280 Melrose Street Providence, RI 02907 Phone 401-784-7288



February 21, 2023

VIA ELECTRONIC MAIL

Luly E. Massaro, Commission Clerk Rhode Island Public Utilities Commission 89 Jefferson Boulevard Warwick, RI 02888

RE: Docket No. 22-49-EL-The Narragansett Electric Company d/b/a Rhode Island Energy Advanced Metering Functionality Business Case Responses to MDC Data Requests – MDC Set 1

Dear Ms. Massaro:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy ("Rhode Island Energy" or the "Company"), attached is the electronic version of Rhode Island Energy's response to MDC Set 1 from the Mission:Data Coalitions's First Set of Data Requests in the above-referenced matter.¹

On February 10, 2023, the Company filed a Motion to Object to Data Requests by Mission:Data Coalition Nos. 1-3, 1-5(a), 1-6, 1-7(c)-(g), 1-8, 1-9, and 1-10(a)-(c) and Motion for a Protective Order With Respect to Mission:Data Coalition Data Request Nos. 1-5(a) and 1-7, in which it asserted an objection to these data requests. That motion remains pending, and pursuant to the direction provided in Public Utilities Commission ("Commission") counsel's February 16, 2023 email, the Company is not providing responses to these data requests at this time. To the extent required after the Commission rules on the Company's objection, the Company will provide responses as and when directed.

Thank you for your time and attention to this matter. If you have any questions, please contact Jennifer Brooks Hutchinson at 401-316-7429.

Very truly yours,

Junfor Bing Hill

Jennifer Brooks Hutchinson

Enclosures

¹ Per communication from Commission counsel on October 4, 2021, the Company is submitting an electronic version of this filing followed by hard copies filed with the Clerk within 24 hours of the electronic filing.

Luly E. Massaro, Commission Clerk Docket No. 22-49-EL – AMF Business Case February 21, 2023 Page 2 of 4

Docket No. 22-49-EL Service List cc: John Bell, Division Leo Wold, Esq.

CERTIFICATE OF SERVICE

I certify that a copy of the within documents was forwarded by e-mail to the Service List in the above docket on the 21st day of February, 2023.

Adam M. Ramos, Esq.

The Narragansett Electric Company d/b/a Rhode Island Energy Docket No. 22-49-EL Advanced Meter Functionality (AMF) Service list updated 2/9/2023

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Luly E. Massaro, Commission Clerk Docket No. 22-49-EL – AMF Business Case February 21, 2023 Page 3 of 4

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Luly E. Massaro, Commission Clerk Docket No. 22-49-EL – AMF Business Case February 21, 2023 Page 4 of 4

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<u>MDC 1-1</u>

Request:

In the testimony of Mr. Walnock and Ms. Reder, AMF Book 1 at 29:1-3, indicate "PPL also has developed and implemented portals that provide customers and non-regulated power producers ("NPPs") with the ability to view their usage data."

- (a) Please provide detailed descriptions of these portals with the following: the utilities and states involved; screenshots of each portion of such portals showing their functionality; a detailed list of the types of customer data that are accessible; technical documentation; and current utilization statistics of each portal including the number of registered NPPs and the number of customers whose data has been transmitted via such portal.
- (b) In the instances referenced above, what does PPL require of NPPs in order to access customer usage data with customer permission (such as contractual commitments, payment of fees, etc.)? Please list all requirements in detail and provide copies of all agreements that PPL requires NPPs to execute.

Response:

- (a) The AMF Business Case includes two portals:
 - 1. The Customer Portal is intended to provide customers with access to energy consumption data, energy insights, and service offerings. See Bates page 64 of Book 2 of the AMF Business Case for more details on the Customer Portal.
 - 2. Non-Regulated Power Producers ("NPPs") are intended to use the Supplier Portal, which will provide NPPs the ability to request access to their customers' metering and billing data.

PPL Corporation ("PPL") currently offers Customer Portals in both Pennsylvania (for PPL Electric Utilities Corporation ("PPL Electric")) and Kentucky (for Louisville Gas & Electric and Kentucky Utilities (LGE/KU)). PPL currently offers a Supplier Portal in Pennsylvania for PPL Electric. The current utilization of each portal including the number of registered NPPs and the number of customers whose data has been transmitted via such portal is as follows:

Portal	Customer Data	NPP's
PPL Electric Customer Portal	835K	N/A
LGE & KU Electric Customer	18K **	N/A
Portal		
PPL Electric Supplier Portal	550K	180

** Note, AMI Mass deployment only recently kicked off in LGE/KU territories. Start date = 11/2022

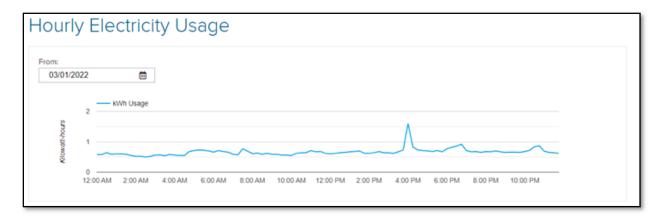
Customer Portal

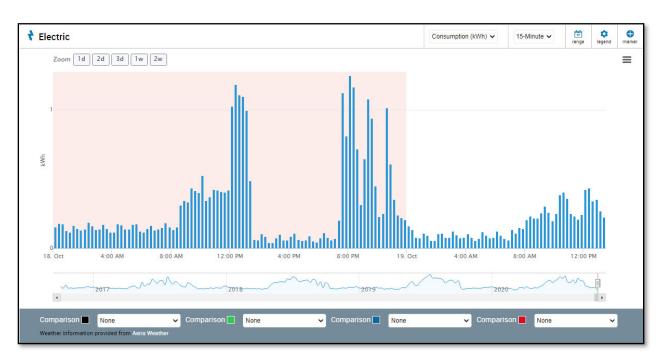
The Customer Portals available in Pennsylvania and Kentucky provide similar types of customer data and functionality across both markets; The breakouts of types of data shown below:

A) Energy Data Insights

• Hourly Usage with Intervals (down to 15 minutes)

• PPL Electric:





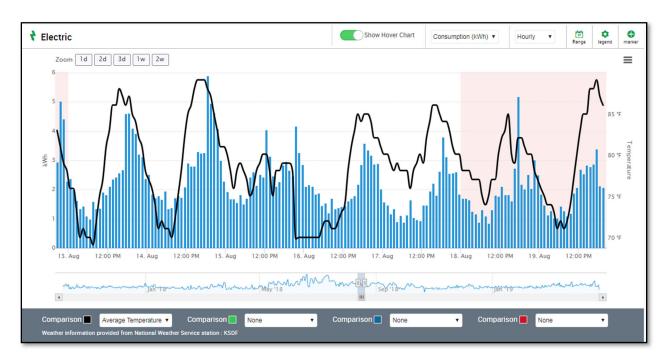
o LGE/KU:

• Consumption data with Temperature overlay

• PPL Electric:



LGE/KU:



Billing Data Comparisons

• PPL Electric – Bill to Date Estimations:

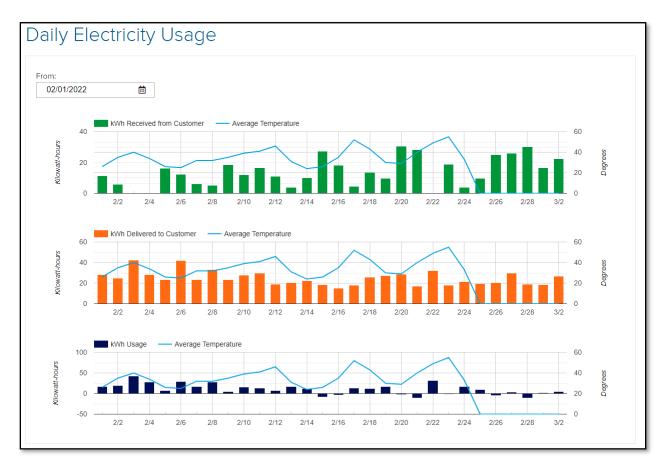
Bill-to-Date Estimate* 6 days into 32-day billing cycle ending Mar 28	\$46.98	
Usage-to-Date	354 kWh	View Ways to Save >
Average Daily Cost	\$7.83	
'Your bill-to-date estimate is based on PPL Electric Utilities' price for generation and tr	ransmission as of the previous day.	

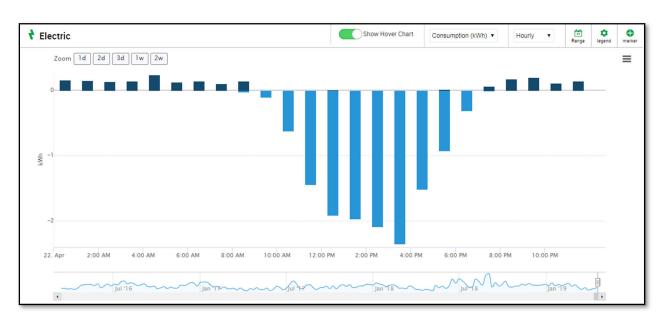
LGE/KU Customer Portal – Compare Energy or Billing Data to Prior Periods:



• Net Metering Data

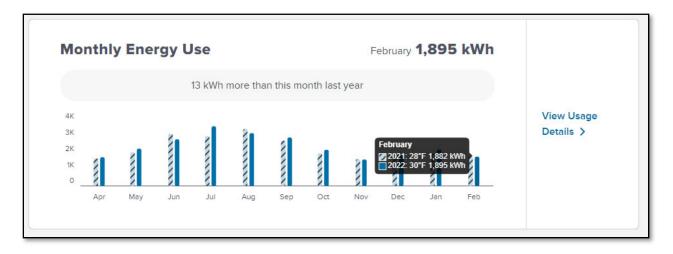
• PPL Electric – See Appendix A7





o LGE/KU:

- B) **Customer Tools & Actions:** The capability for customers to take advantage of configurable tools that alert customers to usage thresholds
 - PPL Electric Compare Year-Over-Year Consumption:



Prepared by or under the supervision of: William J. Hennegan and Philip J. Walnock

• LGE/KU – Configure Usage or Billing Threshold Notifications:

Add Threshold N	lotifications	×	all AT&T 🗢	11:07 AM	🕫 🖉 71% 🔳	uli atat 🗢	12:22 PM	1 🛛 56% 🔳
			<	0		<	0	
Notification Details				1 (410) 100-290 >			1 (410) 200-613 >	
Location	Home	•		Text Message Today 11:03 AM			Text Message Yesterday 12:54 PM	
Service Type	Electric		FRM·lae-ki	@mymeter.co		FRM-Ide-	ku@mymeter.co	
Meter	Meter #911454 (Residential Electric Service)	•	MSG:MyMe reached: M daily total c above 3 kW	eter threshold eter# 911454 has onsumption use 'h. Your usage is		MSG:MyM reached:	Meter threshold Meter# 911454 has I dollar use above 1 \$.	
Threshold Details			11.3 kWh.					
Notify me when	Daily v usage is Over v 0 kWh v							
You currently avera Electric Service)	tige 16.8347 kWh per day, 117.8429 kWh per week, and 505.0411 kWh per mont 5 11454 (Residential							
Recipient Details								
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Standard te	xt messaging rates may apply for SMS text messaging communications Add Recipient	+						
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• LGE/KU – Compare Usage Against Zip Codes

• PPL Electric – Green Button Download My Data:

Hourl	Electricity Usage	
From: 03/01/2	22 🛱	
03/01/2		
	2	
Kilowatt-hours	1	
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Expor	up to 2 years of data to Excel	
02/16/2	22 🗎	
To: 03/01/2	22 🗎	
Download	reen Button data to take advantage of online services and applications to help you manage your electricity use.	d •

Format: Service Type: Meters: Interval: Start Date: End Date:	CSV Green Button CSV #911454 (Residential Electric Service) 15-Minute 07/20/2018 08/20/2018	Choose Columns	Row Sort Order ≡ Read Date ↑ ≡ kWh ↑ ≡ S ↑	Choose Columns Select the columns you want in your download from this list by checking the box. To arrange the columns in a specific order, click and hold on the a, and draa and drop it to the location you want it t appear in your download results. Row Sort Order When you select the columns from the 'Choose Columns' section, they will appear in this section. The data will be sorted in the order you specify. Drag and drop the order of your sorting by clicking and holding on the a and moving it to the location you want. Click the ↑ to select ascending or descending or descending or der for each column if you have a preference.
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• LGE/KU - Green Button Download My Data -

<u>Supplier Portal</u>

The Supplier Portal was developed in Pennsylvania as part of the Electronic Data Exchange Working Group's web portal that provides Energy Generation Suppliers ("EGS") (the Pennsylvania equivalent of NPPs) and Conservation Service Providers ("CSPs") with access to customer data. The Supplier Portal provides access to summary and interval usage data to market participants (EGS and CSPs), as well as account and billing information to the customer's Supplier of record. A Supplier can view a bill image for their customer. If the customer receives paper bills, the Supplier can view up to the last two bill images if they were the "provider of record" during the bill month.

Monthly & Interval Data Lookups

Monthly Usage Example:

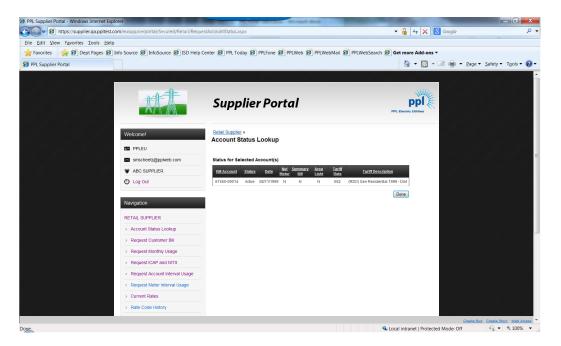
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PL Supplier Portal					🕅 • 🕅 • 🖃 🖶 • 🖻	ane • Safety • Tools •
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		anufacturer Landis & Gyr				
RETAIL SUPPL	ER					
> Account Sta	us Lookup	Relative Bill Month	Reading From Date	Reading To Date	Total KWH	
> Request Cu		201404	2014-03-06	2014-04-07	989	
· · · · · · · · · · · · · · · · · · ·		201403 201402	2014-02-05 2014-01-07	2014-03-06 2014-02-05	1286	
> Request Mo	nthly Usage	201402	2013-12-05	2014-02-05	1319	
Request ICA	P and NITS	201401	2013-12-05	2014-01-07	1019	
> Request Acc	ount Interval Usage	201312	2013-10-07	2013-11-05	1001	
		201310	2013-09-05	2013-10-07	1283	
> Request Me	ler Interval Usage	201309	2013-08-05	2013-09-05	1641	
Current Rate	5	201308	2013-07-08	2013-08-05	2150	
> Rate Code H	listory	201307	2013-06-06	2013-07-08	2048	
· Standard Of	fer Pending Enrolments	201306	2013-05-07	2013-06-06	1268	
		201305	2013-04-05	2013-05-07	1286	
> Standard Of	fer Referrals	201304	2013-03-05	2013-04-05	1207	
Suppler Co	stact Information	201303	2013-02-05	2013-03-05	1142	
> Download E	igible Customer List	201302	2013-01-07	2013-02-05	1065	
	-	201301	2012-12-05	2013-01-07	1371	
> Download M	y Current Customer List	201212	2012-11-05	2012-12-05	1115	
> Submit Web	Inquiry	201211	2012-10-05	2012-11-05	1038	
> Web Inquiry	Status	201210	2012-09-05	2012-10-05	1455	
		004000	30.00.02	30.00.05	2207	ate Bug Create Story Web Acc

Interval Usage Example:

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PPL Supplier Portal									4	• 🗟 • 🖃 🚔 •	Page • Safety • Tools •
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RETAIL SUPPLIER	Multiplie		rai osaĝe (e	pprotect)							
Account Status Lookup	Manufac		tis & Gyr								
Request Customer Bill	Date	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5.00 AM	6:00 AM	7:00 AM	8.00 AM	
> Request Monthly Usage	2014-02-21	1.2096	1.2672	1.2096	3.0528	1.6128	1.728	1.6704	1.6704	1.5552	
Request ICAP and NITS	2014-02-22	1.2096	1.2672	3.0528	1.6704	1.8432	1.6704	1.728	1.6704	1.8432	
	2014-02-23		0.6336	2.1312	0.9792	1.0368	0.9792	0.9792	1.0368	1.152	
> Request Account Interval Usage	2014-02-24		1.2672	1.3248	1.728	3.1104	1.6704	1.7856	2.2464	2.1888	
Request Meter Interval Usage	2014-02-25		1.3248	2.304	2.5344	2.9952	2.1312	1.8432	2.1888	2.1312	
Current Rates	2014-02-27	2.016	1.2672	1.2672	3.3408	1.7855	1.728	2.0736	2.5344	1.7855	
> Rate Code History	2014-02-28	1.3824	1.3248	3.2256	1.7856	1.7856	1.7856	3.168	2.1312	2.1312	
> Standard Offer Pending Enrollme	2014-03-01	1.5552	1.4976	2.304	2.7648	1.7856	1.8432	1.7858	2.2464	2.7072	
Standard Offer Referrals	2014-03-02		1.2096	2.88	1.728	1.728	1.728	1.8432	2.9952	1.2672	
	2014-03-03		1.2672	2.2464	2.3616	1.6704	1.7856	3.2256	2.2464	2.016	
Supplier Contact Information	2014-03-04		1.3248	3.1104	1.7856	1.728	2.4192	2.5344	2.592	2.016	
Download Eligible Customer List	p014-03-05	1.3248	0.0330	0.576	2.0344	1.0944	1.0544	1.0944	1.4970		reate Bug Create Story Web Ar

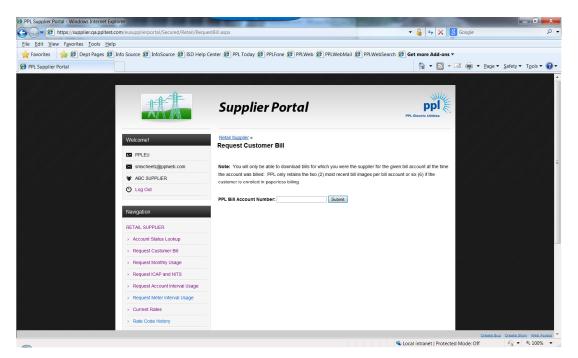
Account & Billing Information

Account Status Lookup:



Prepared by or under the supervision of: William J. Hennegan and Philip J. Walnock

Customer Bill Request:



(b) To access customer usage data with customer permission, PPL Electric requires that a supplier must be: 1) licensed through the Pennsylvania Public Utility Commission as an EGS, and 2) PPL Electronic Data Interchange tested and certified. Both are needed prior to PPL granting third parties access to the Supplier Portal. EGS's that have been granted access can view energy data as well as account and billing data for the EGS customers of record. More detail can be found on the web site at this URL: https://www.pplelectric.com/site/Other-Parties/Electricity-Suppliers.

Prepared by or under the supervision of: William J. Hennegan and Philip J. Walnock

<u>MDC 1-2</u>

Request:

In the same testimony, Mr. Walnock and Ms. Reder state that a "Supplier Portal" will be available to NPPs.

- (a) Who will be eligible to use the Supplier Portal? Will the Supplier Portal in Rhode Island only be accessible to licensed competitive suppliers? Please explain the Company's position and rationale.
- (b) How will the Supplier Portal for Rhode Island Energy be different in any way from the portals in other PPL jurisdictions mentioned in Book 1 at 29:1-3? Please provide a detailed explanation of each difference.

Response:

- (a) The Company has not yet determined specific access eligibility for the Rhode Island Energy Supplier Portal. The PPL Electric Utilities Corporation ("PPL Electric") Supplier Portal in Pennsylvania is available to licensed competitive suppliers, and it will serve as a template for the development for the Rhode Island Energy Supplier Portal. The Company will determine specific access eligibility as part of the detailed design phase for AMF implementation.
- (b) The Company has not yet determined all the details for the design of the Supplier Portal, however it plans to leverage the PPL Electric Supplier Portal code and internal business processes used in Pennsylvania. Today, accessibility and eligibility for the PPL Electric Supplier Portal is managed by the process referenced in the Company's response to MDC 1-1 (b).

PPL Electric has had a Supplier Portal since 2013. PPL Electric developed that Supplier Portal based on input from the supplier stakeholders, and it has gone through several phases of added functionality and improvements since. The PPL Electric Supplier Portal will serve as the starting point for the design of the Rhode Island Energy Supplier Portal, with Rhode Island Energy specifics to be determined during the detailed design phase. From a preliminary view, functionality that currently exists in the PPL Electric Supplier Portal that is expected to be part of the Rhode Island Energy Supplier Portal includes:

- Request customer bill image
- Request monthly usage summary

- Request ICAP & NITS
- Load Profile
- Meter Constant
- Request customer historical interval usage
- Supplier contact information
- Download Eligible Customer List

<u>MDC 1-3</u>

Request:

Rhode Island Energy proposes that its advanced meters will collect electric usage data at 15minute intervals.

- (a) If the time interval needs to be modified to, say, 5 minutes in order to participate in ISO-New England demand response programs, what will be the cost to change the recording interval from 15 minutes to 5 minutes? Please provide all documents relevant to this question. Also identify which entity – Rhode Island Energy employees, proposed AMF contractors, etc. – would charge the amounts provided.
- (b) Would Rhode Island Energy be willing to commit to negotiate its contracts with AMF vendors such that the cost to reprogram a meter from 15 minutes to 5 minutes (or any other interval as required by ISO-New England) is zero? Why or why not? Please explain in detail.

Response:

On February 10, 2023, the Company filed a Motion to Object to Data Requests by Mission:Data Coalition Nos. 1-3, 1-5(a), 1-6, 1-7(c)-(g), 1-8, 1-9, and 1-10(a)-(c) and Motion for a Protective Order With Respect to Mission:Data Coalition Data Request Nos. 1-5(a) and 1-7, in which it asserted an objection to this data request. That motion remains pending, and pursuant to the direction provided in Public Utilities Commission ("Commission") counsel's February 16, 2023 email, the Company is not providing a response to this data request at this time. To the extent required after the Commission rules on the Company's objection, the Company will provide a response as and when directed.

<u>MDC 1-4</u>

Request:

In AMF Book 1 at 36:19-20, Mr. Walnock and Ms. Reder describe Green Button Connect ("GBC").

- (a) Please complete the spreadsheet attached to indicate what data fields and historical information will be provided through GBC.
- (b) Will Rhode Island Energy attain independent certification of adherence to the GBC standard?
- (c) If the answer to (b) is no, please explain in detail why not, and provide all documents related to its decision not to seek independent certification.
- (d) If the answer to (b) is yes, please explain whether certification will be achieved once, or whether Rhode Island Energy will attain certification on an ongoing basis. Please explain in detail the Company's response.
- (e) Will Rhode Island Energy provide natural gas usage data via GBC?
- (f) If the answer to (e) is no, please explain in detail why not.
- (g) Please provide a list of all Function Blocks from the GBC standard that Rhode Island Energy proposes to implement. For reference, a helpful list of all Function Blocks is provided by one vendor here: https://utilityapi.com/docs/greenbutton/scope#fb-reference-table

Response:

(a) The Company has not yet determined all the details required to complete the attached spreadsheet for the design of Green Button Connect ("GBC"). The Company plans to leverage Green Button code and internal business processes used by other PPL Corporation ("PPL") affiliates in Pennsylvania and Kentucky as the foundation when it commences the detailed design phase. PPL affiliates currently have Green Button functionality for customers in Pennsylvania and GBC enhancements are planned to be implemented for customers in Kentucky later this year. These implementations will serve as the starting point for the GBC solution for advanced metering functionality ("AMF") meters in Rhode Island.

(b) The Company has not yet determined all the details for the design of GBC. The Company plans to review all options available with respect to certification.

(c) See (b) above.

(d) See (b) above.

(e) At this time, there are no plans to include natural gas usage data via GBC. The Company has not included AMF functionality for natural gas meters in the AMF Business Case.

(f) See the Company's response to part (e), above.

(g) See the Company's response to part (a), above. It is too early in the process for Rhode Island Energy to have determined the Function Blocks that it will implement.

<u>MDC 1-5</u>

Request:

In AMF Book 1 at 49:13, Mr. Walnock and Ms. Reder mention "in-home device support through the newly created CP."

- (a) What requirements will Rhode Island Energy impose on Home Area Network ("HAN") devices (or the manufacturers of such devices) in order to connect with customers' meters? Please explain and provide copies of all contracts, testing protocols, and the like.
- (b) Will Rhode Island Energy commit to a policy of "bring your own device" ("BYOD") with regard to Home Area Network ("HAN") devices, meaning that Rhode Island Energy will honor any customer's attempt to connect a device of the customer's choosing to the customer's meter without pre-clearance or advance certification by Rhode Island Energy?
- (c) If the answer to (b) is anything other than an unqualified yes, then please explain in detail the rationale for the Company's response. Provide all documents related to the Company's decision-making regarding HAN device compatibility.
- (d) Will HAN capability be available to customers at the "AMF Deploy Ready" phase – in other words, immediately after an advanced meter is installed? Why or why not? If not, please explain in detail when HAN capability will be available for customers.

Response:

- a) On February 10, 2023, the Company filed a Motion to Object to Data Requests by Mission:Data Coalition Nos. 1-3, 1-5(a), 1-6, 1-7(c)-(g), 1-8, 1-9, and 1-10(a)-(c) and Motion for a Protective Order With Respect to Mission:Data Coalition Data Request Nos. 1-5(a) and 1-7, in which it asserted an objection to this data request. That motion remains pending, and pursuant to the direction provided in Public Utilities Commission ("Commission") counsel's February 16, 2023 email, the Company is not providing a response to this part of this data request at this time. To the extent required after the Commission rules on the Company's objection, the Company will provide a response as and when directed.
- b) The details around the types of devices to be included have not been determined yet. The Company's affiliates have in-home device support capabilities in both

Prepared by or under the supervision of: William J. Hennegan and Philip J. Walnock

Pennsylvania and Kentucky using ZigBee as the wireless technology for connecting a device to the meter. The Company's Pennsylvania and Kentucky affiliate have adopted a "bring your own device" approach. The meters being deployed in Rhode Island will use Wi-Fi as opposed to ZigBee. The Company needs to conduct an analysis of the impacts of connecting a device by Wi-Fi, as well as the types of devices in the market, before it can specify the types if devices to include.

- c) To guide Home Area Network ("HAN") device compatibility, the Company will follow its Cybersecurity, Data Privacy and Data Governance Plan, included in the AMF Business Case as Attachment G, which provides provisions to making data accessible while keeping it secure and maintaining customers' privacy.
- d) No. The Customer Portal in-home Device Support is scheduled in Group 3 of the AMF Functionality Roadmap which is in the Phase "AMF Enhancements from Meter Deployment Start." The capability to provide HAN device compatibility is considered an "AMF Enhancement During Meter Deployment", which is scheduled to occur six months after meter deployment starts to provide time for development of systems, enrollment requirements and customer communications. See Figure 6.1 in the AMF Business Case, Bates page 70 for additional detail regarding the timing of the functionalities.

<u>MDC 1-6</u>

Request:

In AMF Book 1 at 49:14-15, Mr. Walnock and Ms. Reder state, "Also, the CP will provide an integrated marketplace for customer research of solar PV adoption..."

- (a) Please provide all designs and written descriptions of the "integrated marketplace" showing its functions, both to ratepayers and Rhode Island Energy.
- (b) Please provide all documents regarding the "integrated marketplace."
- (c) What specific "customer research" or data from customers does Rhode Island Energy expect to obtain as a result of the proposed CP that cannot be obtained from rooftop solar interconnection applications?

Response:

On February 10, 2023, the Company filed a Motion to Object to Data Requests by Mission:Data Coalition Nos. 1-3, 1-5(a), 1-6, 1-7(c)-(g), 1-8, 1-9, and 1-10(a)-(c) and Motion for a Protective Order With Respect to Mission:Data Coalition Data Request Nos. 1-5(a) and 1-7, in which it asserted an objection to this data request. That motion remains pending, and pursuant to the direction provided in Public Utilities Commission ("Commission") counsel's February 16, 2023 email, the Company is not providing a response to this data request at this time. To the extent required after the Commission rules on the Company's objection, the Company will provide a response as and when directed.

<u>MDC 1-7</u>

Request:

In AMF Book 1 at 49:14-18, Mr. Walnock and Ms. Reder continue, "Also, the CP will provide...the ability for C&I and multi-family customers to have a portfolio view of C&I facilities and multifamily units, aggregate data, and normalized usage based on variables, such as production, occupancy, or weather."

- (a) Will Rhode Island Energy support automated benchmarking with EnergyStar Portfolio Manager? Please explain in detail.
- (b) If not, please explain in detail how the CP will "normalize" energy usage based on the variables cited. Please provide the mathematical equations, technical documentation and communication with actual or potential vendors relating to this question.
- (c) If customers provide "production" or "occupancy" data to Rhode Island Energy, please provide a detailed list of all entities including, but not limited to, contractors/vendors, regulated affiliates, unregulated affiliates, etc. that will have custody of, or come into contact with, such customer-provided data.
- (d) If customers provide "production" or "occupancy" data to Rhode Island Energy, will Rhode Island Energy commit to not share such data with its unregulated affiliates unless the customer consents? Why or why not? Please explain in detail.
- (e) Please provide copies of any agreements between Rhode Island Energy and regulated or unregulated affiliates that pertain to the exchange of customer data including, but not limited to, energy usage data, billing data, or customer program participation information.
- (f) In the past 3 years, has Rhode Island Energy shared customer energy usage, billing, or other customer-specific information with any unregulated affiliate? If yes, please provide a detailed explanation, including, but not limited to, the circumstances, the types of customer data shared, the reason(s) for the unregulated affiliate to seek such customer data, etc.
- (g) Please provide a copy of any consent form(s), screenshots of web-based consent forms, or contractual language with customers of any kind that Rhode Island Energy plans to use for customer-provided data such as "production" and "occupancy" that are not necessary for regulated electric utility service.

Response:

- (a) The Company has not determined the specific features of automated benchmarking because the Customer Portal solution detailed design has not yet occurred.
- (b) The identification of the specific features of the C&I and Multifamily Portfolio has not yet occurred and will be part of detailed design. The functionality will provide residential and commercial customers who manage multiple customer accounts with the ability to group those accounts together into a single view in the Customer Portal. This will allow these customers the ability to make better decisions about their energy usage across all of their accounts as they can see all of the information in one place for their entire portfolio of accounts.
- (c)-(g) On February 10, 2023, the Company filed a Motion to Object to Data Requests by Mission:Data Coalition Nos. 1-3, 1-5(a), 1-6, 1-7(c)-(g), 1-8, 1-9, and 1-10(a)-(c) and Motion for a Protective Order With Respect to Mission:Data Coalition Data Request Nos. 1-5(a) and 1-7, in which it asserted an objection to these subparts of this data request. That motion remains pending, and pursuant to the direction provided in Public Utilities Commission ("Commission") counsel's February 16, 2023 email, the Company is not providing a response to these subparts of this data request at this time. To the extent required after the Commission rules on the Company's objection, the Company will provide a response as and when directed.

<u>MDC 1-8</u>

Request:

In AMF Book 1 at 50:8-51:6, Mr. Walnock and Ms. Reder discuss the "Future" phase of AMF.

(a) Does Rhode Island Energy believe that "home analytics where the details into energy usage by appliance could be provided to empower customers" is a natural monopoly? Why or why not? Please explain in detail.

Response:

On February 10, 2023, the Company filed a Motion to Object to Data Requests by Mission:Data Coalition Nos. 1-3, 1-5(a), 1-6, 1-7(c)-(g), 1-8, 1-9, and 1-10(a)-(c) and Motion for a Protective Order With Respect to Mission:Data Coalition Data Request Nos. 1-5(a) and 1-7, in which it asserted an objection to this data request. That motion remains pending, and pursuant to the direction provided in Public Utilities Commission ("Commission") counsel's February 16, 2023 email, the Company is not providing a response to this data request at this time. To the extent required after the Commission rules on the Company's objection, the Company will provide a response as and when directed.

<u>MDC 1-9</u>

Request:

See AMF Book 1 at 54:18-55:5. Is Rhode Island Energy saying that it will not commence a competitive procurement process for AMF because it intends to merely "leverage existing strategic partnerships" with PPL's already-chosen vendors? Please explain in detail.

Response:

On February 10, 2023, the Company filed a Motion to Object to Data Requests by Mission:Data Coalition Nos. 1-3, 1-5(a), 1-6, 1-7(c)-(g), 1-8, 1-9, and 1-10(a)-(c) and Motion for a Protective Order With Respect to Mission:Data Coalition Data Request Nos. 1-5(a) and 1-7, in which it asserted an objection to this data request. That motion remains pending, and pursuant to the direction provided in Public Utilities Commission ("Commission") counsel's February 16, 2023 email, the Company is not providing a response to this data request at this time. To the extent required after the Commission rules on the Company's objection, the Company will provide a response as and when directed.

<u>MDC 1-10</u>

Request:

See AMF Book 1 at 55:8-9 where Mr. Walnock and Ms. Reder indicate, "AMF will animate the market for third-party products and services by enabling customers to share energy usage information with authorized entities."

- (a) Does Rhode Island Energy have any quantitative targets (in terms of number of third parties, number of customers using third party enabled services, or any other metric) by which it will evaluate the success or failure of market animation?
- (b) If yes, please provide those targets and a detailed explanation for each.
- (c) If no, please explain in detail why no quantitative targets were developed.
- (d) Has Rhode Island Energy conducted any interviews, research or surveys of third parties that have in any way informed the Company's proposed functionality?
- (e) If yes, please provide copies of documentation (including meeting summaries).
- (f) If yes, please explain in detail, and provide specific examples of, how the Company's proposal has been modified by such interviews, research or surveys in order to animate the market for third parties.
- (g) If no, please explain in detail why no interviews, research or surveys of third parties were conducted.

Response:

- (a)-(c) On February 10, 2023, the Company filed a Motion to Object to Data Requests by Mission:Data Coalition Nos. 1-3, 1-5(a), 1-6, 1-7(c)-(g), 1-8, 1-9, and 1-10(a)-(c) and Motion for a Protective Order With Respect to Mission:Data Coalition Data Request Nos. 1-5(a) and 1-7, in which it asserted an objection to this data request. That motion remains pending, and pursuant to the direction provided in Public Utilities Commission ("Commission") counsel's February 16, 2023 email, the Company is not providing a response to this data request at this time. To the extent required after the Commission rules on the Company's objection, the Company will provide a response as and when directed.
- (d) No, Rhode Island Energy has not conducted any formal interviews, research or surveys of third parties to inform proposed functionality; however, through the

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Power Sector Transformation ("PST") Advisory Group process, the Company engaged in multiple meetings and sessions over several years that informed the content for the AMF Business Case. Enabling third party products and services was one of the topics of discussion with the AMF/GMP Sub-Committee of the PST Advisory Group. These stakeholder members represent a broad spectrum of interests ranging from environmental and clean-energy groups to low-income, community, and business interests, as well as non-regulated power producers ("NPPs"). See Figure 1.3: PST AMF and GMP Sub-Committee Meeting Schedule of the AMF Business Case, Bates Page 18. Through this stakeholder process, the Company incorporated feedback from the Sub-Committee members regarding the timing of Green Button Connect functionality through the Customer Portal in the AMF Functionality Roadmap (Figure 6.1 of the AMF Business Case). For example, based on the input from the AMF/GMP Subcommittee, the Company advanced Green Button Connect into Group 3 (i.e., planned within six months after deployment starts).

- (e) Please see Attachment MDC 1-10 for a copy of the AMF Data Governance and Data Security slide deck presented to the AMF/GMP Subcommittee at the August 16, 2022 PST Advisory Group meeting. There are no additional meeting summaries to share.
- (f) See the response to subpart (d), above.
- (g) Rhode Island Energy did not conduct interviews, research or surveys of third parties because it was able to rely upon and leverage the prior experience of PPL Corporation's affiliates in Kentucky and Pennsylvania. In addition, the robust stakeholder process through of the PST Advisory Group provided multiple perspectives regarding the enablement of third party services and products, among other issues that is reflected in the content of AMF Business Case. See also the response to subpart (d), above.

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AMF Data Governance and Data Security

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People, Process, Technology, and Purpose are Key



• People – The requirement for greater security and faster delivery cycles requires changes in team make up and requires regular training. Security is integrated through the business for security/compliance requirements.

Company maintains a cybersecurity organization comprised of individuals who are trained, certified and experienced in information and cybersecurity. Investment in, and ongoing assessment of our cyber skills is vital to the success of our cybersecurity function.

Processes – Software and components need to be tracked as they change and as well as the vulnerabilities
affecting them. A systematic process is needed since manual processes for tracking vulnerabilities as they are
disclosed are unreliable.

Company has a Data Governance Council that is made up of a cross-functional body of departments to ensure the governance initiatives are coordinated in the most functional manner with ongoing efforts across PPL. Company leverages internal security policies derived from best practices designed to look for novel and effective ways to protect the company's assets from current and emerging threats.

• Technology – Signature-based solutions providing ground truth based on output and continuous monitoring of newly disclosed vulnerabilities and compromises mapped to production software and associated systems

AMF system will be evaluated for compliance with cybersecurity requirements derived from the Company's Enterprise Security Standards and appropriate industry security standards and frameworks. This evaluation process will continue throughout the development lifecycle

Purpose – Evaluate the risk and possible repercussions

Company considers not only the potential impact to the flow of power to customers, but also the intended flow of data through the company's System(s).

PPL Data Governance Plan

- Defines pertinent policies addressing data privacy, data governance, information classification, and Cybersecurity and enterprise security standards
- Supports critical infrastructure and vital business functions including AMF
- Framework includes a comprehensive set of principles and standards:
 - ✓ Data Governance Policy
 - ✓ PPL Standards of Integrity
 - ✓ PPL Responsible Behavior Program
 - ✓ Information Security
 - ✓ Information Classification and Handling
 - ✓ Electronic Information Security

- ✓ Records Management
- ✓ PPL Cybersecurity Policy
- ✓ PPL FERC Standards of Conduct
- ✓ PPL Enterprise Information Security Policy
- ✓ Data Security Standard
- Designed to ensure the data generated by the Company and through its AMF:
 - Collected, managed, stored, transferred, and protected in a way that preserves customer privacy

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- Practices are consistent with cybersecurity requirements
- Facilitates access to further operational requirements
- Enables grid modernization and clean energy objectives

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PPL Data Governance Policy

Data Governance Policy (Governance Team/Roles & Responsibilities)

- Define the roles and responsibilities for different data creation and usage types, and clear lines of accountability.
- Develop best practices for effective data management and protection.
- Protects data against internal and external threats
- Ensure that data consumers complies with applicable laws, regulations, exchange, and standards
- Ensure that a data trail is effectively documented

AMF Data Privacy Review (Framework to communicate with customers and third parties)

- Data Access Principles
 - Utilizes widely recognized data privacy frameworks for AMF
 - Supported by NIST as long-established and best practices that are readily available and straightforward concepts to consistently utilize when building privacy controls into processes
- Data Privacy Review
 - Compares the NIST Guidelines to the Company's existing privacy policies, procedures and the AMF implementation plan to identify where best practice is in place or further alignment is needed

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AMF Data Privacy Review

- AMF Data Privacy
 - Evolving AMF technologies brings new types of information that can involve privacy
 - Need to review existing policies to confirm adequate coverage
 - Standard practices are required to safeguard information
 - Consumers need notification of privacy exposures
- Using NIST Interagency Report 7628 volume 2 on Privacy and the Smart Grid as a basis for a review
- Applies to AMF and to GMP

DRAFT - Data Privacy Review Categories	
1 Management and Accountability	
2 Notice and Purpose	
3 Choice and Consent	
4 Collection and Scope	
5 Use and Retention	
6 Individual Access	
7 Disclosure and Limiting Use	
8 Safety and Safeguards	
9 Accuracy and Quality	
10 Openness, Monitoring, and Challenging Compliance	
11 Personal Information in the Smart Grid	
12 Wireless Access to Smart Meters and Secondary Devices	
13 Commisioning, Registration, and Enrollment for Smart Devices	
14 Smart Grid Data Acess by Third Parties	
15 Plug-in Electric Vehicles Privacy Concerns	
16 Awareness and Training	
17 Mitigating Privacy Concerns within the Smart Grid	
18 Emerging Smart Grid Privacy Risks	

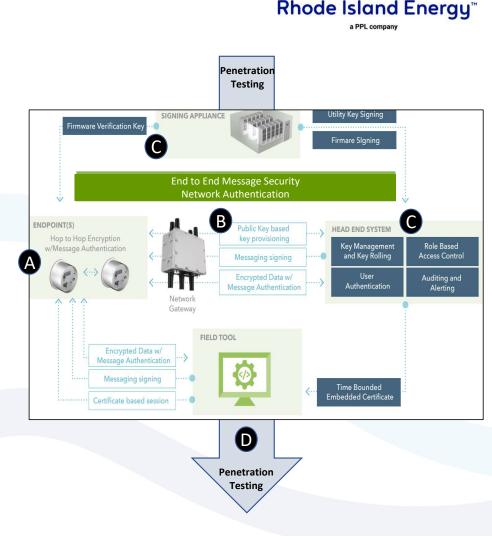
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Cyber Security: Technology and Process

- A. Data encryption capability for transit at the networking layers on the devices
 - Uses advanced encryption protocol standard to protect the transfer of data online
- B. RF network provides a uniquely keyed application layer messaging encryption to ensure privacy between an endpoint and the associated head end system
 - Uses 3-layered approach provides best in class cryptography and privacy controls
- C. Resistance and local security tamper resistance protects devices from being modified and allows for monitoring
- D. Penetration testing will also be required by a thirdparty focusing on the network and software layers
- E. Ongoing testing coupled with design characteristics, which includes A+B+C+D, ensures the entire system is secure

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Green Button for Customers, Third Parties/NPPs

- RIE can generate Green Button data from AMF meters
- Green Button Connect will be available through the Customer Portal designed to provide customers with secure access to energy usage in a consumer-friendly and computer-friendly format.
- Provides customers with the ability to take advantage of a growing array of services to help manage energy use and save on their bills.
- Enables and incentivizes entrepreneurs to build innovative applications, products and services which will help consumers manage energy use
- Benefits utilities that receive numerous requests for information
- Customers can authorize the sharing of their data with thirdparties.





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Performance Metrics and Reporting



- Suite of metrics designed to provide a transparent assessment progress of AMF implementation in key areas
- Focus is on providing metrics for three key areas:
 - Implementation
 - Customer
 - Operations
- AMF Program Report to be provided at the end of the year with mid-year project status update meeting

DRAFT Performance Metrics

Benefit Category	Benefit Metric
Program Implementation	Major Project Release progress
	Progress of AMF Program Functionality Releases
	Meter Pre-Sweep Completions
	Counts of Completed Pre-Sweeps
	Network Deployment
	Counts of Completed Device Installs
	Meter Deployment
	Counts of Completed Exchanges
	Meter Base Repairs
	Counts of Meter Bases requiring repairs prior to meter exchange
	Sector Completion
	Sector Acceptance Status
	Program Spend
	Costs Breakdown Summary for key categories of the AMF Program
Customer	Customer Interactions
	Counts and reasons for customer contacts to the AMF Program
	Customer Portal Enrollments
	Counts of customers signing up for Customer Portal access
	Customer Surveys / Customer Satisfaction
	Breakdown of Customer Satisfaction survey results of AMF communication,
	access to information & FAQs, and issue resolution
	Customers Accessing Green Button Connect Data
	Counts of customers who have exported their Green Button Connect data
	Customers who Opt out of AMF meter
	Count of customers who have elected to Opt Out from receiving an AMF meter
Operations	Billing Read Rate
	Register meter reads expected vs. delivered
	Interval Read Rate
	Interval meter reads expected vs. delivered
	MDMS estimates sent to Billing
	Percentage of meters requiring estimates for billing
	Remote Switch Performance
	Percentage success rates of remote switches
	Last Gasp Alerting
	Percentage of Last Gasp alerts successfully delivered to the OMS (Outage
	Management System)
	VVO metric
	Number of feeders with AMF deployed that have implemented Volt Var
	Optimization

<u>MDC 1-11</u>

Request:

See AMF Book 1 at 81:1-2 where Mr. Walnock and Ms. Reder state, "NPP's can access the data of customers who enroll in their services in two different ways: 1) Electronic Data Exchange; 2) Supplier Portal."

- (a) Please explain in detail what is meant by "Electronic Data Exchange."
- (b) If Rhode Island Energy is referring to "Electronic Data Interchange (EDI)," please explain in detail how the Company will ensure that NPPs will only be permitted to access the energy data of accounts to which the NPP has authorization. What steps ensure that customer consent has been received by the Company prior to the release of customer data?

Response:

a) Electronic Data Exchange is the process in which Electronic Data Interchange ("EDI") is shared between the Company and nonregulated power producers ("NPPs").

b) As a deregulated utility, Rhode Island Energy provides a customer choice program in which customers can select their preferred energy supplier. In order for a customer to participate in the customer choice program, the NPP will obtain an authorization form from the customer that acknowledges the customer's intent to receive services from the energy supplier. Upon customer authorization, the supplier will send an EDI 814 enrollment request transaction to the utility that includes the customer's account number and first four characters of the account name. This will be deemed by the Company as confirmation that the customer has consented to the enrollment or switch. The utility will then provide an EDI 814 enrollment response to the supplier indicating whether the request was accepted or rejected. If the customer enrollment was accepted, a start date will be provided that signals when the customer will begin billing under the supplier's program and when the supplier will begin receiving the customer's consumption and billing data.

Rhode Island Energy will process the enrollment request; upon successful enrollment the Customer Information System system will tag the customer as being served by that NPP and will share EDI data with only that supplier.

<u>MDC 1-12</u>

Request:

See Schedule PJW/WR-1 at 58, citing Wi-Fi capabilities on advanced meters.

- (a) Will the Company support IEEE2030.5 over Wi-Fi as the communication standard for transmitting kWh data to Home Area Network ("HAN") devices?
- (b) If no, what communications standard(s) will be used? Please explain in detail.
- (c) If IEEE2030.5 will be used, which "function sets" of the IEEE2030.5 standard will the Company implement? Please explain in detail.
- (d) If IEEE2030.5 will be used, please describe in detail all data that will be provided to authorized HAN devices and on what frequency.
- (e) Given that Wi-Fi is on the meters, will customers be able to direct the Company to send their meter data to any URL the customer wishes on a periodic interval, say every 5 seconds, without needing to have a dedicated device such as an IEEE2030.5 client running on a gateway device inside the home? Why or why not? Please explain in detail.
- (f) Will all customer types (including commercial and industrial) have Wi-Fi HAN access, or will be HAN be limited to residential customers? Please explain in detail.
- (g) Does Rhode Island Energy intend to offer its own mobile phone application to connect to the HAN over Wi-Fi?
 - i. If yes, please provide all designs, diagrams, screenshots, mockups and the like showing the functionality.
 - ii. If yes, will the mobile app be a separate app from the Company's traditional bill payment app that exists today? Why or why not? Please explain in detail.
 - iii. If yes, what is the estimated cost for the development of the Company's HAN mobile app?
- (h) If ratepayers ultimately pay for load disaggregation functionality on meters, does Rhode Island Energy believe customers should be able to have their

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disaggregation insights transmitted over Wi-Fi to any device or service of the customer's choice? Why or why not? Please explain the Company's rationale in detail.

(i) If ratepayers ultimately pay for load disaggregation functionality on meters, does Rhode Island Energy believe that it owns such insights, or do customers? Please explain the Company's views in detail.

Response:

- (a) Yes, the Company is committed to enabling Wi-Fi from the meter to the Home Area Network ("HAN") devices, however the specific communication standard for transmitting kWh data has not been determined.
- (b) See MDC 1-12 (a) above.
- (c) See MDC 1-12 (a) above.
- (d) See MDC 1-12 (a) above.
- (e) AMF Business Case Attachment G, (Bates 296) the Cybersecurity, Data Privacy and Data Governance Plan will guide provisions, process and requirements pertaining to data that is shared from the meter via Wi-Fi that is yet to be developed.
- (f) All customer types that receive an AMF meter will have Wi-Fi HAN access.
- (g) A decision has not yet been made on the details of connecting a mobile device to the HAN over Wi-Fi. Rhode Island Energy will consider offering a mobile application for this purpose as one of the potential options.
- (h) AMF Business Case Attachment G, (Bates 296) the Cybersecurity, Data Privacy and Data Governance Plan will guide provisions, process and requirements pertaining to data management stemming from load disaggregation functionality on meters.
- (i) The Company's Cybersecurity, Data Privacy and Data Governance Plan govern how AMF data and insights from it will be used such that (1) the data generated by the Company and through its AMF is collected, managed, stored, transferred, and protected in a way that preserves customer privacy; (2) practices are

consistent with cybersecurity requirements and facilitate access to further operational requirements; and (3) grid modernization objectives and Climate Mandates can be met. The Company is committed to protecting the confidentiality, integrity, and availability of all data and information, data and information assets, and data and information resources to a level that is commensurate with their value.