Grid conceptually endorses this standard; however, the term self diagnostics is vague and the definition needs to be clearly articulated before this can be incorporated into a standard.

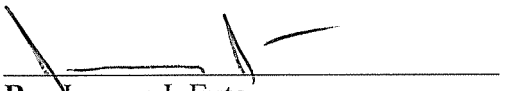
m) *Upgrade capability.*

National Grid Response: National Grid believes this should include the ability to remotely upgrade meter software over the AMI communications network. Upgrading the firmware

remotely has cyber security and other technical concerns, making the desirability questionable. Therefore it should not be referenced in the proposed standard. Hardware upgradeability should be encouraged to the extent economically practicable; however, for the mass market deployment, replacement may be a less costly option than upgrading existing devices. Subject to these conditions, National Grid endorses this standard.

Respectfully submitted,

Niagara Mohawk Power Corporation d/b/a
National Grid
KeySpan Energy Delivery New York
KeySpan Energy Delivery Long Island



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