PUBLIC UTILITIES

BOARD OF PUBLIC UTILITIES

AMI Data Access Standards

Proposed New Rule: N.J.A.C. 14:5-10

Authorized By: New Jersey Board of Public Utilities, Christine Guhl Sadovy, President, Dr. Zenon Christodoulou, Ph.D., Marian Abdou, and Michael Bange, Commissioners.

Authority: N.J.S.A. 48:2-12, 48:2-13, 48:2-16, 48:2-25, and 48:3-96

Calendar Reference: See Summary below for explanation of exception to calendar requirement.

BPU Docket Number: EX24090717

Proposal Number:

The deadline for comments on this matter is 5:00 P.M. on _____. While all comments will be given equal consideration and will be made part of the final record of this proceeding, the preferred method of transmittal is through the Board's Public Document Search tool, by searching for the specific docket listed above and using the "Post Comments" button. Written comments may also be submitted. Please include subject matter and docket number and submit to:

Secretary of the Board
New Jersey Board of Public Utilities
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All comments are considered "public documents" for purposes of the State's Open Public Records Act. Commenters may identify information that they seek to keep confidential by submitting it in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3.

The agency proposal is as follows:

Summary

The New Jersey Board of Public Utilities ("Board") is proposing to adopt new rules to be added to the provisions of N.J.A.C. 14:5, Electric Service, pursuant to N.J.S.A. 48:2-12, 48:2-13, 48:2-16, 48:2-25, and 48:3-96. N.J.A.C. 14:5-10, AMI Data Access Standards, establishes the rights and rules regarding the collection, use and sharing of data collected by AMI (Advanced Metering Infrastructure) meters. AMI data differs from traditional meter data in that it is collected in regular intervals per hour throughout the course of the day, rather than the traditional single monthly meter read. This data can be used to create energy usage profiles, allowing customers to better understand their electric usage. By sharing this data, customers can have other parties analyze their usage data and offer ways in which they can save money by changing their usage habits or participate in other programs. These rules are intended to provide customers with access to their data, the ability provide it to only the parties with which they wish to share it, not just the utility, and ensure their data is protected. These measures also foster a competitive and non-discriminatory environment for the development of products and services utilizing this data for customers' benefit.

The substantive provisions of the new rules are summarized as follows:

N.J.A.C. 14:5-10.1 delineates the purpose and scope of subchapter 10. This rule pertains only to electric meters using AMI technology.

N.J.A.C. 14:5-10.2 identifies and defines specific terms used in subchapter 10. This establishes the guidelines for what is considered "AMI Data", establishes the Green Button Data Standard and differentiates between validated and non-validated data. The definition for AMI Data establishes the types of information that will be considered customer-generated data and therefore, owned by the customer. This also creates a clear distinction between parameters measured on the customer side of the meter, which belong to the customer, and data obtained on the system side of the meter, which is intended for use by the electric distribution companies ("EDCs") to facilitate system operation. The Green Button Standard establishes a uniform format used industry wide and prevents the implementation of a different, proprietary standard that could limit access and competition. The distinction between validated and non-validated data is important as they represent two separate data streams. Non-validated data is obtained directly from the meter via short range communication that provides data in close to real-time. Validated data is sent from the meter to the electric utility and goes through a process to ensure the readings are correct for billing purposes. Validated data is sharable only after the validation process occurs and lags the time of the readings by 24 to 48 hours.

N.J.A.C. 14:5-10.3 establishes the data collection interval requirements for validated data and how quickly it will be made available after collection. The rule further establishes the requirement for a customer owned, energy monitoring device to act as the interface with the meter for access to non-validated AMI data. This method was chosen as an added layer of security in keeping a separation of the meter from a direct connection to the customer's internet and also provides a near real time data stream for the customer's direct use. Due to range limitations of the protocol utilized by AMI meters for non-validated data, the rule explains that connectivity may be limited if too far away or in a multi-unit dwelling.

N.J.A.C. 14:5-10.4 establishes that the customer owns their own usage data measured by the AMI meter and the right to share or revoke access to that data with third parties. The rule further requires the Green Button Data Standard as the primary data format and data sharing method to be used for validated data. Green Button *Connect My Data*® and Green Button *Download My Data*® are the industry standard methods of allowing customers to easily and securely share their energy usage data with authorized third parties.

N.J.A.C. 14:5-10.5 establishes the appropriate uses of AMI Data by the electric utilities. The rule requires EDCs to bill customers with AMI meters on actual usage, not estimates. It also prevents the EDCs from selling any customer's AMI Data. The rule further requires the EDCs to share anonymized AMI Data with academic institutions for the purpose of researching energy usage and clean energy adoption

N.J.A.C. 14:5-10.6 establishes a common release form for third parties to obtain authorization from customers to receive customer AMI Data. This process is intended to only allow legitimate third parties to obtain access to AMI Data. By standardizing the form and process across the EDCs, third parties can easily obtain authorization from each of the EDCs with the same documentation. An additional provision ensures that customers and the proper authorities are notified in the event that of an unintended release of customer information.

N.J.A.C. 14:5-10.7 ensures that the EDCs provide non-discriminatory access to AMI Data. The purpose of these provisions is to encourage competition between all parties to provide a diverse selection of products and tools to customers. In addition, the provisions require notification of changes to data streams which may disrupt an application's functionality, prohibits EDCs from reverse engineering third party applications and provides a system for third party developers to notify the utility of bugs or technical issues.

N.J.A.C. 14:5-10.8 explains the reporting metrics that the EDCs will provide the Board on a quarterly basis. This information will allow Board staff to gauge customer participation in data sharing programs and determine if there are access or operational issues that need to be addressed.

As the Board has provided a 60-day comment period on this notice of proposal, this notice is excepted from the rulemaking calendar requirements set forth at N.J.A.C. 1:30-3.1 and 3.2, pursuant to N.J.A.C. 1:30-3.3(a)5.

Social Impact

The rules proposed for adoption relate directly to the provision of safe, adequate, and proper service by New Jersey EDCs. Said rules are necessary to ensure that an electric distribution system is constructed and installed pursuant to acceptable standards and is maintained and inspected in a manner that will protect the safety and well-being of the public. AMI meters and the data they provide allow the EDCs to more quickly and accurately determine the causes of outages, identify power quality and loading issues, and provides system performance information down to the customer level. Customers directly benefit from the data they generate as well because the added visibility of their usage allows customers, or an authorized third party on their behalf, to analyze their usage data and look for opportunities to save money on their electric bills. The new rules will ensure that the State's EDCs continue to provide safe and reliable service to their customers. These changes are anticipated to have a positive social impact for ratepayers and expected to be well received by the public.

Economic Impact

As a result of the new rules proposed, EDCs, as they have in the past, will incur expenses to implement these provisions. Specifically, expenses will include establishing secure portals to

share information at the customer's request, supporting IT infrastructure, software development, and the costs for reconfiguration of meter settings. Since these items represent appropriate business activities, all reasonable levels of costs associated with them will be passed along to ratepayers through rates for service. While the adoption includes new reporting requirements, minimal economic impact is expected as a result of these changes.

Federal Standards Statement

Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq., require State agencies that adopt, readopt, or amend State rules that exceed any Federal standards or requirements to include in the rulemaking document a Federal standards analysis. While the rule references Order 2222 of the Federal Energy Regulatory Commission ("FERC") and requires the EDCs to meet the requirements of FERC Order 2222 according to PJM's planned implementation timeline, the rule does not exceed the requirements of FERC Order 2222. FERC Order 222 requires AMI Data read intervals of 5 minutes in order for individual generators to participate in Distributed Energy Resource aggregations. The rule requires the EDCs to be prepared to meet this requirement pursuant to PJM's implementation schedule. Furthermore, EDCs need only implement the shorter read interval for customers making this request.

Jobs Impact

The Board does not anticipate that the new rules proposed for adoption either will cause jobs to be generated or lost in any area of the State's economy.

Agriculture Industry Impact

The Board does not anticipate that the new rules proposed for adoption will have any impact on the agriculture industry of the State.

Regulatory Flexibility Statement

The new rules proposed for adoption will not impose reporting, recordkeeping, or other compliance requirements on small businesses, as that term is defined in the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., in that no regulated New Jersey EDC has fewer than 100 full-time employees.

Housing Affordability Impact Analysis

The new rules proposed for adoption with amendments, new rules, and a repeal will have no impact on affordable housing in New Jersey and will not evoke a change in the average costs associated with housing because the rules pertain to the regulation of electric utilities.

Smart Growth Development Impact Analysis

The new rule proposed for adoption will have an insignificant impact on smart growth and there is an extreme unlikelihood that the rules would evoke a change in housing production in Planning Areas 1 or 2, or within designated centers, under the State Development and Redevelopment Plan in New Jersey because the rules pertain to the regulation of electric utilities.

Racial and Ethnic Community Criminal Justice and Public Safety Impact

The proposed new rule will not have an impact on pretrial, detention, sentencing, probation, or parole policies concerning adults and juveniles in the State. Accordingly, no further analysis is required.

Full text of the proposed new rules follows:

SUBCHAPTER 10. AMI DATA ACCESS STANDARDS

14:5-10.1 Purpose and scope

This subchapter sets forth requirements that EDCs shall follow in managing data created through use of AMI meters.

14:5-10.2 Definitions:

"AMI data" means any information collected regarding a customer's electrical usage, demand, or information measured to calculate such, recorded over regular intervals of time as measured, stored or transmitted by a utility owned smart meter. For the purposes of this rule, this shall not refer to any other data collected independent of the customer's usage unless specifically stated as such.

"Green Button Data Standard" means data formatted according to the Energy Services Provider Interface data standard for use through Green Button *Connect My Data*® ("Green Button Connect") or Green Button *Download My Data*® ("Green Button Download").

"Validated AMI data" means billing quality data collected by the EDCs which has been confirmed as accurate through an EDC verification process.

"Non-validated AMI data" means customer usage data read locally, directly from the meter, using a low power, short range communications protocol.

14:5-10.3 AMI data collection and availability

(a) Validated AMI data shall be available to customers or their authorized agents no later than 48 hours after the meter readings are captured.

1. Each EDC shall collect billing quality interval usage AMI data, at watt-level precision, for all customers in intervals of no greater than 15 minutes.

2. Each EDC shall be capable of offering five (5) minute data collection, if specifically requested by a customer, by no later than PJM's planned implementation date for the Order 2222 of the Federal Regulatory Commission.

(b) Access to non-validated AMI data shall be provided at customer request through a customer owned, qualified energy monitoring device that a customer may procure from the competitive market. The EDC shall not be in violation of this paragraph if the EDC is unable to provide this access due to the distance of the customer device from the meter or location in a multi-unit dwelling. The EDCs shall configure the customer's AMI meter to allow the monitoring device to receive the customer's AMI data on a 15 second or less basis.

14:5-10.4 Ownership and sharing of AMI data

(a) AMI data measured, stored or transmitted by an AMI meter belongs to the customer whose usage is captured by their AMI meter.

(b) Customers have the right to share their AMI data with authorized third parties. Customers have the right to revoke access to their AMI data from third parties at any time.

(c) Each EDC shall make a customer's AMI data accessible and sharable using the Green Button Data Standard.

(d) Each EDC shall enable Green Button Connect and/or Green Button Download as a means for customers or their authorized agents to access AMI data. The EDCs shall also enable authorized third parties to access their customers' interval usage data

through Green Button Connect, an electronic data interchange or through the EDCs' supplier web portals via flat files (i.e., "batch CSV" or tab-delimited files).

(e) AMI data sets shall contain a rolling 14 days' worth of AMI data delivered through supplier portals daily and accessible through an automated Application Programming Interface solution.

(f) EDCs shall ensure AMI data is transmitted to the authorized third parties no later than 60 seconds after customer authorization.

(g) Each EDC shall make the following data types available to be shared with authorized third parties, in addition to AMI data:

1. All customer billing information, including, but not limited to, account information, meter information, rate information, and any other data necessary for customers to participate in various demand management programs;
2. Premise addresses for multi-site customers; and
3. Customer account number(s).

(h) Each EDC shall not charge a fee for access to AMI data to the customer or to the third party with whom the customer wishes to share their AMI data, including authorized third-party suppliers, distributed energy resource aggregators, and other energy services companies.

14:5-10.5 Utility use of AMI data

(a) Each EDC shall bill customers with activated AMI meters installed using the customer's actual AMI data, rather than estimated data. In addition, each EDC

shall establish the customer's peak load contribution using each customer's load data.

(b) Any use cases that are outside of the EDC's core functions (such as billing, settlements, and reliability) or are outside of requirements established in Board mandated programs (such as Energy Efficiency) shall be open to competition by authorized third parties.

(c) EDCs shall not be permitted to sell any customer AMI data.

(d) In order to support academic research into energy usage and clean energy adoption, each EDC must provide access to AMI data on an anonymized usage basis, at the zip code or sub-zip code level, to faculty, graduate students, or post-doctoral fellows associated with academic institutions for legitimate, non-commercial academic research into customer usage and system reliability.

(e) Each EDC shall explore additional use cases for the types of data that can be collected from AMI meters, including the activation of additional data fields.

14:5-10.6 Third Party authorization and data security

(a) All EDCs shall coordinate with each other to create and maintain a common "one-click" web-based release form, known as the New Jersey Common Release Form, for the purpose of authorizing access to customer data. A third-party supplier enrollment that includes the New Jersey Common Release Form disclosure information contained in subsection (b) below shall be acceptable.

(b) The common release form shall be web-based, solely accessible by using multi-factor authentication, and include the following information:

1. Name of the third party requesting authorization;
2. Scope of data fields to be shared, how many periods back (historical), how many periods forward (ongoing), and for which accounts/services;
3. How the data is authorized to be used after customer consent is given;
4. One-click consent/decline; and
5. Confirmation required through multi-factor authentication.

(c) Customers shall have the ability to withdraw permission, without penalty, at any time.

(d) In the event of an unauthorized release of customer information, each affected EDC shall notify customers, the New Jersey State Police, and the Board's Division of Reliability and Security of the release. Official entities shall be informed within 48 hours of the utility learning of the release, and customers shall be notified as soon as is practicable.

14:5-10.7 Ensuring fair access and competition

(a) Each EDC shall ensure non-discriminatory access to validated and non-validated AMI data for any authorized third parties and unregulated EDC affiliates.

(b) Each EDC shall notify application developers 90 days prior to making changes to AMI data formatting, frequency, or other technical changes that may adversely affect application functionality, unless the change is necessary to address an immediate cybersecurity concern or system vulnerability.

(c) Each EDC shall be prohibited from surveilling or reverse engineering third-party software applications, or engaging in any effort to gain competitive insight or

advantage into a third party's business or product offering, unless the third-party software application contains code or vulnerability issues that could impact the integrity of the data.

(d) Each EDC shall provide a web-based issue tracking system for authorized third party software application developers to log technical requests and bugs.

14:4-10.8 Reporting metrics

(a) Each EDC shall report the following metrics to the Board and the Board's Division of Clean Energy on a quarterly basis:

1. Total usage in kilowatt-hours and number of EDC customers during the reporting period, broken down by month and customer tariff class. Each EDC shall also provide the same data for each of the previous five (5) years, broken down by month and applicable customer tariff class;
2. The hourly demand curve in kilowatt-hours for each customer tariff class (minimum hourly interval), and during the same quarter for each of the previous five (5) years, broken down by month and including the percentage of customers whose demand exceeded tariff level (e.g., incurred demand charges);
3. Number of customers who granted ongoing access to their AMI Data via Green Button Connect and Green Button Download;
4. Number of customers who granted one-time access to their AMI data via Green Button Connect;
5. Number of customers who withdrew ongoing access permission;

6. Number and type of errors generated (customer-facing) in a data-sharing authorization;
7. Number and type of errors generated (third party-facing) in a data-sharing transaction;
8. Data delivery time after an authorization is granted (in seconds with histogram);
9. Web page loading time (in milliseconds with histogram);
10. Time for third parties to complete technical and administrative onboarding with utilities' Green Button Connect systems;
11. Number and type of technical issues reported by third parties or customers, including severity, acknowledgment time with histogram, and resolution time with histogram;
12. Total number and percentage of customers with AMI meters who logged into the data portal;
13. Total number and percentage of customers identified to receive messages regarding their energy savings tools, personalized usage and or savings tips; and
14. Average and median number of instances that each customer logged into the data portal during the reporting period.