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March 11, 2020

NHPUC 11MAR'20PM3:37

Debra A. Howland
Executive Director
New Hampshire Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, NH 03301

> Re: **Docket No. DE 19-197 Statewide Multi-Use Online Energy Data Platform**
> **Public Service Company of New Hampshire d/b/a Eversource Energy;**
> **Unitil Energy Systems, Inc.; and Liberty Utilities (Granite State Electric)**
> **Corp. d/b/a Liberty Utilities—Docket Scoping Comments**

Director Howland:

Public Service Company of New Hampshire d/b/a Eversource Energy, Unitil Energy Systems, Inc., and Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities hereby submit these jointly composed scoping comments for Docket No. DE 19-197 pursuant to the New Hampshire Public Service Commission ("Commission") Staff's Scoping Comment Solicitation that it issued along with the proposed procedural schedule on February 10, 2020, and which the Commission adopted along with the procedural schedule with a submission deadline of today, March 11, 2020.

If you have any questions regarding this filing, please do not hesitate to contact me. Thank you for your assistance with this matter.

Regards,

Jessica A. Chiavara
Counsel, Eversource Energy
o/b/o Eversource, Unitil, and Liberty

Enclosures
cc: service list

THE STATE OF NEW HAMPSHIRE
before the
PUBLIC UTILITIES COMMISSION

Electric and Natural Gas Utilities
Development of a Statewide, Multi-Use Online Energy Data Platform

Docket No. DE 19-197

COMMENTS ON STAFF SCOPING SOLICITATION RECOMMENDATION BY PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE D/B/A EVERSOURCE ENERGY; UNITIL ENERGY SYSTEMS, INC.; LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP. D/B/A LIBERTY UTILITIES

INTRODUCTION

These comments are to assist in defining the upcoming year-long inquiry laid out by the New Hampshire Public Utility Commission ("Commission") in its approved procedural schedule for this docket to develop a statewide, multi-use online energy data platform. Following a pre-hearing conference on February 3, 2020, Staff ("Staff") encouraged parties with similarly aligned interests and insights to combine comments in reply to this information request, which Staff put out to "better delineate the form that the statewide multi-use online energy data platform may ultimately take pursuant to the directives of RSA 378:51, II, and to describe the potential benefits and costs associated with the platform pursuant to RSA 378:51, III". Scoping Comment Solicitation at 1. In this filing, Public Service Company of New Hampshire d/b/a/ Eversource Energy ("Eversource"), Unitil Energy Systems, Inc. ("Unitil"), and Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities ("Liberty"), (together "the Utilities"), respond to Staff and the Commission's desire

> to determine the following aspects of the platform during DE 19-197: (1) the governance, development, implementation, change management, and versioning of the energy data platform; (2) standards for data accuracy, retention, availability, privacy, and security, including the integrity and uniformity of the logical data model; and (3) financial security standards or other mechanisms to assure third-party compliance with privacy standards. RSA 378:51, II. The Commission must also determine whether the costs associated with the proposed platform may be reasonable and in the public interest. RSA 378:51, III. Id.

Additionally, the Utilities are combining similarly aligned policy and operational objectives to most efficiently and effectively get this docket underway. It is with that intent and with thanks to the Commission that the Utilities take this opportunity to provide the following responses to aid in designing the scope of Docket No. DE 19-197.

Functionalities

1. *What functionalities should a statewide multi-use energy data platform offer to customers, Distributed Energy Resource ("DER") providers, Competitive Suppliers, and other users, including any applications and business uses?*

In examining what functionalities a statewide multi-use energy data platform should offer customers, DER providers, Competitive Suppliers, and other users, the Utilities offer the following information and experiences:

- Customers have the ability to access their energy usage and billing and payment data online. One added feature might be the ability for customers to grant access to their usage data, for a specific start and end date, to a third-party software provider.
- For DER providers the Utilities assume they may want usage data.
- The Utilities already have a robust Electronic Data Interchange ("EDI") system installed and operational with competitive suppliers, complete with security and protection in place via this national standard. Suppliers are able to enroll and drop customers, while also receiving monthly usage and billing data.
- Municipal entities on the other hand, may want access to annual and monthly usage data by Sector (Residential, Municipal, Commercial) within their respective communities.

While other use cases may exist for other third parties, these are some of the basic and elemental functions that seem to be of interest.

2. *What level of energy data granularity appropriately balances costs of collecting, storing, and transmitting energy data with the incremental benefits of increased granularity?*

When considering levels of granularity and the costs of collecting, storing, and transmitting energy data with the incremental benefits of increased granularity, the Utilities note that customers currently have access to their monthly kWh (and kW for business customers) usage and this information should continue to be accessible to them. A smaller number of customers have access to interval data. Most of the metered data is read monthly, while interval data is usually read daily.

3. *How often should the data be updated?*

Data is currently available (and may be updated) to customers after the meter has been read, validated (sometimes estimated) and determined to be accurate.

4. *Should the customer data platform focus only on energy usage data as measured at the meter, or include other data and/or data sources? If other data sources, how should those sources be included and at what cost?*

A customer data platform should include secure access to customer energy usage data as measured at the meter and validated for billing. The benefit and value of the data will help determine what costs should be supported in order to share that data.

5. *Is the energy data platform under consideration in this docket the appropriate mechanism to provide information on energy system data? Why or why not?*

In considering the propriety of the data platform as the mechanism of choice, the Utilities believe such propriety would correlate directly with how robust the requirements of the data platform become. There will likely be some overlap to what customers currently have access to today. The Utilities update customer data access capabilities based on customer needs, and their interest in sharing data with others. This energy data platform, depending upon how it is defined, may be focused on users other than customers. As project scope is further defined, other appropriate mechanisms may be determined to meet these new requirements.

With respect to the "energy system data" part of this question, the Utilities do not believe this data platform is the appropriate tool for storing and making energy system data available to non-utilities. Docket No. IR 15-296 is investigating grid modernization, specifically the issue of providing energy system data and as such, the Utilities do not have further comments to provide on this point in this docket at this time.

Existing Opportunities for Energy Data Access

1. *What are the capabilities of the currents platforms through which customers can access their energy data?*

The Utilities currently provide customers with access to their monthly usage and billing data as follows: utility websites, Green Button Download My Data (Eversource & Unitil), Customer Engagement platforms such as Energy Savings Plans or the Home Energy Reports application, via Customer Service Representative and in some cases via a mobile application. Unitil and Eversource both currently offer Green Button Download My Data for their electric customers, and Eversource offers further services to customers through its customer engagement platform.

2. *Are capabilities of current platforms a function of current metering/billing infrastructure? If so, please describe that infrastructure.*

The capabilities of current platforms are functions of already-existing metering and billing infrastructure. The data available to customers is dependent on the type of meter(s) installed and the data collection systems used to gather that data. Generally speaking, the Utilities install metering required to obtain the data needed for billing or reporting purposes. Since the vast majority of customers are billed only on kWh consumption, the metering is designed to provide (and the meter reading system is designed to collect) such relevant information.

A smaller subset of customers require additional information for billing/reporting purposes, such as maximum kW demand values, bi-directional kWh registration, energy usage by Time-Of-Use (TOU) period, and, for large customers, interval data in 30 minute intervals. For larger customers, interval data must be collected remotely either via a phone line connection, a cell phone connection, or Ethernet connection. In cases where remote reading is not available, the interval data must be gathered manually via "probing" the meter locally. There are also some locations where residential type meters must be read manually.

As a reference, the following chart has a list of electric meters by utility and by type:

| | Liberty | Unitil | Eversource | | | |
| | | | AMR & remotely read meters | | Manually read meters | |
			Residential	C&I	Residential	C&I
Drive-by meter reading	40,254	All AMI	487,716	77,563	0	0
Time-of-use register	1178	All	40	0	1	345
Reading of interval data	358	2170, but expanding	1	234	112	1,815

Source: https://www.puc.nh.gov/Regulatory/Docketbk/2020/20-004/INITIAL%20FILING%20-%20PETITION/20-004_2020-01-10_STAFF_RECOMMENDATION.PDF

3. *Is it possible for existing energy data offerings (to) overlap with, but not be duplicative of, a statewide energy data platform? If so, please explain how.*

It is currently possible for existing energy data offerings to overlap with but not be duplicative of a statewide energy data platform. However, as described in the first response under this topic of inquiry, customers currently have multiple ways to access their usage data, as well as a formal way (via EDI) for competitive energy suppliers to access historical and ongoing usage data. The Utilities' current data offerings could exist in conjunction with a statewide platform that includes aggregated community data and authenticated customer opt-in data sharing with third parties.

4. *Please describe the approximate customer participation in existing platforms and any marketing strategies are employed to maximize customer participation.*

The number of Utilities' customers that participate in electronic billing are in 20-30% range. The number of Utilities' customers who downloaded their data in 2019 is less than 0.1%.

The Utilities employ the following types of marketing strategies to encourage customers to use these platforms: paid social media, digital display advertising, paid search advertising, information in bill inserts or bill messages, direct response campaigns including email and direct mail, prime placement on utility web site, monthly newsletter articles, customer service representative scripts which offer online registration and preference management, and on-hold integrated voice response (IVR) messages.

Database Structure and Management

1. *Please describe any preferred approaches to governance, development, implementation, change management, and versioning of the platform.*

   The following items and recommended approaches would need to be developed once system requirements are defined, and are a list of possibilities:

Governance
- A set of governance principles to be designed with a goal of protecting customer privacy and data integrity, while enabling customers to access usage data and share that data with authorized third parties.
- Customer Awareness: Customer notice about all agreed upon privacy-related policies and practices as well as any changes to policies and practices on an ongoing basis.
- Customer Choice and Consent: Customer control over access to their own Customer data.
- Customer Data Access and Participation: Customer access to their own Customer data and ability to actively participate in its maintenance.
- Customer Data Integrity and Security: Customer data should be as accurate as reasonably possible and protected against unauthorized access.

(The above are based on principles enforced by the state of California for their data platform.)

- **Some Governance and Privacy items to address**
  - ✓ Customer Notice
  - ✓ Access and Control
  - ✓ Data Minimization
  - ✓ Use and Disclosure Limitation
  - ✓ Data Quality and Integrity
  - ✓ Data Security and Breach Notification
  - ✓ Who decides when to shut data access off?
  - ✓ Are the Utilities liable if a third party commits actions in violation of the privacy rules?
  - ✓ Accountability and Auditing

Development / Implementation
- Industry Standards: Energy-industry standards such as Green Button Download My Data and Connect My Data should be leveraged to enable secure access to, and sharing of, all customer data housed in this platform. The Connect My Data standard provides tools for the customer to electronically authorize the direct and secure transfer of their usage data to third party providers. Leveraging data transfer standards like XML and ATOM, Connect My Data is designed to support modeling highly complex and detailed usage data and provides us with a desired level of future compatibility.
- To support collaborative decision making, a technology review board of each utility's IT departments could be organized to be responsible for vetting and approving all technology and architectural decisions.

Change Management / Versioning
- To facilitate decision making and communications on platform and requirement changes, a formal *Change Control Review Board* could be formed from a cross-functional section of the utility implementation teams. This group could review, approve and communicate any and all changes to the technology, implementation approach and/or functional requirements for the platform.
- Software development should be performed using industry standard Software Development Lifecycle and source/change control techniques to insure the integrity and traceability all software and database components.

2. *Please describe any preferred standards for data accuracy, retention, availability, privacy, and security.*

The Utilities agree that assuring the integrity, privacy and security of any customer data made available through any platform will require a well-informed, proactive approach and must be carefully considered through all phases of the planning and development process. The relevant policies, procedures, and guidance described in PUC 300 Rules for Metering[1] should be followed to ensure that the Utilities can deliver "billing quality" data. Any platform developed must be designed following principles of record retention, availability (understanding cost considerations) with appropriate business continuity and disaster recovery plans in place. The scope of these availability and continuity discussions is highly dependent on future implementation decisions and should be discussed further at that time.

Data privacy must represent a primary objective during the development of any platform storing and transmitting private customer data. The Utilities recommend that this platform, depending upon what data is provided, adheres to RSA 363:38 and any other FERC, NERC, or US DOE privacy requirements.

3. *Please describe any preferred approaches to utility design and operation of the platform, including but not limited to a common landing page connecting to the data or relevant web pages of an individual utility, or alternatively, a single jointly designed and operated database.*

Before defining an approach regarding the design of the platform, it may be beneficial to more clearly define the use cases that can be addressed cost-effectively through this data platform. The Utilities suggest utilization of a hybrid model that considers cost, allows for flexibility, and complements existing energy data offerings by the Utilities. A hybrid model might consist of the following functional elements (or building blocks): (1) allow customers the ability to easily access their own data; (2) allow customers to share their usage data with third parties; (3) provide aggregated community-level data; and (4) provide general multi-utility aggregation data.

(1) Allow customers the ability to access their own data
The Utilities currently have customer engagement platforms in place that provide access to customer data and the ability for customers to interact with their utility for services, outage updates, and energy efficiency offerings. The Utilities could enhance their platforms to utilize a statewide common data sharing standard (such as Green Button Download My Data) which would provide customers the ability to easily access and download their usage data in a manner that is consistent

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[1] NH PUC 300 Rules for Metering https://www.puc.nh.gov/Regulatory/Rules/Puc300.PDF

regardless of utility provider. This common data standard would also allow combining across Utilities.

(2) Allow customers to share their usage data with third parties
This functional element could manage third-party data sharing needs including authenticating customers, authorizing the sharing of data, enrolling and giving access to third parties, and sharing via a common standard. Sharing of data would utilize the Green Button Connect My Data standard and be based upon a common data model. This standard would allow third parties to receive and seamlessly combine data from different Utilities. This functional element could be implemented by each of the Utilities.

(3) Provide aggregated community-level data
The Utilities could also work together to host an aggregated data repository. Aggregated data would be provided by the Utilities using standards to ensure common data privacy requirements are met. This could be a central state portal (such as NHsaves.com or a separate website or portal) and allow customers and third parties access to data. The Utilities propose that the aggregated community-level data would be usage at the city and town level by sector (i.e., residential, municipal, and commercial). This repository would combine aggregated usage data from each of the Utilities and could be publicly available.

(4) Provide general multi-utility aggregation data
Aggregated data could be provided by the Utilities using a common aggregation standard (see privacy responses for examples) to ensure privacy data standard are met.

These functional elements, much like building blocks, could be architected to be provided by the Utilities, or Utilities in partnership with a third-party vendor, or combinations of both. A hybrid platform would allow leveraging of existing services and common standards to achieve the goals of this docket. Access to decentralized functions could be provided using standard means such as hyperlinks, embedded services (or content), and live integrations.

4. Please comment on the definitions of the terms "common base of energy data," and "user friendly interface," and describe how they relate to preferred database structure and management approaches.

Using a national standard for data, created by industry and ratified by the ANSI-accredited North American Energy Standards Board may be useful. Green Button for download by customers would allow interested customers to authorize and share standard data with third parties.

User friendly interface
A user-friendly interface is important to the adoption and regular use of a website. User interface design focuses on anticipating what users might need to do and ensuring that the interface has elements that are easy to access, understand, and use to facilitate those actions. Interface elements include but are not limited to input controls (buttons, text fields, checkboxes, radio buttons, dropdown lists), navigational components (breadcrumb, slider, search field), informational components (tooltips, icons, progress bar, notifications) and containers (accordions).[2]

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[2] https://www.usability.gov/what-and-why/user-interface-design.html, Usability.gov

Best practice recommendations

Best practices could go far to guide the design and functionality of a website for accessibility and ease of use, including:

✓ Keep the interface simple
✓ Create consistency and use common user interface elements
✓ Be purposeful in page layout
✓ Strategically use color and texture
✓ Use typography to create hierarchy and clarity
✓ Make sure that the system communicates what's happening
✓ Think about defaults that reduce the burden on the user

Community-Level Data

1. *What is the current process and costs associated with accessing community-level data, how long does the process general take, and who pays the costs?*

Currently, this data is provided on a case-by-case basis upon request from a community aggregator. Once a non-disclosure agreement is executed between both parties, the Company then extracts data from multiple databases that store customer data in order to compile the requested data. A town must request data from each of the Utilities and combine that data if a town is served by multiple Utilities. Depending on the level of data requested, the process could a few hours or it could take a few weeks. Currently this data is provided free of charge.

2. *What type of data is necessary for a community seeking community choice aggregation to competitive suppliers?*

Our understanding is that this is currently being looked at in New Hampshire at the legislature and by this Commission and could include:

• Customer contact information for all customers in that town who are on default service. This information could be used to notify customers about the aggregation offer.
• Customer information, including Account Number, for the Community and its competitive energy supplier to enroll customers via EDI (for those customers that did not opt out).

Costs and Benefits

1. *What are the likely incremental benefits and costs of a single statewide database compared to utility specific energy data access mechanisms?*

The incremental benefits and costs of a "platform" are unknown at this time. Once the Utilities understand the specific requirements, architecture and interfaces, we could compare costs of possible solutions to deliver the requirements.

Additional research and information gathering is needed to determine possible solutions and the associated implementation costs. In the process of researching models in other states, the Utilities learned that Texas pays a considerable sum for a statewide, centralized platform / data repository: spending $9,000,000 in annual hosting fees (which does not include startup and ongoing development costs).[3]

2. *Is there an annual cost associated with maintaining Green Button Connect certification?*

There is an Annual Membership fee (< $20,000/year) along with Testing & Certification costs ($2,700 per test period). Unitil currently pays an Annual membership fee for their Green Button Download My Data feature.[4]

3. *Should costs associated with a statewide platform be recovered from all ratepayers or through user fees for those seeking: (a) individual data; or (b) aggregated and anonymized community-level data?*

If proven to be cost-effective to implement, the costs to develop, implement, and maintain the statewide platform should be recovered in rates across all customers. If third party software providers receive most of the value from this, then it may be appropriate to assess and collect fees from those third parties. Such user fees could then be used to offset costs to all customers.

4. *How might a user fee for the database be structured?*

A user fee for the database could be structured based on use or with an annual subscription fee, or some other use fee.

Phasing / Deferral

1. *Are there any functionalities which should be considered for deferral or phased implementation during deployment of any energy data platform? Why?*

The requirements need to be further understood and defined before developing an implementation strategy, phased, deferred or otherwise. There are some things, like energy usage data by City / Town, that the Utilities have been discussing that could be made available fairly quickly. Enabling Green Button Connect might be another feature that could be added to Utility systems.

2. *How should an energy data platform be designed so that it includes the possibility of reasonably foreseeable functionalities whose costs may not be reasonable at this time, or future functionalities which may not be foreseeable at this time?*

The requirements need to be further understood and defined before thinking about the "possibility of reasonably foreseeable functionalities". The Utilities have found that technologies do change over time

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[3]http://interchange.puc.texas.gov/Search/Filings?UtilityType=A&ControlNumber=49730&ItemMatch=Equal&DocumentTyp e=ALL&SortOrder=Ascending
 http://interchange.puc.texas.gov/Documents/49730_2_1050709.PDF

[4] https://www.greenbuttonalliance.org/join

and software may need to be converted due to obsolescence, or the data may need to be converted to a new database. Where financially and technically feasible, any and all hardware and software components and implementation techniques leveraged for the platform should be of modern vintage. This approach will help to mitigate the risk of pre-mature obsolescence and should help to limit our exposure as "new and better" technologies and techniques come to market.

Privacy Thresholds

1. *Is there a threshold standard for energy data aggregation and anonymization that the Commission should adopt to enable multi-tenant property owners to access whole building energy data while also protecting the privacy of individual customers?*

Currently, property owners do not have access to their tenant's energy use, due to the restrictions of RSA 363:38. To be responsive to this question, we are aware of two common standards for access to multi-tenant property owners used in other states, the "4/80 rule" and the "15/15 rule" that may be of use.

The 4/80 Rule in Illinois

The Illinois Commerce Commission (ICC) defines aggregated to mean compiling a set of <u>individual</u> customers' usage data, rather than <u>summing</u> up individual usage data. Outside of Illinois, "aggregated" means that all energy use data are summed up for the entire group – making it very difficult to identify individual consumption behavior.

The 15/15 Rule defined by the ICC

This applies only to the access of anonymous, distinct energy use data. The ICC specified that the process of summing up energy use data was outside the scope of the proceeding, so the availability of that data for benchmarking purposes remains unchanged by this decision.

2. *Is there a threshold standard for energy data aggregation and anonymization that the Commission should adopt to enable access to community-level data while also protecting large energy users in a single community from having their data disclosed in a manner which unfairly inhibits their business practices or might disclose trade secrets?*

Once the problem is defined, we could look at the 4/80 or the 15/15 rule, or some other standard, to determine which one would work better.

Obligations of Database Users

1. *Is there a qualification and/or registration process that third parties must complete in order to access either individual or community level data? If so, please describe or provide an example of such a qualification and/or registration process.*

Pursuant to RSA 363:38 the Utilities, as service providers, may not share, disclose, or otherwise make accessible to any third party a customer's individual customer data, except under limited

conditions. One such condition is that the customer has provided express consent. Alternatively, a utility may provide individual information to third parties for "system, grid, or operational needs, or the research, development, and implementation of new rate structures and tariffs, demand response, customer assistance, energy management, or energy efficiency programs". However, the Utilities may only do so if the utilities have required the third party, by contract, to implement and maintain reasonable security procedures and practices appropriate to the nature of the information, to protect the personal information from unauthorized access, use, destruction, modification, or disclosure, and to prohibit the use of the data for a secondary commercial purpose not related to the primary purpose of the contract without the express consent of the customer. The Utilities also note that under this law a service provider may disclosing data as may be required by law or by an order of the commission. Based upon these restrictions, without a specific law or commission order (which should define any qualification or registration process) it appears that either a third party would need to obtain (and provide to the utility) the express consent of the customer for the release of individual data. Or, a determination would need to be made that accessing that information is for "system, grid, or operational needs, or the research, development, and implementation of new rate structures and tariffs, demand response, customer assistance, energy management, or energy efficiency programs" and then the third party would need to have a specific contract with the applicable utility or utilities for the protection of the data. Putting aside the concern that entities cannot be required to contract with each other involuntarily, it appears that, at a minimum, any qualification process would require a third-party provider to demonstrate that it has implemented and can maintain reasonable security procedures and practices appropriate to the nature of the information, that it will protect the personal information from unauthorized access, use, destruction, modification, or disclosure, or use for a secondary commercial purpose not related to the primary purpose of the contract without the express consent of the customer.

2. *How long should the registration or certification be in effect and how often must it be renewed?*

How long a registration or certification should be in effect and the frequency of renewal depends on who will be using this and what they are using it for. If the customer is authorizing the use of their data for a set period of time, then sharing data would stop on the end date (or the customer could stop sharing data with third parties at any time). If the registration or certification is related to third parties accessing usage data, then it might be appropriate to have annual re-certifications. How third parties use the data, and how many customers are authorized access to usage data, may provide more insight into how this might work over time.

3. *Should third parties be required to execute non-disclosure agreements, cybersecurity agreements or other similar agreement? If so, please describe or provide an example of such an agreement.*

Pursuant to RSA 363:38, absent customer consent, contracts to protect individual data would be necessary.

The Utilities recommend that prior to receiving access to energy data, the requesting party will execute a standard non-disclosure agreement in addition to a pre-disclosure review of the third-party's information security and privacy controls and protections.

Please see the example non-disclosure agreement from California Decision (D.) 14-05-016.

4. ***Should third parties be required to meet certain financial security standards or other mechanisms that may be warranted to assure third parties comply with privacy, cybersecurity, or other standards. If so, please describe or provide an example of such mechanisms.***

Third parties looking to have access to individual customer data should be required to be at all times fully capable of living up to any and all commitments or obligations that come with that privilege. Among those obligations are the financial costs of fully and properly responding to any privacy or data breach that could occur. At the very least, third parties receiving access to energy data should have security and privacy controls and protections in place.

Issues and Stakeholders Not Yet Identified

1. ***Are there any stakeholders who have not yet petitioned for intervention but would contribute materially to, and are likely to participate in, the DE 19-197 docket process?***

The stakeholders involved seem to cover a large, diverse group. Other stakeholders that might be interested that could contribute to this process might include: advocacy groups focused on customer privacy might help inform all of us of current trends and risks associated with the broad distribution of customer energy data. Or for another example, the NH Business & Industry Association may be interested in knowing how this might impact their constituents' businesses.

2. ***Are there any foreseeable issues that should be covered in this docket that are not yet identified in the list of issues and questions above? If so, please describe those issues.***

Once the Utilities fully understand the requirements, there may be other issues that will arise. Some issues that will likely need further discussion include:

- Third party certification
  - The process of determining who has and can gain access to the customer usage data.

- Financial security
  - The stakeholders should consider whether third parties must agree to and abide by access rules and, if such rules are violated, what financial and future access penalties might be assessed.

- Liability for violations
  - How will the utility providers of customer data be indemnified for third party actions if there is a data breach?

- Platform Architecture & Costs
  - An assessment should be conducted to weigh costs, risks, and management considerations of a hybrid platform or other architectures.

- Long-term maintenance and operation
  - How will these responsibilities be distributed between the utility stakeholders?
  - What allocation mechanisms can ensure equitable distribution of costs and fees?