

June 24, 2022

Via E-Docket

Hon. Michelle L. Phillips, Secretary to the Commission
New York State Public Service Commission
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Re: Call for Commission Action Regarding Access to Real-Time Usage Data from Advanced Meters

Dear Commissioners:

We, the undersigned organizations, would like to draw your attention to a pressing problem that is artificially limiting clean energy and distributed energy resources (DERs) in New York: access to real-time usage data from advanced meters.

The advanced meters in Avangrid, ConEd and National Grid territories support real-time broadcasts of energy usage data every few seconds via Wifi or Zigbee radio signals. This information is critically important to the operation of solar, energy efficiency, demand response, batteries and many other DERs. However, ConEd has declined to enable real-time functionality on their meters despite ongoing stakeholder engagement and requests. And while Avangrid and National Grid are installing meters *capable* of providing real-time usage data over Wifi, neither utility has provided a timeline or process by which customers could avail themselves of this important feature.

Lacking access to real-time usage data, enabled by the AMI equipment that all customers have paid for through their rates, DER customers in New York are forced to install expensive and duplicative meters in order to access real-time usage information. The costs to install additional meters in buildings can cost several thousand dollars or more.¹ Such costs are a significant barrier to residential customers and smaller commercial customers. Today, the lack of access to real-time usage data is resulting in significant missed opportunities for managing utility costs, and the broader benefits of large scale deployment of customer-sited DERs.

¹ See, e.g., *Got Data? The Value of Energy Data Access to Consumers* by Mission:data Coalition. Page 15 cites \$2,900 to \$6,400 in hardware, installation and networking costs. Available at <http://www.missiondata.io/s/Got-Data-value-of-energy-data-access-to-consumers.pdf>

To date, the Commission has yet to establish any requirements or timelines by which customers can make use of their real-time electricity usage data. We hereby ask for Commission leadership on this issue, for the following reasons:

- **Ratepayer fairness demands that real-time usage data be readily accessible to customers.** Ratepayers are already paying for advanced meters through rates in ConEd, National Grid and Avangrid territories. If ratepayers cannot access real-time capabilities, then, under the Commission’s “used and useful” standard, customers should be refunded the portion of metering costs that is associated with real-time functionality.
- **Real-time usage data is critical to achieving New York’s decarbonization goals.** It will be extremely difficult to achieve the state’s emissions targets if every customer interested in shifting their load to low-carbon periods is forced to pay for a redundant electric meter plus installation costs. We believe that New York can lead the country on clean energy and decarbonization, but these efforts will be undermined by lack of access to real-time usage data. We note that California, Illinois and Pennsylvania have successfully offered access to real-time usage data for millions of consumers.
- **Usage data delayed by 30 or 45 minutes is not sufficient for many applications.** We understand that ConEd and National Grid have, or are planning, a Green Button Connect system in which 15-minute usage intervals can be delivered, after a 30-minute delay, to a customer-authorized energy management firm. While helpful, this feature has a latency of 30 minutes that renders many applications inoperable. For example, such applications include, but are not limited to, rapid load-shifting; energy diagnostics in homes or buildings seeking to identify spikes in power demand; discharging of batteries to limit peak charges; and even the curtailment of renewable production to prevent substation backfeeding, as has been recently discussed in the ITWG, and which may be necessary to achieve CLCPA objectives.

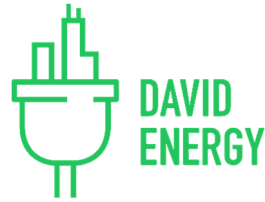
In conclusion, we ask for your prompt attention on this matter to ensure that any customer in New York with an advanced meter can easily access and use their real-time usage data.

Additional detail about our request is provided in Attachment 1. Thank you for your consideration, and we look forward to hearing from the Commission.

Sincerely,



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Attachment 1

Relevant Procedural History

On February 13, 2009 in Case No. 09-M-0074, the PSC established “Advanced Metering Infrastructure Minimum Functional Requirements” in *Order Adopting Minimum Functional Requirements for Advanced Metering Infrastructure Systems and Initiating an Inquiry into Benefit-Cost Methodologies*, stating: “**AMI systems must have the ability to provide customers direct, real-time access to electric meter data. The data access must be provided in an open non-proprietary format**” (p. 10). The order also states, “**At the point where the customer or the customer’s agent interfaces with the AMI system, the data exchange must be in an open, standard, non-proprietary format**” (p. 12).

Furthermore, in *Order Approving Advanced Metering Infrastructure Business Plan Subject To Conditions* (March 17, 2016) in Case Nos. 15-E-0050 *et al.*, the Commission ordered that “Con Edison should partner with other vendors to grow the ‘internet of things’ that can be interconnected [with advanced meters]...” (p. 35). “Additionally, customers should understand **how to timely access their own data**, and to understand and control how it is accessed and used by others. Furthermore, Con Edison should work with DER providers and ESCOs to develop an understanding what it takes for them to participate actively and facilitate their participation” (p. 37; see note on NYISO DER aggregation below). “An important aspect of AMI is its ability to enable active participation by customers, but customers must be equipped with the knowledge required to participate in a meaningful way. Customers will need to be actively supported in getting the right information to make informed decisions on their participation...” (p. 37). “In addition, Con Edison should include in its customer engagement plan an accommodation of web and smartphone applications offered by third-parties **that allow customers to view their usage and energy costs in real time** as well as cumulatively for the billing period. The Company is to strive to maximize third-party provider participation (e.g., smart thermostats, other smart home equipment, electric vehicle charging, demand response aggregators, solar and battery vendors, etc.)” (p. 38).

The Commission has accepted National Grid’s and Avangrid’s proposals to install advanced meters with a Wifi-based Home Area Network. National Grid states that “customers can elect to connect the embedded AMI Wifi radio to their home Wifi network” (National Grid, *Advanced Metering Infrastructure Grid-Edge Computing Report*, March 21, 2022, Case No. 20-M-0082, p. 12). However, National Grid does not provide any timeline for the implementation of such capabilities, nor has National Grid established the contractual terms, costs (if any), or technical eligibility of Wifi devices to interface with meters.

Real-Time Usage Data in NYISO Markets

Real-time usage data is imperative for enabling broad participation by Distributed Energy Resource (DER) aggregations in the NYISO's Capacity, Energy, and Ancillary Services markets. The NYISO's FERC Order No. 2222-compliant DER market participation model requires that DER aggregations provide 24x7 telemetry with a 6-second scan rate. In the case of DER aggregations composed of residential end-use customers, the only cost-effective and ubiquitous means of meeting this telemetry requirement is real-time access to usage data from the utilities' advanced meters. Absent this functionality, an entire category of demand-side resources faces disqualification from certain NYISO markets, despite its capability to respond to NYISO dispatch instructions in large quantities and on short notice.

Recommendations for Consolidated Edison (Zigbee-based Home Area Network)

Unlike National Grid and Avangrid, ConEd's advanced meters contain Zigbee radios instead of Wifi radios. In the near term, ConEd should enable customers to submit a form for ConEd to manually "pair" a customer's Zigbee device with his or her meter using ConEd's already-procured back-end software known as the HAN Communications Manager (HCM). This practice is widely used by utilities across the country.

On July 17, 2020, ConEd filed in Case No. 15-E-0050 a report written by Guidehouse that assessed the potential for activating the Home Area Network and unlocking real-time usage data for customers. The report cites many challenges associated with Zigbee HAN activation including costs and limits to the Zigbee broadcast range. The above recommendation avoids the costs associated with a self-service website cited in the report, as well as the challenges associated with Zigbee broadcast range and physical access to meters because commercial customers typically have physical access to their meters.

Finally, once the above recommendation is implemented, the Commission should rapidly investigate options for all ConEd customers to utilize their Home Area Network in order to comply with above-cited Commission orders. If Zigbee is not viable for some types of customers in ConEd's territory, then the Commission should explore options including, but not limited to, new radio technologies and leveraging broadband network hardwiring in new construction for customers to access and use their real-time usage data.

Recommendations for National Grid and Avangrid (Wifi-based Home Area Network)

The Commission should move rapidly to establish important HAN program details so that consumers can take advantage of advanced metering functionality. Specifically, the Commission should establish a timeline for HAN activation; the customer experience involved with pairing a device; the parameters of technical eligibility for devices to connect to meters; and any contractual terms between utilities and device makers the Commission feels are necessary.

Furthermore, the Commission's efforts should be informed by a settlement agreement involving Xcel Energy that was approved by the Colorado Commission in April, 2022. The settlement requires Xcel Energy to provide (i) open, non-discriminatory access to 1-second meter data using the IEEE2030.5 protocol over Wifi at no cost; (ii) support for "bring your own device" within 180 days; and (iii) a software development kit (SDK) with appropriate documentation and code samples to assist in market development of real-time energy management tools for customers.²

² Colorado Public Utilities Commission. Proceeding No. 21A-0279E. Decision No. R22-0131, *Unanimous Comprehensive Settlement Agreement*, Appendix A. Effective April 7, 2022.

Available at

http://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=967594&p_session_id=
