

Excerpts on Data Collection and Sharing Requests for Comments from the NY DSP Staff Proposal on Distributed System Implementation Plan dated October 15, 2015:

STATE OF NEW YORK
DEPARTMENT OF PUBLIC SERVICE
Case 14-M-0101 - Proceeding on Motion of the Commission in
Regard to Reforming the Energy Vision.
STAFF PROPOSAL
DISTRIBUTED SYSTEM IMPLEMENTATION PLAN GUIDANCE
Dated: October 15, 2015

C. Distribution System Administration

Data collection and sharing is imperative to achieve the objectives of REV. There are essentially two types of utility data: system data and customer data, both of which are essential to achieve robust customer engagement and market animation. System data must be made available by the DSP at a degree of granularity and in a manner that is timely, as required by the market. Accurate and timely information regarding specific aspects of the distribution system will enable DER suppliers to make investments and operational

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decisions and develop products that will help the grid meet the needs of utility customers and promote the societal benefits driving New York State energy policy initiatives. Similarly, DSPs require data from DER suppliers to ensure that DER is appropriately integrated into DSP planning and operational processes.

Although there is a need for commonality in approaches to accessing and sharing data, which will be addressed in the Supplemental DSIP Filing, certain system data currently exists that should be available for consumers or third party use. Therefore, the Initial DSIP will focus on making available utility system data and locations where DER would have system value. These concepts are consistent with the MDPT report to facilitate planning and investments activities.

Additionally, Staff seeks further comments with respect to data and advanced metering. The Initial DSIP should reflect the current state of development of these tools and present each utility's plans to utilize them to reach associated policy objectives. The Supplemental DSIPs should focus on developing common standards and protocols for sharing and protecting customer information.

The following sections should be included in the Initial DSIP:

System Data Acquisition and Sharing

- Include a description of the extent that system data is currently available for sharing with third parties, including the level of granularity (system level, substation level, etc.).

- o Prepare system data on a substation basis: 8760 load curves, voltage, power quality, reliability. Five year historical and forecasted load curves should be available.

- o Prepare individual feeder system data (load data, voltage, power quality, reliability, etc.) for feeders within areas that DERs are expected to have more value.

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- Provide a process for prioritizing the development of the feeder data. The process should be explained in sufficient detail to ensure its transparency.
- Explain plans for the expansion of collection of granular system data.
- Describe the process for making the data available to stakeholders.
- Identify, with as much granularity as possible, what data would be provided to assist DER providers in selecting target locations to invest capital.
- Explain the process for making the data associated with the “Identify Beneficial Locations for DER Deployment” section available to stakeholders.
- Describe efforts to present locational benefit information available geographically, such as a map within a portal.
- Discuss plans to make efficient use of advanced meter infrastructure (AMI) or other technologies to increase the availability of granular data to support system planning, market administration, and third-party market participation.
- Explain how the plans will support operations, DER interaction, and/or customer interaction (e.g., usage data).
- Identify how the utility plans to prioritize the installation of monitoring systems to maximize benefits and describe how to achieve a low-latency, secure communications network expected to support this expansion.
- Explain how the utility will integrate customer/third-party meters and communications equipment.
- Explain the existing communications network that will support the collection of granular data, and how the utility will be seeking to change the network to support the goals of REV. Provide a cost breakdown and defined schedule for implementation of the proposed communications system.

Customer Data and Engagement

- Identify and explain the means by which utility customers can obtain information regarding their energy usage:
 - Include a description of the extent and granularity of data is currently available for customers to review.

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- Describe the processes for making the data available to customers.
- Explain plans to expand the collection of granular usage data and how to make it available to consumers.
- Explain plans to enhance the ability of utility customers to obtain information regarding their energy usage.
- Identify and explain how vendors can obtain customer specific information from the utility, with authorization from the customer:
 - Include a description of the extent and granularity of the customer-specific energy usage data that is currently available for sharing.
 - Describe the process(es), protocol(s) and practice(s) for customers to share information with third parties they designate and how the data is transmitted to authorized third parties.
 - Identify which of the following data fields are transmitted. For fields not currently transmitted, explain whether and how they could be transmitted.
 - Historical consumption (monthly kWh, or more granular, if available)
 - Historical billing amounts (total dollars, supply charges)
 - Historical power factor
 - Coincident and non-coincident customer peak demand (kW)
 - Customer tariff
 - Reported outages
 - Service location
 - Power quality data
 - Customer complaints about voltage/power quality, including complaints in the immediate vicinity of the customer
 - Describe the extent to which existing data transfer processes and protocols described above, can accommodate increasingly granular customer usage data transmitted at more frequent intervals. Explain whether an alternative national standard protocol should be explored to accommodate the need to transmit such granular data, if acceptable, and identify plans to move toward that new standard.
 - Describe plans to enhance the ability of customer-specific information to be provided to third parties with customer authorization, using industry-standard protocols.

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- Describe required enhancements to privacy and security requirements and practices to accommodate increased data sharing that will accompany a movement to DSP markets.
- Describe, in detail, plans to achieve enhanced consumer engagement, particularly in the time before the implementation of the digital market platform or web-based market is implemented.
 - Include new or enhanced tools and initiatives accompanied by descriptions, budgets, and timelines.

Customer Data Questions for Comment

Consumers must have ready access to their energy usage information as well as the capability to easily direct transfer that information to the customer's choice of vendors. With that information, DER and energy commodity vendors can better target and address the consumer's specific energy needs.

The Commission concluded in its Track I Order that a means to deliver data necessary to facilitate transactions between potential DER and/or commodity vendors and customers is essential. The Commission also anticipated that data sharing issues would be addressed as part of the planned customer engagement platform, or digital marketplace.²⁸ In addition, because of the potential benefits that sharing customer-specific usage information will have on consumer engagement and the development of DER markets, the Track II White Paper includes a proposed earnings incentive mechanism based on utility development and implementation of an online portal.²⁹

²⁸ Track I Order at 60.

²⁹ Track II White Paper at 56.

Issues relating to the sharing of customer data for the purpose of stimulating customer engagement and increasing DER deployment are currently the subject of Commission inquiry and include consideration of the mechanisms for the collection and dissemination of data and strengthening privacy, cyber

security and protection of customer rights. These issues may be pursued contemporaneously with the development of the DSIP. To the extent these customer data issues are not otherwise resolved by the Commission, they should be addressed in DSIP filings.

Comments filed should address the following:

□ What should the Commission direct, beyond current requirements, in order to improve customer and authorized third-party access to the most granular data in as near real-time as possible, and

□ Specifically, what should the Commission direct in order to enhance Electronic Data Interchnage (EDI) to facilitate customer and third-party access to standardized, machine-readable consumption data with industry leading protocols and practices?

Advanced Metering Functionality and Communication Infrastructure

The MDPT report discussed the benefit of using AMI to aid in the collection and transmission of data for purposes including system monitoring and control.³⁰ The report noted that in some instances, advanced meter capabilities may be required for DERs to fully participate in real or near real-time markets.³¹ While Staff agrees, to some extent, with the MDPT working group recommendations that some level of advanced metering functionality is likely required in order to achieve REV objectives, it remains far less clear which technologies, ownership structures, and deployment strategies are likely to optimize AMI as a tool for achieving REV objectives. For example, while a robust communication backbone may be vital for system and market operations, the specific ownership model, communication technologies, system architecture, and required bandwidths are open to discussion. In practice, communication systems are expected to include a mix of mediums and ownership structures, depending on local geography, density, and the

³⁰ MDPT report at 89.

³¹ Id. at 92. CASE 14-M-0101

required functionality. Therefore, utilities should be determining the appropriate methodology to integrate communications systems capable of collecting and disseminating the information needed for a modern distribution system.

The need for AMI is currently being addressed within each individual utility through the rate case process. Consolidated Edison Company of New York, Inc. (Con Edison),³² Orange and Rockland Utilities, Inc. (O&R),³³ and most recently the Iberdrola companies (Rochester Gas and Electric Corporation and New York State Electric and Gas Corporation)³⁴ have AMI before the Commission. Issues being addressed include, but are not limited to, consideration of the appropriate roll out strategy, and whether third-party meters or smart inverters with metering systems could provide appropriate REV functionalities. As part its request for a rate plan extension in Case 13-E-0030, Con Edison proposed implementation of AMI across the entirety of its electric and gas service territory. Con Edison, in collaboration with interested parties, is developing an AMI business plan expected to be filed with the Secretary on October 15, 2015. Similarly, O&R proposes implementation of AMI across its electric and gas systems in Rockland County as part of its current rate proceeding (Case 14-E-0493). O&R, in collaboration with interested parties, is developing an AMI business plan to

³² Case 13-E-0030, Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service.

³³ Case 14-E-0493, Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Orange and Rockland Utilities, Inc. for Electric Service.

³⁴ Case 15-E-0283, Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of New York State Electric & Gas Corporation for Electric Service, and case 15-E-0285, Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Rochester Gas and Electric Corporation for Electric Service.

be filed with the Secretary either as part of, or at the same time as, the company's DSIP filing. Comments will be sought on the filing and parties active in the REV proceeding should also be active in these proceedings. Decisions in the case of Con Edison are expected early in 2016 and will be informed by the process within the case proceeding, but also by the responses to this DSIP guidance proposal.

To better inform the Commission's interest in unleashing innovative and cost-effective solutions, Staff underscores its invitation for the utilities and other interested parties to include in their comments to this DSIP Guidance document detailed descriptions of the benefits advanced metering technology can provide and how those benefits can be captured to further REV goals. Comments should include details on functionality, benefits provided, required deployment levels and whether the data and related benefits expected from advanced meters could be (or should be) provided by third-parties' technologies.

Likewise, proponents of widespread utility-deployed metering systems should file descriptions of those systems to describe their specifications and functions.

Comments filed on AMI should address the following:

What are the alternative tools available today other than AMI to provide advanced meter functionality? Can these tools be used to engage customers or is AMI necessary to accomplish this goal?

List major component technologies required for a successful deployment of a system with advanced metering functionality. What are they, what functions and benefits does each component provide, and where would they physically reside?

Of those technologies described, which components should be owned and maintained by the utility, by customers or by third parties?

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□ Utilities should describe in detail what type of communications technology and infrastructure would be proposed for AMI deployment in your service territory? Explain why this communications strategy was selected versus other potential means of communications such as (mesh/point-to-point/fiber/internet/etc.). What are the pros/cons of the proposed communications system versus other potential means described above? Does the communication system proposed have the capacity to handle the large amount of data needed to support REV goals/initiatives? If not, is the communications system scalable to eventually meet the REV goals/initiatives?

□ Explain in detail how AMI deployment would support further deployment of renewables and DER? Explain the functions and benefits of AMI associated with renewables and DER. How will the monitoring, dispatching, and command/control of renewable/DER be performed? Has the company explored alternatives to AMI associated with the monitoring, dispatching, and command/control of renewables and DER?

□ At what scale or market penetration does deployment of this strategy become effective? For example, is it viable for single customer deployments associated with particular rate designs or DER installations, or are regional or other scales of deployment suggested?

□ Over what timeframe is the deployment anticipated to take place? If market-driven, what will be the key determinants of uptake in the market? How will the deployment schedule affect overall costs?

□ What are the characteristics of the utility service territory that impact economics of AMI deployment? For example, if a utility has fully deployed automatic meter reading or only reads meters bimonthly, this may limit the operational savings available from AMI deployment.

□ Filings should examine the issue of AMI deployment from the perspective of three alternative scenarios: (a) full AMI implementation by the utility, (b) utility implementation of AMI to 20% of customers, with remaining customers receiving AMR (automated meter reading) meters, and (c) AMR implementation by the utility, with AMI deployed to individual customers by ESCOs and/or competitive DER providers. In each scenario, assume the utility will maintain the communications network, and meter data management systems. Compare the costs and risks of each alternative scenario, including flexibility, scalability,

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and level of ratepayer investment, as well as overall net benefits.

- What functionality necessary to support REV markets is available only from AMI networks? For example, control of customer loads can be achieved through alternate communications channels (e.g., pager networks or customer broadband connections). What advantages are offered by AMI deployment?
- Can AMI support demand rates for mass market customers? Are other alternatives to AMI available to support demand rates?
- Describe the anticipated costs associated with the strategy? Provide detail according to capital versus operating expenses, including break-down of costs to specific components including labor costs for installation and operational requirements. Who would bear the costs of the metering strategy?
- What additional system infrastructure (e.g., backbone communication infrastructure) does considered advanced metering system require? What protocols or standards would be required for interoperability? In the case that metering devices and other assets are provided by a third-party service provider, how would ownership and transfer of assets be managed if the customer opts to change service providers? How will ownership and transfer of customer data be managed?
- What grid services, customer services, and essential functions will the system support?
- What types of market programs or rate structures will the system support (e.g., demand response programs, participation in ancillary service markets, real time pricing, time-of-use rates, demand charges, etc.)?
- What are the primary benefits that would derive from the system? For example, would the strategy support conservation voltage reduction (CVR) and associated benefits to system operation and carbon reductions? Are there other operational, societal or customer benefits that the system directly supports?
- What data will be collected, and for what purposes will it be used?
- Who will own the collected data, and how will access to data be managed?

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- Will the system be able to control end-use devices within the consumer's premise? How will information about controlled events be communicated to customers?
- How should cyber-security concerns be addressed on the system and how will customer data be protected?
- How will privacy concerns be addressed on the system described?
- How will individual customer load data be shared with third parties such as energy service providers (ESCOs), demand response providers, and energy service providers?
- Will customer load data be provided to ESCOs and the NYISO in a way that allows the NYISO to settle ESCOs' load based on actual usage instead of class load shapes of their customers? What other attributes of the proposed system should staff be aware of?
- Does a scenario exist where utilities or third parties could offer a customer advanced services without a full scale deployment of advanced meters and what is the rationale behind the response? If not, what limitations would be required to change the response?

Commenters should provide as much detail and specificity as possible. In particular, parties should provide detailed comments and justifications for how proposed strategies would address the issues of asset ownership and whether a universal or more targeted deployment is recommended. Where helpful, strategies and system designs can be described in terms of both detailed business plans and engineering designs, in a similar manner as would be required for Commission approval of the investment or program design. To the extent that these plans can be described in detail, Staff and the Commission will be able to evaluate their merit toward achieving REV objectives, including in comparison to universal rollout of utility-owned advanced meters.

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