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VIA E-FILING & E-MAIL

Carmen D. Diaz, Acting Secretary
New Jersey Board of Public Utilities
44 South Clinton Avenue, 9th Floor
Post Office Box 350
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board.secretary@bpu.nj.gov

Re: Advanced Metering Infrastructure ("AMI") Data Transparency, Privacy & Billing – Draft Minimum Filing Requirements
BPU Docket No. EO20110716

Dear Acting Secretary Diaz:

On behalf of our client, Google Nest, we submit the enclosed comments regarding the Board's Draft Minimum Filing Requirements ("MFRs") on Advanced Metering Infrastructure ("AMI") Data Transparency, Privacy and Billing, filed in response to the BPU's Public Notice issued on July 29, 2022.

Please do not hesitate to contact me if you have any questions.

Very truly yours,

Murray E. Bevan

Enclosure

cc: Google Nest

Comments of Google Nest re: the Advanced Metering Infrastructure ("AMI") Data Transparency, Privacy & Billing – Draft Minimum Filing Requirements
BPU Docket No. EO20110716

Introduction:

Google Nest appreciates the opportunity to comment on the Advanced Metering Infrastructure (AMI) Data Transparency, Privacy & Billing Draft Minimum Filing Requirements ("MFRs") in the New Jersey Board of Public Utilities ("BPU") Docket No. EO20110716.

Google Nest strongly supports the development of pathways for customers to initiate and automatically share their AMI data with authorized third parties. We commend the Staff of the BPU ("Staff") for their thoughtful and clear guidance in the Draft MFRs. We agree with the conclusion of Staff that the Draft MFRs will enable the various use cases identified within, while empowering customers to engage with their energy usage and lower overall consumption, especially during peak periods of grid strain.

In these comments below, we offer specific support to the Staff's Draft MFRs and suggest the following further modifications and clarifications:

1. The final MFRs should maintain language that makes it clear that the customer owns the usage and demand data generated by AMI meters;
2. The enrollment process across utilities should be consistent and no more burdensome on the customer than other utility account functions; and
3. In addition to usage and demand data, EDCs should also provide, to the extent possible, greenhouse gas emission data, historical data, and data as close to real-time as possible.

About Google Nest:

Google Nest, a business unit of Google, is dedicated to making the smart home less complicated and more helpful, where products work together to provide customers with safety, security, comfort and connection with their friends and family. The Nest energy devices include the Google Nest Learning Thermostat, the Google Nest Thermostat E, and the new Google Nest Thermostat, which are equipped with sensors, Wi-Fi capability, and smart-phone grade processing, to help customers consume less energy.

Google Nest thermostats enable households to participate in wholesale markets by providing demand response. There are over 100 million housing units, or roughly 85% of all housing units in the United States, that have either main heating and/or cooling systems where installing a Google Nest thermostat could enable meaningful load reductions.[1]

[1] *See* US Energy Information Administration ("EIA"), Space heating in U.S. homes by climate region, 2015: https://www.eia.gov/consumption/residential/data/2015/hc/php/hc6.6.php.

Of the 100 million households in the U.S. with main heating and/or cooling systems, over 15 million households in the U.S. are estimated to have a smart thermostat installed today.[2] A growing subset of these households actively engage in demand response through programs like Nest's "Rush Hour Rewards". Nest believes that customers and the grid will greatly benefit from bridging the gap between the large potential number of households that can host Distributed Energy Resources ("DERs") and the much smaller number of households that currently have DERs participating in grid service programs. The affordability of the smart thermostat, especially compared with other DERS, like solar or storage, makes it a powerful and effective tool to enable customers across the United States to make their homes responsive to grid conditions and provide resiliency by flexibly managing load.

Google Nest has also recently launched a new service named "Nest Renew." Nest Renew helps residential customers to support a clean energy future right from home by combining existing Nest thermostat programs with new user education tools, intelligent automation, nonprofit funding focused on clean energy equity, and renewable generation support. Nest Renew includes an "Energy Shift" feature that helps users prioritize heating and cooling during periods of lower grid emissions or lower cost electricity. This enables new emissions-based and time-of-use based advanced energy management opportunities for users with Nest thermostats.

Comments:

1. The final MFRs should maintain language that makes it clear that the customer owns the usage and demand data generated by AMI meters.

Google Nest is supportive of efforts in New Jersey to develop safe pathways for customers to choose to share their customer data with any customer-authorized third party. To fully enable customer control over data, we concur that it is important that each Data Access Plan indicates that "usage and demand data generated by AMI meters belong to the customer whose usage is captured by the AMI meter and that such data should be easily accessible with "one click" access and sharing ability."[3] Such a statement appropriately protects customers while also empowering them to make informed decisions about their meter data. In addition, we agree with Board Staff that the EDCs should not be allowed to charge a fee to customers or third parties for accessing customer data.

[2] Based on Park Associates estimates of 13% smart thermostat penetration in January 2018: *See* http://www.parksassociates.com/blog/article/pr-06142017#:~:text=New%20Parks%20Associates%20research%20shows,by%20the%20end%20of%202017

[3] *See* Draft Minimum Filing Requirements, at p. 6.

2. The enrollment process across utilities should be consistent and no more burdensome on the customer than other utility account functions.

Google is encouraged that Staff identifies in the draft MFRs that "data should be easily accessible with "one click" access and sharing ability."[4] We strongly approve of this approach that should limit the technical gating of customers seeking to authorize data access. At Google, we believe there are two general principles that are critical for setting up a meter data access regime:

1. Consent for authorization should be informed and meaningful; and
2. The method of authentication and authorization should match the method used by the utility in other applications.

By adopting these principles for the proposed "New Jersey Common Release Form", the BPU can avoid creating overly prescriptive requirements on the pathway to data access while still establishing reasonable bounds that protect consumers and their customer data.

The first principle, that consent is informed and meaningful, is critical for consumer protection. An effective data sharing regime needs to include a pathway trusted by customers. Authentication and authorization solutions, such as OAuth 2.0, are considered industry standards because they reasonably ensure it is the customer themselves that is providing consent while using the exact same authentication process with which the customer is familiar. Knowing that the authorization was given directly by the customer through secure pathways is of course also critical for the BPU to maximize customer safety.

The second principle, that authentication and authorization should match the method used by the utility in other applications, is crucial to ensure that the customer is actually empowered to easily share their data. Cumbersome and unfamiliar processes erode customer trust and ultimately will create barriers frustrating customers' ability to successfully share their data with third parties. For example, EnergyHub found that the enrollment process for a California demand response program saw a drop-off of 97% when requiring customers to share Service Account Number and sign a separate form. This drop-off in the California process is particularly stark when compared to a similar Texas program that saw a drop-off through the enrollment process of only 58% where those extra steps were not included.[5] Put another way, the California program only enrolled 3 customers successfully for every 100 that started the enrollment process. And within that California flow, the extra step of signing a separate form *alone* led to 39% of customers failing to complete authorization.[6]

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[4] *Ibid*.

[5] See Energy Hub "Optimizing the Demand Response Program Enrollment Process" available at https://f.hubspotusercontent40.net/hubfs/415845/White%20papers%20(2021)/EnergyHub_OptimisingEnrollmentProcess_Whitepaper_2021.pdf?__hstc=128267091.1a5421134e960e3a96d03e8faee8571b.1643149785994.1643149785994.1643149785994.1&__hssc=128267091.1.1643149785994&__hsfp=668737353

[6] Ibid.

To avoid similar customer atrophy in New Jersey, we believe that the simplest solution is to apply the same methods that the utility uses to authenticate the customer today (e.g. for logging into an online account or initiating bill pay through the web portal) to any new data sharing process.

3. The final MFRs should define the core data set, and also provide to the extent possible greenhouse gas emission data, historical data, and data as close to real-time as possible.

The Draft MFRs reference a "core energy data set" that appears to include the following:

- Usage and demand measurements on a near real-time basis, at watt-level precision;
- Validated 5-minute meter Billable Quality Interval Usage ("BQIU") AMI data no later than 48 hours after meter readings are captured;
- All customer billing information, including, but not limited to, account information, meter information, rate information, and any other data necessary to participate in various demand management programs;
- Additional elements identified as part of the Green Button Standard; and
- Premise addresses for multi-site customers and Customer account number(s).

Additional data fields identified by Staff in the proposed MFRs include AMI Data to track electric vehicle charging, a status flag of the metered premise as operating within a predefined community (e.g., Disadvantaged Community), and AMI Data for future Volt/VAR services.

We recommend that Staff clarify in the final MFRs the total composition of the "core energy data set".

In addition, we propose that the BPU also encourage the EDCs to calculate and provide marginal greenhouse gas ("GHG") emissions at a grid, zonal, nodal, and/or customer level at the time of electricity consumption, if that information is available. To meet the goals of the 2019 New Jersey Energy Master Plan of 100% clean energy and 80% emissions reductions from 2006 levels by 2050,[7] this emissions data will be a critical input for companies that want to assist customers with lowering their GHG impact.

Along with GHG emissions data, third-party providers would benefit from access to historical usage data. This will enable more intelligent forecasting about offerings and future DER behavior. We urge the BPU to specify that historical data should also be made available through the data sharing process.

We also strongly support the draft MFR proposal to make available unvalidated AMI data as quickly as possible. This real-time data will provide instant feedback to providers that are helping to manage electric load in a customer's home or building. We applaud the approach of the MFR to both set clear guidelines for unvalidated AMI data to be available as soon as possible, and that validated data be available no more than 48 hours later. The core intent of AMI data access should be the ongoing sharing of meter data, and the MFR proposal treats these processes with appropriate seriousness.

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[7] See "2019 New Jersey Energy Master Plan," at p. 12, available at http://d31hzlhk6di2h5.cloudfront.net/20200127/84/84/03/b2/2293766d081ff4a3cd8e60aa/NJBPU_EMP.pdf.

Conclusion:

Google Nest is extremely supportive of enabling customers to share their AMI data with authorized third parties of their choosing. We believe that this functionality is critical to meeting the climate goals of New Jersey and engaging customers in making smart and informed choices about their energy usage. We further envision that this will unlock numerous programs and technologies that will provide direct value back to customers. We look forward to further engagement with the BPU, the EDCs, and stakeholders on this topic.

Sincerely,
/s/ PARAG CHOKSHI
Parag Chokshi
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