

Maine Public Utilities Commission



Report on Resolve, Regarding Monitoring of and Reporting on Energy Use Data Standards and Online Energy Data Platforms

**Presented to the
Joint Standing Committee on
Energy, Utilities and Technology
February 28, 2023**

Background:

During its 2022 session, the Legislature enacted Resolves 2021, ch. 179, Resolve, Regarding Monitoring of and Reporting on Energy Use Data Standards and Online Energy Data Platforms (Resolve¹). The Resolve includes two sections with action items for the Maine Public Utilities Commission (Commission) as described in detail below. This report is required by the Resolve and includes the information received by the Commission gathered from utilities as described below.

Section 2 of the Resolve requires the Commission to issue a request to all electric transmission and distribution (T&D) utilities and natural gas utilities in the State for the following information:

1. Whether the utility has the present ability to map specific meters to specific buildings and, if the utility does not have the ability, a description of the process necessary to achieve this ability, including the costs to the utility's ratepayers; and
2. Whether the utility has the present ability to export energy data in the Green Button Alliance format and support the Green Button Connect My Data standard and the energy services provider interface of the North American Energy Standards Board, and, if the utility does not have the present ability to export energy data in the Green Button Alliance format and support the Green Button Connect My Data standard and the energy services provider interface of the North American Energy Standards Board, a description of the process necessary to achieve this ability, including the costs to the utility's ratepayers.

Section 3 of the Resolve requires the Commission to submit a report to the joint standing committee of the Legislature having jurisdiction over utilities and energy matters that includes the information gathered under Section 2. It authorizes the committee to report out related legislation to the 131st Legislature in 2023.

Notice of Inquiry:

Pursuant to Section 2, the Commission sent a Notice of Inquiry to request responses to the following questions from all electric T&D and natural gas utilities. Comments were also invited from other interested parties. This Notice of Inquiry is included as Appendix A.

The Commission received replies from Maine's two investor-owned electric T&D utilities and the four natural gas utilities operating in the State. No data was provided from Maine's consumer owned electric utilities.

¹ <http://www.mainelegislature.org/legis/bills/getPDF.asp?paper=HP1499&item=5&snum=130>

Utility Responses to Notice of Inquiry:

Question 1:

1. Does the utility currently have the ability to associate specific meters to specific buildings such that meter aggregation can be achieved to support the Whole Building concept used by the EPA Energy Portfolio Manager benchmarking process?
- a. If the utility does not currently have the ability to associate specific meters to specific building, what action would the utility need to take to achieve this ability?
 - b. What would those actions likely cost the utility’s ratepayers? Please detail both one-time costs as well as any ongoing costs or maintenance required.

Question 1 Responses:

<p>Central Maine Power</p>	<p>Avangrid’s Energy Manager portal, featuring an integration with US EPA’s EnergyStar Portfolio Manager (ESPM), equips users (typically landlords or property owners) with the ability to search for their commercial sites and associated meters, aggregate properties and meters into a Virtual Whole Building entity within the portal, and have this data sent daily to the EPA ESPM site for benchmarking purposes.</p>
<p>Versant Power</p>	<p>The Resolve asks a very similar question using the phrasing “ability to map specific meters to specific buildings.” It is not completely clear what the Resolve means by “map,” or the NOI means by “associate,” but Versant interprets this question to ask whether the Company can determine the location of the building where the meter is located. The answer to this question is “yes.”</p> <p>Additionally, Versant can determine which meters and accounts are contained within a particular building or geographical area. However, such determinations are not automated, and the total energy usage for an apartment building, for example, is not aggregated in any format or available to the public in any general way. As discussed more fully below, individual account usage is readily available to the account owner and authorized users on the account. To return to the apartment building example, in practice this would usually mean each individual tenant of an apartment complex would have access to their own usage, but neither the other tenants nor the landlord would have access to their usage, unless authorized.</p> <p>Versant notes that unless ordered to provide usage data by the Commission or individually authorized by each account owner, disclosure of such data would violate 65-407 Chapter 815 Sec. 4 Customer Privacy because it would be a “disclosure of electricity . . . usage . . . to a third party without the consent of a customer.”</p>
<p>Maine Natural Gas</p>	<p>MNG does have the ability to associate specific meters to specific buildings.</p>
<p>Summit Natural Gas</p>	<p>Summit maps specific meters to the buildings that they serve. The location is based on the customer’s physical address and related to the service line that is mapped for the customer. Summit also captures the meters’ unique identifiers in the Company’s Geographic Information System (“GIS”), which connects the asset to the Company’s customer information system, which is the master program that maintains the rest of the meter information and customer data.</p>

<p>Bangor Gas</p>	<p>Bangor Gas does not currently have the capabilities described above and envisioned by the legislative resolve. The Company has approximately 8,000 total meters on its system. The Company solicited quotes in 2021 in order to investigate the costs for using smart meters equipped with encoder receiver transmitter (“ERT”). The Company was exploring such technology for limited use in areas not currently easily accessible by readers (e.g., only fifty or fewer locations on the system). The quoted cost for each meter was \$74.50. Assuming deployment throughout the Company’s system, based on 8,000 meters, this means an initial investment just for the meters of at least \$600,000.</p> <p>In addition, every meter that is a rotary meter would incur an additional cost of \$199.00 per meter for the conversion drive on which the ERT would be mounted. Approximately 25% of Bangor Gas’s meters are rotary meters. 2,000 meters multiplied by approximately \$200.00 means an additional investment of \$400,000.00. In addition to equipment costs, labor costs would be required. As a conservative assumption the Company assumes that one hour would be the minimum time necessary to swap out meters as well as installation of the conversion drive on rotary meters.² Assuming an average labor rate of \$40.00/hour, 8,000 hours of time would mean another \$320,000.00 in labor costs.</p>
<p>Northern Utilities</p>	<p>Unitil’s Customer Information System can identify customer accounts with specific meters that are associated with specific buildings.</p>

Question 2:

2. Does the utility currently have the ability to export energy usage data in the Green Button Alliance Connect My Data standard (i.e., the Energy Services Provider Interface (ESPI) of the North American Standards Board (NAESB))?
- a. If the utility does not currently have the ability to export energy usage data in the Green Button Alliance Connect My Data standard (the NAESB ESPI standard), what actions would the utility need to take to achieve this ability?
 - b. What would those actions likely cost the utility’s ratepayers? Please detail both one-time costs as well as any ongoing costs or maintenance required.

Question 2 Responses:

Central Maine Power	Avangrid’s commercial/nonresidential Energy Manager portal allows users to download usage data, via the Green Button Download feature, from each commercial site for which they have authorization. This feature adheres to the Green Button Alliance .xml standard. Download is also available in .csv format.
Versant Power	<p>Green Button data is generally intended to enable customers to monitor and analyze their own energy usage. Versant has for some time provided customers with the ability to access their account usage in detail through their account portal on Versant’s website, and customers currently can easily export their usage data in Green Button format. If a customer requests Versant to export their data, for instance if they do not have internet access, Versant can do this as part of its customer service. Versant is not resourced to export customer data on any kind of scale beyond infrequent individual requests. Thus, the answer to this question is a qualified “yes.”</p> <p>If the Commission is inquiring as to whether Versant currently has the ability, through an information technologies protocol, to de-identify and aggregate usage data for a particular building simply by punching in an apartment building address, for example, this capacity does not currently exist. Such functionality could be developed by inventing a query for this kind of result, but it would likely take a team of Versant Information Technology specialists and Geographic Information System specialists several months to complete. Such an investment of human resources is difficult to calculate but would be significant.</p>
Maine Natural Gas	MNG does not have the ability to export energy usage data in the Green Button Alliance Connect My Data standard. To achieve this ability, Maine Natural Gas would need to contract with its utility billing software provider for development to the ESPI standards. The cost would likely range between \$8,000 and \$48,000 in upfront costs and between \$5,760 and \$11,520 in annual technical support and maintenance depending on final specific requirements for the interface.
Summit Natural Gas	Summit is not a member of the North American Energy Standards Board (NAESB) and thus, does not have information related to the Green Button Alliance format requirements. Accordingly, Summit cannot determine whether its systems and information formats are compatible with the Green Button Alliance or whether there would be costs associated with moving to those standards.

Bangor Gas	The current billing software utilized by Bangor Gas (and its affiliates) would only allow for remote reading of meters by a meter reader driving in the immediate vicinity of the customer location and receiving information via a handheld unit. Information received via the handheld unit would only be available at the moment when the meter communicates with the handheld unit. Bangor Gas understands that modifying current software in order to allow real time data accessible throughout all hours would cost approximately \$750,000.00. At the same time, the current customer software would also have to be updated to allow customers to have real time access to data, which would also cost several hundreds of thousands of dollars. Finally, the Company understands based on a review of the Green Energy Alliance website that additional testing and certification would need to take place. There would be an additional cost for such testing and certification; however, the details of such costs are not known to the Company at this time.
Northern Utilities	Unitil's Customer Portal currently provides for customers access to gas usage via download in .xml and csv formats. Unitil is currently in the process of a planned version upgrade of the Customer Information System which includes the Green Button Connect My Data capabilities (utilizing NAESB ESPI standards). This functionality is planned to be available to customers in early 2024. Green Button Connect My Data functionality is incorporated as a component of the Customer Information System version upgrade, and thus implementation and support / maintenance costs cannot be isolated.

Additional Data:

Versant shared some additional information related to their supplier marketplace portal (the "Portal"). This portal is distinct from a customer's individual account portal on Versant's website. Information on the Portal is available to those granted access, who can then search for information via account number. Versant's exact comments are provided in Appendix B.

Comments were also received from a coalition organization operating in this industry space, Mission:Data. Mission:Data's response can be found in Docket Number: [2022-00281](#) (or by entering the Docket Number: 2022-00281 in the Commission's Case Management System located by accessing the following link - <https://mpuc-cms.maine.gov/CQM.Public.WebUI/ExternalHome.aspx>)

Appendix A – Notice of Inquiry

STATE OF MAINE
PUBLIC UTILITIES COMMISSION

Docket No. 2022-00281

September 12, 2022

MAINE PUBLIC UTILITIES COMMISSION

NOTICE OF INQUIRY

Inquiry into Meter Mapping to Specific Buildings and the
Ability to Export Energy Data in Certain Formats

BARTLETT, Chair; DAVIS and SCULLY, Commissioners

I. SUMMARY

Through this Notice, the Commission initiates an Inquiry to obtain information from all electric transmission and distribution (T&D) utilities in the State, all natural gas utilities in the State, and other interested persons regarding metering capabilities and the exportation of energy data in certain formats as required by recent legislation.

II. BACKGROUND

Legislation

During its 2022 session, the Legislature enacted Resolve, Regarding Monitoring of and Reporting on Energy Use Data Standards and Online Energy Data Platforms [Resolves 2021, ch. 179](#) (Resolve).

Section 2 of the Resolve requires the Commission to issue a request to all T&D and natural gas utilities in the State for the following information:

(1) Whether the utility has the present ability to map specific meters to specific buildings and, if the utility does not have the ability, a description of the process necessary to achieve this ability, including the costs to the utility's ratepayers; and

(2) Whether the utility has the present ability to export energy data in the Green Button Alliance format and support the Green Button Connect My Data standard and the energy services provider interface of the North American Energy Standards Board, and, if the utility does not have the present ability to export energy data in the Green Button Alliance format and support the Green Button Connect My Data standard and the energy services provider interface of the North American Energy Standards Board, a description of the process necessary to achieve this ability, including the

costs to the utility's ratepayers.

Section 3 of the Resolve requires the Commission to submit a report to the joint standing committee of the Legislature having jurisdiction over utilities and energy matters that includes the information gathered under section 2 of the Resolve by February 28, 2023. The Resolve gives the committee the authority to report out related legislation to the 131st Legislature in 2023.

III. REQUEST FOR COMMENTS

The Commission requests responses to the following questions from all T&D and natural gas utilities by **December 2, 2022**. Reply comments from interested parties may be filed by **January 7, 2023**.

A. Questions to be answered by electric transmission and distribution utilities and natural gas utilities.

1. Does the utility currently have the ability to associate specific meters to specific buildings such that meter aggregation can be achieved to support the Whole Building concept used by the EPA Energy Portfolio Manager benchmarking process? For additional information, please refer to https://www.energystar.gov/sites/default/files/tools/DataAccessKeyConsiderationsFinal_508.pdf.

a. If the utility does not currently have the ability to associate specific meters to specific building, what action would the utility need to take to achieve this ability?

b. What would those actions likely cost the utility's ratepayers? Please detail both one-time costs as well as any ongoing costs or maintenance required.

2. Does the utility currently have the ability to export energy usage data in the Green Button Alliance Connect My Data standard (i.e., the Energy Services Provider Interface (ESPI) of the North American Standards Board (NAESB))?

a. If the utility does not currently have the ability to export energy usage data in the Green Button Alliance Connect My Data standard (the NAESB ESPI standard), what actions would the utility need to take to achieve this ability?

b. What would those actions likely cost the utility's ratepayers? Please detail both one-time costs as well as any ongoing costs or maintenance required.

IV. NOTICE

This Notice shall be provided to all electric T&D utilities and natural gas utilities, the Office of the Public Advocate, the Efficiency Maine Trust, the Governor's Energy Office, the people who testified on L.D. 2017, Resolve, Regarding Monitoring of and Reporting on Energy (Resolves 2021, ch. 179) and all persons on the notification list in Docket No. [2021-00378](#) (Inquiry For Statewide On-Line Energy Data Platform).

Any interested person who would like to submit comments in this proceeding or receive notification of submittals must sign up as a "registered user" in the Commission's Case Management System (CMS).¹ When registering, persons should indicate the entity or entities they represent and

on whose behalf filings will be made. Such persons should also place themselves on the notification list for this docket.

Dated at Hallowell, Maine, this 12th day of September 2022.

BY ORDER OF THE COMMISSION

/s/ Harry Lanphear

Harry Lanphear
Administrative Director

Related Information

Versant understands that this NOI is based on the desire for energy usage analysis of large residential or commercial buildings, or perhaps neighborhoods. If that understanding is correct, there is a much more cost effective, efficient, and beneficial way to make this information available to those that seek it than to require utilities to develop a tool to perform this de-identification and aggregation. Versant already makes electricity usage information available via its relationship with its supplier marketplace portal (the “Portal”). This portal is distinct from a customer’s individual account portal on Versant’s website. Information on the Portal is available to those granted access, who can then search for information via account number. The easier solution, then, is to provide a mechanism for parties interested in this aggregated or benchmark data to gain access to the Portal, and to obtain the list of the account numbers of the meters in the building or geographic territory at issue. With access and the list of account numbers, interested parties can search the portal for the information they are seeking, and potentially obtain it for any time period they wish, even on an ongoing basis.

The barrier to this solution is access to the portal and the disclosure of the responsive account numbers, both of which are likely prohibited by 65-407 Chapter 815 Sec. 4. However, nothing prevents an interested party from applying to the Commission for an Order directing Versant to grant the party access to the Portal, and to provide them the requested account numbers. Upon issuance of such an order Versant would be able to reply efficiently and the interested party would have greater ability to obtain and analyze the usage data in question. Granting access to the Portal is relatively simple but assembling the list of responsive account numbers would require some human resources depending on the scope of the request.⁴ In such a scenario Versant requests that the interested party be required to compensate Versant for time and materials expended in responding or that the cost of answering these inquiries would be considered a recoverable cost when setting rates.