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VIA ELECTRONIC FILING

Aida Camacho-Welch, Secretary
New Jersey Board of Public Utilities
44 South Clinton Avenue
3rd Floor, Suite 314
P.O. Box 350
Trenton, New Jersey 08625-0350

**Re: Straw Proposal on Advanced Metering Infrastructure (AMI) Data Transparency,
Privacy & Billing, Docket No. EO20110716**

Dear Secretary Camacho-Welch:

Jersey Central Power & Light Company (“JCP&L” or the “Company”) is pleased to submit comments on the Straw Proposal on Advanced Metering Infrastructure (“AMI”) Data Transparency, Privacy & Billing (“Straw Proposal”) dated August 23, 2021 (“Straw Proposal” or “Straw”). The Straw Proposal issued by the Staff (“Staff”) of the New Jersey Board of Public Utilities (“Board” or “BPU”) outlines twelve topics for utility data access plans (“DAPs”) and Staff seeks “comment on (i) whether the principles set forth below are the appropriate places for the Electric Distribution Company’s (“EDC”) to focus; (ii) whether there are modifications or clarifications to these principles that will aid an equitable clean energy transition and/or lower consumer costs; and (iii) whether there are additional concepts that are desirable and prudent to accomplish these goals.”¹ In addition, the twelve topics request comment on specific issues identified by Staff therein.

JCP&L thanks Staff for the opportunity to provide comments on the Straw Proposal and the strategies it sets forth. In this letter, JCP&L sets forth (i) general comments, (ii) comments responsive to the issues posed by Staff under each of the twelve topics in the Straw Proposal, and

¹ Straw Proposal at 8. The twelve topics identified in the straw proposal are: (1) Customer Ownership & “Hassle-Free” Sharing of Energy Related Data; (2) Adoption of Standardized Customer Privacy Requirements; (3) Using AMI to Drive Efficient Achievement of New Jersey’s Clean Energy Goals, and Positioning New Jersey Grid to Appropriately Account for Clean Energy Attributes; (4) Maximizing Impact of AMI on Reliability, Planning, and Reporting Metrics; (5) Data Granularity & Appropriate Rollout Schedule; (6) Ensuring Fair Access and Competition for All Meter Capabilities; (7) Billing and Settlements Best Practices; (8) Format of Data Sharing and Cost Implications; (9) Promoting Academic Research into Reliability and Clean Energy Adoption by Customers; (10) Appropriate Utility Use of AMI Data; (11) AMI Data must Support Emergency Responder Effectiveness and Safety; and (12) Stakeholder Engagement.

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(iii) additional concepts that should be considered to address the Board’s goals. JCP&L hopes that Staff finds these comments helpful.

General Comments

JCP&L offers the following general comments in response to the Straw. The Company incorporates these general comments by reference into the specific comments on the twelve topics below whether or not restated therein.

The Company supports the establishment of working groups to address the myriad and breadth of issues raised below, and to allow sufficient time for those groups to accomplish their work, prior to codifying the minimum filing requirements (“MFR”) in an order or rule. This process would allow relevant subject matter experts on the numerous highly technical subjects to provide input and attempt to achieve consensus, in a manner that would avoid implementation issues that were not considered or fully vetted.

In addition, any requirements for statewide standardized Data Access Plans (“DAPs”) should embody the concept of EDC-specific flexibility where appropriate. Throughout the Straw, there is the use of a new term “enshrine the principle.” The Board in its prior Orders, rules and Energy Master Plans has not used this legally-ambiguous term, and the Company recommends not using it here, especially given the idea of permanence such a term conveys in a time where flexibility and adaptation will be critical. The Straw’s principles should instead reflect the Board’s longstanding policy of affording flexibility to reflect the differences between different EDCs. The EDCs have different AMI Plans, either already implemented or in the process of development and deployment, with different technical features, as well as different service territories, such that a one-size fits all approach to DAPs will not be feasible in all instances. Indeed, the Board has already recognized in its AMI Filing Order and the Energy Master Plan that there will be technical differences between each EDC’s AMI system.² Through working groups, the Board can identify such differences and accommodate them in its MFRs. In future filings, the EDCs should be able to propose deviations from the MFR requirements with an explanation of the need for and reasonableness of the proposal.

The Board must also recognize longstanding legal principles of cost recovery. Specifically, the EDCs are implementing AMI and smart meters at the Board’s direction at considerable cost. (See AMI Filing Order.) The EDCs must be able to begin to fully and timely recover and earn a

² I/M/O the Petition of Rockland Electric Company For Approval of An Advanced Metering Program; And For Other Relief, BPU Docket No. ER16060524, Decision and Order (February 19, 2020) (“AMI Filing Order”). In the AMI Filing Order (at p.3), the Board direct each EDC to file a petition for AMI implementation. It stated: “Each AMI filing will receive a separate docket number and be independently review by the Board. This is consistent with the EMP provision that, ‘the roll-out of AMI must be done on a utility-specific basis, given that each utility is starting from a different investment baseline in the AMI backbone necessary to realize the full benefits of smart meters.’ See EMP 5.3.1 at p. 185. As prudence reviews will be fact and utility specific, the Board will address each utility’s specific concerns, including but not limited to, meter replacement and the cost to utilize smart meters. *Id.*”

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return on and of their substantial investment in the smart meter system through the rate case process once those meters are being used in providing utility service to customers, without additional *post-hoc* conditions stemming from DAPs or requirements that risk stranding investments. Further, to the extent the requirements arising out of this proceeding generate additional costs for the EDCs, the Board should recognize the right to cost recovery and provide a means of timely cost recovery.

Further, it is important the Board give ample time for the engagement of the myriad of technical experts required to deliver a robust data paradigm envisioned in the Straw that will impact the diverse population of stakeholders that will share in the data construct. This data paradigm will satisfy goals, embody principals and establish responsibilities including but not limited to concepts of data accuracy, completeness, sustainability, standardization, shareability, security, transmission, data storage, ownership, governance, access, flexibility, evolution and compliance. Moreover, it is expected such concepts are to be memorialized through documents prescribing coordination much like that of retail shopping and the various contracts and operating documents created to support customer utilization of Third-Party Supplier (“TPS”) offerings and allowing those TPS to coordinate with EDCs to realize customer’s supply needs.

In conclusion, this proceeding involves a multitude of technical data access issues that will require considerable effort by numerous subject matter experts and working groups. The Company urges the Board to keep this proceeding focused on data access issues arising out of the impending installation of AMI and smart meters, and to address other more remote issues or matters already being covered in other proceedings (e.g. supplier consolidated billing, non-data access AMI deployment metrics, in other existing proceedings devoted to their resolution.

JCP&L’s Responsive Comments on the Twelve Topics

The Company’s comments on the specific proposals under the twelve topics are set forth below.³

1. Customer Ownership & “Hassle-Free” Sharing of Energy Related Data.

Ownership of data. Staff recommends that the Board enshrine the principle that customers own and have complete control over sharing of all individually generated interval usage and related AMI data. This principle should serve as the foundation of any Standard DAP.

JCP&L Comment: The question of customer ownership, responsibility and compliance, especially as it relates to data paradigms, can only be described as being in the earliest stages of the overall electric industry transformation. Therefore, in order to respond to the concept proposed, the Board should clarify what “Ownership” is and is not, as well as describe the data in question recognizing that merely being deemed a customer owner of certain data does not and

³ JCP&L notes that although the Straw (at page 7, under heading II) refers to “questions” attached at the end of the document; however, there were no questions attached to the Straw proposal.

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cannot mean said customer has absolute or exclusive authority on how that data is to be made available to the EDC so long as the customer has reserved a connection to the EDC's distribution and/or transmission systems nor dictate terms with Regional Transmission Organizations (RTOs). It is important that the Board recognize, as with historic metering information from legacy meters, that the EDC is entitled to unfettered access to the meter and use of the smart meter data, without limitation. The EDCs continue to require this data for traditional utility purposes, including billing; outage restoration and reliability; system planning; voltage monitoring; evolving utility responsibilities in the areas of Clean Energy Program requirements, State initiatives such as those underway for Electric Vehicles and Energy Storage, and implementation of future Energy Efficiency, Peak Demand and Pilot Programs; and, other evolving utility functions, such as integrated distribution planning, non-wires alternatives, and implementation of FERC Order 2222 utility requirements which may include bi-directional energy flows.

Definition of "Real-time" and "Near real-time" access to data. Staff proposes to define real time and near real time access to data as a requirement that all utilities make all data available no later than 24 hours after the meter reading is captured. Staff also proposes that utilities support the sharing of data to home area networks ("HAN") on a sub-15 second basis.

JCP&L Comment: JCP&L recommends that the definition of real-time and near real-time access be discussed during the working group in order to fully understand why Staff is recommending that these parameters be so strictly defined, and what use or need these parameters are intended to address.

While the Company is not opposed to creating definitions in this area, JCP&L recommends that definitions be developed in workshops, where definitions can be memorialized in a data dictionary and aligned with industry standards and terms. Thus, all stakeholders (customers, equipment manufacturers, market participants, etc.) would be on equal footing in understanding such terms and can operate uniformly under such requirements.

Such workshops can also ensure that any standards do not conflict with the limitations of systems already planned or installed by EDCs.

For example, the process the Company would deploy in New Jersey would align with FirstEnergy's enterprise-wide AMI solution and would work as follows. Data would be made available 48 hours to the customer via the customer web portal after a meter reading is captured, and an interval would be time stamped when it is captured. The AMI meters would be interrogated on a daily basis to retrieve the *prior* 24-hours' interval data. Thus, 24 hours is too short of a period for the interval data to be made available from the time stamp for the interval (which time stamp is created when the data is captured from the meter).

The Company does not object to the proposal regarding sharing to the home area networks ("HAN") on a sub-15 second basis, with respect to un-validated data. The enterprise-wide FirstEnergy AMI solution provides direct access to unvalidated meter data to a customer on a near

real-time basis through a customer-owned qualified energy monitoring device and HAN technologies that a customer may procure from the competitive market via an interface to the AMI meter on an approximately seven second basis.

AMI data available on a rolling basis. Staff sees value in requiring utilities to make the AMI data available on a rolling basis as meters are installed across the service territory, and it should not wait until all or most of the AMI meters are installed.

JCP&L Comment: The enterprise-wide FirstEnergy AMI solution that would be deployed in New Jersey provides that AMI data will be available on a rolling basis as (i) meters are installed across the service territory and (ii) have attained acceptable daily communication rates. Deployment in an area begins with the installation of primary network communication hardware (pole mounted routers) followed by meter exchanges within that area to enable meter communication. There is a meter certification process that involves a 10-day communication monitoring test before certification. This is to ensure that over-the-air network communications will be reliable. After this certification, the meter reads sought via the AMI solution, in lieu of manual reading, will begin. Once that occurs, the AMI interval data is enabled for downstream systems available to the customer, and over the air provisioning is capable to enable HAN devices. Where communication is not adequate following the meter exchange, the communication network may be enhanced with pole mounted range extenders that strengthen the network between meters and routers. Typically, meters pass the certification process without range extenders and are certified within 2-3 weeks following exchange. Where range extenders are necessary, certification may take 2-4 months to accommodate the design and installation of this equipment.

Thus, the concept of AMI data availability must reflect the time required for the certification process discussed above.

Access to Data. Staff suggests all bona fide users of customer data would have access to the data once a customer provides valid authorization.

JCP&L Comment: Access by third parties to customer data is contingent on developing, in this proceeding and in the working groups under the auspices of this proceeding, appropriate governance on the authorized use and access to customer data. Subject to those protocols, under JCP&L's AMI Plan, authorized use of customer AMI data would be available to customers via a customer portal, and available to licensed TPSs via a supplier portal or through the Electronic Data Interchange ("EDI"). (See Response to Topic 8 below)

JCP&L understands that in the future many types of entities will desire access to data to address a variety of needs and offer products and services. However, JCP&L contends that parameters for such access must be explicitly defined and codified based upon, and cannot proceed without, a comprehensive, transparent and well understood governance and compliance practices.

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Currently, the State of New Jersey has created a robust retail electric shopping paradigm that provides well understood governance of TPSs' access to customer data. The governance of such data is memorialized in the TPS Agreement both the Company and the TPS sign.

However, there are other parties seeking access to the same data where equally robust requirements to secure customer data does not exist. Such parties include but are not limited to: PJM Curtailment Service Providers, various researchers (university, government, etc.), Distributed Energy Resource Aggregators (FERC Order 2222), Energy Efficiency providers, energy managers, brokers, and so on.

JCP&L recommends as part of the working group process that discussion take place to establish frameworks and protocols, governing access to systems, documents, and the like and applicable to the increasing list of parties seeking access to customer data.

Real time or near real time access to usage data. Staff proposes as an MFR element that customers, or their agents, should be able to access customer energy usage data in real-time, or near real-time, in order to enable the use of technology to make better energy choices and to automate responses to market and other behavior change signals.

JCP&L Comment: See JCP&L's Comment above on definition of real-time and near real-time data access, including the time frame for validated data.

Data Portability. Staff proposes as an MFR element that customers have the right to move their energy-related data from one energy services provider to another, a concept known as "data portability"

JCP&L Comment: See Comment above on data ownership. It is unclear what is meant by "portability", and the Company may have further comments should the Staff provide further clarification. The EDC should have neither responsibility nor accountability for any transfer of energy-related data from one energy services provider to another. However, JCP&L agrees the customer should be able to share its data with its current and subsequent energy service providers. Under JCP&L's AMI Plan, the utility Customer Portal will display AMI interval data and allow data export by customers into electronic files. Third parties would be able to obtain access to meter data via the following means: (i) data may be obtained directly from the customer, who may choose to share the data retrieved through the Customer Portal or HAN devices; (ii) the utility may provide historical data to third parties in excel-format files via email following receipt of a traditional Letter of Authorization signed by the customer; and, (iii) the utility will make interval data available to BPU-licensed TPS through EDI and web portal technology.

Data timing. Staff proposes as an MFR element that data should be made available for customers as soon as practicable.

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JCP&L Comment: See Comment above on definition of real-time and near real-time data access, including the time frame for validated data. The Company agrees that data should be made available as soon as practicable as a general principle, although the time frame for provision of validated and invalidated data may vary by EDC and the designs of their systems. As set forth above, to allow for validation, interval data would be made available (in JCP&L's case, via the Customer Portal) within 48 hours. Non-validated data thru the HAN devices mentioned earlier would be available in near real-time (approximately seven seconds for JCP&L).

Timely implementation of data access mechanisms. Staff proposes an MFR element providing that the mechanisms for appropriate and secure access to customer energy usage data are implemented in a useful, timely, standardized and quality-assured manner.

JCP&L Comment: As discussed above in the Comment regarding access to data under Topic 1, JCP&L believes success can only be achieved by all stakeholders if there is a clear and agreed to understanding of requirements as it relates to sharing of any data. JCP&L recommends that workshops address the matter of sharing usage data as part of a larger effort to standardize and memorialize sharing all customer information required to supply, manage and coordinate customer energy needs.

In accordance with JCP&L's AMI Plan, JCP&L is currently prepared to provide data access to retail customers, third parties and TPSs so as to ensure timely access, as described in detail in response to Topic 8.

Under the JCP&L Plan, the implementation of mechanisms including the Customer Portal, HAN Provisioning, TPS Supplier Portal, and TPS EDI would occur during the AMI deployment period. Interval data would become available following implementation of technology supporting each of these mechanisms, as well as the exchange and integration of the AMI meter.

Data Sharing That Minimizes Hassle. Staff proposes that Customers should be able to share their AMI data with energy services providers, including utility contractors and TPSs, with a minimum of hassle, including online industry-standardized forms that provide secure access to authorized agents with "one click" and access to a single point of contact that will be listed prominently on each provider's website.

JCP&L Comment: Please refer to above Comments on access to data. JCP&L believes proposed mechanisms under its AMI Plan for TPSs and third parties permit data sharing with a minimum of hassle. Specifically, a TPS would be afforded access to AMI interval data under their license, where the utility validates such license prior to providing any access via EDI or supplier web portal functionality.

Leveraging the Customer Portal, non-licensed third-party entities would be able to access data directly from the customer with "one click" capability for data download, as opposed to seeking authorization from the customer to then request data from the utility. Simply put, the third

party could request *data* from *the customer* instead of requesting *authorization* from the customer to get the data *from the EDC*.

Comparable access standards for both utilities and third-parties. Staff proposes comparable access standards for both utilities and third-parties requesting access to customer data for non-core utility functions, such as billing or reliability considerations.

JCP&L Comment: Preliminary, the Company refers to its answer in “Access to Data”, in Topic 1 above, recommending that Staff dedicate workshops to addressing the comprehensive environment of sharing data and how that will be accomplished.

JCP&L also requests further clarification regarding what is envisioned as “comparable access” and “non-core utility functions.” In particular, the Company seeks to understand what “non-core” “utility functions” the Straw contemplates that third part could provide as it participated in competitive markets including with respect to interconnections of facilities with the electric distribution system.

In any event, as a general proposition there should not be standards for “comparable” access by utilities for customer data, relative to third parties. First, it should be well understood utilities and third parties are not similarly situated and their data needs will not be equal. For example, third parties don’t have obligation to serve, or the costs to plan and operate systems to meet that obligation and a third party is not tasked with the responsibility to understand if a distributed energy resource located at one customer premise is impacting the operations of another customer premise, a situation where the utility would be obligated to act but where no such responsibility resides with any third party. Therefore, the data needs of the company to address such situations would of course differ from those of a third party.

Indeed, utility access to its AMI meters, in which it has invested and owns, is necessary for many functions not necessary or contemplated for third parties, such as over the air real time communication of alarms, daily interrogation of data and events, the ability to push configurations to the meter, and the like. Reliability is a core utility function and the data necessary to the utility to ensure society’s access to safe, reliable electricity should not be equated with any third party’s individual delivery of products or services. The EDCs will require AMI data not only for traditional utility purposes, such as billing, outage restoration and reliability, system planning, and voltage monitoring, but also for evolving utility responsibilities in the areas of Clean Energy Program requirements, State initiatives such as those underway for Electric Vehicles and Energy Storage, and implementation of future Energy Efficiency, Peak Demand and Pilot Programs, and other evolving utility functions.

Thus, the Board need not, and should not, manufacture standards for utility access to data, or to limit the access which utilities already have. Arbitrary pre-determined limits on EDCs’ use of AMI data, and “comparable” access standards for utilities relative to non-utility parties, are not appropriate for this proceeding.

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Second, further standards addressed to utility access to data are unnecessary. Moreover, the Board's existing affiliate relations rules (N.J.A.C. 14:4-3.1 et. seq.) and public utility holding company standards (N.J.A.C. 14:4-4.1 et seq.) along with Board approval of utility AMI Plans, and Board approval of DAPs (affording data access to other parties) are sufficient to safeguard against monopoly advantage concerns while permitting utilities the flexibility to use customer data in new and innovative ways when appropriate, including in ways that the assists the Board in achieving its goals. *See, e.g., N.J.A.C. 14:4-3.3(a)* (An electric and/or gas public utility shall not unreasonably discriminate against any competitor in favor of its affiliate(s) or related competitive business segment).

2. Adoption of Standardized Customer Privacy Requirements.

Privacy/Informed Consent/Working Groups. *Staff recommends the Board enshrine the principle of robust customer privacy protections and informed consent for release of customer electricity usage data. Staff proposes initiation of a working group to provide ongoing recommendations related to a common framework for customer privacy protections to be expressed in the New Jersey Common Release Form ("NJ-CRF").*

JCP&L Comment: JCP&L supports customer privacy and a requirement for safeguarding of customers' personal information and prevention of unauthorized use of this information. JCP&L supports the use of a working group to specify appropriate information sharing restrictions and to discuss the use of the NJ-CRF. An overly broad general requirement for "informed consent", absent specifics, may unintentionally restrict usage information sharing that is intended to benefit and better serve the customer, and should await the outcome of the working group efforts.

Straw Proposal. *Staff seeks comment on the inclusion of these elements in the MFRs under development in this docket: The utility will protect the customer's data from unauthorized release.*

JCP&L Comment. This issue should be discussed in a working group. *See Comments regarding the "Access to Data" section in Topic 1.* JCP&L needs more clarification regarding what is considered an unauthorized release in a data sharing environment and seeks to discuss real world scenarios and appropriate policies regarding data release. For example, EDCs can only be responsible for data in its possession and control, and not for any cybersecurity or other issues at customer or third party side of the meter/transaction.

JCP&L expects to leverage the Customer Privacy Policy as adopted by its sister companies in Pennsylvania in a timely and proper manner, upon commencement of implementation of the AMI Plan as approved by the Board. JCP&L's sister companies in Pennsylvania developed a Customer Privacy Policy, which was approved by the Pennsylvania Public Utility Commission. The Customer Privacy Policy addresses data security, data collection and privacy, and third-party information sharing.

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The Customer Privacy Policy states: “The Companies collect and retain Sensitive Customer Information that is reasonably necessary to serve their customers, effectively manage business operations, and meet regulatory and compliance obligations. The Companies do not sell or share any Sensitive Customer Information to third parties. In addition, they will not disclose a customer’s information without prior consent, except as required by law, requested by regulatory agencies and governmental authorities, or for legitimate business purposes (such as credit evaluations). The Companies protect Sensitive Customer Information under current privacy protection laws, regardless of meter type.”

Straw Proposal. All access to customer data should occur through the protocols of the NJ-CRF.

JCP&L Comment: JCP&L supports this type of detailed discussion within the working group.

Straw Proposal. How and the degree to which the required data can be captured and automated in a low friction (i.e. easily entered, low latency, timely and clear interaction) processing mode.

JCP&L Comment: It is unclear what exactly the Staff contemplates by “low friction”, and the Company may have further comments should the Staff provide further explanation. However, JCP&L believes the current data access mechanisms employed by JCP&L’s sister companies in Ohio and Pennsylvania, and which will be employed by the Company in New Jersey, which include a customer portal, HAN provisioning, supplier portal, and EDI would be considered “low friction”.

Straw Proposal. In the event of an unauthorized release of customer information, the NJ-CRF will require steps to notify customers, the Board, the Attorney General, Law Enforcement (or explain why law enforcement was not notified) of the release.

JCP&L Comment: Where JCP&L is responsible for an unauthorized release of customer information due to a defect, vulnerability or breach in our owned and operated systems, JCP&L would report as required under New Jersey law and applicable BPU orders pursuant to JCP&L’s cyber security and data breach response plans.

However, the Company believes it is only proper it be responsible for those releases of customer information for which it directly was responsible and had control over.

Should any third party be responsible for an inappropriate release of customer information after it has been aggregated and stored on another system outside of JCP&L’s direct control, it must be the responsibility of the third party to report such releases pursuant to New Jersey law and BPU orders.

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These responsibilities should be clearly stated in requirements and memorized in proper documents.

Please refer to the Company's recommendation in its "Access to data" Comment under Section 1 to dedicate workshops to the comprehensive environment of sharing data and how that will be accomplished.

Straw Proposal. The working group should regularly meet to address and propose to the Board best practices related to privacy and cyber-security for updates to the NJ-CRF.

JCP&L Comment: JCP&L can and will participate in the working group in furtherance of security protections and data privacy concerns.

Straw Proposal. The EDCs will participate in the working group and ensure that the cybersecurity and privacy protections of the NJ-CRF maintain the integrity of the security practices of each EDC. The EDC shall remain the custodian of the data and is therefore obligated to protect it.

JCP&L Comment: Where JCP&L is responsible for an unauthorized release of customer information due to a defect, vulnerability or breach in our owned and operated systems, JCP&L would report as required under New Jersey law and applicable BPU orders pursuant to our cyber security and data breach response plans.

However, the Company believes it is only proper it be responsible for those releases of customer information for which it directly was responsible and had control over.

Should any third party be responsible for an inappropriate release of customer information after it has been aggregated and stored on another system outside of JCP&L's direct control, it must be the responsibility of the third party to report such releases as per New Jersey law and BPU orders.

These responsibilities should be clearly stated in requirements and memorized in proper documents.

3. Using AMI to Drive Efficient Achievement of New Jersey's Clean Energy Goals, and Positioning New Jersey Grid to Appropriately Account for Clean Energy Attributes.

Use Cases. In developing the MFRs, Staff has identified the following use cases that each utility's DAP should enable. Staff seeks comment on how these use cases should be incorporated into the MFRs. In addition, commenters should describe specific data access and communication network protocols that would enable each identified use case, and identify both the qualitative and quantitative benefits that could be derived.

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- *Instantaneous usage and demand measurements on a near real-time basis; Staff initially recommends that the Standard DAP require utilities to collect 5-minute meter IU data, at watt-level precision;*

JCP&L Comment: See Comment above in Topic 1 on the definition of real-time and near real-time data access, including the time frame for validated data. The Company agrees that data should be made available as soon as practicable as a general principle, although the time frame for provision of validated and invalidated data may vary by EDC and the designs of their systems.

Under the JCP&L AMI Plan, the installed AMI meters would support direct meter data transmission to qualified in-home devices and HAN technologies that a customer may procure from the competitive market. Usage data is available near real time (approximately seven seconds) through this technology.

The Company currently uses intervals of 15 minutes for commercial customers and 60-minute data for residential customers. With the vast majority of utility customers requiring only 60-minute interval length, there is a substantial increase in cost to enable capacity of the AMI communication network and back-office system infrastructure to process and store data, and systems that provide access to such data for a 5-minute interval length or other length that is less than what is currently used and necessary.

It is not clear as to the value 5-minute meter IU data would provide for MFRs, and a working group should address this issue further. Before requiring a shorter interval period that would impact AMI system design the Board would need to carefully consider the AMI infrastructure already designed and currently being deployed by EDCs and the costs of any modifications.

High bill notification. *In developing the MFRs, Staff has identified the following use cases that each utility's DAP should enable. Staff seeks comment on how these use cases should be incorporated into the MFRs. In addition, commenters should describe specific data access and communication network protocols that would enable each identified use case, and identify both the qualitative and quantitative benefits that could be derived.*

- *Ability for the customer to be notified about high bills on a near real time basis.*

JCP&L Comment: Utilities should evaluate the capability enabled by AMI interval data retrieved daily to implement high bill notifications. Algorithms will need developed to accumulate consumption during a service period and determine when such notification is appropriately provided to the customer to avoid burdensome notifications which then get ignored. For example, it will need to be determined what day of the current service period and what threshold triggers the notification while allowing the customer enough time in the service period to adjust usage.

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Voluntary Conservation Notification. In developing the MFRs, Staff has identified the following use cases that each utility's DAP should enable. Staff seeks comment on how these use cases should be incorporated into the MFRs. In addition, commenters should describe specific data access and communication network protocols that would enable each identified use case, and identify both the qualitative and quantitative benefits that could be derived.

- Ability for customers to be notified about voluntary conservation requests.

JCP&L Comment: JCP&L believes that this should be addressed in a workshop.

The Company recommends that a process for voluntary conservation requests needs to be carefully designed and coordinated with the utility peak demand reduction programs to ensure such initiatives are complimentary and to avoid customer confusion. As an example, voluntary conservation requests could also be used for a behavioral demand response program that provides notification messages to motivate customers to reduce usage during peak demand reduction events. Interval data is used by this type of program to support measurement and verification of the demand reduction achieved during events, as well as to support customer feedback regarding their performance, similar to other demand response programs.

Alternate Rate Structures. In developing the MFRs, Staff has identified the following use cases that each utility's DAP should enable. Staff seeks comment on how these use cases should be incorporated into the MFRs. In addition, commenters should describe specific data access and communication network protocols that would enable each identified use case, and identify both the qualitative and quantitative benefits that could be derived.

- Ability to use different rate structures, such as time of use or peak demand.

JCP&L Comment: Smart meters provide the enabling technology for customers to take advantage of time varying rates. One policy question is whether the BPU wishes to have the EDCs enhance the rate offerings under Basic Generation Service ("BGS") or continue to reserve enhanced rate offerings for the competitive market. While the capacity of the Company's distribution system is generally considered to be fixed, that is it doesn't vary with time, distribution rates may be designed more granularly to correspond with demand on the distribution system.

JCP&L currently offers TOU rates (seasonal rates and time-of-day, i.e., on/off-peak rates) for certain rate schedules. JCP&L will be able to further enhance its TOU rate offerings as the Company accumulates a larger data set with respect to customer usage patterns from the AMI deployment. A robust data set is required to support more complex and/or granular rate designs to ensure that TOU rates are properly designed in accordance with cost causation principles so as to avoid inter- and intra-class cross subsidization.

Generation Export. In developing the MFRs, Staff has identified the following use cases that each utility's DAP should enable. Staff seeks comment on how these use cases should be

incorporated into the MFRs. In addition, commenters should describe specific data access and communication network protocols that would enable each identified use case, and identify both the qualitative and quantitative benefits that could be derived.

- *Ability for customers to understand how and when their own generation is exporting to the grid, including instantaneous two-way meter data where applicable.*

JCP&L Comment: Further clarification is needed on what Staff means by “instantaneous” in terms of data. Please see comments above regarding data availability. Under JCP&L’s AMI Plan, metering would be capable of bi-directional measurement when the customer has behind the meter generation. At any instant in time when the customer load exceeds customer generation, measurement will be accumulated in a ‘delivered’ register. And at any instant in time when customer generation exceeds customer load, measurement will be accumulated in a ‘received’ register. Both delivered and received interval data should be available to the customer. As such, a customer will know during what hours its generation is exporting to the grid as reflected in the interval data presented for the received register.

- Ability for customers with DERs to fully participate in DER aggregations envisioned by FERC Order 2222, including providing appropriate data access and availability for approved two-way metering and telemetry requirements.*

JCP&L Comment: JCP&L has been active in implementation efforts in the PJM stakeholder process to develop the requirements and design elements that will be required of DER systems including metering and telemetry to meet the ambitious goals of FERC Order 2222.

However, there are many questions that will require coordination with state regulators to establish the proper foundation for implementation plans.

An example of a foundational question is to what level will the State of New Jersey allow individual assets behind the meter, or behind the point of interconnection of a customer and utility, to participate in the PJM markets. For example, do all assets behind the meter or behind the interconnection have to act in the same manner? If a battery and a solar panel are behind the meter of a customer, can the battery participate in a PJM market and the solar panel receive retail net meter treatment? Or do both need to either participate in the wholesale market or both need to go to retail net metering?

JCP&L would recommend workshops convene on this subject not only in the context of this straw proposal but also in the context of how the State, Staff and other stakeholders expect utilities to organize to support the goals and functions of FERC Order 2222 and several substantial simultaneous efforts underway.

DER/Interconnection Costs. *In developing the MFRs, Staff has identified the following use cases that each utility’s DAP should enable. Staff seeks comment on how these use cases should*

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be incorporated into the MFRs. In addition, commenters should describe specific data access and communication network protocols that would enable each identified use case, and identify both the qualitative and quantitative benefits that could be derived.

- *Ability for the customers to understand how the size of the DER they interconnect to the grid will affect interconnection costs.*

JCP&L Comment: JCP&L does not believe that historical AMI data will allow customers to fully understand how the size of the DER they interconnect to the grid will “affect interconnection costs.” JCP&L views interconnection costs to be the total cost of application fees, study fees and any mitigation costs needed to maintain the safety and reliability of the distribution and transmission system. These costs are location and DER rating-specific and can only be determined upon application for interconnection.

However, JCP&L believes that AMI data made readily accessible to a customer and/or their representative could assist in determining the proper sizing of behind the meter DER. In this case, AMI data enables the customer to properly size the DER to match their own energy consumption and/or peak demand which would lead to insight concerning installation costs, though not interconnection costs.

NEMA standards. *Staff also seeks comment on whether the MFRs should require compliance with the National Electrical Manufacturer’s (“NEMA”) handbook under ANSI C12.0 standards and prohibit standards that differ from those established by NEMA, which could preclude competitive offerings from generally used Original Equipment Manufacturers.*

JCP&L Comment: The American National Standards Institute (ANSI) oversees both ANSI C12.1, “American National Standard for Electric Meters – Code for Electricity Metering,” and ANSI C12.20, “American National Standard for Electric Meters for Electricity Meters – 0.1, 0.2 and 0.5 Accuracy Classes.” The most recent editions of these standards are ANSI C12.1-2014 and ANSI C12.20-2015. Though these are both voluntary standards, they do form the basis for the testing requirements set by most North American utilities and utility commissions for their revenue (i.e., “billing”) meter requirements. FirstEnergy does not support the use of metering products that do not meet the above stated standards for use in revenue billing or settlements. ANSI C12.1 and ANSI C12.20 are published by the National Electrical Manufacturers Association (NEMA). Both of the ANSI standards stated above, should be the minimum for all revenue (i.e., “billing”) meter requirements.

It is premature to address in the abstract an unidentified “standards that differ” without further information about what those standards are and what their legal and functional impact would be. This should be discussed further in a workshop.

Distribution Planning. *In their MFR compliance filings, utilities should be able to explain how their proposed DAP plans can leverage their AMI investment to improve visibility and*

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planning on the distribution level, including such items as aggregating AMI data sets to: Allow the use of information gleaned from AMI to assist customers and third parties to propose and site DERs at the most valuable place on the distribution grid.

JCP&L Comment: Distribution planning is and must remain a core function of the EDCs. Proposed use of AMI information for the siting of third-party facilities is premature, beyond the scope of this proceeding and implicates FERC Orders 2222, 2003, 2006, and 890, and numerous other issues. This issue should be addressed in a separate forum.

Distribution Planning. In their MFR compliance filings, utilities should be able to explain how their proposed DAP plans can leverage their AMI investment to improve visibility and planning on the distribution level, including such items as aggregating AMI data sets to: Promote system visibility for customers and third-party developers through enabling real-time power flow mapping from the feeder to the customer meter in a way that would update on real time conditions, forecast load and voltage at primary and secondary nodes and meters, and, monitor the voltage, power quality, frequency, and other measurements of the grid conditions in real time.

JCP&L Comment: JCP&L seeks clarification of the straw proposal with regard to the necessity of promoting “system visibility for customers and third-party developers through real time power flow mapping...”, including what role the Straw envisions for customer and third parties regarding the utility functions listed (emphasis added). AMI meters are installed at the point of interconnection. AMI data could improve visibility to JCP&L at its distribution control center when AMI data is integrated into its ADMS power flow. AMI and its integration into ADMS will allow JCP&L to have visibility into the impacts of customer DER on the system at various times throughout the year and can help operators identify possible need to override the DER or allow the DER to remain in operation during system contingencies.

In addition, applying data analytics to the AMI data may provide visibility to new loads as electrification becomes more prevalent. AMI voltage data can be used to more rapidly identify voltage and power quality problems to enable an appropriate utility response. AMI data can be aggregated to the distribution service level to identify overloaded transformers and allow for a proactive replacement program. This data can be a valuable tool to aid the *utility* in managing steady state voltage, especially in areas with high DER penetration.

Distribution Planning. In their MFR compliance filings, utilities should be able to explain how their proposed DAP plans can leverage their AMI investment to improve visibility and planning on the distribution level, including such items as aggregating AMI data sets to: Allow the consideration of non-wire alternatives and potentially informing a local pricing component that may be used in future market-based mechanisms to best capitalize on the value for DER services provided to the local distribution circuit.

JCP&L Comment: AMI data can be used as another data point in the identification of circuit constraints or steady state voltage problems. This is due to the granularity of the data at a

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customer level which can be aggregated to a nodal level at different points on a distribution circuit. This data can also be used to identify the time duration of the constraint or voltage excursion and can be used in the design of a cost-effective solution. This cost-effective solution may include non-wire alternatives. If a utility pursues a market-based solution, it would need absolute assurance that the DER mechanism will solve the problem, since utilities have the responsibility for safety and reliability of the distribution system.

With regards to the concept of informing a local pricing component, JCP&L is unclear of the manner in which such a concept may be realized. If the Board is referring to wholesale price nodes of PJM, such price points are on the bulk transmission system and would continue to be impacted by non-local price influencers. If the Board envisions a secondary, local market that is administered outside of the PJM wholesale marketplace, such a concept would require a healthy level of workshops to establish the market design and cost accompanied by retail/wholesale coordination focused on delivering cost effective results to customers. JCP&L would be agreeable to participating in such an effort.

Distribution Planning/Regulatory Support. In their MFR compliance filings, utilities should be able to explain how their proposed DAP plans can leverage their AMI investment to improve visibility and planning on the distribution level, including such items as aggregating AMI data sets to: Enable efficient and productive regulatory performance audit as well as future legislative and regulatory reform debate and decision support.

JCP&L Comment: JCP&L does not understand what is meant by “enable efficient and productive regulatory performance audit as well as future legislative and regulatory reform debate and decision support,” and is therefore unable to comment at the time. Upon receipt of additional information, JCP&L would be happy to comment.

4. Maximizing Impact of AMI on Reliability, Planning, and Reporting Metrics.

Smart Meter Data In Reliability Reporting. In the short term, Staff recommends that utilities begin utilizing smart meter availability data in all reliability reporting requirements, including System Average Interruption Duration Index (“SAIDI”)/System Average Interruption Frequency Index (“SAIFI”) and other metrics, as such data becomes available on a rolling basis.

JCP&L Comment: JCP&L does not agree in the short-term that smart meter availability data should be used for “all” reliability reporting requirements. Until AMI deployment and full integration of ADMS and process development occurs, on an ad-hoc basis, there are manual methods available to use AMI data for reliability analysis. These methods are labor and time intensive and not practical for daily reliability analysis but will be used when needed. For periodic reporting of metrics like SAIDI the use of smart meter availability data should not be required until AMI deployment, integration with ADMS, and development of an appropriate process are completed.

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Distribution Planning. To ensure consistency with the principle of AMI fostering improvement in reliability by increasing transparency, improving efficiency of planning and improved outage recovery, Staff proposes the following MFR elements. Commenters should address specific elements of a DAP that would foster achievements of these or additional principles:

- *AMI Data should be collected and stored for retrieval, synthesis, modeling and analysis supporting future distribution planning, including but not limited to:*
 - *Determining whether retail-level load management could avoid upgrading a circuit;*
 - *Forecasting overloads on future circuits based on granular usage trends;*
 - *Determining whether deployment of DER resources could more efficiently alleviate identified violation; and*
 - *Facilitating improvements to the current interconnection process.*

JCP&L Comment: AMI data can be used for the development of integrated distribution plans as it will provide more granular real-time data availability and data analytics that better represent system parameters as compared to the limited visibility from manual load readings. Over time, this could enable a transition from a more static planning process based on peak loads to a more dynamic and iterative approach which takes into account various loading scenarios, and a better understanding of system limits and capabilities (e.g., impact of clouds, vs. humidity, vs. solar production, vs. load). Thus, the integrated distribution planning model will be complemented by AMI data as AMI data will support continuous complex and iterative analysis with more granular and readily available data. The following highlights benefits to distribution planning from AMI data, as well as certain limitations:

- a. AMI data can capture customer steady state voltage and can provide indication of high or low voltage. This can be beneficial in areas of high solar penetration where high voltage may occur and can be beneficial in high load serving areas where transformers and secondary conductors may be undersized.
- b. AMI data can also be used to identify overloaded distribution transformers which will allow utilities to proactively replace units before they fail.
- c. Volt, Var, and Watt measurements can be helpful when locating and sizing capacitor banks to improve power system efficiency and in regulating voltage. This data can also be helpful when implementing an integrated volt var system to help reduce system demand and achieve energy savings goals.
- d. Although AMI data does not provide a complete picture of circuit loading, the data can be helpful in the development of future integrated distribution plans due to the level of granularity at a customer level.

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- e. AMI data can be helpful in the planning process; however, it does not provide a complete view of distribution circuit loads. Smart meters are primarily used for residential customers and in forecasting circuit loads and may not initially include large customers. It is important to keep in mind that AMI data only represents customer load and excludes line and transformer losses. Therefore, there is a data gap when trying to correlate AMI data with distribution circuit peaks.
- f. An additional challenge with AMI data is how to sum the loads and determine an accurate coincidence factor to apply at various nodes on the distribution circuit. Determining accurate diversification is important to properly identify thermal overloads that can occur on various sections across the distribution circuit. Additional research and application of data analytics will help with this issue. AMI data can be beneficial in determining load duration curves as it can provide planning engineers visibility into the duration of peak loads. This can be helpful in understanding loading risks and identifying cost-effective planning solutions.
- g. AMI load, event, and diagnostic data together with the other analytic methods and factors could be used to identify and evaluate impacts of electrification or penetration of DERs. When there is an unknown in DER or electrification at a customer's location, load data could be used to explore a pattern of usage, load shape and variation in demands. The use of data analytics or machine learning can be explored to help identify electrification and/or changes in DER operation.

JCP&L agrees with Board staff that after the full deployment of AMI meters and the development of processes the granular data made available by AMI data collection and storage will lead to significant accuracy improvements in static circuit modeling used in planning the distribution system and reviewing applications in the interconnection process. The increase in accuracy of static models will facilitate improvements to the current interconnection process by enabling more accurate calculation of available hosting capacity. Furthermore, the granular data collected over fixed time intervals, combined with the SCADA-derived circuit level data currently collected, will allow for the development of time series models of the distribution system. The time series modeling analysis supported by AMI data will provide JCP&L with the ability to evaluate the time dependent impact of solar PV and storage devices used to inject or absorb power in support of the distribution system, or in support of participation in wholesale markets.

Outage Determination. To ensure consistency with the principle of AMI fostering improvement in reliability by increasing transparency, improving efficiency of planning and improved outage recovery, Staff proposes the following MFR elements. Commenters should address specific elements of a DAP that would foster achievements of these or additional principles:

- *Use of information will be maximized to cost-effectively determine location and severity of outages.*

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JCP&L Comment: When a customer experiences an outage, AMI will generate a Power Outage Notification message which is sent back through a communication network to a central database. This information will be shared with systems such as the ADMS in the future. However, when there is severe damage to the electric utility and communication infrastructure resulting from major weather events, it is possible that not all Power Outage Notifications will be received in a timely manner.

By year end 2023, JCP&L's ADMS system will integrate AMI outage data for outage prediction, allowing better situational awareness of true outage events and areas for isolation. Since Power Outage Notifications will be sent back to the ADMS at the time of the outage, actual outage locations will be better known as notifications are received. This will also help the ADMS better predict the actual extent of the outage, and support where responding resources should be directed, with less reliance on customers to notify the Company for said information. Further, areas identified for isolation during the restoration process can be established more quickly since Power Outage Notifications will be able to identify impacted locations. Whether isolation is achieved through a remotely operated field device or a crew in the field, actions will be positively supported through AMI data. However, it should be emphasized that AMI alone will not be able to relay the cause or the full scope of the damage. Information that may be useful in diagnosing the possible cause of an outage or the extent of needed repairs will also be obtained through customer feedback, damage assessment, and information received from responding repair crews.

Situational awareness will also be improved simply by the ability to remotely ping a meter to determine power status. Knowing the power status of a meter location will help system operators validate outages or confirm restoration has been achieved. If nested outages exist, and when repairs are completed, the ability to verify power status through the use of ping functionality will be particularly useful.

Aid in Emergency Operations. To ensure consistency with the principle of AMI fostering improvement in reliability by increasing transparency, improving efficiency of planning and improved outage recovery, Staff proposes the following MFR elements.

- a. *Use of AMI information will be maximized, as appropriate, to aid in emergency operations.*

JCP&L Comment: In instances where there are known safety risks like flooding or fire, JCP&L would have the system capability to remotely disconnect power at the meter upon request of the emergency response officials. (See also Comments on Topic 11 below).

Third party access regarding emergency conditions. To ensure consistency with the principle of AMI fostering improvement in reliability by increasing transparency, improving efficiency of planning and improved outage recovery, Staff proposes the following MFR elements.

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- b. *Barriers to third party access regarding outages and other emergency conditions are appropriately lowered, with specific reporting on number of authorized access connections and maintained.*

JCP&L Comment: It is unclear what type of third-party access to outage information or emergency conditions it is considering in this part of the Straw. Upon receipt of additional information, JCP&L would be happy to comment.

5. Data Granularity & Appropriate Rollout Schedule.

Data Granularity. Staff recommends that the standard DAP require utilities to collect 5-minute meter Interval Usage (“IU”) data, at watt-level precision.

JCP&L Comment: The Company currently uses intervals of 15 minutes for commercial customers and 60-minute data for residential customers. With the vast majority of utility customers requiring only 60-minute interval length, there is a substantial increase in cost to enable capacity of the AMI communication network and back-office system infrastructure to process and store data, and systems that provide access to such data for a 5-minute interval length or other length that is less than what is currently used and necessary.

It is not clear as to the value 5-minute meter IU data would provide for MFRs, and a working group should address this issue further. Before requiring a shorter interval period that would impact AMI system design and costs the Board should carefully consider the AMI infrastructure already designed and currently being deployed by EDCs.

Rollout Schedule for IU data. Staff proposes that the utilities make the IU data available on a rolling basis as AMI meters are installed across their service territories. Rollout of this critical energy-saving information should not wait until all, or even most, AMI meters are installed. This will allow consumers (and the energy services marketplace and participating aggregators) to gradually adapt to the influx of new data and for customers to immediately benefit from their AMI investment. Staff seeks comment on how best to implement these requirements.

The enterprise-wide FirstEnergy AMI solution that would be deployed in New Jersey provides that AMI data will be available on a rolling basis as meters are installed across the service territory and have attained acceptable daily communication rates. Deployment in an area begins with the installation of primary network communication hardware (pole mounted routers) followed by meter exchanges within that area to enable meter communication. There is a meter certification process that involves a 10-day communication monitoring test before certification. This is to ensure that over-the-air network communications will be reliable. After this certification, the meter reads sought via the AMI solution, in lieu of manual reading, will begin. Once that occurs, the AMI interval data is enabled for downstream systems available to the customer, and over the air provisioning is capable to enable HAN devices. Where communication is not adequate following the meter exchange, the communication network may be enhanced with pole mounted

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range extenders that strengthen the network between meters and routers. Typically, meters pass the certification process without range extenders and are certified within 2-3 weeks following exchange. Where range extenders are necessary, certification may take 2-4 months to accommodate the design and installation of this equipment. Thus, the concept of AMI data availability must reflect the time required for the certification process discussed above.

6. Ensuring Fair Access and Competition for All Meter Capabilities.

Meter memory/Power quality data. Staff seeks comment from the utilities on whether their meter memory and processing sizes, as well as communication network bandwidth, are sized appropriate to provide these types of data [current, phase frequency, volt, var, watt and other power quality components]. Staff also seeks comment from all stakeholders on whether receiving data on a variety of power quality components might be useful to customers or third parties, and for supporting regulatory compliance verification audits through direct sampling methods.

JCP&L Comment: The communications network for the Company's AMI to be deployed in New Jersey will be sized to accommodate the volume and frequency of data sampling from the AMI meters. If future requirements increase the sampling frequency and/or amount of data points requested, additional infrastructure would be required both in the field to support the AMI communications network and in the AMI back-office systems to support the additional volume and processing of AMI data.

Apps. Staff seeks comment on the inclusion of these elements in future MFRs.

1. *Open access principles must ensure that third parties have reasonably fair access to any app "stores" or other processes for distributing apps run by the utilities consistent with privacy and security requirements*
2. *Any costs that a utility proposes to recover for app distribution mechanisms or open-access platforms must be reasonable and provide tangible benefits to customers*
3. *Third parties should be able to seek review from the Board if they are concerned that they are being treated unfairly by the EDCs in the running of any app distribution mechanism*
4. *Clear procedures should exist for addition of an app to any store*
5. *Approval should not be unreasonably withheld, given that the third party service provider meets baseline privacy and security requirements, with a built-in Board appeal process*
6. *An app that is approved through the NJ-CRF for one utility will be deemed approved for all other similar utilities*

JCP&L Comment: FirstEnergy currently does not have an AMI platform that supports distributed intelligence consisting of third-party apps that run on smart meters.

FirstEnergy's meter vendor is currently reviewing its roadmap to make third party distributed intelligence apps compatible with our existing platform (which will be deployed in New Jersey), but there is no timeframe for when that may be completed.

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FirstEnergy's AMI platform is a vendor-provided solution, and the software is their proprietary property. Third party apps are controlled by the meter vendor, not the utility. The meter vendor will work with a developer to ensure the app runs on the applicable meter platform. Once the app is certified by the meter vendor, they can publish the app in their app store and make it available for select utilities or available for all.

Given these types of advanced applications are in their infancy, FirstEnergy urges caution allowing any third parties to have any ability to determine what gets deployed to the utility's meters via the vendor's app store. This raises significant cyber security concerns since the applications consume resources on both the meter and the network. These resources are finite, and there would need to be some level of prioritization to ensure the basic function of measuring and recording a customer's energy usage is not compromised.

Statewide data warehouse. Staff seeks comment on inclusion of this element in future MFRs: Whether New Jersey should adopt a Statewide data warehouse, as several other states, including New York, New Hampshire and Texas have opted for. The major advantage of a third party data warehouse is ensuring that all parties in New Jersey's energy ecosystem have non-discriminatory access to the data. Concerns include cost, complexity, and time for rollout.

JCP&L Comment: The Company agrees with the concerns including cost, complexity, and time for rollout of a Statewide data warehouse involving collaboration and standardization amongst all utilities and all market participants, as well as identification of the entity to build and operate such data warehouse. The Company recommends this broad topic be addressed in its own Data Warehouse Working Group.

To address these concerns, the Company prefers to leverage the existing infrastructure of its sister utilities in OH and PA to support data access to BPU-licensed third parties (as defined today) and customers, including TPS Supplier Portal functionality as well as Customer Portal functionality.

7. Billing and Settlements Best Practices.

Settlement of customer accounts with actual data and using load data to establish peak load contribution. Staff seeks comments on requiring EDCs to settle customer accounts using actual AMI customer data, instead of estimates, and proposes that the MFRs require each EDC to establish the customer's Peak Load Contribution ("PLC") using each customer's load data.

JCP&L Comment: A "requirement" is unnecessary, since the actions that the Straw Proposal seeks will occur organically to the benefit of the EDCs and customers as AMI implementation proceeds. Actual Hourly Usage will be incorporated into the settlement of

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accounts at PJM at the time a customer's AMI meter is exchanged and bill certified.⁴ Specifically, Actual Hourly Usage will be utilized when completing initial settlement and the sixty-day reconciliation processes and continue on a rolling basis throughout the remainder of the smart meter deployment. Estimation, or more specifically, the use of the customer's assigned class profile and respective usage factor would be limited to customers where an AMI meter has not yet been deployed or during the initial settlement process, where missing meter data may exist. The missing data would be replaced with Actual Hourly Usage during the sixty-day reconciliation process, where available. Of course, this use of actual data for settlement would not occur in this manner for "opt-out" customers.

Regarding the calculation of the customer's PLC, Actual Hourly Usage will be incorporated into the annual calculation following the implementation of the customer's AMI meter assuming that the meter was exchanged, and bill certified prior to the occurrence of the five coincident peaks used in the annual calculation of the PLC. To create a customer specific PLC, among other things, JCP&L will identify the customer's usage during the five coincident peaks. If Actual Hourly Usage is available, that data will be used. However, if the meter was exchanged and bill certified after any one of the coincident peaks occurred, load profiled data will be used. Subsequent calculations of the annual PLC would be calculated using the customer's Actual Hourly Usage.

Supplier Consolidated Billing. Staff seeks comment on the acceleration of the transition to supplier consolidated billing ("SCB") as part of the push towards maximizing the benefits of AMI deployment.

JCP&L Comment: Issues of SCB should not be added into this already full stakeholder proceeding regarding AMI data access. SCB is a complex, discrete topic and should be addressed separately. Additionally, it is already being discussed in various working groups before the Board.⁵ As Staff is aware, and raised in other working groups, there are numerous issues that would need to be considered before the implementation of SCB could occur which include, but are not limited to: billing accuracy requirements, regulatory requirements for utility bills, customer service responsibilities and requirements, disconnect/reconnect for non-payment policies and procedures, TPS creditworthiness requirements, data transfer protocols specific to billing, complexities of a combination electric and gas utility with multiple TPSs for electric and gas, customer eligibility for and processing of deferred payment arrangements, customer deposit processes, customer contracts, purchase of receivables rules, New Jersey Administrative Code

⁴ Bill Certified is when a smart meter has passed network communication test standards assuring over the air communications will be reliable after which the meter reads are sought via over the air communication in lieu of manually reading the meter, and interval data is enabled for downstream systems including Billing, Settlements, Supplier Portal/EDI, and Customer Portal.

⁵ See, e.g., In re the Community Solar Energy Pilot Program Year 2 Application Form and Process – Consolidated Billing EDC Report at BPU Docket No. QO20080556 and In re the Community Solar Energy Pilot Program at BPU Docket No. QO18060646 (March 11, 2021 Notice) ("What are the advantages and disadvantages of Utility Consolidated Billing, TPC Consolidated Billing and dual billing as they apply to community solar.")

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requirements related to consumer protections, billing, marketing and advertising, continued EDC obligation and costs to retain its billing system and increased cost to integrate with multiple TPSs, and cost recovery for EDC development and implementation. Due to the complexity of the issues described above, it would take considerable time and effort to implement in New Jersey. If there is interest and sufficient commitment from the TPS community, which is unclear at this time, supplier consolidated billing should only be considered after AMI data access issues have been resolved, and only if and when the Board revisits the whole subject of billing options and purchase of receivable programs and processes.

Efficiency of Rates. To ensure consistency with the principle of AMI improving the efficiency of rates charged to customers, Staff seeks comment on the inclusion of these elements in future MFRs. Commenters should address specific elements of a DAP that would foster achievement of these elements or whether commenters see any perceived challenge to these recommendations.

- (1) AMI information will enable rate designs that improve the efficiency and granularity of rates charged to customers;*
- (2) Customer settlement should be based on actual usage data;*
- (3) Furthering communication opportunities between electricity suppliers and customers will enable increased customer service and participation in the energy future.*
- (4) Demand measurements will be revenue quality, sufficient for use in billing or planning determinations.*

JCP&L Comment:

(1) See the Company's response under Section 3. To further enhance its TOU rate offerings, JCP&L will need to accumulate a larger data set with respect to customer usage patterns from the AMI deployment on which to base the rate designs. A robust data set is required to support more complex and/or granular rate designs to ensure that TOU rates are properly designed in accordance with cost causation principles so as to avoid inter- and intra-class cross subsidization. Once the DAP is operational, the data will help to guide making a TOU rate that is revenue neutral, encourages peak energy use reduction, and limits subsidization by other customers.

Outside of the TOU rate, the Company will be able to provide greater transparency to a net metering customer. In Pennsylvania, where AMI meters have been implemented at FirstEnergy affiliated utilities of JCP&L, a net metering customer's bill was transformed to show more data and to provide usage and generation information that the customer previously did not see on the billing. In this example, the customer's usage and distribution charges for the month will be shown separately like a non-net metering customer. Then separately, the generation kWh provides a credit against the net metering customer's gross distribution charge, with a net charge resulting from this offsetting process. A net metering customer then is able to use this information to tailor their usage patterns and allow for maximum benefit being realized.

(2) See comment above regarding settlement and PLC.

(3) See comment above regarding SCB. As discussed above SCB should not be included in MFRs. Additionally, JCP&L as well as the other utilities are anticipating the benefits AMI will introduce to the Settlement process such as but not limited to replacing profile data with actual measured hourly data and recently filed for changes in the BGS process to capitalize on these improvements by advance to how Unaccounted for Energy is managed to enhance retail and wholesale energy accounting coordination between EDCs, BGS and EGS and customers.

(4) It is correct that AMI demand measurement data is revenue quality and will be sufficient for distribution planning. (For more details on distribution planning, see Section 4 above)

8. Format of Data Sharing and Cost Implications.

Data Access Method Included In EDCs AMI systems. Staff seeks comment on the technology and software upgrades associated with providing the data in a manner that is appropriate for each use case. Utilities should comment on the standard method of data access included with their AMI systems, and explain the necessary upgrades and extensions required to provide data in these formats. Utilities and commenters should include cost estimates for enabling these data access formats.

JCP&L Comment: JCP&L's proposed AMI Plan affords access to data for customers, third parties, and licensed TPSs, as described below. However, the questions posed in this straw proposal, considered in conjunction with recent FERC actions, such as FERC Order 2222, demonstrate that there will be an ever-expanding population of stakeholders interested in customer data for an endless array of business (managing/serving customer energy requirements) and non-business needs.

Therefore, JCP&L welcomes workshops where the stakeholders can collectively establish a framework for managing access to customer data and recognize and memorialize the means by which such access will be accomplished. This will involve the discussion of "technology and software upgrades" and associated costs.

JCP&L provides a few examples below to begin discussion on the topic, but this list is by no means all inclusive.

- A. Data Access For Customers. The Company will enhance its Customer Portal to display AMI interval data and allow data to be exported by customers into electronic files leveraging Green Button Download My Data. The Company is evaluating Green Button Connect My Data as part of a recent Request for Proposal from Customer Portal Solution Vendors as an addition to Green Button Download My Data. In addition, the installed AMI meters will support direct meter data

transmission to qualified in-home devices and HAN technologies that a customer may procure from the competitive market. The estimated cost to implement Green Button Connect My Data is in the range \$10 million to \$12 million over 20 years. Green Button Connect My Data was not included in JCP&L's AMI Plan and would be considered an additional cost that the Board would need to consider.

- B. Data Access for Non-Licensed Third Parties. Third parties may obtain access to meter data via the following means: (i) data may be obtained directly from the customer, who may choose to share the data retrieved through the Customer Portal or HAN devices; (ii) the utility may provide historical data to third parties in excel-format files via email following receipt of a traditional Letter of Authorization signed by the customer; and, (iii) the utility will make interval data available to BPU-licensed TPS through EDI and web portal technology.
- C. Data Access for BPU Licensed TPS. JCP&L will make interval data available through EDI. JCP&L notes that its sister Companies in Pennsylvania participated in a Web Portal Working Group ("WPWG") hosted by the Electronic Data Exchange Working Group ("EDEWG") to collaborate among marketplace participants including many EGSs (equivalent of TPS in New Jersey) where three forms of functionality were agreed upon and so ordered for implementation. Green Button Connect My Data was not a selected method by the market participants. For JCP&L's sister Companies in Ohio, certain Competitive Retail Electric Service ("CRES") providers (equivalent of TPSs in New Jersey) agreed upon the same functionality for Ohio that was agreed to in Pennsylvania. Assuming many of the Companies licensed as TPSs in New Jersey are the same Companies licensed as EGSs and CRES in these other jurisdictions, it is reasonable to expect that these market participants may prefer the same functionality in New Jersey listed below:
- 1) Single User-Multiple Request (SU-MR) – allowing TPSs to request and receive AMI interval usage for one or more account numbers as part of a single request.
 - 2) System-to-System Historical Interval Usage (StS-HIU) – allows TPSs IT systems to communicate directly with the web portal system of JCP&L without requiring a user to manually log into the web portal itself and leverage the user interface. The requestor connects to JCP&L's system exchanging data via XML transactions.
 - 3) System-to-System Rolling 10-Day (StS-Rolling 10-Day) – a "provide-and-park" approach for sharing AMI data. JCP&L publishes a file that includes all available detailed bill quality meter-level interval usage in hour ending format for the set of accounts served by a particular TPS on a specific usage delivery date.

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The cost estimate to stand up the functionality detailed in the three items above for New Jersey TPSs ranges from \$50,000 to \$70,000.

Data sharing without charge/cost socialization. Staff seeks comment on whether it may prove appropriate for utilities to make investments to support the State's goal of enabling customers to control their own energy usage and to provide this data free of additional charge to entities with a legitimate interest in data, including TPSs, DER aggregators, and other energy service companies. Staff requests comment on the potential socialization of these costs, and whether the potential grid savings would outweigh the costs required to develop robust data sharing platforms. Commenters should explain in detail the potential benefits of data sharing platforms that may exist in addition to other benefits of AMI data access, such as the benefits of better visibility into the distribution system to interconnection and hosting capacity.

JCP&L Comment: When a third-party requests access to data through data sharing, there is a cost to providing that data. Because the cost is directly attributable to those that request the information, it is entirely appropriate to directly charge those costs to the requesting customer (who may not actually be a retail customer or supporting retail customers), instead of socializing the costs across all of the Company's customers. What the Company proposes is consistent with cost causation principles. Revenues to the Company from the costs charged directly will be reflected from the revenue requirement in the following distribution base rate case.

Sharing of Mesh Networks. Staff requests that interested commenters address the potential to cost-effectively leverage data mesh networks by multiple utilities through joint-use agreements or other methods. Staff proposes to require that utilities develop a standard protocol for sharing networks to allow other regulated industries to utilize already existing networks.

JCP&L Comment: JCP&L believes it is outside the scope of this proceeding to address the joint use of AMI communications networks; that such consideration is rife with legal, security, operational and cost issues; and that given the myriad issues facing the Board with respect to access to data generated from AMI under the EDCs' existing AMI Plans (either approved or filed), it would be premature and ill-advised to expand this proceeding to address network sharing among different utilities.

The Company has no plans at this time for integrating its infrastructure with other utilities (whether electric, gas or water) and is not aware of any major integration of these technologies across multiple utility companies. JCP&L notes that its sister companies who have deployed AMI technology do not share their AMI infrastructure with other utilities. The back-office AMI infrastructure including the head end/collection engine, field network director, and meter data management system are shared among the sister companies which provides an overall cost savings among JCP&L's sister companies.

The lack of shared networks can reasonably be attributed to the many integration challenges including but not limited to data security, customer privacy, cost allocation, service

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level agreements and accountability to other third parties, and regulatory implications of carrying network communications. In addition, prior to even considering network sharing, all utilities and Staff would need to complete a deep dive into whether this is even feasible operationally given the different systems used by the various utilities. Such consideration would be a massive undertaking and should not be lumped in with this pending data access stakeholder process.

Indeed, this would involve a review of far more than just cyber security (although that is certainly a major risk of shared systems, by exposing any one system to the risk of intrusions in another) to look holistically at data, financial, and operational risk. Each utility would face certain risks from a cyber security perspective if it owns and operates the network and a much higher risk if the network (or parts of a shared network) is owned and operated by another entity.

In addition, there may be even greater impediments and higher risks from an operational perspective. From a pure security standpoint, sharing of networks introduces connectivity and vulnerability issues. In the case of FirstEnergy's mesh network with the Itron system, devices must have FirstEnergy issued certificates to join that mesh and the routing carries traffic back through the Connected Grid Routers (CGRs) on poles to FirstEnergy head end routers in the datacenters. If the mesh is shared, the Company would have to either provide or permit a gateway to the other tenants. It would also have to either issue certificates to their devices or add the tenants' Certification Authority (CA) to our trusted lists on the CGRs. It is unclear operationally how that could be accomplished in a secure, trustworthy, and ongoing manner. The theft or leak of a mesh network credential could be a catastrophic security or operational impact. Additionally, permitting arbitrary devices that may or may not comply with, be monitored by, or subject to FirstEnergy's AMI network introduces security vulnerability and software defect risks to a tightly-controlled, closed-loop system. Operationally, it must also be noted that a mesh network is a low throughput / low bandwidth system specifically to ensure reachability, coverage, and reliability. A malicious, incorrectly-configured, or rogue device on the network could impact availability and reliability of the metering systems.

Another operational issue with mesh network sharing is the potential for an EDC's network to be overwhelmed by more data than it is designed to handle. The EDCs cannot prevent devices they do not manage from consuming excessive amounts of data and negatively impacting the transmittal of data over the network.

If an EDC owns/operate a mesh network and has other tenants, it will undoubtedly have significantly increased cyber insurance costs. It also presents the risk of regulatory classification as a telecommunications provider which could have additional regulatory implications.

9. Promoting Academic Research into Reliability and Clean Energy Adoption by Customers.

Access to Data for Academic Use: Staff recommends that the Board adopt standard terms for promoting access to AMI data for legitimate non-commercial academic research into customer

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usage and system reliability. Staff seeks comment on the structure of a standard state-wide data access agreement, consistent with the NJ-CRF. Staff seeks comment on the appropriate format and data access elements to all faculty, graduate students and post-doctoral fellows, associated with academic institutions, to gain access to aggregated AMI data by signing a state-wide non-disclosure agreement that allows sharing of anonymized usage data at the zip code or sub-zip code level.

JCP&L Comment: JCP&L supports academic research. However, steps need to be taken to ensure that customer information is kept confidential and can be utilized in a cost-effective manner. This issue should be addressed in the working group setting, to discuss what type of information would be useful for academic research, whether that information can be aggregated in a way to ensure sensitive customer information is protected in a cost-effective manner, who actually owns the data when it is transferred over to the researcher, and what conditions would be placed on the researcher once they have the customer information.

Please refer to the company’s recommendation in “Access to data” in Topic 1 to dedicate workshops to the comprehensive environment of sharing data and how that will be accomplished.

10. Appropriate Utility Use of AMI Data.

Straw Proposal. *Staff recommends that EDC usage of smart meter data be limited to core functions, including billing, settlements and reliability. Staff seeks comment on how to define limitations. Staff seeks comment on a recommendation that each standard DAP require that use cases that are outside the utilities core function be done either with at risk capital with competitive solicitations or performed exclusively by third parties. Commenters should address the proposal that any exception to this general rule, such as the delivery of EE services, be specifically listed in the utility’s compliance filings and be limited to those roles that are uniquely performed by the utility, and whether this proposal avoids situations where the utility gains an unfair advantage.*

JCP&L Comment: DAPs should not contain a requirement restricting EDCs’ use of AMI data to only be in connection with certain functions, nor should utilities have to specify exceptions in compliance filings. DAPs should certainly not be a means to define or specify what functions the EDCs are authorized to perform as New Jersey public utilities. This is a legal issue implicating rights and obligations under Title 48 of the New Jersey statutes, utility tariffs, Board Orders and other law that is well beyond the scope of this proceeding.

Arbitrary, pre-determined limits on EDCs’ use of AMI data are not appropriate for this proceeding. The EDCs’ proper functions, and the use of AMI data in the performance of those functions, have and will continue to evolve in order to meet the current Clean Energy Program requirements, State initiatives such as those underway for Electric Vehicles and Energy Storage, and implementation of future Energy Efficiency, Peak Demand and Pilot programs. Indeed, the suggestion of limitations on utilities’ use of AMI data in connection with “targeted time of use rates” (Straw at p. 10) runs directly counter to the AMI Filing Order (p.3) and the EMP (§5.3.1, p.

184) findings that “alternative rate designs” are one of the recognized benefits of AMI. Additionally, PJM’s compliance filing (due Feb 2022) and implementation of FERC Order 2222 will likely require utilities to take on key roles for metering and telemetry of DERs.

The Board’s existing affiliate relations rules (N.J.A.C. 14:4-3.1 et. seq.) and public utility holding company standards (N.J.A.C. 14:4-4.1 et seq.), along with Board approval of utility AMI Plans, and Board approval of DAPs (affording data access to other parties) are sufficient to safeguard against monopoly advantage concerns while permitting utilities the flexibility to use customer data in new ways when appropriate, including in ways that the Board desires to achieve its goals. See, e.g., N.J.A.C. 14:4-3.3(a) (An electric and/or gas public utility shall not unreasonably discriminate against any competitor in favor of its affiliate(s) or related competitive business segment).

Please refer to the company’s recommendation in “Access to Data” under Topic 1 to dedicate workshops to the complete environment of sharing data and how that will be accomplished.

11. AMI Data must Support Emergency Responder Effectiveness and Safety.

Straw Proposal. *Each EDC should address the need for EDC usage of AMI to support emergency responder effectiveness and safety and address the system integration and processes they will implement to support this. Staff seeks comment on any additional straw proposal elements that would assure AMI’s support of emergency responder safety.*

JCP&L Comment: AMI data and information can be used to benefit emergency responder effectiveness and safety especially during large scale events such as a flood or a hurricane. In instances where there is known safety risks like flooding or fire, JCP&L would have the system capability to remotely disconnect power at the meter upon request of the emergency response officials.

JCP&L will integrate methods into our systems and processes in a staged manner, with near term and longer term (future) plans.

In the near term, AMI data can be accessed via ping functionality to help enhance our current hazard response process by offering better awareness of the customers’ service status and voltage. This awareness can be used to help prioritize our response to reported hazards. In addition, pinging may provide information regarding the surrounding area’s service status. This will require development/revision of business processes and training on the various ways that AMI information can be used to enhance the current hazard response process. While AMI complements/enhances our current hazard response process, employees will still be required to do a physical evaluation and isolation of hazards in the field.

For the future, JCP&L is looking at a possible study into other use cases where AMI data could be used to assist with identification of wire-down situations. This technology is not mature in the industry, is still being investigated by the utility industry, and will require an extensive evaluation.

12. Stakeholder Engagement.

Staff suggests tying rate recovery of AMI investment to DAP implementation. Staff suggests that in Staff's view a key metric of whether ratepayer investments in AMI infrastructure are considered used and useful is successful implementation of a DAP. Staff requested comment on how to measure whether the utilities have implemented a functioning Data Access Plan before allowing full recovery of the AMI assets.

JCP&L Comment: The Company objects to Staff's underlying premise that full recovery of the EDCs' investment of hundreds of millions of dollars in capital could be dependent upon successful implementation of DAPs. These items are distinct and must be considered independently as a matter of law and good policy.

JCP&L has proposed to invest significant amounts in AMI infrastructure over a period of six years (including pre-deployment, deployment, and engineering phases) in response to the Board's AMI Filing Order. Full recovery of and on the Company's prudently incurred AMI investment and equitable treatment of stranded costs associated with legacy meters are essential elements of a successful AMI implementation. The EDCs have filed, and will be implementing, their AMI investments pursuant to the directives in the AMI Filing Order and in the resolutions (typically via Stipulation) of their individually docketed AMI matters. These proceedings involve Verified Petitions and pre-filed testimony, including regarding cost recovery. Each EDC has or will have cost recovery provisions agreed upon by the parties and approved by the Board. Recovery of AMI investments and expenses should be based on the BPU order approving the Company's AMI Plan and including the BPU's policies and practices related to recovery of utility investments and operating costs. Recovery of AMI investment and expenses should not be delayed because of or otherwise tied to any element or milestone within the DAP. Adding additional backward-looking constraints on cost recovery, developed after AMI Plans have been filed, litigated, and settled in response to BPU directives, would be patently unfair and contravene well-established principles of due process, takings, and rate-making.

Metrics for AMI and DAP. Staff seeks comment on appropriate metrics that should be reported related to AMI and DAPs to ensure prudent rollout, including but not limited to AMI System Status Metrics, Energy Consumption Metrics, Distribution System Performance, and Customer Satisfaction.

JCP&L Comment: Preliminarily, JCP&L notes that the metrics listed by Staff do not all relate to data access. Such metrics are outside the scope of this proceeding. In the EDC's individual AMI proceedings, just as in other proceedings involving infrastructure investment

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plans, appropriate metrics are established via litigation or Stipulation. Typically, the metrics applied to the EDCs are similar, since some of the same parties (including Staff and Rate Counsel) are involved in each proceeding. This proceeding should address only DAP metrics.

Regarding data access, JCP&L submits that the following are appropriate metrics for reporting:

- Web Portal Views: Number of customers who have viewed the web portal each month;
- HAN Authorized Devices: Number of customers who have authorized the connection of HAN devices, including a breakout of devices by category, each month; and
- TPS (Third Party Supplier) Data Access: Number of customers who have authorized TPS access to customer energy usage data each month

Method of ongoing engagement. *Staff believes it is crucial that all parties are given an opportunity to present their concerns related to data access.... Staff seeks comment on whether stakeholders prefer working groups over other methods of engagement like comment periods, work sessions, and audits, and if so why.*

JCP&L Comment: JCP&L recommends working groups. Given the enormity of the matters that must be resolved, these groups should work on resolution of the Topics in the Straw Proposal for a reasonable period of time, until they reach consensus or reach an impasse, at which time they could inform Staff on which items were agreed upon and which remain open. Working groups are the best means to bring subject matter experts together on the numerous, highly technical issues. With the advent of virtual meetings via Teams, Zoom and other platforms, coordinating working group meetings should not be difficult. The back and forth of face-to-face interaction is much more conducive to understanding, collaboration and resolution than submission of written comments. With regard to the Board Staff's suggestion of "one or more stakeholder meetings" prior to a recommendation to the Board (Straw at p. 2), one meeting is certainly not sufficient, would lead to an incomplete development of the issues, and would not provide sufficient process to the EDCs who will bear the primary responsibility for implementing the ultimate Board determinations. A reasonable time period should be established, and the working groups themselves should determine the number of meetings as needed.

Audits are not advisable since they are an after-the-fact tool for evaluation, whereas the Straw seeks to set the rules of the road going forward. At this point, a provision for audits (which can be costly and burdensome) is premature, since they are a tool the Board always has access to if it becomes necessary.

Additional Concepts

Staff requested the commenters identify any additional concepts that are desirable and prudent to accomplish the Board's goals. The Company has taken care to limit the introduction of new topics to a proceeding that is already vast, and in keeping with its comments above, the

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Company believes that certain topics should be addressed either later or in a different forum or docket (e.g., supplier consolidated billing).

However, JCP&L suggests that a logical, additional concept the Board may consider is the opportunity for innovation in the collections process, which innovation will help to improve the safety and security of utility employees and customers.

Specifically, deployment of AMI can enhance the collections process by allowing real-time communications and payment capabilities prior to disconnection for non-payment. Under current rules, the final steps of collections for non-payment require a “truck roll” by a utility employee on the day of disconnect to attempt personal contact (i.e., a “door knock”) and either collection of full payment (including in cash) or a combination of payment with a deferred payment agreement, if eligible, in lieu of disconnect. By utilizing real-time communications and payment capabilities, AMI provides an opportunity to reconsider this process, with the following objectives:

- a. Improve the safety and security of utility employees, customers, and utility property;
- b. Utilize real-time personal notice (such as text, email or other digital methods, or phone calls) of disconnection to reduce the carbon emissions associated with truck rolls and expand customer options to avoid disconnection;
- c. Utilize real-time payment channels (such as Venmo, PayPal) to improve efficiencies for utilities and customers and expand customer options to avoid disconnection;
- d. Reduce costs related to collections and uncollectible expense for all customers; and
- e. Improve the efficiencies of ending and restoring service.

We will highlight some of the opportunities to enhance worker and customer security and reduce emissions. Utility employees involved in collections are subject to safety exposures of driving, threats and assaults by other persons, theft of cash collected, damage to utility property including vehicles, dangerous animals, environmental hazards (slip, trips, falls and falling objects), and electrical hazards associated with physically disconnecting and reconnecting service. Our Ohio and West Virginia sister companies have recorded an increase in the ratio of threats to disconnections for non-payment compared to prior years. (New Jersey is still operating under a residential moratorium/grace period which impacts relevant data gathering for the recent period, but a similar pattern may be expected when residential disconnections resume). The nature of customer threats to our employees includes physical harm, including death, damage to utility property and taking severe action such as using brandishing weapons or releasing dangerous animals. Further, customers are exposed to scams such as individuals posing as utility employees who steal their money under the guise of preventing shutoff of electric service and who may expose the customer to an increase in threats and assault. The use of real-time communications and payment methods will provide customers increased options and opportunities to prevent disconnection, while minimizing victimization by scammers.

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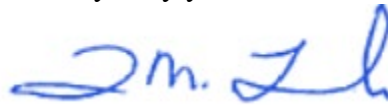
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Utility employees completing collections activities each drive an average of 13,000 miles per year. Even with JCP&L's fleet made up of mostly hybrid vehicles, the annual carbon emissions related to collections is approximately 104 metric tons of CO₂. Using real time communications throughout the collections process facilitated by the deployment of AMI would lead to a reduction in the majority of truck rolls and CO₂ emissions.

JCP&L appreciates the opportunity to provide these comments on the Straw Proposal and hopes that the Staff will find them helpful as it works toward forming the basis of a minimum filing requirement order. If there are any questions, please contact me.

Very truly yours,



Lauren M. Lepkoski
Counsel for Jersey Central Power & Light Company