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January 5, 2018

Via Electronic Filing

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
2nd Floor, Room-N201
Harrisburg, PA 17120

RE: Michele Hriadil and Francis Hriadil v. Duquesne Light Company
Docket No. C-2016-2571726

Dear Secretary Chiavetta:

Enclosed please find Duquesne Light Company's Motion to Strike and Motion for Protective Order. A copy of this document has been served upon Complainants in accordance with Commission regulations.

Please feel free to contact me if you have any questions.

Sincerely,

Jeremy V. Farrell
Attorney for Duquesne Light Company

Paul Shane Miller
Attorney for Duquesne Light Company

Enclosure

cc: Michele Hriadil and Francis Hriadil (with enclosure)
ALJ Jeffrey Watson (with enclosure)

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

MICHELE HRIADIL and FRANCIS HRIADIL,	:	
Complainants,	:	
vs.	:	No: C-2016-2571726
DUQUESNE LIGHT COMPANY,	:	
Respondent.	:	

MOTION TO STRIKE AND
MOTION FOR PROTECTIVE ORDER

Filed on behalf of Respondent
Duquesne Light Company

Counsel of Record for this Party:
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NOTICE TO PLEAD

TO COMPLAINANTS MICHELE HRIADIL AND FRANCIS HRIADIL:

YOU ARE NOTIFIED TO FILE A WRITTEN RESPONSE TO THIS MOTION OF RESPONDENT DUQUESNE LIGHT COMPANY WITHIN 20 DAYS OF SERVICE OR A JUDGMENT MAY BE ENTERED AGAINST YOU.

TUCKER ARENSBERG, P.C.

Jeremy V. Farrell, Esquire
Attorney for Duquesne Light Company

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

MICHELE HRIADIL and FRANCIS HRIADIL,	:	
Complainants,	:	
vs.	:	No: C-2016-2571726
DUQUESNE LIGHT COMPANY,	:	
Respondent.	:	

MOTION TO STRIKE AND
MOTION FOR PROTECTIVE ORDER

Respondent Duquesne Light Company files this Motion to Strike and Motion for Protective Order pursuant to 52 Pa. Code §§ 5.103 and 5.362:

1. On January 2, 2017, Duquesne Light received two documents from Complainants: (1) Motion to Compel Discovery; and (2) "Follow-up to Set #1 of Discovery Requests." Duquesne Light files this Motion to strike the motion to compel (which seeks to compel responses to the simultaneously-served follow-up discovery requests) and request a protective order against the unreasonably burdensome inquiries raised in Complainant's "follow-up" discovery requests, which are a broad and puzzling blend of argument, commentary, and more than **189** questions (on top of the more than 150 Complainant has already served and Duquesne Light has already answered). Duquesne Light understands that Complainants are *pro se*, but their requests far exceed the discovery contemplated by the Commission's regulations and should be barred for the reasons set forth below.

BACKGROUND

2. In this action, Complainants seek to opt out of Duquesne Light's smart meter plan, Complaint, ¶ 5, relief that is not available under the law.[1] The basis for Complainants' request is their belief that smart meters are universally unsafe and should not be permitted in this Commonwealth. Complaint, ¶ 4. In their Complaint, Complainants allege that smart meters pose safety, health, and privacy/cyber-security concerns. Complaint, ¶¶ 4-5. Duquesne Light has not yet installed a smart meter at Complainants' home.

3. After Duquesne Light's Preliminary Objections were denied, this matter was scheduled for a hearing on the limited issue of whether Duquesne Light violated the Public Utility Code, a Commission order or regulation, or a Commission-approved tariff. Interim Order Denying Preliminary Objections at 6 - 7 (Order entered August 16, 2017) (Watson, ALJ).

4. Complainants subsequently served Duquesne Light with their first set of discovery requests, a copy of which is attached as Exhibit A. Even a cursory glance through Exhibit A reveals that Complainants' discovery requests were incredibly voluminous. In fact, counting only the separately numbered questions and subparts, Complainants served **over 150** discovery requests to Duquesne Light. Complainants' requests were both broad in scope and sought many details regarding nearly every aspect of Duquesne Light's smart meter implementation plan. See Exhibit A.

5. Despite the volume of Complainants' first set of discovery requests and the fact that many of the questions were vague, overly broad, or argumentative, Duquesne Light, in good faith, provided substantive responses to Complainants' requests, which are attached as

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[1] See, e.g., Starr v. PECO Energy Co., C-2017-2615628, 2017 WL 4864901, at *5–6 (Pa. P.U.C. Oct. 4, 2017) ("The Commission has, within its discretion, interpreted Act 129 as not allowing an opt out of smart meter installation."); Evans v. PECO Energy Co., Docket No. C-2013-2368477, 2013 WL 7019103 at *3 (Pa. P.U.C. Dec. 19, 2013); Francis v. PECO Energy Co., Docket No. C-2014-2451351, 2015 WL 5011620 at *7 (Pa. P.U.C. August 20, 2015).

Exhibit B. In addition to its written responses, Duquesne Light produced responsive documents.[2]

6. Given the breadth of Complainants' initial discovery requests, Duquesne Light did ask Complainants for two short extensions to respond -- as Complainants go to length to point out in their motion to compel. Collectively, the extension requests totaled less than 30 days, and, when Duquesne Light made those requests, a litigation schedule and hearing date had not even been set.[3] Duquesne Light served Complainants with its discovery responses within the time period covered by the latest continuance granted by Complainants and, with the clarification provided in footnote 2 below, stands by its responses.

7. Duquesne Light heard nothing from Complainants regarding its discovery responses until the Prehearing Conference on December 14, 2017, when, for the first time, Mr. Hriadil mentioned that he had some unidentified problems with Duquesne Light's responses. This despite the fact that undersigned counsel had various email and telephone conversations with Mr. Hriadil between when Duquesne Light served its discovery responses and the Prehearing Conference.

8. Duquesne Light then received Complainants' motion to compel and follow-up discovery requests on January 2, 2018. A copy of the Complainants' follow-up discovery requests are attached as Exhibit C.

9. Somehow, the "follow-up" requests, all of which purport to derive from the discovery requests Complainant had already served and Duquesne Light had already answered, are more voluminous than their predecessor. A count of the separately numbered

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[2] Duquesne Light acknowledges Complainants' contention that Duquesne Light did not produce two documents referenced in its discovery responses. Duquesne Light will address that issue through a separately verified supplemental discovery response.

[3] As an aside, it is unclear to Duquesne Light why Complainants place such emphasis on the fact that Duquesne Light was given these extensions when it was Complainants who agreed to provide them in the first place. Prior to Complainants' Motion to Compel, the Parties had been relatively cooperative with informally extending deadlines throughout the pleadings and discovery process.

and bulleted inquiries in the follow-up requests indicated that Complainants put **189** questions to Duquesne Light -- on the deadline to serve discovery in this case.[4]

10. The discovery requests were accompanied by a motion to compel, which, curiously, seeks an order asking the Commission to prospectively compel Duquesne Light to answer the follow-up discovery requests served simultaneously with the motion to compel. Motion to Compel at 6.

MOTION TO STRIKE

11. Duquesne Light moves to strike Complainants' motion to compel because it is unfounded and improper.

12. Outside of Mr. Hriadil's generic statement at the Prehearing Conference that he had then-unidentified problems with Duquesne Light's discovery responses, Complainants admittedly made absolutely no attempt to resolve the alleged problems with Duquesne Light's discovery responses directly with Duquesne Light. See Motion to Compel at 5, 6.

13. Instead, Complainants filed a motion proactively seeking an order compelling Duquesne Light to respond to the "follow-up" discovery requests served simultaneously with the motion to compel. Motion to Compel at 6. That is an improper attempt to convert discovery requests, which are in themselves flawed for the reasons set forth below, into a motion to compel. There is no legal basis to do so and Duquesne Light respectfully requests that Complainants' motion to compel be stricken from the record.

MOTION FOR PROTECTIVE ORDER

14. 52 Pa. Code § 5.361(a) states:

(a) Discovery or deposition is not permitted which:

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[4] Though Complainants may technically have complied with the litigation schedule set in this matter, Complainant's eleventh-hour, voluminous discovery requests certainly violate the spirit of 52 Pa. Code § 5.331(b), which requires that parties initiate discovery as early as reasonably possible.

(1) is sought in bad faith.

(2) would cause unreasonable annoyance, embarrassment, oppression, burden or expense to the deponent, a person or party.

***

(4) would require the making of an unreasonable investigation by the deponent, a party or witness.

Id. This section limits the scope of discovery in Commission proceedings and prohibits discovery that would cause an unreasonable burden, expense, or investigation by a participant. City of Pittsburgh v. Pennsylvania Public Utility Comm'n, 526 A.2d 1243, 1249 (Pa. Cmwlth. 1987); appeal denied 538 A.2d 880 (Pa. 1988). Here, Complainants' "follow-up" discovery requests meet at least the last two quoted categories in §5.361(a), and, given Complainants' attempt to compel a response to the requests the same day they were issued without previously taking up the matter with Duquesne Light, potentially the first. Accordingly, Duquesne Light respectfully requests a protective order.

15. 52 Pa. Code § 5.632(a) details when protective orders are appropriate: "Upon a motion by a party or by the person from whom discovery or deposition is sought, and for good cause shown, the presiding officer may make an order which justice requires to **protect a party or person from unreasonable annoyance, embarrassment, oppression, burden or expense**, including one or more of the following: (1) the discovery or deposition shall be prohibited ... (3) the scope of discovery or deposition shall be limited and that certain matters may not be inquired into." Id. at § 5.362(a)(1), (3) (emphasis added).

16. As an initial matter, the follow-up discovery requests violate several Commission procedural regulations. Many of them are not limited to a single question in violation of 52 Pa. Code § 5.341(d); nor are the requests logically numbered and ordered as required by 52 Pa. Code § 5.341(e).

17. A more fundamental problem with Complainants' follow-up requests is that they attempt to improperly expand the scope of this proceeding from one that questions whether Duquesne Light has violated the Public Utility Code, an associated regulation, or tariff to a wholesale attack on Duquesne Light's smart meter implementation plan, which has already been approved by the Commission,[5] and/or a challenge to the scientific merit of Act 129's mandatory universal deployment of smart meters, which, as noted above, is a matter of settled law that Complainants must (and already have attempted to)[6] address through other forums, such as the legislative branches of state and/or local government. That is a significant issue. Complainants should not be permitted to expand the scope of this hearing through the discovery process. Furthermore, because Complainants' discovery requests exceed the scope of this proceeding, they are outside the scope of discovery permitted under 52. Pa. Code § 5.321(c) because they, by nature, are not "relevant to the subject matter involved in the pending action."

18. There is a myriad of other problems with Complainants' latest discovery requests (which are repetitive or derivative of questions that Duquesne Light has already answered), the cumulative effect of which is to impose precisely the sort of unreasonable burden, annoyance, and investigation prohibited by 52 Pa. Code § 5.361. A representative sampling of those problems is set forth below:

a. The discovery requests themselves are made up of **189** separately numbered or bulleted questions, many of which contain multiple inquiries making the volume of the requests even greater.

b. As noted above, some follow-up requests amplify the original requests into areas outside the scope of the Complaint or the Presiding Officer's Interim Order which established the scope of the hearing. See, e.g., Request No. 26 / 6(f)-(g) (pp.

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5 See, e.g., Docket No. M-2009-2123948 (Pa. P.U.C. Opinion and Order entered May 6, 2014).

6 For example, in paragraph four of their Complaint, Complainants allege that they contacted at least six state senators and representatives, Governor Wolf's office, the office of the Pennsylvania Attorney General, and their mayor. Complaint, ¶ 4.

24)[7] (asking whether customers in general are advised "at any time" that their internal electrical circuitry is their responsibility and informed of "what additional upgrades/protections should be installed to ensure that his internal electrical circuitry and appliances are protected and compatible with the new Smart Meter being installed on his property"); Request No. 31(b), (e) / 9(a)(i) ("Is 'meter exchanger' a recognized profession?" and "Are the Smart Meter exchangers temporary or permanent employees? If some are permanent and some are temporary, what is the percentage of each category?"); Request No. 32 / 9(b)(i) (pp. 28-29) (asking about the bonus structure for meter exchangers); Request 42 / 18(d) (pp. 35-36) (asking many questions through 14 separate bullet points about how customers with smart meters are billed based on the usage read by the meter, when no billing concerns were raised in the Complaint).

c. Other questions are argumentative and/or ask Duquesne Light to speculate as to a myriad of possibilities or unknown future events. See, e.g., Request No. 8 (p. 10) ("Furthermore the maximum number of 'typical' readings does not reflect the maximum number of readings that the Respondent's Smart Meter are capable of executing and processing, as the Respondent is well aware. What is 'typical' now will not necessarily be what is 'typical' in the future...."); Request No. 44 / 18(h) (p. 37) (after Duquesne Light answered "[n]o" to whether it had "plans in the future to market" customer data for creating new income streams, Complainant stated that "The Respondent is well aware that plans change for many reasons. Is the Respondent precluded from offering this personal customer data to any individual, company, or organization in the future?").

d. Some repeat the same question Duquesne Light has already answered. See, e.g., Request No. 34 / 9(b)(iii) (p. 29) (asking, after Duquesne Light had previously answered that it performs meter exchanges without interrupting customers' service where it can be done safely, "does Respondent routinely condone and authorize the use of a 'hot install' (i.e. where homeowners electrical service is not turned off prior to installation of the Smart Meter)?"); Request No. 40 / 18(a) (p. 34) (after Duquesne Light answered "[n]o" and provided an explanation to the question of whether "personal data [will] only be used for billing purposes internal to Duquesne Light", Complainants asked again "Will this personal customer electric usage data be used only for billing purposes internal to Duquesne Light?").

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[7] Complainants' follow-up discovery requests are confusingly numbered. The citation format for them used by Duquesne Light in the following paragraphs are Request 1 / 2 (p. 3), with the "1" representing the paragraph number in Complainants' follow-up discovery requests where the question appears, the "2" representing the number of Complainants' original discovery request from which the follow-up question derives, and "3" representing the page number of the follow-up discovery requests where the question can be found.

e. Other follow-up requests are repetitive of themselves. See, e.g., Request No. 7(c) and (d) (p. 10) ("Which numbers are correct? How is one to know that they are correct and accurate? For those numbers that are not correct, what are the correct numbers? And, what verification is there that these new numbers are correct and accurate numbers? What are they based on?").

f. Some criticize Duquesne Light for responding generally to a question that was broad or general in nature. See, e.g., Request No. 6 / 1(h) (pp. 8-9) (criticizing Duquesne Light's use of the term "business processes" in its responses); Request No. 7 / 1(h)(i) (pp. 9-10) (same). The follow-up requests are replete with these sorts of broad and generic questions.

g. Another asks Duquesne Light what specific settlement offers it has made to other customers who have had complaints about smart meters and alleges that Duquesne Light "does not seem to remember" that settlements are encouraged by the Commission. See, e.g., Request 47 / 22 (pp. 40-41).

19. Individually and taken as a whole, these 189 requests, which come on the heels of more than 150 requests already answered, are precisely the sort of unreasonably burdensome, annoying, and harassing fishing expedition that is prohibited under 52 Pa. Code § 5.631 and grounds for a protective order under 52 Pa. Code §5.632. Duquesne Light understands Complainants are acting *pro se*, but that does not grant them the right to ask hundreds of unreasonable and burdensome discovery requests. *Pro se* parties have no greater discovery rights than represented parties. See, e.g., Leblanc v. Stedman, 483 Fed.Appx. 666 (3rd Cir. 2012) (no abuse of process by trial judge's denial of *pro se* plaintiff's motions to compel where the discovery sought was immaterial to the dispute).

20. Based on the foregoing, Duquesne Light respectfully submits that it has shown good cause why it is entitled to a protective order prohibiting Complainants' follow-up discovery requests in their entirety.

WHEREFORE, Respondent Duquesne Light Company respectfully requests that this Honorable Commission enter an order striking Complainants' Motion to Compel Discovery and

granting it a protective order against Complainants' "Follow-up to Set #1 of Discovery Requests."

Respectfully submitted,

TUCKER ARENSBERG, P.C.

Jeremy V. Farrell, Esquire
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(412) 594-3938
Paul Shane Miller, Esquire
PA I.D. No. 319174
(412) 5503594-
1500 One PPG Place
Pittsburgh, PA 15222
Counsel for Respondent, Duquesne Light Company

LIT:633763-1 014657-158498

EXHIBIT
A

331 Shady Ridge Drive
Monroeville, PA 15146

October 5, 2017

Via Paper Filing

Jeremy V. Farrell, Esquire
TUCKER ARENSBERG, P.C.
1500 One PPG Place
Pittsburgh, PA 15222

RE: **Michele Hriadil and Francis Hriadil v. Duquesne Light Company**
Docket No. C-2016-2571726

Dear Jeremy V. Farrell, Esquire, Counsel for Duquesne Light Company:

As Respondent's Counsel, enclosed please find Complainant's (Hriadil's) Set #1 of Discovery Requests Directed to Respondent (Duquesne Light Company).

The standard response time is within twenty days after the date of service. Your responses must be verified in accordance with 52 Pa. Code § 1.36.

Thank you for your attention to this request.

A copy of this document has been provided to Judge Jeffrey Watson, PA PUC Pittsburgh Administrative Law Judge Office, in accordance with Commission regulations.

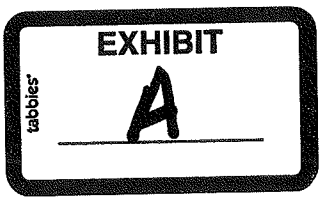
Please feel free to contact me if you have any questions.

Sincerely,

Francis Hriadil

Francis Hriadil
Complainant
(412) 779-3314
hriadil@attglobal.net

Cc: Judge Jeffrey Watson, PA PUC Pittsburgh Administrative Law Judge Office



BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

MICHELE HRIADIL and FRANCIS HRIADIL,	:	
Complainant,	:	
vs.	:	No: C-2016-2571726
DUQUESNE LIGHT COMPANY,	:	
Respondent.	:	

SET #1 OF
DISCOVERY REQUESTS

Filed by Michele and Francis Hriadil

hriadil@attglobal.net
(412) 779-3314
331 Shady Ridge Drive
Monroeville, PA 15146

SET #1 OF DISCOVERY REQUESTS

TO: RESPONDENT'S GENERAL COUNSEL, JEREMY V FARRELL, ESQUIRE, AND PAUL SHANE MILLER, ESQUIRE.

YOU ARE HEREBY NOTIFIED TO FILE A WRITTEN RESPONSE TO THE WITHIN SET #1 OF DISCOVERY REQUESTS OF COMPLAINANTS MICHELE AND FRANCIS HRIADIL WITHIN TWENTY (20) DAYS OF SERVICE HEREOF, IN ACCORDANCE WITH 52 PA. CODE SS 5.342 AND 5.349(d).

Francis Hriadil
October 5, 2017

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

MICHELE HRIADIL and FRANCIS HRIADIL,	:	
Complainant,	:	
vs.	:	No: C-2016-2571726
DUQUESNE LIGHT COMPANY,	:	
Respondent.	:	

SET #1 OF DISCOVERY REQUESTS DIRECTED TO RESPONDENT

TO RESPONDENT:

Complainants Michele Hriadil and Francis Hriadil ("Complainants"), serve the following Set #1 of Discovery Requests Directed to Respondent Duquesne Light Company ("Duquesne Light") through its undersigned counsel, Tucker Arensberg, P.C., pursuant to 52 Pa. Code SS 5.341 and 5.349.

In accordance with 52 Pa. Code SS 5.342 and 5.349(d), Respondent Duquesne Light Company ("Respondent") must respond to each discovery request within 20 days after being served with these discovery requests.

Respondent's responses must be verified in accordance with 52 Pa. Code S 1.36.

Complainants (we) reserve the right to serve additional and follow-up discovery requests.

DEFINITIONS

A. The terms "You" and "Your" shall mean Respondent Duquesne Light Company and any individual acting on their behalf.

B. The term "Formal Complaint" shall mean the Formal Complaint and all subsequent associated Responses and New Matters (1, 2, 3, and 4) by the Complainants filed against Respondent Duquesne Light with the Pennsylvania Public Utility Commission, Docket No. C-2016-2571726.

C. The term "Document" shall mean any written, typed, printed, graphic, or recorded material that is currently in Your possession, custody, or control or that was formerly in Your possession, custody, or control. A Document is in Your "control" if You have ownership, possession, or custody of the Document or if You have the right to secure the Document or a copy from any person or entity that has possession of it. The term "Document" includes, but is not limited to, electronic mail or email, text messages, social media postings, comments, and messages, medical records, articles, studies, word processed documents, digital presentations, facsimiles, instant messages, calendars, diaries, appointment books, agendas, journals, drafts, voicemail messages, post cards, post-it notes, reports, logs, message slips, invoices, checks, paystubs, letters, memoranda, agreements, contracts, tax returns, bank statements, spreadsheets, video recordings, audio recordings, computer programs, printouts, and all other written, graphic, or electronic materials of any nature whatsoever.

D. The term "Property" shall mean Complainants' residence at 331 Shady Ridge Drive, Monroeville, PA 15146.

E. The term "Smart Meter" shall mean the wireless digital electric meter (i.e. the Duquesne Light / Itron SK9AMI7 OpenWay Centron Smart Meter operating in its Smart Grid Mesh system) that Respondent Duquesne Light is seeking to install at Complainants' Property.

INSTRUCTIONS

A. You must provide all information that is available to You. This includes not only Your personal knowledge but also all information that is reasonably available to You.

B. You are requested to produce all responsive Documents that are in Your possession, custody, or control. All Documents must be produced in the same order that they are normally maintained. For each Document, identify which specific discovery request it responds to.

C. If You object to any discovery request, You must explain the reason(s) for Your objection.

D. If You do not have any Documents in Your possession, custody, or control that are responsive to a discovery request, You must say so.

E. In responding to these discovery requests, include all Documents that were obtained by You and anyone acting on Your behalf. If You state that any Document(s) are not within Your possession, custody, or control, describe what effort You made to locate each such Document.

F. If You state that a Document is not under Your control, identify who has control of the Document and state the Document's location.

G. You must produce each Document in its entirety even if only part of the Document is responsive to the document request.

H. These discovery requests are continuing in nature. This means that if You receive or become aware of information that is responsive to any discovery request after You have served Your original answers, You must promptly supplement Your answer and provide that information.

DISCOVERY REQUESTS

1. State all technical, functional, and operational characteristics (i.e. how it actually operates and is operated in the field) of Your Smart Meter (the SK9AMI7) in Your Smart Grid, including but not limited to:

a. What versions (standard Meter, Collector Meter, etc.) of Your Smart Meter (the SK9AMI7) are you installing on customer's residences? How are they different?

b. What are the makes and models of all wireless communications modules in each version of Your SK9AMI7? What are their purpose, function, capability, and operational characteristics?

c. What is the Absolute Peak Power Output of the 900 MHz RF transceiver and the 2.4 GHz Zigbee transceiver in each version of Your SK9AMI7 Smart Meter?

d. What is the Gain of the antenna(s) of each version of Your Smart Meter, in the direction of maximum gain, at each of the frequencies of operation (900 MHz, 2.4 GHz)?

e. What is the exact Transmission Burst Time interval of each version of Your SK9AMI7?

f. What is the complete Duty Cycle range (minimum, average, maximum) of each version of Your Smart Meter (the SK9AMI7), and their corresponding Transmission Times in 24 hours (900 MHz, 2.4 GHz)?

g. What is an average and maximum total duration time (in seconds) that each version of Your residential Smart Meter transmits and/or receives any signal in a 24 hour period (900 MHz, 2.4 GHz)? How is this computed or measured?

h. How many times/transmissions in total (average, maximum) for any purpose is each version of Your Smart Meter configured to transmit during a 24-hour period (900 MHz, 2.4 GHz)?

i. How many of those times (average and maximum) are to transmit electric usage information?

ii. How many of those times (average and maximum) are for other purposes? What are those other purposes?

iii. What are the number of times (average and maximum) by type/category of transmission?

i. Under what scenarios does each version of Your Smart Meter transmit outside of the daily schedule, i.e., transmissions such as on-demand reads, tamper/theft alerts, last gasps, firmware upgrades, etc.?

j. Typically, how much of the communication between the customer's Smart Meter

i. and other Smart Meters in the customer's area grid is unscheduled vs. scheduled?

ii. and You (Duquesne Light) is unscheduled vs scheduled?

k. Are there any other factors that go into determining duration and/or frequency of Your Smart Meter's transmissions (e.g., if a meter can't access the network when it's trying to send usage data, meter ID, etc.)? If yes, please identify these factors.

l. What is the amount of RF emission at the source of each version of Your Smart Meter when Your Smart Meter is transmitting data (instantaneous maximum peak level, averaged over 30 minutes)?

m. Does the amount of RF emission vary depending on duration of transmission/volume of data being sent? For example, are RF emissions higher when there is a larger volume of data to be transmitted?

n. Are there any other factors that impact the amount of RF emissions? If so, please identify the factor(s) and their impact on RF emissions.

o. Is there RF emission when Your Smart Meter is not transmitting? If yes, what is the amount of RF emission?

p. Is there a difference in the amount of RF emissions for Your Smart Meter with the transceivers off and a Smart Meter with the transceivers removed and not present? If yes, what is that difference and how is it calculated?

q. Is there a difference in the amount of RF emissions for Your Smart Meter with the transceivers off and a traditional Analog Meter? If yes, what is that difference and how is it calculated?

r. Since the SK9AMI7 is programmable, what control methods and capabilities do You have to change, adjust, or modify the Duty Cycle of the SK9AMI7 either directly or remotely?

s. What is the operational difference between Your standard residential Smart Meter and Your larger Collector Smart Meters?

i. Is the customer informed that his/her residence/property has been chosen to house one of Your larger Collector Smart Meters, as opposed to Your standard residential Smart Meter?

ii. Is the customer given the option to refuse to house Your Collector Smart Meter?

t. Describe the function and operation of the Switch-Mode Power supply that supplies power to Your Smart Meter (the SK9AMI7?

i. How does the AC/DC switching circuitry draw power from the customer's line?

ii. What voltage spiking, harmonics, additional loads and stresses does this introduce onto the customer's household interior electrical wiring?

iii. In addition to the customer's electrical usage, is the customer being charged for the additional power used to operate Your Smart Meter?

u. Do you provide the customer/homeowner with the option to disable the 2.4 GHz Zigbee Transceiver?

ANSWER:

2. Produce all Documents, including but not limited to studies, that relate to Your answer to Discovery Request No. 1.

ANSWER:

3. State all facts that support Your claim that Duquesne Light's installation of a Smart Meter at the Property will not negatively affect the health and/or medical condition(s) of Michele Hriadil, Francis Hriadil, and/or any pets or animals, and/or any visitors including but not limited to the elderly, children, babies, pregnant mothers and their fetuses, etc.

a. What analyses, if any, did You carry out to ensure that the Radiofrequency (RF) radiation, and Low Frequency (LF) radiation induced by the Switch-Mode Power supply, from Your wireless Smart Meter system would be safe for all of Your customers, and those living at or visiting their Property?

i. If You did not carry out any analyses, how then did You establish that Your wireless Smart Meter system is safe for all of Your customers, and those living at or visiting their Property?

b. Did your analysis/assessment consider the Radiofrequency (RF) radiation from a single wireless Smart Meter, or the radiation from all components of Your wireless Smart, Meter system including

i. all wireless Smart Meters in a community?

ii. all intermediate wireless relay devices in a community such as any wireless Collector Smart Meters and Repeaters?

iii. all wireless Transmitters/Receivers required to communicate between the intermediate wireless relay devices and Duquesne Light or its agents?

c. Recognizing that the science indicates there are many conditions that can affect and influence Radiofrequency radiation levels in the home environment, does Your installation account for:

i. uncertainties about the existing RF environment that exist at a location, such as how much RF exposure already exists at a location?

ii. what kind of reflective and re-radiation interior and exterior environments exist at a location? (It is established science that reflections and re-radiation can come from common building materials ((tile, concrete, stainless steel, glass, ceramics)) and highly reflective appliances and furnishings that are common in kitchens, etc.)

iii. how interior and exterior space is utilized near walls where the Smart Meters are mounted?

iv. the specific physical condition(s) of the residents, and all likely visitors to the residence, including but not limited to age, medical condition(s), disabilities, medical implants, relative health, reliance on critical care equipment that may be subject to electronic interference, etc.?

v. the location of Your Smart Meter on the residence in close proximity to, or in co-location with, other Smart Meters on the same building, such as with connected condominiums (like the Complainant's Property), apartment buildings, etc.?

vi. unrestrained access to areas of the Property where Your Smart Meter(s) are located?

d. What if anything is taken into account concerning the installation of Your Smart Meter?

e. Are customers/homeowners provided with any written notice of the dangers and inherent risks associated with being in close proximity to Your Smart Meter on a regular basis?

i. Is a safety barrier provided to ensure and maintain the required safe separation distance for all persons, children, animals, etc?

ii. Are there warning labels on Your Smart Meters?

f. As a responsible corporate resident of the state of Pennsylvania, concerned with providing adequate, efficient, safe, and reasonable service for the accommodation, convenience, and safety of its patrons, to what extent are You aware of and acknowledge the numerous reports, statements, and warnings by respected and prestigious organizations such the World Health Organization (WHO), the National Institutes of Health (NIH), the National Toxicology Program (NTP), the American Cancer Society (ACS), the American Academy of Pediatrics (AAP), the American Academy of Environmental Medicine (AAEM), etc., as well as numerous experts in the medical and technology fields, with regard to the exposure of Your customers to regular and frequent pulsed Radiofrequency (RF) radiation and Low Frequency (LF) radiation from Your Smart Meter system?

ANSWER:

4. Produce all Documents, including but not limited to studies, that relate to Your answer to Discovery Request No. 3.

ANSWER:

5. Do You stand behind and guarantee Your claim that "Your wireless Smart Meter system is harmless"? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for all health and medical consequences that occur as a result of Your wireless Smart Meter system?

ANSWER:

6. To the extent not articulated in Your response to the preceding requests, state all facts that support Your claim that Duquesne Light's installation of a Smart Meter at the Property does/will not pose a reliability, safety, or quality problem.

a. What are the physical elements, components, and materials used in the construction of Your electrical Smart Meter? Electronic components? Circuit boards? Flammable materials?

b. In the United States, Authorities Having Jurisdiction (AHJs) assert that certification of electrical equipment is necessary and that Underwriters Laboratories is the preferred safety certification organization. Does a UL Mark appear on Your Smart Meter?

c. Can overheating of the electronic components and flammable materials inside of Your Smart Meters cause the components to degrade, expand, "pop", smoke, burst into flame, burn, and/or explode, with a single occurrence or repeatedly over time?

d. Does Your Smart Meter contain anything to warn the homeowner of overheating, fire danger, or explosion?

e. Has destructive testing been carried out on Your Smart Meter?

i. If so, what were/are the failure modes/mechanisms? What were/are the occurrences of overheating, smoking, burning, popping, and explosions when the Smart Meter components are overstressed?

ii. If not, how do you know what the failure modes of Your Smart Meters are, and how do you know they are safe?

f. Does Your Smart Meter provide Circuit Breaker protection for the homeowner?

g. Does Your Smart Meter provide Surge Arrestors designed to withstand and protect the homeowner's internal electrical system and connected appliances from large voltage surges and other events originating on the utility-side electrical grid?

h. How does Your Smart Meter compare with the innate ability of the traditional strictly Analog Meter to protect the homeowner from large voltage surges and other events originating on the utility-side electrical grid?

i. What measures exist in Your Smart Meters to assure safe and reliable operation, and prevent degradation over time, due to power surges and environmental factors such as debris, humidity, vibration, salt water, etc. which can lead to the occurrence of "hot sockets" that is superior to the traditional strictly Analog Meter?

j. To what degree is Your Smart Meter susceptible to damage from "hot sockets" as compared with the traditional strictly Analog Meter?

k. What risks and responsibilities do You assume, and what risks and responsibilities does the homeowner assume, once Your Smart Meter is installed on their residence, as many insurance companies will not cover fires related to Smart Meter failures?

i. Do You assume any responsibility for damage done to the customer's/homeowner's electrical wiring, electrical appliance, utility meter box, building structure, etc. due to voltage surges or other events originating on the utility-side electrical grid?

ii. Are customers/homeowners informed of these risks and responsibilities?

l. Thousands of fires have been documented in PA, CA, TX, FL, NV, IL, and across Canada in buildings after the installation of Smart Meters, including Your Smart Meter (the SK9AMI7). Property has been damaged, and there have been injuries and fatalities. Causes have been attributed to power/voltage surges, overheating, and old building wiring. To what extent are You aware of and acknowledge these occurrences, and what specific measures have you instituted to ensure the safety of your customers?

m. How many SK9AMI7 Smart Meters have been removed or recalled from the field for reasons of quality, safety, and reliability?

ANSWER:

7. To the extent they have not been previously requested or produced, produce all Documents that relate to Your response to Discovery Request No. 6.

ANSWER:

8. Do You stand behind and guarantee Your claim that "Your wireless Smart Meter system is safe and reliable"? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for any and all property damage and personal harm, etc. that occurs as a result of Your wireless Smart Meter system?

ANSWER:

9. State all facts that support Your claim that Duquesne Light's manner of installing its Smart Meters is safe.

a. Installations are not being carried out by Duquesne Light certified electricians. Duquesne Light has subcontracted its Smart Meter installation out to contractors who deploy installer technicians with varying degrees of training and expertise, such as Wellington Power Corporation.

i. How much education, experience, and what specific training do the installer technicians subcontracted by Duquesne Light have, and what, if any, are their certifications?

ii. What quality control measures are in place to ensure that their education and training is sufficient and properly maintained, and that the proper installation protocols are being followed?

b. The installation of Your Smart Meters has been directly witnessed and observed by many, including myself. The focus is on speed of deployment in a neighborhood (deploying as many devices as possible in the shortest time), not safety. The meters are just simply and quickly changed out in what is called a "hot install."

i. What is Duquesne Light's specific installation protocol and procedure that is followed to ensure the safety of its customers/homeowners?

ii. What measures has Duquesne Light instituted to make sure that this protocol and procedure are being properly and consistently followed in the field?

iii. Does Duquesne Light condone and authorize the use of a "hot install"?

iv. How does Duquesne Light protect its customers/homeowners and their property from the potential of "electric flash, arching, or sparking" upon a "hot install"?

c. Are the customer's/homeowner's neutral connections considered and checked by a certified electrician for damage or corrosion prior to installation?

i. If so, how is this inspection done and what does it involve?

d. Are the age and condition of the customer's/homeowner's electrical system, wiring, and meter box bases considered and checked by a certified electrician prior to installation of Your Smart Meter to ensure that the sockets and house wiring is compatible with the installation of your Smart Meter?

i. If so, how is this inspection done and what does it involve?

ii. How many residences have failed this inspection?

iii. What are the observed frequencies and occurrences of

aa. damage or melting around the meter tabs/blades?

bb. pitting in the socket jaws?

cc. loss of spring tension in the socket jaws?

dd. oxidation on the lug wires?

ee. evidence of arcing?

ff. sockets that are unsafe or not up to code?

gg. other abnormal conditions?

iv. What other safety related issues have been observed?

v. How has Duquesne Light addressed these safety related issues when they occurred?

e. What testing for "hot sockets" is performed during the installation of Your Smart Meter?

f. Is the electric power to the residence turned off at the utility pole, etc. during the installation of Your Smart Meter to protect the customer's/homeowner's electrical system and appliances from damage due to the installation process? If not, why not?

g. Is the general protocol that the installation is carried out irrespective of the condition of the residence and its electrical system? If not, how not?

ANSWER:

10. Produce all Documents that relate to Your response to Discovery Request No. 9.

ANSWER:

11. Do You stand behind and guarantee Your claim that "Your manner of installing Your Smart Meters is safe"? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for any and all property damage and personal harm, etc. that occurs as a result of the installation of Your wireless Smart Meter?

ANSWER:

12. State all facts that support Your claim that Duquesne Light's installation of a Smart Meter at the Property is reliable and secure.

a. With everyone from individuals in the home to secure government installations being the targets of ongoing cyber attacks, that are routinely reported in the press, by law enforcement, and in trade journals, which have resulted in the loss of "secure" identity, medical, financial, etc. information, incurring, at times, massive and devastating personal, financial, business, etc. damage and loss, and in which experts in the security field such as Former CIA Director James Woolsey have repeatedly issued dire warnings, what justification can You provide that Your security protocols for Your Smart Meter system are effective, are any different, and any better than the best security systems in the country which have already been breached?

b. How is the security of our personal information, of the electricity to our Property, of the electrical infrastructure of the state of Pennsylvania not made significantly more vulnerable by the deployment and proliferation of hundreds of thousands to millions of wireless programmable end-metering devices, such as Your Smart Meters, and Your Collector Meters, Your Repeaters, Your Data Storage Centers, etc, which are effectively hundreds of thousands to millions of open portals into the electrical energy infrastructure of the state?

c. Has the delivery of electricity to any of Your customers been unintentionally interrupted by a shutdown switch

i. that You did not trigger with a wireless signal?

iii. that You triggered accidentally with a wireless signal?

d. Have there been any attempts at cyber hacking of Your wireless Smart Meter system?

i. If yes, what were the nature and outcome of these attempts?

ii. If yes, have You incurred any costs as a result of such hacking

aa. from lost revenue?

bb. in identifying the specific cyber vulnerability that enabled the hacking?

cc. for software or hardware revisions to correct the cyber vulnerability?

dd. for replacing, recalling, or modifying Your Smart Meters?

iii. If You have incurred costs as a result of hacking, were those costs passed on to Your customers?

ANSWER:

13. Produce all Documents that relate to Your response to Discovery Request No. 12.

ANSWER:

14. Do You stand behind and guarantee Your claim that "Your Smart Meter system is secure"? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for any and all Property damage and personal harm, etc. that occurs as a result of the hacking, breach, or abuse of Your Smart Meter security system?

ANSWER:

15. Given the controversial nature of wireless Smart Meter deployment, and the increasing negative reports and warnings appearing in the press, and in medical and trade publications, state the facts indicating that the installation of Your Smart Meter will not have a negative impact on the value of our Property?

ANSWER:

16. Produce all Documents that relate to Your response to Discovery Request No. 15.

ANSWER:

17. Do You stand behind and guarantee Your claim that "Your Smart Meter system will not negatively affect the value of our Property"? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for any loss in value of our Property that occurs as a result of the installation of Your Smart Meter system?

ANSWER:

18. What is the nature and specificity of the customer data being collected by Your Smart Meter system, and how do You intend / plan to use that customer data?

a. Will this personal data only be used for billing purposes internal to Duquesne Light?

b. What protections are in place to ensure the privacy of this personal data?

c. If this personal data is to be used for other than billing purposes, what are those purposes, and will this be done only with the knowledge and written consent of the customer/homeowner?

d. Will this personal data be used to monitor and/or profile the customer/homeowner?

e. Have You received any requests for this personal data from any individual, company, or organization for the purposes of profiling, data-mining, etc.?

f. Have You offered this personal data to any individual, company, or organization?

g. Have You sold this personal information to any individual, company, or organization?

h. Do You have plans in the future to market this personal data in any way for the purposes of creating new income streams?

ANSWER:

19. Produce all Documents that relate to Your response to Discovery Request No. 18.

ANSWER:

20. Do You stand behind and guarantee Your claim that "our personal data collected by Your Smart Meter system will remain secure and private within Duquesne Light"? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for any loss, abuse, or misuse of our personal data, and any use of our personal information for other than billing purposes without our knowledge and written consent, that is collected and stored by Your Smart Meter system?

ANSWER:

21. How many incidents have occurred, and how many customers have filed concerns and complaints with Duquesne Light, concerning Your Smart Meters with regards to, but not limited to,

a. health?

b. safety, reliability, and fires?

c. privacy?

d. security?

e. electrical and device interference?

f. increased and increasing electrical bills, and over-billing charges?

What were the specifics of these incidents or complaints?

ANSWER:

22. Has Duquesne Light provided any relief or accommodation from their Smart Meter system to any individual, official, group, community, organization, etc. for any reason at any time?

a. If so, list those individuals, officials, groups, communities, organizations, etc., and the reasons for that relief or those accommodations?

ANSWER:

23. To the extent not previously requested or produced, produce all Documents that You intend to offer into evidence at any hearing in this matter.

ANSWER:

24. State the full name, title, affiliation, address, and telephone number of each person who You expect to call to testify at any hearing of this matter.

ANSWER:

25. State the full name, title, affiliation, address, and telephone number of each person who You expect to call to testify as an expert witness at any hearing of this matter and, for each expert witness, state:

a. The subject matter on which the expert is expected to testify;

b. The substance of the facts and opinions to which the expert is expected to testify; and

c. A summary of the grounds for each expert opinion.

ANSWER:

26. Produce the report of any expert You intend to call to testify on Your behalf at trial.

ANSWER:

27. Produce the curriculum vitae of any expert that You intend to call to testify on your behalf at trial.

ANSWER:

Respectfully submitted,

Francis Hriadil

Francis Hriadil
(412) 779-3314
331 Shady Ridge Drive
Monroeville, PA 15146
October 5, 2017

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

MICHELE HRIADIL and FRANCIS HRIADIL,	:	
Complainant,	:	
vs.	:	No: C-2016-2571726
DUQUESNE LIGHT COMPANY,	:	
Respondent.	:	

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document upon the participant listed below in accordance with the requirements of 52 PA. Code § 1.54 (relating to service by a participant):

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(412) 594-5619 (Fax)

Counsel for Respondent, Duquesne Light Company

Dated this 5th day of October, 2017

Francis Hriadil

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Monroeville, PA 15146
(412) 779-3314
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EXHIBIT
B

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

MICHELE HRIADIL and
FRANCIS HRIADIL,

Complainants,

v.

DUQUESNE LIGHT COMPANY,

Respondent.

No: C-2016-2571726

RESPONDENT'S RESPONSES TO SET #1 OF DISCOVERY REQUESTS

Filed on Behalf of:
Duquesne Light Company

Counsel of Record for this Party:

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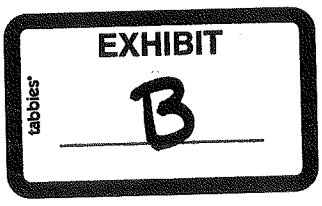


BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

MICHELE HRIADIL and FRANCIS HRIADIL,	:	
Complainants,	:	
vs.	:	No: C-2016-2571726
DUQUESNE LIGHT COMPANY,	:	
Respondent.	:	

RESPONDENT'S RESPONSES TO SET #1 OF DISCOVERY REQUESTS

Respondent Duquesne Light Company ("Duquesne Light") submits the following Responses to Set #1 of Complainants' Discovery Requests:

GENERAL RESPONSES AND COMMENTS

1. Duquesne Light's responses to Complainants' Set #1 of Discovery Requests (the "Discovery Requests") are made to the best of its present knowledge, are based upon information currently known to Duquesne Light, and are given without prejudice to its right to change, supplement, and/or clarify its answers and responses, if necessary.

2. To the extent that the Discovery Requests purport to enlarge Duquesne Light's obligations beyond the requirements of the applicable rules of practice and procedure and/or imprecisely specify the information requested and/or documents requested, Duquesne Light has endeavored in good faith to produce discoverable information that can reasonably be identified as responsive to the Discovery Requests.

3. Duquesne Light's responses to the Discovery Requests are limited to the smart meters being installed in the company's service territory.

4. Duquesne Light's responses to the Discovery Requests are made subject to, and without in any way waiving or intending to waive, any objections as to the competency, relevancy, materiality, privilege or admissibility of evidence, for any purpose, of any of the

information provided and/or documents produced. In the event that any privileged information is divulged by Duquesne Light, its disclosure is inadvertent and does not constitute a waiver of any privilege.

5. Duquesne Light's responses to the specific Discovery Requests are written in bold font below.

DISCOVERY RESPONSES

1. State all technical, functional, and operational characteristics (i.e. how it actually operates and is operated in the field) of Your Smart Meter (the SK9AMI7) in Your Smart Grid, including but not limited to:

a. What versions (standard Meter, Collector Meter, etc.) of Your Smart Meter (the SK9AMI7) are you installing on customer's residences? How are they different?

Duquesne Light is installing the HW 3.1 OpenWay CENTRON singlephase meter on all residential structures within its service territory.

b. What are the makes and models of all wireless communications modules in each version of Your SK9AMI7? What are their purpose, function, capability, and operational characteristics?

The 900MHz communication module within the OpenWay CENTRON meters being installed in Duquesne Light's service territory is an Itron-designed proprietary circuit board. The 2.4GHz wireless interface is also an Itron proprietary design and integrated to the meter register circuit board. Both of the radios fall under the FCC ID: SK9AMI7. It is unclear what specific additional information is being sought by this request, but see Duquesne Light's responses to the remaining requests for additional information.

c. What is the Absolute Peak Power Output of the 900 MHz RF transceiver and the 2.4 GHz Zigbee transceiver in each version of Your SK9AMI7 Smart Meter?

The technical details for both radios in SK9AMI7 are shown below:

Technical Information 900 MHz LAN Radio

Antenna Type: Quarter Wave Embedded Slot Antenna
Antenna Gain: 2.2dBi
Transmitter Conducted Power: 28.38dBm, 688.65mW
Maximum System EIRP: 30.58dBm, 1142.88mW

Technical Information 802.15.4 Zigbee Radio

Antenna Type: Quarter Wave Embedded Slot Antenna
Antenna Gain: 3.8dBi
Transmitter Conducted Power: 18.13dBm, 65.01mW
Maximum System EIRP: 21.93dBm, 155.96mW

d. What is the Gain of the antenna(s) of each version of Your Smart Meter, in the direction of maximum gain, at each of the frequencies of operation (900 MHz, 2.4 GHz)?

See response to Discovery Request #1(c).

e. What is the exact Transmission Burst Time interval of each version of Your SK9AMI7?

The OpenWay network deployed within Duquesne Light's service territory operates as a frequency-hopping, mesh network. When transmitting, each device will transmit for up to 150 milli-seconds in each time slot.

f. What is the complete Duty Cycle range (minimum, average, maximum) of each version of Your Smart Meter (the SK9AMI7), and their corresponding Transmission Times in 24 hours (900 MHz, 2.4 GHz)?

The transmit duty cycle for the 900MHz radio within the OpenWay network deployed within Duquesne Light's service territory will vary based on a number of factors, including, but not limited to, where in the mesh network topology the meter is located, the quality of the radio links to neighboring meters, and the level of interference present. Therefore, the most accurate way to estimate the transmit duty cycle is from a statistically significant sample of a representative deployment. The table below shows the Mean, Maximum, Minimum and Median transmit duty cycle for a sample of approximately 7,000 meters over a representative 24-hour window of operation.

	Duty Cycle	Time
Mean	0.06%	53.14 seconds per day
Maximum	0.58%	497.8 seconds per day
Minimum	0.02%	18.31 seconds per day
Median	0.06%	49.81 seconds per day

The OpenWay meter's 2.4GHz Zigbee radio communicates with other HAN (Home Area Network) devices. The table below shows the measured transmission times for an idle Zigbee radio and a Zigbee radio with one of two

sample devices joined to the meter. Duquesne Lights expects that, for current deployments, the average meter will have either zero (idle) or one HAN device attached to it.

	Duration of transmission in a 24-hour period	Duty Cycle
Idle Zigbee Radio (no devices joined)	9.9 seconds	0.01%
Meter with Tendril IHD (In Home Display)	132 seconds	0.15%

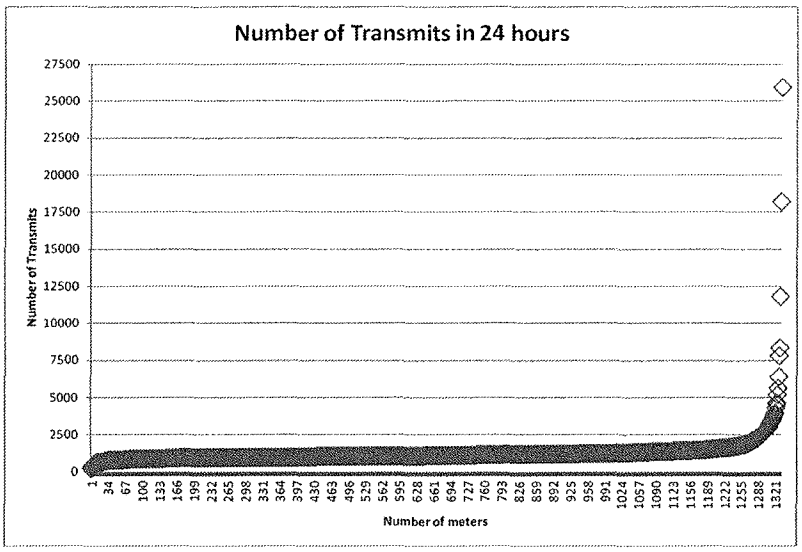
g. What is an average and maximum total duration time (in seconds) that each version of Your residential Smart Meter transmits and/or receives any signal in a 24 hour period (900 MHz,2 4 GHz)? How is this computed or measured?

See response to Discovery Request #1(f).

h. How many times/transmissions in total (average, maximum) for any purpose is each version of Your Smart Meter configured to transmit during a 24-hour period (900 MHz, 2.4 GHz)?

This will vary depending on business process, which will determine how read schedules are set up. Typically, there are three to four scheduled reads from each meter in a 24-hour period. With a hierarchical cell structure, meters will relay upstream and downstream traffic within the RF mesh. The total number of transmissions will include the scheduled reads, on-demand reads, and alarms/alerts along with the network traffic needed for command and control (synchronization, security, data integrity and dynamic network resiliency). Based on data gathered from a large, representative OpenWay network deployment (two load profile reads + one register read + one event read per day), the total transmissions are:

- **The average number of transmissions in a 24-hour period is approximately 1,268 (less than 1 time/minute);**
- **The maximum number of transmissions in a 24-hour period is approximately 25,916 (18 times/minute or about once every 3.3 seconds);**
- **Looking at the distribution of the field data gathered, only a small percentage of the meter population will transmit near the maximum value. In fact, 97 percent of the meters in this random sample transmitted less than 2,500 times in a 24-hour period.**



i. How many of those times (average and maximum) are to transmit electric usage information?

This will vary depending on business process, which will determine how read schedules are set up. Typically, there are two or three scheduled reads for usage data from each meter in a 24-hour period.

ii. How many of those times (average and maximum) are for other purposes? What are those other purposes?

This will vary with business process, which will determine how read schedules are set up. Typically, there are two or three scheduled reads for purposes other than returning usage data from each meter in a 24-hour period. These are typically for doing a register read and/or events read. The balance of the transmissions are for network command and control: synchronization, security, data integrity and dynamic network resiliency.

iii. What are the number of times (average and maximum) by type/category of transmission?

Detailed analysis of the type/category of transmissions has not been completed. One data point from the gathered field data is that, on average, the segmentation between meter data transmissions (scheduled and/or on-demand) and network command and control (synchronization, security, data integrity and dynamic network resiliency) is expected to be:

- **Transmissions of meter data: 10%**
- **Transmissions for network command/control: 90%**

i. Under what scenarios does each version of Your Smart Meter transmit outside of the daily schedule, i.e., transmissions such as on-demand reads, tamper/theft alerts, last gasps, firmware upgrades, etc.?

Duquesne Light cannot reasonably determine what information is sought by the "etc." abbreviation and provides the following information in response to the remaining portions of Discovery Request #1(i):

- **On-Demand Reads: These reads are outside of the daily read cycle and will be fully dependent on business processes. Each On-Demand read will generate one downstream and one upstream packet with average transmission duration of 125mSec.**

- **Tamper/Theft Alerts: These alerts vary based on the environment of the deployment. Each event will generate a single upstream packet with average transmission duration of 18 mSec.**

- **Last Gasp: This will be highly dependent on the frequency and extent of the power outages in the coverage area. Each meter will send three last gasp messages when a power outage is detected with average transmission duration of 18 mSec.**

- **Firmware Download: Firmware downloads over the RFLAN are typically done once a year (reflecting major system releases). The firmware download process is a background activity for the network typically spanning from 12 hours to 12 days (depending on the number/type of firmware modules downloaded). Measurements at the Itron meter farm indicate the firmware download adds approximately 2% overhead to the network traffic. For example, a download of 347KB register firmware will take up to 8 days. On a 1G RFLAN system with 150 Byte packets, this results in:**

    - **347,000 Bytes/150 Bytes/Pkt = 2,313 Pkts**

    - **2,313 Pkts/8 Days = 289 Pkts/Day (12 Pkts/Hour)**

    - **Each packet represents one downstream broadcast transmission of approximately 150 mSec.**

- **Network Synchronization: The nature of an RF mesh network requires that meters maintain communications with their neighbor meters to ensure the stability, self-healing and integrity of the network. A good example of this is timing synchronization where meters send their neighbor meters time-synchronization packets at regular intervals to ensure all of the devices in the network are synchronized for time slot usage. Time-synchronization packets are sent approximately every 93 seconds with average transmission duration of 18 mSec.**

j. Typically, how much of the communication between the customer's Smart Meter

i. and other Smart Meters in the customer's area grid is unscheduled vs. scheduled?

See response to Discovery Request #1(h)(iii).

ii. and You (Duquesne Light) is unscheduled vs scheduled?

The majority of the communications between the customer's meter and the utility is based on scheduled data requests (interval data read, register reads, events read, network statistics read). The amount of communication for on-demand reads and events will be highly dependent on business processes and the environment of the deployment (e.g., outage and tamper events). The network overhead does not represent communication between a meter and the utility (i.e., does not route back to the head end system). These overhead transmissions are required for the proper operation of the dynamic, self-healing RF mesh. The 53 seconds that an average OpenWay meter transmits in one day includes all of the communications described above.

k. Are there any other factors that go into determining duration and/or frequency of Your Smart Meter's transmissions (e.g., if a meter can't access the network when it's trying to send usage data, meter ID, etc.)? If yes, please identify these factors.

When meters first join a network, they go through a sequence of three discovery beaconing phases to find the network and appropriate neighbor devices to sponsor them on to the network. Each of the phases are described below:

- **Phase 1 of Discovery: approximate 9 minute duration; 156 cycles of 1.04 seconds of beaconing (20ms beacon on each of 52 channels); followed by 2.5 seconds of listening (no transmissions).**
- **Phase 2 of Discovery: approximate 55 minute duration; 99 cycles of 1.04 seconds of beaconing; followed by 32.5 seconds of listening.**
- **Phase 3 of Discovery: Remaining time until it joins the network; continuous cycles of 1.04 seconds of beaconing; followed by 1 hour, 2.5 seconds of listening.**

Once on the network, the meter will behave as outlined above.

l. What is the amount of RF emission at the source of each version of Your Smart Meter when Your Smart Meter is transmitting data (instantaneous maximum peak level, averaged over 30 minutes)?

The limits for Maximum Permissible Exposure (MPE) established by the FCC account for a 20cm distance from the source to the measurement point. The RF emissions for the OpenWay meters deployed by Duquesne Light without this 20cm distance (at the antenna source) are:

<u>900 MHz LAN Radio</u>

- **Transmitter Conducted Power: 28.38dBm, 688.65mW**
- **Antenna Gain: 2.2dBi**
- **Maximum System EIRP: 30.58dBm, 1142.88mW**
- **With 1 percent duty cycle over 30 minute interval: 1.143mW**

<u>2.4GHz Radio</u>

- **Transmitter Conducted Power: 18.13dBm, 65.01mW**
- **Antenna Gain: 3.8dBi**
- **Maximum System EIRP: 21.93dBm, 155.96mW**
- **With 1 percent duty cycle over 30 minute interval: 1.56mW**

Note: The maximum observed duty cycle was 0.58%. This has been rounded up to 1 percent.

m. Does the amount of RF emission vary depending on duration of transmission/volume of data being sent? For example, are RF emissions higher when there is a larger volume of data to be transmitted?

No. The level of RF emissions (radiated power level) is fixed and the levels are shown in the response to Discovery Request #1(c). Only the duration of transmission will vary with the amount of data being sent.

n. Are there any other factors that impact the amount of RF emissions? If so, please identify the factor(s) and their impact on RF emissions.

The factors impacting RF emissions have been discussed above.

o. Is there RF emission when Your Smart Meter is not transmitting? If yes, what is the amount of RF emission?

Yes. All solid state electronic devices emit RF emissions due to processor clock signals and power supplies (such as televisions, DVD players, cell phones, computers and solid state meters). These types of unintentional emissions have limits set by the FCC in the Code of Federal Regulations, Title

47, Part 15 (47 CFR 15), Subpart B, Class B Devices. The smart meters being installed in Duquesne Light's service territory are tested and validated to be compliant with these FCC requirements.

p. Is there a difference in the amount of RF emissions for Your Smart Meter with the transceivers off and a Smart Meter with the transceivers removed and not present? If yes, what is that difference and how is it calculated?

No. When the radio is off, it does not transmit. The unintentional RF signals from the meter's solid state electronics will remain virtually unchanged with the radio turned off or removed.

q. Is there a difference in the amount of RF emissions for Your Smart Meter with the transceivers off and a traditional Analog Meter? If yes, what is that difference and how is it calculated?

Since smart meters are solid state electronic devices and Ferrous meters are electro-magnetic devices, their behavior is different and, to the best of Duquesne Light's knowledge, a comparison has therefore not been undertaken. Both devices, however, must comply with the same FCC regulations.

r. Since the SK9AMI7 is programmable, what control methods and capabilities do You have to change, adjust, or modify the Duty Cycle of the SK9AMI7 either directly or remotely?

The Duty Cycle of the Itron OpenWay meters has been established using a large population of deployed meters with a typical daily read schedule to ensure validity. This read schedule can be modified. Studies have not been undertaken to quantify the difference in Duty Cycle when the read schedule of the meters is modified. The expectation is that there will be minimal variance in the Duty Cycle with typical changes to read schedules.

s. What is the operational difference between Your standard residential Smart Meter and Your larger Collector Smart Meters?

Duquesne Light does not use a collector smart meter.

i. Is the customer informed that his/her residence/property has been chosen to house one of Your larger Collector Smart Meters, as opposed to Your standard residential Smart Meter?

See response to Discovery Request #1(s).

ii. Is the customer given the option to refuse to house Your Collector Smart Meter?

See response to Discovery Request #1(s).

t. Describe the function and operation of the Switch-Mode Power supply that supplies power to Your Smart Meter (the SK9AMI7?

The power supply is used to convert AC voltage to DC voltage to operate electronics in the meter. The HW 3.1 OpenWay Centron singlephase meter uses a capacitive switcher to drive a linear which then drives a buck convertor.

i. How does the AC/DC switching circuitry draw power from the customer's line?

Power supplied to the meter to energize meter electronic circuits is drawn from the line side terminals (utility side) of the meter. Utility customers are not charged for the power consumed by the meter.

ii. What voltage spiking, harmonics, additional loads and stresses does this introduce onto the customer's household interior electrical wiring?

Interior electrical wiring is the responsibility of the customer and/or homeowner and can vary by location. The smart meters being installed within Duquesne Light's service territories comply with the limits established by the FCC and have been validated by several outside laboratories, including UL.

iii. In addition to the customer's electrical usage, is the customer being charged for the additional power used to operate Your Smart Meter?

No.

u. Do you provide the customer/homeowner with the option to disable the 2.4GHz Zigbee Transceiver?

No.

2. Produce all Documents, including but not limited to studies, that relate to Your answer to Discovery Request No. 1.

The following documents are attached:

- **FCC RF Exposure Report for SK9AMI7**
- **OpenWay Wireless Transmissions 24 Hour Duty Cycle**
- **AMI7 EMC Report**
- **Duquesne Light's Final Smart Meter Plan - dated June 29, 2012**
- **Duquesne Light's Petition for Approval of Settlement - dated December 7, 2012**
- **Opinion and Order of the Pennsylvania Public Utility Commission - entered May 6, 2013**

- **Petition of Duquesne Light Company to Modify its Smart Meter Plan - dated August 4, 2015**
- **Initial Decision of Administrative Law Judge Katrina Dunderdale - dated October 31, 2016**
- **Opinion and Order of the Pennsylvania Public Utility Commission on Duquesne Light's Petition for Approval to Modify its Smart Meter Plan - entered April 7, 2017**
- **Duquesne Light's Responses to Interrogatories of the Office of Consumer Advocate - Set III**
- **An Investigation of Radiofrequency Fields Associated with the Itron Smart Meter**
- **Application for Approval of Duquesne Light's Assessment of Needs, Technology Solutions and Vendor Selection**
- **Smart Meter Q&A**
- **Understanding Radiofrequency and Your New Meter**
- **Myths vs. Facts: The Truth About Smart Meters**
- **Data Privacy and Your New Meter**
- **Duquesne Light's Privacy Policy**
- **UL Online Certification Directory.**

3. State all facts that support Your claim that Duquesne Light's installation of a Smart Meter at the Property will not negatively affect the health and/or medical condition(s) of Michele Hriadil, Francis Hriadil, and/or any pets or animals, and/or any visitors including but not limited to the elderly, children, babies, pregnant mothers and their fetuses, etc.

Duquesne Light is required by law to install smart meters throughout its service territory, which includes Complainants' home. The company's smart meter procurement and implementation plan has been approved by the Pennsylvania Public Utility Commission, which is prima facie evidence that it is safe, reasonable, and in compliance with the law. Furthermore, the smart meters being installed in Duquesne Light's service territory meters are compliant with the applicable FCC regulations for both intentional and unintentional radiation. See also the documents being produced in connection with Duquesne Light's discovery responses. Duquesne Light cannot reasonably determine what information is sought by the "etc." abbreviation and relies on its responses set forth above and below.

a. What analyses, if any, did You carry out to ensure that the Radiofrequency (RF) radiation, and Low Frequency (LF) radiation induced by the Switch-Mode Power supply, from Your wireless Smart Meter system would be safe for all of Your customers, and those living at or visiting their Property?

See response to Discovery Request #3.

i. If You did not carry out any analyses, how then did You

establish that Your wireless Smart Meter system is safe for all of Your customers, and those living at or visiting their Property?

See the response to the preceding Discovery Request.

b. Did your analysis/assessment consider the Radiofrequency (RF) radiation from a single wireless Smart Meter, or the radiation from all components of Your wireless Smart Meter system including

i. all wireless Smart Meters in a community?

ii. all intermediate wireless relay devices in a community such as any wireless Collector Smart Meters and Repeaters?

iii. all wireless Transmitters/Receivers required to communicate between the intermediate wireless relay devices and Duquesne Light or its agents?

As required by the FCC, Itron assessed all of the active radios within the device. As with any other FCC-compliant device, Duquesne Light is not responsible for deployment of other devices in proximity of the meters. Itron has published a white paper that specifically addresses the levels of RF exposure from meter banks: "The Facts on RF Exposure from Meter Banks." A key factor highlighted in this paper is that the RF levels fall off very quickly over distance. This results in minimal additive levels of RF exposure from multiple devices in a given area.

c. Recognizing that the science indicates there are many conditions that can affect and influence Radiofrequency radiation levels in the home environment, does Your installation account for:

Before responding to each individual request below, Duquesne Light notes that this request is not only argumentative, but also overly broad with respect to what it contends that "science" indicates. Furthermore, Duquesne Light exercises responsibility for its equipment, but customers and/or homeowners are responsible for the internal circuitry and appliances that are located within a particular structure.

i. uncertainties about the existing RF environment that exist at a location, such as how much RF exposure already exists at a location?

No.

ii. what kind of reflective and re-radiation interior and exterior environments exist at a location? (It is established science that

reflections and re-radiation can come from common building materials ((tile, concrete, stainless steel, glass, ceramics)) and highly reflective appliances and furnishings that are common in kitchens, etc.)

No.

iii. how interior and exterior space is utilized near walls where the Smart Meters are mounted?

No.

iv. the specific physical condition(s) of the residents, and all likely visitors to the residence, including but not limited to age, medical condition(s), disabilities, medical implants, relative health, reliance on critical care equipment that may be subject to electronic interference, etc.?

No.

v. the location of Your Smart Meter on the residence in close proximity to, or in co-location with, other Smart Meters on the same building, such as with connected condominiums (like the Complainant's Property), apartment buildings, etc.?

No.

vi. unrestrained access to areas of the Property where Your Smart Meter(s) are located?

This request is so vague that Duquesne Light cannot reasonably be expected to form a complete response. See Duquesne Light's response to the preceding Discovery Requests.

d. What if anything is taken into account concerning the installation of Your Smart Meter?

This request is so vague that Duquesne Light cannot be reasonably expected to form a complete response, but Duquesne Light considers safety, reliability, and efficiency when installing smart meters throughout its service territory.

e. Are customers/homeowners provided with any written notice of the dangers and inherent risks associated with being in close proximity to Your Smart Meter on a regular

basis?

This request is argumentative and Duquesne Light disagrees with the premise of this request, which is that there is a danger and/or inherent risk of being in some undefined "close proximity" to the smart meters being installed throughout its service territory.

i. Is a safety barrier provided to ensure and maintain the required safe separation distance for all persons, children, animals, etc?

No.

ii. Are there warning labels on Your Smart Meters?

The Smart Meter contains a standard message that warns against introducing currents at voltages above the meter's design tolerance.

f. As a responsible corporate resident of the state of Pennsylvania, concerned with providing adequate, efficient, safe, and reasonable service for the accommodation, convenience, and safety of its patrons, to what extent are You aware of and acknowledge the numerous reports, statements, and warnings by respected and prestigious organizations such the World Health Organization (WHO), the National Institutes of Health (NIH), the National Toxicology Program (NTP), the American Cancer Society (ACS), the American Academy of Pediatrics (AAP), the American Academy of Environmental Medicine (AAEM), etc., as well as numerous experts in the medical and technology fields, with regard to the exposure of Your customers to regular and frequent pulsed Radiofrequency (RF) radiation and Low Frequency (LF) radiation from Your Smart Meter system?

This request does not refer to any specific documents and is so vague that Duquesne Light cannot be reasonably expected to form a complete response, but Duquesne Light is generally aware that various entities have produced publications relating to RF and LF.

4. Produce all Documents, including but not limited to studies, that relate to Your answer to Discovery Request No. 3.

The following documents are attached:

- **RF Safety Compliance of OpenWay Smart Meters and the CG-Mesh IPv6 Network**

- **The Facts on RF Meter Banks.**

5. Do You stand behind and guarantee Your claim that "Your wireless Smart Meter system is harmless"? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for all health and medical consequences that occur as a result of Your wireless Smart Meter system?

This request is vague, ambiguous, and lacks a factual foundation as it does not indicate how or when Duquesne Light made the alleged statement in question. Duquesne Light reiterates that it is required by law to install smart meters throughout its service territory, which includes Complainants' home. The company's smart meter procurement and implementation plan has been approved by the Pennsylvania Public Utility Commission, which is prima facie evidence that it is safe, reasonable, and in compliance with the law. Duquesne Light's alleged liability for any acts or omissions will be adjudicated through the appropriate legal proceedings based on the facts of each case.

6. To the extent not articulated in Your response to the preceding requests, state all facts that support Your claim that Duquesne Light's installation of a Smart Meter at the Property does/will not pose a reliability, safety, or quality problem.

See response to Discovery Request #5.

a. What are the physical elements, components, and materials used in the construction of Your electrical Smart Meter? Electronic components? Circuit boards? Flammable materials?

The terms used in this request are vague. Duquesne Light offers the following table, which lists the common material used in the HW 3.1 OpenWay CENTRON meter:

CEN-II	
Component	***Material***
Base and Switch Cover	PET RYNITE FR 515
Outer Cover, Inner Covers, OEM Support and Register Display	Polycarbonate
Electrical components; resistors, capacitors, diodes, transistors, integrated chips (IC)	Common supported materials used to manufacture electrical components

Printed Circuit Boards	Fiberglass epoxy resin with copper foil

b. In the United States, Authorities Having Jurisdiction (AHJs) assert that certification of electrical equipment is necessary and that Underwriters Laboratories is the preferred safety certification organization. Does a UL Mark appear on Your Smart Meter?

No, but the HW 3.1 OpenWay CENTRON singlephase was UL 2735 tested and approved on May 30, 2015.

c. Can overheating of the electronic components and flammable materials inside of Your Smart Meters cause the components to degrade, expand, "pop", smoke, burst into flame, burn, and/or explode, with a single occurrence or repeatedly over time?

Duquesne Light cannot and will not speculate as to what might happen to the components of a smart meter based on a vague and unidentified set of facts. As noted by the responses to the preceding Discovery Requests, the smart meters being installed in Duquesne Light's service territory fall within the limits established by the FCC, have been tested and approved by UL, and the company's smart meter procurement and implementation plan has been approved by the Pennsylvania Public Utility Commission, which is prima facie evidence that it is reasonable, safe, and in compliance with the law.

d. Does Your Smart Meter contain anything to warn the homeowner of overheating, fire danger, or explosion?

The Smart Meter contains a standard message that warns against introducing currents at voltages above the meter's design tolerance.

e. Has destructive testing been carried out on Your Smart Meter?

This question is so vague that Duquesne Light cannot reasonably be expected to form a complete response.

i If so, what were/are the failure modes/mechanisms? What were/are the occurrences of overheating, smoking, burning, popping, and explosions when the Smart Meter components are overstressed?

See response to Discovery Request #6(e) above.

li If not, how do you know what the failure modes of Your Smart Meters are, and how do you know they are safe?

See response to Discovery Request #6(e) above.

f. Does Your Smart Meter provide Circuit Breaker protection for the homeowner?

No. Protection of the internal electrical circuitry and appliances are the responsibility of the customer and/or homeowner. See section 13 of Duquesne Light's tariff and the associated electric service installation rules, both of which are being produced.

g. Does Your Smart Meter provide Surge Arrestors designed to withstand and protect the homeowner's internal electrical system and connected appliances from large voltage surges and other events originating on the utility-side electrical grid?

See response to Discovery Request #6(f).

h. How does Your Smart Meter compare with the innate ability of the traditional strictly Analog Meter to protect the homeowner from large voltage surges and other events originating on the utility-side electrical grid?

This request is so vague that Duquesne Light cannot reasonably be expected to form a complete response, but Duquesne Light uses industry-standard protective devices throughout its electric circuits, such as breakers, protective relays, and reclosers. Protection of the internal electrical circuitry and appliances are the responsibility of the customer and/or homeowner. See response to Discovery Request #6(f).

i. What measures exist in Your Smart Meters to assure safe and reliable operation, and prevent degradation over time, due to power surges and environmental factors such as debris, humidity, vibration, salt water, etc. which can lead to the occurrence of "hot sockets" that is superior to the traditional strictly Analog Meter?

This request is so vague that Duquesne Light cannot be reasonably expected to form a response, but the HW 3.1 OpenWay CENTRON singlephase meters are ANSI C12.1, ANSI C12.20 and UL2735 compliant devices. Furthermore, the meters operate within the limits established by the FCC and the company's smart meter implementation and procurement plan has been approved by the Pennsylvania Public Utility Commission, which is prima facie evidence that it is reasonable, safe, and in compliance

with the law. Furthermore, the meters themselves do not lead to the occurrence of hot socket conditions. Hot Socket conditions are caused by external influences. External influences that can contribute to hot socket conditions are loose or open meter socket jaws, corrosion of meter socket jaws, contamination of meter socket jaws, and faulty wiring of meter socket. Precautions against, and repair of, such conditions is the responsibility of the customer.

j. To what degree is Your Smart Meter susceptible to damage from "hot sockets" as compared with the traditional strictly Analog Meter?

This request is so vague that Duquesne Light cannot be reasonably expected to form a complete response, but see the response to the preceding Discovery Request.

k. What risks and responsibilities do You assume, and what risks and responsibilities does the homeowner assume, once Your Smart Meter is installed on their residence, as many insurance companies will not cover fires related to Smart Meter failures?

This request is so vague that Duquesne Light cannot be reasonably expected to form a complete response. Duquesne Light's responsibilities are set by the applicable law and by its tariff. Duquesne Light has no knowledge relating to the availability of coverage under individual homeowner insurance policies.

i. Do You assume any responsibility for damage done to the customer's/homeowner's electrical wiring, electrical appliance, utility meter box, building structure, etc. due to voltage surges or other events originating on the utility side electrical grid?

This request is so vague that Duquesne Light cannot be reasonably expected to form a complete response. Duquesne Light's responsibilities are set by the applicable law and by its tariff.

ii. Are customers/homeowners informed of these risks and responsibilities?

This request is so vague that Duquesne Light cannot be reasonably expected to form a complete response. Duquesne Light's tariff is publicly available.

l. Thousands of fires have been documented in PA, CA, TX, FL, NV, IL, and across Canada in buildings after the installation of Smart Meters, including Your Smart Meter (the SK9AMI7). Property has been damaged, and there have been injuries and fatalities. Causes have been attributed to power/voltage surges, overheating, and old building wiring. To what extent are You aware of and acknowledge these occurrences, and what specific measures have you instituted to ensure the safety of your customers?

This request is so vague and overly broad that Duquesne Light cannot be reasonably expected to form a complete response. Furthermore, as noted above, the smart meters being installed in Duquesne Light's service territory are within the limits established by the FCC, have been tested and approved by UL, and comply with ANSI standards. Furthermore, the meters operate within the limits established by the FCC and the company's smart meter implementation and procurement plan has been approved by the Pennsylvania Public Utility Commission, which is prima facie evidence that it is reasonable, safe, and in compliance with the law.

m. How many SK9AMI7 Smart Meters have been removed or recalled from the field for reasons of quality, safety, and reliability?

This request is so vague that Duquesne Light cannot be reasonably expected to form a complete response. Furthermore, as noted above, the smart meters being installed in Duquesne Light's service territory are within the limits established by the FCC, have been tested and approved by UL, and comply with ANSI standards. Furthermore, the meters operate within the limits established by the FCC and the company's smart meter implementation and procurement plan has been approved by the Pennsylvania Public Utility Commission, which is prima facie evidence that it is reasonable, safe, and in compliance with the law.

7. To the extent they have not been previously requested or produced, produce all Documents that relate to Your response to Discovery Request No. 6.

The following documents are attached:

- **Notice of Completion and Authorization to Apply the UL Mark**
- **Paragraph #13 of Duquesne Light's Tariff**
- **Duquesne Light's Electric Service Installation Rate Rules**
- **Additional documents have already been provided in responses to Discovery Request #2 and Discovery Request #4.**

8. Do You stand behind and guarantee Your claim that "Your wireless Smart Meter system is safe and reliable"? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for any and all property damage and personal harm, etc. that occurs as a result of Your wireless Smart Meter system?

See response to Discovery Request #5.

9. State all facts that support Your claim that Duquesne Light's manner of installing its Smart Meters is safe.

Duquesne Light reiterates that it is required by law to install smart meters throughout its service territory, which includes Complainants' home. The company's smart meter procurement and implementation plan has been approved by the Pennsylvania Public Utility Commission, which is prima facie evidence that it is safe, reasonable, and in compliance with the law. See Duquesne Light's responses to the ensuing Discovery Requests.

a. Installations are not being carried out by Duquesne Light certified electricians. Duquesne Light has subcontracted its Smart Meter installation out to contractors who deploy installer technicians with varying degrees of training and expertise, such as Wellington Power Corporation.

This request does not contain a question that requires a response from Duquesne Light.

i. How much education, experience, and what specific training do the installer technicians subcontracted by Duquesne Light have, and what, if any, are their certifications?

This interrogatory is so vague and broad that Duquesne Light cannot reasonably be expected to form a response. Duquesne Light cannot be reasonably expected to identify the education, experience, and specific training of each individual subcontractor technician. Notwithstanding the vagueness and broadness of this interrogatory, Duquesne Light provides the following response:

All Wellington Power Corporation field personnel exchanging meters in Duquesne Light's service territory are IBEW union members and have been required to pass a written test as well as a two-week field evaluation. It is Duquesne Light's belief that such evaluation is consistent with industry best practices.

ii. What quality control measures are in place to ensure that their

education and training is sufficient and properly maintained, and that the proper installation protocols are being followed?

Wellington Power Corporation supervisors audit 100 percent of new field technicians' meter installations during their first two weeks of field work. Thereafter, supervisors conduct spot audits of 3 percent of installations. It is Duquesne Light's belief that such auditing procedure is consistent with industry best practices.

b. The installation of Your Smart Meters has been directly witnessed and observed by many, including myself. The focus is on speed of deployment in a neighborhood (deploying as many devices as possible in the shortest time), not safety. The meters are just simply and quickly changed out in what is called a "hot install."

This request does not contain a question that requires a response from Duquesne Light, but Duquesne Light disagrees that it emphasizes speed over safety.

i. What is Duquesne Light's specific installation protocol and procedure that is followed to ensure the safety of its customers/homeowners?

Prior to pulling a meter, Duquesne Lights instructs its employees to look for obvious signs of deterioration such as excessive corrosion, a sunken or detached underground service entrance cable, or a socket visibly detached from the customer's house. After a meter is pulled and the employee can see behind the meter, the company instructs them to inspect various componentry inside the socket for signs of deterioration. This includes the insulators, the jaws, the connections, and the wiring. The employee is also instructed to verify service voltage. If the design of the socket permits, the employee will apply bypass jumpers prior to removing the meter to prevent the customer from losing power during the exchange.

ii. What measures has Duquesne Light instituted to make sure that this protocol and procedure are being properly and consistently followed in the field?

To ensure employees are adhering to procedures, Duquesne Light's supervisors take an active approach in conducting field safety audits.

iii. Does Duquesne Light condone and authorize the use of a "hot install"?

The term "hot install" is undefined, thereby making it difficult for Duquesne Light to provide a complete response to this Discovery Request. Where it can be done safely, Duquesne Light does exchange meters without interrupting electric service to the customer.

iv. How does Duquesne Light protect its customers/homeowners and their property from the potential of "electric flash, arching, or sparking" upon a "hot install"?

The term "hot install" is undefined, thereby making it difficult for Duquesne Light to provide a complete response to this Discovery Request. Duquesne Light and its installation contractors do not attempt meter exchanges under conditions they deem to pose a safety hazard. As part of the smart meter exchange process, Duquesne Light or its installation contractors contact residential customers prior to the exchange, in part to provide the customers with an opportunity to advise the company of any conditions that would impede a meter exchange or if the customer would prefer to shut down operating equipment during the meter exchange. At the time of the exchange, if the installation technician identifies a condition that would make it unsafe to conduct the exchange (e.g., a socket abnormality), he or she stops the exchange and notifies Duquesne Light. Duquesne Light then sends an experienced meter technician to remedy the condition and/or notify the customer of required repairs or service corrections. As part of the installation process the meter exchanger is to attempt to notify the customer prior to meter exchange in the event the customer would prefer to shutdown operating equipment. If the installer identifies a socket abnormality during install, they would stop exchange and notify Duquesne Light to send a meter specialist to make repairs or notify customer of potential service corrections needed.

c. Are the customer's/homeowner's neutral connections considered and checked by a certified electrician for damage or corrosion prior to installation?

Duquesne Light does not consult certified electricians prior to the meter exchange. If an installing technician identifies an abnormality with the customer's neutral connections as part of his/her visual inspection, he/she would stop the installation. By way of further response, see the response to Discovery Request #9(b)(iv).

d. If so, how is this inspection done and what does it involve? Are the age and condition of the customer's/homeowner's electrical system, wiring, and meter box bases considered and checked by a certified electrician prior to installation of Your Smart Meter to ensure that the sockets and house wiring is compatible with the installation of your Smart

Meter?

Duquesne Light does not consult certified electricians prior to the meter exchange. By way of further response, see the response to Discovery Request #9(c).

i. If so, how is this inspection done and what does it involve?

Duquesne Light objects to this Discovery Request because it is vague. By way of further response, Duquesne Light states that it does not consult certified electricians prior to conducting a meter exchange.

ii. How many residences have failed this inspection?

Through the course of the project, Wellington Energy has forwarded investigations at a rate of 0.5 percent consistently for Duquesne Light Specialist. In this 0.5 percent would be potential neutral connection concerns.

iii. What are the observed frequencies and occurrences of

aa. damage or melting around the meter tabs/blades?

bb. pitting in the socket jaws?

cc. loss of spring tension in the socket jaws?

dd. oxidation on the lug wires?

ee. evidence of arcing?

ff. sockets that are unsafe or not up to code?

gg. other abnormal conditions?

The 0.5 percent investigation referenced in the response to Discovery Request #9(d)(ii) above includes the conditions stated in Discovery Request #9(d)(iii)(aa)-(gg).

iv. What other safety related issues have been observed?

Duquesne Light does not specifically itemize the socket conditions.

v. How has Duquesne Light addressed these safety related issues when they occurred?

A Duquesne Light meter specialist will make repairs or notify the customer of potential service corrections needed.

e. What testing for "hot sockets" is performed during the installation of Your

Smart Meter?

Duquesne Light and Wellington Energy, Inc perform the checks for the conditions mentioned previously in Discovery Request #9 that lead to "hot sockets."

f. Is the electric power to the residence turned off at the utility pole, etc. during the installation of Your Smart Meter to protect the customer's/homeowner's electrical system and appliances from damage due to the installation process? If not, why not?

Electric service to the residence is typically not turned off during a meter exchange because under most conditions such service interruption is not required to ensure that the exchange will not pose a safety risk to customer, customer property, or the installation technician.

g. Is the general protocol that the installation is carried out irrespective of the condition of the residence and its electrical system? If not, how not?

This request is so vague that Duquesne Light cannot be reasonably expected to form a complete response, but, as noted above, the internal electrical circuitry is the responsibility of the customer and/or homeowner. By way of further response, if the installer identifies a socket abnormality during install they would stop exchange and notify Duquesne Light to send an experienced meter technician to make repairs or notify the customer of potential service corrections needed.

10. Produce all Documents that relate to Your response to Discovery Request No. 9.

The following documents are attached:

- **Advanced Meter Exchange Procedure**
- **Verify Service Voltage & Perform Safety Check Procedure**

11. Do You stand behind and guarantee Your claim that "Your manner of installing Your Smart Meters is safe"? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for any and all property damage and personal harm, etc. that occurs as a result of the installation of Your wireless Smart Meter?

See response to Discovery Request #5.

12. State all facts that support Your claim that Duquesne Light's installation of a Smart Meter at the Property is reliable and secure.

See Duquesne Light's responses to the preceding Discovery Requests.

a. With everyone from individuals in the home to secure government installations being the targets of ongoing cyber attacks, that are routinely reported in the press, by law enforcement, and in trade journals, which have resulted in the loss of "secure" identity, medical, financial, etc. information, incurring, at times, massive and devastating personal, financial, business, etc. damage and loss, and in which experts in the security field such as Former CIA Director James Woolsey have repeatedly issued dire warnings, what justification can You provide that Your security protocols for Your Smart Meter system are effective, are any different, and any better than the best security systems in the country which have already been breached?

This request is so broad and vague that Duquesne Light cannot be reasonably expected to form a complete response. Duquesne Light reiterates the company's smart meter procurement and implementation plan has been approved by the Pennsylvania Public Utility Commission, which is prima facie evidence that it is safe, reasonable, and in compliance with the law. Duquesne Light incorporates its response to the preceding requests as if fully restated.

b. How is the security of our personal information, of the electricity to our Property, of the electrical infrastructure of the state of Pennsylvania not made significantly more vulnerable by the deployment and proliferation of hundreds of thousands to millions of wireless programmable end-metering devices, such as Your Smart Meters, and Your Collector Meters, Your Repeaters, Your Data Storage Centers, etc, which are effectively hundreds of thousands to millions of open portals into the electrical energy infrastructure of the state?

This request is argumentative and Duquesne Light rejects its premise. The smart meters being installed in its service territory are not "open portals into the electrical energy infrastructure of the state."

c. Has the delivery of electricity to any of Your customers been unintentionally interrupted by a shutdown switch

i. that You did not trigger with a wireless signal?

Upon information and belief, no.

ii. that You triggered accidentally with a wireless signal

Under both Duquesne Light's Smart Meter system and its legacy metering system, it is possible that a customer's electric service could be mistakenly disconnected due to human error. Duquesne Light does not believe that its Smart Meter system is more vulnerable than its legacy metering system to such error. Duquesne Light is not aware of any instances in which a customer's service was erroneously disconnected due to a technical error of its Smart Meter wireless communications equipment.

d. Have there been any attempts at cyber hacking of Your wireless Smart Meter system?

Upon information and belief, no.

i. If yes, what were the nature and outcome of these attempts?

ii. If yes, have You incurred any costs as a result of such hacking

aa. from lost revenue?

bb. in identifying the specific cyber vulnerability that enabled the hacking?

cc. for software or hardware revisions to correct the cyber vulnerability?

dd. for replacing, recalling, or modifying Your Smart Meters?

iii. if You have incurred costs as a result of hacking, were those costs passed on to Your customers?

13. Produce all Documents that relate to Your response to Discovery Request No. 12.

None.

14. Do You stand behind and guarantee Your claim that "Your Smart Meter system is secure"? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for any and all Property damage and personal harm, etc. that occurs as a result of the hacking, breach, or abuse of Your Smart Meter security system?

See response to Discovery Request #5.

15. Given the controversial nature of wireless Smart Meter deployment, and the increasing negative reports and warnings appearing in the press, and in medical and trade

publications, state the facts indicating that the installation of Your Smart Meter will not have a negative impact on the value of our Property?

This request is argumentative and Duquesne Light disagrees with its premise. Furthermore, Duquesne Light reiterates that it is required by law to install smart meters throughout its service territory, which includes Complainants' home, and the company's smart meter procurement and implementation plan has been approved by the Pennsylvania Public Utility Commission, which is prima facie evidence that it is safe, reasonable, and in compliance with the law. See also Duquesne Light's response to the preceding Discovery Requests.

16. Produce all Documents that relate to Your response to Discovery Request No. 15.

None.

17. Do You stand behind and guarantee Your claim that "Your Smart Meter system will not negatively affect the value of our Property"? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for any loss in value of our Property that occurs as a result of the installation of Your Smart Meter system?

See response to Discovery Request #5.

18. What is the nature and specificity of the customer data being collected by Your Smart Meter system, and how do You intend/ plan to use that customer data?

Duquesne Light's residential Smart Meters collect hourly and daily electric consumption data for the purposes of billing customers. Smart Meters also collect the following data used for utility grid operations: demand resets; meter tampering events; battery voltage; power outage or restoration events; and voltage thresholds.

a. Will this personal data only be used for billing purposes internal to Duquesne Light?

No. As discussed in the response to the preceding request, some data collected by Smart Meters will be used to facilitate grid operations.

b. What protections are in place to ensure the privacy of this personal data?

Duquesne Light takes data security very seriously. The company has a centralized Chief Information Security Officer and dedicated staff responsible for providing cybersecurity operations, risk management and governance for the protection of Duquesne Light assets and information. Duquesne Light takes a measured defense-in-depth approach by deploying security controls to achieve and maintain a reliable and resilient infrastructure designed to protect

customer data and system operations. Duquesne Light's defense-in-depth approach provides the ability to withstand, respond and adapt to the changing cybersecurity threat landscape. Duquesne Light uses a diverse set of tools and techniques to secure our systems and data. Duquesne Light employs security controls including end-point protection systems, advanced malware protection systems, network security segmentation, intrusion detection/prevention systems, security incident and event monitoring, threat intelligence and vulnerability management as well as recovery and response measures. With respect to Duquesne Light's Smart Meter system: the system uses advanced and open standard data encryption and authentication techniques that have been approved internationally by bodies such as the National Institute of Standards and Technology and the National Security Agency.

c. If this personal data is to be used for other than billing purposes, what are those purposes, and will this be done only with the knowledge and written consent of the customer/homeowner?

The Pennsylvania Public Utility Commission requires Duquesne Light to provide an Eligible Customer List (ECL), comprising certain customer information, to qualified electric generation suppliers (EGSs). Customers can opt to be removed from the ECL. ECL requirements predate, and are not associated with, Duquesne Light's Smart Meter system. For more information about the ECL, visit the Public Utility Commission's website at:

http://www.puc.state.pa.us/utility_industry/electricity/electric_competitive_market_oversight.aspx.

d. Will this personal data be used to monitor and/or profile the customer/homeowner?

To an extent, yes. The primary purpose and function of an electric meter (including both Duquesne Light's legacy meters and its Smart Meters) is to monitor the customer's electric consumption.

e. Have You received any requests for this personal data from any individual, company, or organization for the purposes of profiling, data-mining, etc.?

Upon information and belief, Duquesne Light has received one request from an external party for customer interval usage data for the purposes of developing customer profiles. Duquesne Light received this request in 2013 and denied it. DLC does not provide customer data to unauthorized parties.

f. Have You offered this personal data to any individual, company, or organization?

Except for required disclosures as identified in response to Discovery Request #18(c), above, and information disclosed as part of regulatory reporting,

discovery in legal proceedings, or in response to competent order of a court or law enforcement entity, no.

g. Have You sold this personal information to any individual, company, or organization?

No.

h. Do You have plans in the future to market this personal data in any way for the purposes of creating new income streams?

No.

19. Produce all Documents that relate to Your response to Discovery Request No. 18.

The following documents are attached:

- **Email from to Kevin Baden dated April 29, 2013 requesting customer data.**

20. Do You stand behind and guarantee Your claim that "our personal data collected by Your Smart Meter system will remain secure and private within Duquesne Light"? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for any loss, abuse, or misuse of our personal data, and any use of our personal information for other than billing purposes without our knowledge and written consent, that is collected and stored by Your Smart Meter system?

See response to Discovery Request #5.

21. How many incidents have occurred, and how many customers have filed concerns and complaints with Duquesne Light, concerning Your Smart Meters with regards to, but not limited to,

a. health?

b. safety, reliability, and fires?

c. privacy?

d. security?

e. electrical and device interference?

f. increased and increasing electrical bills, and over-billing charges?

What were the specifics of these incidents or complaints?

This request is so vague and broad that Duquesne Light cannot be reasonably expected to form a complete response, but copies of all complaints filed with the Pennsylvania Public Utility Commission are publicly available. The mere fact that a complaint was filed does not in any way suggest that Duquesne Light acted improperly or violated the law.

22. Has Duquesne Light provided any relief or accommodation from their Smart Meter system to any individual, official, group, community, organization, etc. for any reason at any time?

The term "relief or accommodation from their Smart Meter system" is so vague that Duquesne Light cannot be reasonably expected to form a complete response. Duquesne Light reiterates that it is required by law to install smart meters throughout its service territory, and that the applicable laws do not provide for individual customers to "opt out" of having a Smart Meter installed at their premises.

a. If so, list those individuals, officials, groups, communities, organizations, etc., and the reasons for that relief or those accommodations?

23. To the extent not previously requested or produced, produce all Documents that You intend to offer into evidence at any hearing in this matter.

Duquesne Light has not yet made a final determination regarding the documents it will offer as hearing exhibits.

24. State the full name, title, affiliation, address, and telephone number of each person who You expect to call to testify at any hearing of this matter.

Duquesne Light has not yet made a final determination as to who it will call to testify at a hearing in this matter.

25. State the full name, title, affiliation, address, and telephone number of each person who You expect to call to testify as an expert witness at any hearing of this matter and, for each expert witness, state:

a. The subject matter on which the expert is expected to testify;

b. The substance of the facts and opinions to which the expert is expected to testify; and

c. A summary of the grounds for each expert opinion.

Duquesne Light has not yet determined what expert witnesses, if any, it will call to testify at a hearing in this matter.

26. Produce the report of any expert You intend to call to testify on Your behalf at trial.

See response to Discovery Request #25.

27. Produce the curriculum vitae of any expert that You intend to call to testify on your behalf at trial.

See response to Discovery Request #25.

TUCKER ARENSBERG, P.C.

By: _____

Jeremy V. Farrell, Esquire
PA. ID. No. 316258
Paul Shane Miller, Esquire
PA. ID. No. 319174
1500 One PPG Place
Pittsburgh PA 15222
(412) 566-1212

Counsel for Respondent,
Duquesne Light Company

LIT:631910-1 014657-158498

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Respondent's Responses to Set #1 of Discovery Requests was served by First-Class, U.S. Mail, postage prepaid, this 20th day of November, 2017 upon the following:

Michele Hriadil and Francis Hriadil
331 Shady Ridge Drive
Monroeville, PA 15146

Jeremy V. Farrell, Esquire
PA. ID. No. 316258
Paul Shane Miller, Esquire
PA. ID. No. 319174
1500 One PPG Place
Pittsburgh PA 15222
(412) 566-1212

Counsel for Respondent,
Duquesne Light Company

LIT:631910-1 014657-158498

EXHIBIT
C

331 Shady Ridge Drive
Monroeville, PA 15146

December 30, 2017

Via Paper Filing

Judge Jeffrey Watson
PA PUC Pittsburgh Administrative Law Judge Office
301 Fifth Ave, Suite 220
Piatt Place
Pittsburgh, PA 15222

RE: **Michele Hriadil and Francis Hriadil v. Duquesne Light Company**
Docket No. C-2016-2571726

Dear Judge Watson:

Enclosed please find a copy of Complainants' **Motion to Compel Discovery** with regards to our Formal Complaint.

Our **Follow-up to Set #1 of Discovery Requests** is attached which details the specific Discovery Requests that require attention and resolution.

A copy of this document has been served upon the Respondent's Counsel, Jeremy V Farrell, Esquire, in accordance with Commission regulations.

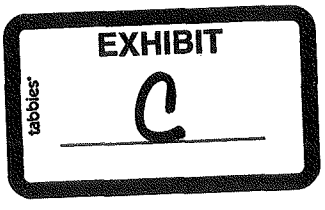
Please feel free to contact me if you have any questions.

Sincerely,

Francis Hriadil

Francis Hriadil
Complainant
(412) 779-3314
hriadil@attglobal.net

Cc: Jeremy V Farrell, Esquire, Counsel for Duquesne Light Company



BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Michele Hriadil and Francis Hriadil, Complainant, vs. DUQUESNE LIGHT COMPANY, Respondent.	:	No: C-2016-2571726

FOLLOW-UP TO SET #1 OF DISCOVERY REQUESTS

Filed by Michele and Francis Hriadil

hriadil@attglobal.net
(412) 779-3314
331 Shady Ridge Drive
Monroeville, PA 15146

FOLLOW-UP TO SET #1 OF DISCOVERY REQUESTS

TO: RESPONDENT'S GENERAL COUNSEL, JEREMY V FARRELL, ESQUIRE, AND PAUL SHANE MILLER, ESQUIRE.

PLEASE FILE A WRITTEN RESPONSE TO THE WITHIN FOLLOW-UP TO SET #1 OF DISCOVERY REQUESTS OF COMPLAINANTS MICHELE AND FRANCIS HRIADIL WITHIN TWENTY (20) DAYS OF SERVICE HEREOF, IN ACCORDANCE WITH 52 PA. CODE SS 5.342 AND 5.349(d).

Francis Hriadil

Francis Hriadil
December 30, 2017

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Michele Hriadil and Francis Hriadil, Complainant, vs. DUQUESNE LIGHT COMPANY, Respondent.	:	No: C-2016-2571726

FOLLOW-UP TO SET #1 OF OF DISCOVERY REQUESTS

TO RESPONDENT:

Complainants Michele Hriadil and Francis Hriadil ("Complainants"), serve the following Follow-up to Set #1 of Discovery Requests Directed to Respondent Duquesne Light Company ("Duquesne Light") through its undersigned counsel, Tucker Arensberg, P.C., pursuant to 52 Pa. Code SS 5.341 and 5.349.

In accordance with 52 Pa. Code SS 5.342 and 5.349(d), Respondent Duquesne Light Company ("Respondent") must respond to each discovery request within 20 days after being served with these discovery requests.

Respondent's responses must be verified in accordance with 52 Pa. Code S 1.36.

Complainants (we) reserve the right to serve additional and follow-up discovery requests.

DEFINITIONS

A. The terms "You" and "Your" shall mean Respondent Duquesne Light Company and any individual acting on their behalf.

B. The term "Formal Complaint" shall mean the Formal Complaint and all subsequent associated Responses and New Matters (1, 2, 3, and 4) by the Complainants filed against Respondent Duquesne Light with the Pennsylvania Public Utility Commission, Docket No. C-2016-2571726.

C. The term "Document" shall mean any written, typed, printed, graphic, or recorded material that is currently in Your possession, custody, or control or that was formerly in Your possession, custody, or control. A Document is in Your "control" if You have ownership, possession, or custody of the Document or if You have the right to secure the Document or a copy from any person or entity that has possession of it. The term "Document" includes, but is not limited to, electronic mail or email, text messages, social media postings, comments, and messages, medical records, articles, studies, word processed documents, digital presentations, facsimiles, instant messages, calendars, diaries, appointment books, agendas, journals, drafts, voicemail messages, post cards, post-it notes, reports, logs, message slips, invoices, checks, paystubs, letters, memoranda, agreements, contracts, tax returns, bank statements, spreadsheets, video recordings, audio recordings, computer programs, printouts, and all other written, graphic, or electronic materials of any nature whatsoever.

D. The term "Property" shall mean Complainants' residence at 331 Shady Ridge Drive, Monroeville, PA 15146.

E. The term "Smart Meter" shall mean the wireless digital electric meter (i.e. the Duquesne Light / Itron SK9AMI7 OpenWay Centron Smart Meter operating in its Smart Grid Mesh system) that Respondent Duquesne Light is seeking to install at Complainants' Property.

INSTRUCTIONS

A. You must provide all information that is available to You. This includes not only Your personal knowledge but also all information that is reasonably available to You.

B. You are requested to produce all responsive Documents that are in Your possession, custody, or control. All Documents must be produced in the same order that they are normally maintained. For each Document, identify which specific discovery request it responds to.

C. If You object to any discovery request, You must explain the reason(s) for Your objection.

D. If You do not have any Documents in Your possession, custody, or control that are responsive to a discovery request, You must say so.

E. In responding to these discovery requests, include all Documents that were obtained by You and anyone acting on Your behalf. If You state that any Document(s) are not within Your possession, custody, or control, describe what effort You made to locate each such Document.

F. If You state that a Document is not under Your control, identify who has control of the Document and state the Document's location.

G. You must produce each Document in its entirety even if only part of the Document is responsive to the document request.

H. These discovery requests are continuing in nature. This means that if You receive or become aware of information that is responsive to any discovery request after You have served Your original answers, You must promptly supplement Your answer and provide that information.

DISCOVERY REQUESTS

1. Complainants filed Set #1 of Discovery Requests to Respondent on October 5, 2017. The standard response time is 20 days (i.e. October 25, 2017).

On October 17, 2017, Respondent contacted Complainants requesting an extension to November 15, 2017 (i.e. an additional 21 days, which extended the response time for the Respondent from the initial filing date to 41 days). As a sign of cooperation, complainants agreed to the extension.

On November 14, 2017, Respondent contacted Complainants again requesting another extension to November 20, 2017 (i.e. a further addition of 5 days, which further extended the response time for the Respondent from the initial filing date of October 5 to 46 days). Again, as a sign of cooperation, Complainants agreed to a second extension.

Complainants received the Respondent's responses to Complainants filed Set #1 of Discovery Requests on November 21, 2017, 47 days after the filing of October 5, 2017.

2. Complainants reviewed Respondent's response in detail and discovered a number of errors, omissions, and inadequacies that need to be addressed and resolved. These are specifically detailed in the following sections.

3. Complainants reviewed Respondent's November 20, 2017 response to Complainants October 5, 2017 Set #1 Discovery. Respondent's November 20, 2017 indicated that 27 documents were to be attached with their response. Only 25 documents were provided. Two (2) documents are missing.

Complainants received the following 25 documents on a computer disc:

1. Petition for Approval.pdf
2. Interrogatories.pdf
3. EPRI Report.pdf
4. Petition for Settlement 12.7.2012.pdf
5. Order.pdf
6. 2015.08.04 Final Petition of DLC for Approval to Modify i.pdf

7. 2016.11.08 Initial Decision.docx

8. 2017.04.07 Order on Petition to Modify SMP.DOCX

9. 2010 SM Technology Needs Assessment and RFP.PDF

11. Smart Meter Q.A.PDF

12. Understanding Frequency.pdf

13. Myths v. Facts.pdf

15. Data Privacy.pdf

101247WP_The Facts on RF Meter Banks_WhitePaper.pdf

999999_734_20171120_11484144732.pdf

999999_734_20171120_12101159952.pdf

999999_734_20171120_12104643354.pdf

AMI7_EMC_Report.pdf

itron-openway-rf-white-paper.pdf

NofA-4786755348-May-30-2015.pdf

OpenWay Wireless Transmissions_24 Hour Duty Cycle.pdf

RF_Exposure_SK9AMI7_HW3.1.pdf

Service and Installation Rate Rules.pdf

UL2735 Certificate.pdf

Verify_Service_Voltage_Perform_Safety_Check.docx

Complainants did not receive the following 2 documents which were named in Respondent's response:

Paragraph #13 of Duquesne Light's Tariff (indicated on page 19)

Advanced Meter Exchange Procedure (indicated on page 24)

Is the Respondent intending to supply these missing documents?

ANSWER:

4. Complainants October 5, 2017 Set #1 Discovery Request question 1. e. (page 5) was,

What is the exact Transmission Burst Time interval of each version of Your SK9AMI7?

Respondent's November 20, 2017 response (pages 3 and 4) was,

The OpenWay network deployed within Duquesne Light's service territory operates as a frequency-hopping, mesh network. When transmitting, each device will transmit for ***up to 150 milli-seconds*** *in each time slot.* **(emphasis added)**

"*Up to 150 msec*" does not completely address and answer the question asked. This is simply the maximum (i.e. largest) pulse time interval. Respondent's answer indicates that there are smaller pulse time intervals without defining specifically what those are.

a. To be clear and complete, please list all pulses, their pulse time intervals, and how frequently each type of pulse occurs?

b. Specifically, what is the minimum (i.e. smallest) pulse time interval?

c. Specifically, what is the average pulse time interval?

d. Specifically, what is the mode (i.e. most frequently occurring) pulse time interval?

ANSWER:

5. Complainants October 5, 2017 Set #1 Discovery Request question 1. f. (page 5) was,

What is the complete Duty Cycle range (minimum, average, maximum) of each version of Your Smart Meter (the SK9AMI7), and their corresponding Transmission Times in 24 hours (900 MHz, 2.4 GHz)?

Respondent's November 20, 2017 response (page 3) was,

The transmit duty cycle for the 900MHz radio within the OpenWay network deployed within Duquesne Light's service territory will vary based on a number of factors, including, but not limited to, where in the mesh network topology the meter is located, the quality of the radio links to neighboring meters, and the level of interference present. Therefore, the most accurate way to estimate the transmit duty cycle is from a statistically significant sample of a representative deployment. The table below shows the Mean, Maximum, Minimum and Median transmit duty cycle for a sample of approximately 7,000 meters over a representative 24-hour window of operation.

	Duty Cycle	*Time*
Mean	*0.06%*	*53.14 seconds per day*
Maximum	*0.58%*	*497.8 seconds per day*
Minimum	*0.02%*	*18.31 seconds per day*
Median	*0.06%*	*49.81 seconds per day*

The OpenWay meter's 2.4GHz Zigbee radio communicates with other HAN (Home Area Network) devices. The table below shows the measured transmission times for an idle Zigbee radio and a Zigbee radio with

one of two sample devices joined to the meter. Duquesne Lights expects that, for current deployments, the average meter will have either zero (idle) or one HAN device attached to it.

	Duration of transmission in a 24-hr period	*Duty Cycle*
Idle Zigbee Radio (no devices joined)	*9.9 seconds*	*0.01%*
Meter with Tendril IHD (In Home Display)	*132 seconds*	*0.15%*

This response is incomplete and does not fully answer the question. The Respondent is well aware that, in its current deployment environment, its Smart Meter is not operating anywhere near its full design capability. The Complainants question specifically asked for the Respondent to indicate the complete Duty Cycle range of its Smart Meter which includes the maximum capability of its Smart Meter in its Smart Grid, not simply what is currently measured or sampled in the current deployment environment. This was not provided. So, Complainants ask again, what is the maximum Duty Cycle design capability of the Respondents SK9AMI7 Smart Meter?

ANSWER:

6. Complainants October 5, 2017 Set #1 Discovery Request question 1. h. (page 6) was,

How many times/transmissions in total (average, maximum) for any purpose is each version of Your Smart Meter configured to transmit during a 24-hour period (900 MHz, 2.4 GHz)?

Respondent's November 20, 2017 response (page 4) was,

*This will **vary depending on business process**, which will determine how **read schedules** are set up. **Typically, there are 3 to 4 scheduled reads from each meter in a 24-hour period**. With a hierarchical cell structure, meters will relay upstream and downstream traffic within the RF mesh. The total number of transmissions will include the scheduled reads, on-demand reads, and alarms/alerts along with the network traffic needed for command and control (synchronization, security, data integrity and dynamic network resiliency). Based on data gathered from a large, representative OpenWay network deployment (2 load profile reads + 1 register read + 1 event read per day), the total transmissions are: **(emphasis added)***

- *The **average** number of transmissions in a 24-hour period is approximately **1,268** (less than time/minute); **(emphasis added)***
- *The **maximum** number of transmissions in a 24-hour period is approximately **25,916** (18 times/minute or about once every 3.3 seconds); **(emphasis added)***
- *Looking at the distribution of the field data gathered, only a small percentage of the meter population will transmit near the maximum value. In fact, 97% of the*

meters in this random sample transmitted less than 2,500 times in a 24-hour period.

Here and throughout Respondent's response to Complainants Set #1 Discovery Request Respondent uses the vague and undefined term "*business process*" which is one of the factors affecting / controlling Read Schedules, Duty Cycles, etc. The operation of the SK9AMI7 Smart Meters is programmable and under the direct and remote control of the Respondent.

a. Name all specific business processes that would affect / control the Smart Meter
   - Read Schedule?
   - Duty Cycle?

b. No Duty Cycle is provided for the 1,268 number.
   What is the Duty Cycle associated with this number?

c. No Duty Cycle is provided for the 25,916.
   What is the Duty Cycle associated with this number?

ANSWER:

7. Complainants October 5, 2017 Set #1 Discovery Request question 1. h. i. (page 6) was,

How many of those times (average and maximum) are to transmit electric usage information?

Respondent's November 20, 2017 response (page 5) was,

*This will vary depending on **business process**, which will determine how read schedules are set up. Typically, there are **2 or 3 scheduled reads for usage data from each meter in a 24-hour period**. **(emphasis added)***

Complainants October 5, 2017 Set #1 Discovery Request question 1. h. ii. (page 6) was,

How many of those times (average and maximum) are for other purposes? What are those other purposes?

Respondent's November 20, 2017 response (page 5) was,

*This will vary with **business process**, which will determine how read schedules are set up. Typically, there are **2 or 3 scheduled reads for purposes other than returning usage data from each meter in a 24-hour period**. These are typically for doing a register read and/or events read. The balance of the transmissions are for network command and control: synchronization, security, data integrity and dynamic network resiliency. **(emphasis added)***

Again, Respondent uses the vague and undefined term "*business process.*"

Further, Respondent states that there are typically *"2 or 3 scheduled reads for usage data"* and "*2 or 3 scheduled reads for purposes other than data usage."* Taken together, this indicates that there are typically 4 to 6 scheduled reads from each meter in a 24-hour period.

a. Name all specific business processes that would affect / control the Smart Meter Read Schedule for usage data and for purposes other than usage data?

b. Why is the typical number of scheduled reads from each meter in a 24-hour period 3 to 4 in the Respondent's answer to the previous question, and now is indicated to be 4 to 6?

c. Which numbers are correct? How is one to know that they are correct and accurate?

d. For those numbers that are not correct, what are the correct numbers? And, what verification is there that these new numbers are correct and accurate numbers? What are they based on?

e. To be very specific, Complainants ask again, what are the average and maximum number of Scheduled Reads in a 24-hour period:

- for each meter, in total?
- for each meter, for usage data?
- for each meter, for purposes other than data usage?

ANSWER:

8. Furthermore, the maximum number of "typical" readings does not reflect the maximum number of readings that the Respondent's Smart Meter are capable of executing and processing, as the Respondent is well aware. What is "typical" now will not necessarily be what is "typical" in the future. The Respondent has already indicated that meter transmissions and reading schedules can be changed by the Respondent due to its business decisions, which can change at any time and for any number of reasons unbeknownst to the homeowner. So, it is necessary to know the maximum and full design capability of the Respondent's Smart Meter and its Network Mesh to understand its full effect and impact.

a. In this regard, Complainants ask, what are the maximum number of Scheduled

Reads possible, i.e the maximum Scheduled Read design capability of the Smart Meter, the highest Scheduled Read rate it can achieve, in a 24-hour period:

- for each meter, in total?
- for each meter, for usage data?
- for each meter, for purposes other than data usage?

b. Can each individual Smart Meter on a homeowner's residence be programmed with

- its own individual Read Schedule (yes/no)?
- its own individual Duty Cycle (yes/no)?
- its own individual Electricity Usage Data Measurement Interval (yes/no)?
- what other parameters can be selectively programmed on the Smart Meter on a homeowner's residence?

ANSWER:

9. Complainants October 5, 2017 Set #1 Discovery Request question 1. h. iii. (page 6) was,

What are the number of times (average and maximum) by type/category of transmission?

Respondent's November 20, 2017 response (page 5 and 6) was,

Detailed analysis of the type/category of transmissions has not been completed. One data point from the gathered field data is that, on average, the segmentation between meter data transmissions (scheduled and/or on-demand) and network command and control (synchronization, security, data integrity and dynamic network resiliency) is expected to be:

- *Transmissions of meter data: 10%*
- *Transmissions for network command/control: 90%*

a. Complainant asked for number of transmissions in a 24-hour period, not percentage segmentation. Complainant did not answer the question that was asked. Respondent started deploying the meters in 2014, i.e. 3 years ago, and has deployed more than half of its meters at this point. Respondent has been monitoring and managing their behavior in the field throughout this period. Yet, Respondent provides no specific data. Respondent simply states that a *"detailed analysis of the type/category of transmissions has not been completed."*

- If not, why not? This implies that Respondent does not really know what its Smart Meters and Network Mesh are doing. Is this the case?

- When will that detailed analysis be completed?
- What are the 24-hour transmission numbers that Respondent does have?

b. Furthermore, the maximum design capability of the smart meter and its network mesh is known by the Respondent.

- What is the maximum number of transmissions in 24-hour that the Smart Meter is capable of executing?

ANSWER:

10. Complainants October 5, 2017 Set #1 Discovery Request question 1. i. (page 6) was,

Under what scenarios does each version of Your Smart Meter transmit outside of the daily schedule, i.e., transmissions such as on-demand reads, tamper/theft alerts, last gasps, firmware upgrades, etc.?

Respondent's November 20, 2017 response (page 6) was,

Duquesne Light cannot reasonably determine what information is sought by the "etc." abbreviation and provides the following information in response to the remaining portions of Discovery Request #1(i):

> • *On-Demand Reads: These reads are outside of the daily read cycle and will be fully dependent on* ***business processes****. Each On-Demand read will generate one downstream and one upstream packet with average transmission duration of 125mSec.* ***(emphasis added)***
>
> • *Network Synchronization: The nature of an RF mesh network requires that meters maintain communications with their neighbor meters to ensure the stability, self-healing and integrity of the network. A good example of this is timing synchronization where meters send their neighbor meters time-synchronization packets at regular intervals to ensure all of the devices in the network are synchronized for time slot usage.* ***Time-synchronization packets are sent approximately every 93 seconds with average transmission duration of 18 mSec.***
>
> ...

These set of answers is summarized in the table below:

Type	Duration		Frequency
Network Synchronization	avg transmission duration	= 18 mSec	approx every 93 sec
Last Gasp	avg transmission duration	= 18 mSec	3 messages for each power outage
Tamper/Theft Alerts	avg transmission duration	= 18 mSec	1 packet for each detected event
On-Demand Reads	avg transmission duration	= 125 mSec	dependent on business processes
Firmware Download	approx broadcast transmission	= 150 mSec	once a year, over a 12 hr - 12 day period

a. Respondent again uses the vague and undefined term "business processes."

- Name all specific business processes that would affect / control the On-Demand Reads?
- What is the specific purpose of On-Demand Reads?
- What is the maximum frequency at which On-Demand Reads can be carried out?

b. Respondent lists 5 types of transmissions namely: On-Demand Reads, Tamper/Theft Alerts, Last Gasp, Firmware Download, and Network Synchronization. Each has a different transmission duration and frequency occurrence. Network Synchronization appears to be the most frequently occurring of these transmissions, and has one of the shortest duration transmission lengths. Only an approximate frequency interval of 93 seconds was provided.

- Is Network Synchronization the most frequently occurring transmission?
- If not, what is the most frequently occurring transmission?
- What is the maximum frequency that the Network Synchronization transmissions can be programmed to occur?

c. Respondent's response to Complainants October 5, 2017 Set #1 Discovery Request question 1. h. ii. (page 6), listed the following additional types of transmissions in addition to Network Synchronization: Security, Data Integrity, and Dynamic Network Resiliency. Yet, here, Respondent claims it "*cannot reasonably determine what information is sought by the 'etc.' abbreviation.*" This statement is evasive, as the reasonable interpretation is "the remaining other types of transmissions not specifically listed." And, no specifics are provided concerning these additional types of transmissions as they are with Network Synchronization, Last Gasp, Tamper/Theft Alerts, On-Demand Reads, and Firmware Download, which the Complainants specifically cited.

- What are the Transmission Durations and Frequencies for:

  Security?

  Data Integrity?

  Dynamic Network Resiliency?

Any other types of transmissions that remain that have not specifically been identified by the Respondent?

- What are the maximum frequencies that transmissions can be programmed to occur for:

  Security?

  Data Integrity?

  Dynamic Network Resiliency?

  Any other types of transmissions that remain that have not specifically been identified by the Respondent?

d. Respondent has acknowledged that the Smart Meter produces different types of transmissions for different purposes.

- Of all the transmissions that the Smart Meter produces, what is the most frequently occurring type of transmission?

- If not already described, please provide the duration, frequency, and maximum possible frequency for the most frequently occurring transmission?

ANSWER:

11. Complainants October 5, 2017 Set #1 Discovery Request question 1. j. ii. (page 6) was,

Typically, how much of the communication between the customer's Smart Meter and other Smart Meters in the customer's area grid is unscheduled vs. scheduled?

Respondent's November 20, 2017 response (page 7) was,

*The majority of the communications between the customer's meter and the utility is based on **scheduled data requests** (interval data read, register reads, events read, network statistics read). The amount of communication for on-demand reads and events will be highly dependent on **business processes** and the **environment of the deployment** (e.g., outage and tamper events). The **network overhead** does not represent communication between a meter and the utility (i.e., does not route back to the head end system). These overhead transmissions are required for the proper operation of the dynamic, self-healing RF mesh. The 53 seconds that an **average OpenWay meter** transmits in one day includes all of the communications described above. **(emphasis added)***

There are a number of vague references here that require further clarification.

a. Respondent sets the schedule for data requests. Scheduled data requests are at the discretion and control of the Respondent, and unknown to the homeowner.

- What are the maximum number of data requests that the Respondent can schedule in a 24-hour period?

b. Respondent again uses the vague and undefined term "*business processes.*"

- Name all specific business processes that would affect / control the amount of communication required from a Smart Meter?

c. Respondent uses the new, undefined, and broad term "*environment of the deployment*" and provides only 2 examples "*outage events*" and "*tamper events*".

- List all other factors that comprise the "*environment of the deployment*"?
- How does the location of the Smart Meter in the Network Mesh affect its operational environment and behavior?
- How does proximity to the utility data repeaters and routers that route the data back to the "*head end system*" affect the operational environment and behavior of the Smart Meter?

d. Respondent uses the term "*average OpenWay meter.*"

- List all specific factors that determine whether a homeowner's Smart Meter behaves (collects, transmits, etc.) as an "*average OpenWay meter*" or behaves (collects, transmits, etc.) as the part of meter population operating at the maximum values?
- What are the maximum number of transmissions (i.e. its maximum operational design capability) a Smart Meter is capable of performing in a 24-hour period?

ANSWER:

12. Complainants October 5, 2017 Set #1 Discovery Request question 1. l. (page 6) was,

What is the amount of RF emission at the source of each version of Your Smart Meter when Your Smart Meter is transmitting data (instantaneous maximum peak level, averaged over 30 minutes)?

Respondent's November 20, 2017 response (page 8) was,

The limits for Maximum Permissible Exposure (MPE) established by the FCC account for a 20cm distance from the source to the measurement point. The RF emissions for the OpenWay meters deployed by Duquesne Light without this 20cm distance (at the antenna source) are:

900 MHz LAN Radio

- *Transmitter Conducted Power: 28.38dBm, 688.65mW*
- *Antenna Gain: 2.2dBi*
- *Maximum System EIRP: 30.58dBm, 1142.88mW*
- *With 1 percent duty cycle over 30 minute interval: 1.143mW*

2.4GHz Radio

- *Transmitter Conducted Power: 18.13dBm, 65.01mW*
- *Antenna Gain: 3.8dBi*
- *Maximum System EIRP: 21.93dBm, 155.96mW*
- *With 1 percent duty cycle over 30 minute interval: 1.56mW*

Note: The maximum observed duty cycle was 0.58%. This has been rounded up to 1 percent.

Respondent provided data for a 1% Duty Cycle. This is not the maximum possible Duty Cycle (i.e. the maximum design capability) of the Respondent's Smart Meter.

- Please provide the results for the maximum Duty Cycle possible (i.e. the maximum design capability) of the Respondent's Smart Meter.

ANSWER:

13. Complainants October 5, 2017 Set #1 Discovery Request question 1. r. (page 7) was,

Since the SK9AMI7 is programmable, what control methods and capabilities do You have to change, adjust, or modify the Duty Cycle of the SK9AMI7 either directly or remotely?

Respondent's November 20, 2017 response (page 9) was,

*The **Duty Cycle** of the Itron OpenWay meters has been established using a large population of deployed meters with a typical daily read schedule to ensure validity. This **read schedule** can be modified. Studies have not been undertaken to quantify the difference in Duty Cycle when the read schedule of the meters is modified. The expectation is that there will be minimal variance in the Duty Cycle with typical changes to read schedules. **(emphasis added)***

a. What are the maximum number of Scheduled Reads possible, i.e the maximum Scheduled Read design capability of the Smart Meter, the highest Scheduled Read rate it can achieve, in a 24-hour period?

b. What is the maximum Duty Cycle possible, i.e. the maximum Duty Cycle design capability of the Respondent's Smart Meter, the highest Duty Cycle that it can achieve?

ANSWER:

14. With regard to the Switch-Mode Power supply that supplies power to Respondent's Smart Meter, Complainants October 5, 2017 Set #1 Discovery Request question 1. t. ii. (page 7) was,

What voltage spiking, harmonics, additional loads and stresses does this introduce onto the customer's household interior electrical wiring?

Respondent's November 20, 2017 response (page 10) was,

Interior electrical wiring is the responsibility of the customer and/or homeowner and can vary by location. The smart meters being installed within Duquesne Light's service territories comply with the limits established by the FCC and have been validated by several outside laboratories, including UL.

Respondent did not ask anything about responsibility. Respondent asked what voltage spiking, harmonics, i.e. new and additional loads and stresses does its Smart Meters introduce onto the customer's household interior electrical wiring, due to the operation of its Switch-Mode Power supply? This question was not answered. Please answer this question.

a. Does the Respondent's Smart Meter Switch-Mode Power supply introduce different loads and harmonics onto the customer's household interior electrical wiring than the standard electro-mechanical analog meter (yes/no)?

b. If yes, describe these new loads and harmonics, and how they are different?

ANSWER:

15. With regard to the Switch-Mode Power supply that supplies power to Respondent's Smart Meter, Complainants October 5, 2017 Set #1 Discovery Request question 1. u. (page 8) was,

Do you provide the customer/homeowner with the option to disable the 2.4GHz Zigbee Transceiver?

Respondent's November 20, 2017 response (page 10) was,

No.

The 2.4 GHz Zigbee Transceiver is unrelated to the Respondent's ability to collect customer electric usage data. Other EDCs provide their customers with the option to have this feature disabled.

- What is the reason why the Respondent does not provide its customers with this option?

ANSWER:

16. Complainants October 5, 2017 Set #1 Discovery Request question 3. and 3. a. (page 9) was,

State all facts that support Your claim that Duquesne Light's installation of a Smart Meter at the Property will not negatively affect the health and/or medical condition(s) of Michele Hriadil, Francis Hriadil, and/or any pets or animals, and/or any visitors including but not limited to the elderly, children, babies, pregnant mothers and their fetuses, etc.

a. *What analyses, if any, did You carry out to ensure that the Radiofrequency (RF) radiation, and Low Frequency (LF) radiation induced by the Switch-Mode Power supply, from Your wireless Smart Meter system would be safe for all of Your customers, and those living at or visiting their Property?*

i. *If You did not carry out any analyses, how then did You establish that Your wireless Smart Meter system is safe for all of Your customers, and those living at or visiting their Property?*

Respondent's November 20, 2017 response (pages 11 and 12) was,

Duquesne Light is required by law to install smart meters throughout its service territory, which includes Complainants' home. The company's smart meter procurement and implementation plan has been approved by the Pennsylvania Public Utility Commission, which is prima facie evidence that it is safe, reasonable, and in compliance with the law. Furthermore, the smart meters being installed in Duquesne Light's service territory meters are compliant with the applicable FCC regulations for both intentional and unintentional radiation.

Respondent's answer does not specifically address the questions asked.

- To clarify Respondent's answer, has the Respondent done anything beyond what is stated in its response above to address the specifics raised in the questions (yes/no)?
- If yes, what was done?

ANSWER:

17. Complainants October 5, 2017 Set #1 Discovery Request question 3. b. (page 9) was,

Did your analysis/assessment consider the Radiofrequency (RF) radiation from a single wireless Smart Meter, or the radiation from all components of Your wireless Smart Meter system including

i. *all wireless Smart Meters in a community?*
ii. *all intermediate wireless relay devices in a community such as any wireless Collector Smart Meters and Repeaters?*
iii. *all wireless Transmitters/Receivers required to communicate between the intermediate wireless relay devices and Duquesne Light or its agents?*

Respondent's November 20, 2017 response (page 12) was,

As required by the FCC, Itron assessed all of the active radios within the device. As with any other FCC-compliant device, ***Duquesne Light is not responsible for deployment of other devices in proximity of the meters.*** *Itron has published a white paper that specifically addresses the levels of RF exposure from meter banks: "The Facts on RF Exposure from Meter Banks." A key factor highlighted in this paper is that the RF levels fall off very quickly over distance. This results in minimal additive levels of RF exposure from multiple devices in a given area.* ***(emphasis added)***

Respondent's answer does not fully address the specifics of the question that was asked, and is confusing.

- Is Respondent responsible for the deployment of all devices comprising its Network Mesh in a community, which is more than just its Smart Meters (yes/no)?
- Does Respondent deploy its Smart Meters irrespective of what other RF devices (including but not limited to other Smart Meters) are in proximity of the meters (yes/no)?

ANSWER:

18. Complainants October 5, 2017 Set #1 Discovery Request question 3. c. (page 10) was,

Recognizing that the science indicates there are many conditions that can affect and influence Radiofrequency radiation levels in the home environment, does Your installation account for: ...

Respondent's November 20, 2017 response (page 12) was,

Before responding to each individual request below, Duquesne Light notes that this request is not only argumentative, but also overly broad with respect to ***what it contends that "science" indicates****. Furthermore, Duquesne Light exercises responsibility for its equipment, but* ***customers and/or homeowners are responsible for the internal circuitry and appliances that are located within a particular structure. (emphasis added)***

Respondent is dismissive of the question, and its answer is unclear.

a. Concerning Respondent's statement about "science",
   - Does Respondent deny that RF radiation can be absorbed, re-admitted, refracted, reflected, and/or refocused by materials, both natural and man-made, that are generally present in the environment and in the home (yes/no)?
   - If no, does Respondent then deny that this can affect and influence RF radiation inside and outside of the home environment (yes/no)?

b. Concerning Respondent's statement about deployment and responsibility,
   - When the Respondent removes the homeowner's current meter and replaces it with their Smart Meter, the only element of the homeowner's electrical service and environment being changed is the installation of the new Smart Meter (yes/no)?
   - The new Smart Meter installed by the Respondent is solely the responsibility of the Respondent (yes/no)?
   - Are homeowners asked to change or modify their internal circuitry and/or appliances prior to the installation of the new Smart Meter (yes/no)?
   - Are the responsibilities of the homeowner concerning their meter box, their home's electrical circuitry, and their appliances reviewed with the homeowner prior to the installation of the new Smart Meter (yes/no)?

ANSWER:

19. Complainants October 5, 2017 Set #1 Discovery Request question 3. d. (page 10) was,

What if anything is taken into account concerning the installation of Your Smart Meter?

Respondent's November 20, 2017 response (page 13) was,

This request is so vague that Duquesne Light cannot be reasonably expected to form a complete response, but Duquesne Light considers safety, reliability, and efficiency when installing smart meters throughout its service territory.

Complainants requested the specifics of what is taken into account concerning the installation of the Smart Meter. Respondent answer was vague, and did not supply any specifics.

- How and to what degree is safety taken into account when installing the Smart Meter?
- How and to what degree is reliability taken into account when installing the Smart Meter?
- How and to what degree is efficiency taken into account when installing the Smart Meter?

ANSWER:

20. Complainants October 5, 2017 Set #1 Discovery Request question 3. e. (page 10) was,

Are customers/homeowners provided with any written notice of the dangers and inherent risks associated with being in close proximity to Your Smart Meter on a regular basis?

Respondent's November 20, 2017 response (page 14) was,

This request is argumentative and Duquesne Light disagrees with the premise of this request, which is that there is a danger and/or inherent risk of being in some undefined "close proximity" to the smart meters being installed throughout its service territory.

Instead of answering the question, Respondent dismisses the question. It is a simple yes or no question.

- Does the Respondent provide the customer/homeowner with any written notice regarding possible consequences of being in close proximity (less than 20 cm) to their Smart Meter on a regular basis (yes/no)?
    - If the answer is yes, what does that notice say?
    - If the answer is no, is that because the Respondent avers that there are no consequences to being in close proximity (less than 20 cm) to their Smart Meter on a regular basis (yes/no)?

- Does the Respondent install the new Smart Meter irrespective of its proximity to human activity near the Smart Meter's location (yes/no)?

ANSWER:

21. Complainants October 5, 2017 Set #1 Discovery Request question 3. e. ii. (page 10) was,

Are there warning labels on Your Smart Meters?

Respondent's November 20, 2017 response (page 14) was,

The Smart Meter contains a standard message that warns against introducing currents at voltages above the meter's design tolerance.

Complainants examined the Smart Meters deployed in his neighborhood. No such warning message is displayed on the Smart Meter. No such warning message was received by the Complainants in any material received from the Respondent concerning the installation of the new Smart Meter.

- Where is this standard message, how is it provided to the customer/homeowner, and what specifically does this standard message say?
- What are the maximum currents and/or voltages that the Respondent's Smart Meter's design can tolerance?
- Have voltage surges occurred on the utility side in the past that introduce currents and/or voltages that exceed this maximum voltage design tolerance (yes/no)?

ANSWER:

22. Complainants October 5, 2017 Set #1 Discovery Request question 6. a. (page 12) was,

What are the physical elements, components, and materials used in the construction of Your electrical Smart Meter? Electronic components? Circuit boards? Flammable materials?

Respondent's November 20, 2017 response (page 15 and 16) was,

The terms used in this request are vague. Duquesne Light offers the following table, which lists the common material used in the HW 3.1 OpenWay CENTRON meter:

CEN-II	
Component	*Material*
Base and Switch Cover	*PET RYNITE FR 515*
Outer Cover, Inner Covers, OEM Support and Register Display	*Polycarbonate*

Electrical components; resistors, capacitors, diodes, transistors, integrated chips (IC)	*Common supported materials used to manufacture electrical components*
Printed Circuit Boards	*Fiberglass epoxy resin with copper foil*

Respondent's answer is incomplete.

- Are any of these components or materials flammable (yes/no)?

ANSWER:

23. Complainants October 5, 2017 Set #1 Discovery Request question 6. c. (page 12) was,

Can overheating of the electronic components and flammable materials inside of Your Smart Meters cause the components to degrade, expand, "pop", smoke, burst into flame, burn, and/or explode, with a single occurrence or repeatedly over time?

Respondent's November 20, 2017 response (page 16) was,

Duquesne Light cannot and will not speculate as to what might happen to the components of a smart meter based on a vague and unidentified set of facts. As noted by the responses to the preceding Discovery Requests, the smart meters being installed in Duquesne Light's service territory fall within the limits established by the FCC, have been tested and approved by UL, and the company's smart meter procurement and implementation plan has been approved by the Pennsylvania Public Utility Commission, which is prima fade evidence that it is reasonable, safe, and in compliance with the law.

Respondent refused to answer the question, which requires a simple yes or no answer. Electronic components have known physical behaviors when they fail, irrespective of Respondent's statement.

Flammable materials burn when they are overheated, irrespective of the Respondent's statement.

Respondent's failure to acknowledge this is an evasion.

Again, Complainant would like an answer to the question,

- Can overheating of the electronic components and flammable materials inside of Respondent's Smart Meters cause the components to:
    - degrade, with a single occurrence or repeatedly over time (yes/no)?
    - expand or deform, with a single occurrence or repeatedly over time (yes/no)?
    - "pop", with a single occurrence or repeatedly over time (yes/no)?
    - smoke, with a single occurrence or repeatedly over time (yes/no)?
    - ignite and burn, with a single occurrence or repeatedly over time (yes/no)?
    - and/or explode, with a single occurrence or repeatedly over time (yes/no)?

ANSWER:

24. Complainants October 5, 2017 Set #1 Discovery Request question 6. d. (page 12) was,

Does Your Smart Meter contain anything to warn the homeowner of overheating, fire danger, or explosion?

Respondent's November 20, 2017 response (page 16) was,

The Smart Meter contains a standard message that warns against introducing currents at voltages above the meter's design tolerance.

Respondent refused to answer the question, which requires a simple yes or no answer. Respondent refers to a "standard message" about currents and voltages which has nothing to do with the question asked.

Again, Complainant would like an answer to the question,

- Does the Respondent's Smart Meter contain anything to warn the homeowner of overheating, fire danger, or explosion? (yes/no)?
- If the answer is yes, where is this message, how is it provided to the customer/homeowner, and what specifically does this message say?

ANSWER:

25. Complainants October 5, 2017 Set #1 Discovery Request question 6. e. (page 12) was,

Has destructive testing been carried out on Your Smart Meter?

i. If so, what were/are the failure modes/mechanisms? What were/are the occurrences of overheating, smoking, burning, popping, and explosions when the Smart Meter components are overstressed?

ii. If not, how do you know what the failure modes of Your Smart Meters are, and how do you know they are safe?

Respondent's November 20, 2017 response (page 16) was,

This question is so vague that Duquesne Light cannot reasonably be expected to form a complete response.

Respondent refused to answer the question, which requires a simple yes or no answer, with a follow-up explanation. The question is neither vague nor unreasonable.

Again, Complainant would like an answer to the simple question,

- Has destructive testing been carried out on Respondent's Smart Meter (yes/no)?

If yes, what were/are the failure modes/mechanisms? What were/are the occurrences of overheating, smoking, burning, popping, and explosions when the Smart Meter components are overstressed?

ANSWER:

26. Complainants October 5, 2017 Set #1 Discovery Request question 6. f. and g. (page 12) was,

6. f. Does Your Smart Meter provide Circuit Breaker protection for the homeowner?

6. g. Does Your Smart Meter provide Surge Arrestors designed to withstand and protect the homeowner's internal electrical system and connected appliances from large voltage surges and other events originating on the utility-side electrical grid?

Respondent's November 20, 2017 response (page 16) was,

No. ***Protection of the internal electrical circuitry and appliances are the responsibility of the customer and/or homeowner.*** *See* ***section 13 of Duquesne Light's tariff*** *and the associated electric service installation rules, both of which are being produced.* ***(emphasis added)***

Respondent's answer is incomplete.

a. Respondent states that Section 13 of Duquesne Light's Tariff was to be produced.

- As stated in section 3. of this document Section 13 of Duquesne Light's tariff was not provided in Respondent's response.

b. Respondent states here and in other parts of their response that "*protection of the internal electrical circuitry and appliances are the responsibility of the customer and/or homeowner.*"

- Is this responsibility explained at any time to the homeowner (yes/no)?
- Is the homeowner informed that the new Smart Meter is functionally and operationally different than the meter (i.e. the electro-mechanical meter) being replaced (yes/no)?
- Is the homeowner informed of what additional upgrades/protections should be installed to ensure that his internal electrical circuitry and appliances are protected and compatible with the new Smart Meter being installed on his property (yes/no)?

ANSWER:

27. Complainants October 5, 2017 Set #1 Discovery Request question 6. i. (page 13) was,

What measures exist in Your Smart Meters to assure safe and reliable operation, and prevent degradation over time, due to power surges and environmental factors such as debris, humidity, vibration, salt water, etc. which can lead to the occurrence of "hot sockets" that is superior to the traditional strictly Analog Meter?

Respondent's November 20, 2017 response (page 17) was,

This request is so vague that Duquesne Light cannot be reasonably expected to form a response, but the *HW 3.1 OpenWay CENTRON singlephase meters are ANSI C12.1, ANSI C12.20 and UL2735 compliant devices. Furthermore, the meters operate within the limits established by the FCC and the company's smart meter implementation and procurement plan has been approved by the Pennsylvania Public Utility Commission, which is prima fade evidence that it is reasonable, safe, and in compliance with the law. Furthermore, the meters themselves do not lead to the occurrence of hot socket conditions.* ***Hot Socket conditions are caused by external influences. External influences that can contribute to hot socket conditions are loose or open meter socket jaws, corrosion of meter socket jaws, contamination of meter socket jaws, and faulty wiring of meter socket. Precautions against, and repair of, such conditions is the responsibility of the customer. (emphasis added)***

Respondent states that the homeowner has the responsibility for the upkeep of the meter socket jaws; but, does not indicate that the homeowner is informed of this responsibility.

- Is this responsibility explained at any time to the homeowner (yes/no)?
    - If so, exactly how is this done, and where is the record of this actually occurring?
- Are the Smart Meter prongs/tabs/blades that insert into the meter box sockets an exact match in form and fit (i.e. size, shape, dimensions, materials, separation, and distance) to the prongs/tabs/blades on the meter that is being replaced (yes/no)?
- Is the Smart Meter the property of the Respondent (yes/no)?
- After the Respondent's Smart Meter is installed, does it completely cover the meter box opening and its interior assembly, thus preventing any further ability for routine inspection without disturbing the Respondent's Smart Meter (yes/no)?
- When the Smart Meter is installed on the homeowner's meter box, is it ever installed with a locking ring or a lock of some kind to prevent its removal from the meter box (yes/no)?

ANSWER:

28. Complainants October 5, 2017 Set #1 Discovery Request question 6. j. (page 13) was,

To what degree is Your Smart Meter susceptible to damage from "hot sockets" as compared with the traditional strictly Analog Meter?

Respondent's November 20, 2017 response (page 17) was,

This request is so vague that Duquesne Light cannot be reasonably expected to form a complete response, but see the response to the preceding Discovery Request.

The question is not vague and is not unreasonable. The question specifically asks for the resistance to "hot sockets" of the new Smart Meters versus the Analog Electro-mechanical meters that are being replaced. Respondent refused to answer the question. Respondent's reference to his answer in the previous question does not answer this question. This is information that is and should be readily available to the Respondent.

Complainant again asks,

- Is the new Smart Meter compositionally and operationally different than the Analog Electro-mechanical meter that it is replacing (yes/no)?
- If the answer is yes, is the susceptibility of the new Smart Meter to damage from a "hot socket" different than the Analog Electro-mechanical meter that it is replacing (yes/no)?
    - If the answer is yes, what is that difference?
    - If the answer is no, what is the evidence?

ANSWER:

29. Complainants October 5, 2017 Set #1 Discovery Request question 6. m. (page 13) was,

How many SK9AMI7 Smart Meters have been removed or recalled from the field for reasons of quality, safety, and reliability?

Respondent's November 20, 2017 response (page 19) was,

This request is so vague that Duquesne Light cannot be reasonably expected to form a complete response. Furthermore, as noted above, the smart meters being installed in Duquesne Light's service territory are within the limits established by the FCC, have been tested and approved by UL, and comply with ANSI standards. Furthermore, the meters operate within the limits established by the FCC and the company's smart meter implementation and procurement plan has been approved by the Pennsylvania Public Utility Commission, which is prima facie evidence that it is reasonable, safe, and in compliance with the law.

The question is not vague and is not unreasonable. The question specifically asks about the nature and numbers of removals of deployed Smart Meters from the field. The Respondent refused to answer the question that was asked. This is another evasion on the part of the Respondent. The Respondent has been deploying the new Smart Meters since 2014, and has deployed 100,000s of Smart Meters over this period.

Complainant asks again,

- Has the Respondent removed or recalled any of the new Smart Meters from the field (yes/no)?
- How many Smart Meters have been removed or recalled from the field

  in total?

  for reasons of safety?

  for reasons of reliability?

  for reasons of quality?

  for any other reasons (and list those reasons)?

ANSWER:

30. Complainants October 5, 2017 Set #1 Discovery Request question 7. (page 14) was,

To the extent they have not been previously requested or produced, produce all Documents that relate to Your response to Discovery Request No. 6.

Respondent's November 20, 2017 response (page 19) was,

The following documents are attached:

- *Notice of Completion and Authorization to Apply the UL Mark*
- *Paragraph #13 of Duquesne Light's Tariff*
- *Duquesne Light's Electric Service Installation Rate Rules*
- *Additional documents have already been provided in responses to Discovery Request #2 and Discovery Request #4.*

Respondent did not provide the document "Paragraph #13 of Duquesne Light's Tariff" in its response. .

- Is Respondent going to supply this document?

ANSWER:

31. Complainants October 5, 2017 Set #1 Discovery Request question 9. a. i. (page 15) was,

How much education, experience, and what specific training do the installer technicians subcontracted by Duquesne Light have, and what, if any, are their certifications?

Respondent's November 20, 2017 response (page 20) was,

This interrogatory is so vague and broad that Duquesne Light cannot reasonably be expected to form a response. Duquesne Light cannot be reasonably expected to identify the education, experience, and specific

training of each individual subcontractor technician. Notwithstanding the vagueness and broadness of this interrogatory, Duquesne Light provides the following response:

All Wellington Power Corporation field personnel exchanging meters in Duquesne Light's service territory are IBEW union members and have been required to pass a written test as well as a two-week field evaluation. It is Duquesne Light's belief that such evaluation is consistent with industry best practices.

The question is not vague or broad. It is a very specific question about the training and background of the meter exchangers being employed to exchange the Smart Meters. And, the question was not fully answered. So, Complainants restate the question.

a. Again, what specific training do the Smart Meter exchangers go through, and what certification is received?

b. Is "meter exchanger" a recognized profession (yes/no)?

c. How long is that training program?

d. What are the minimum requirements necessary to be accepted for training to become an a meter exchanger?

e. Are the Smart Meter exchangers temporary or permanent employees? If some are permanent and some are temporary, what is the percentage of each category?

ANSWER:

32. Complainants October 5, 2017 Set #1 Discovery Request question 9. b. i. (page 15) was,

The installation of Your Smart Meters has been directly witnessed and observed by many, including myself. The focus is on speed of deployment in a neighborhood (deploying as many devices as possible in the shortest time), not safety. The meters are just simply and quickly changed out in what is called a "hot install."

i. What is Duquesne Light's specific installation protocol and procedure that is followed to ensure the safety of its customers/homeowners?

Respondent's November 20, 2017 response (page 21) was,

This request does not contain a question that requires a response from Duquesne Light, but Duquesne Light disagrees that it emphasizes speed over safety.

Prior to pulling a meter, Duquesne Lights instructs its employees to look for obvious signs of deterioration such as excessive corrosion, a sunken or detached underground service entrance cable, or a socket visibly detached from the customer's house. After a meter is pulled and the employee can see behind the meter, the company instructs them to inspect various componentry inside the socket for signs of deterioration. This includes the insulators, the jaws, the connections, and the wiring. The employee is also instructed to verify service voltage. If the design of the socket permits, the employee will apply bypass jumpers prior to removing the meter to prevent the customer from losing power during the exchange.

The Respondent only answers the procedural part of the question; but, does not address the specific installation assignment protocols given to its meter exchangers.

- Are meter exchangers assigned daily installation quotas (yes/no)?
- What is the minimum number of Smart Meters that a meter exchanger must install each day?
- Does the Respondent, or its subcontractor Wellington Energy, offer its meter exchangers bonuses based on the number of meters they install in a day, or how quickly meters are installed in an assigned area (yes/no)?
    - If the answer is yes, what this the structure of that bonus program?

ANSWER:

33. Complainants October 5, 2017 Set #1 Discovery Request question 9. b. ii. (page 15) was,

What measures has Duquesne Light instituted to make sure that this protocol and procedure are being properly and consistently followed in the field?

Respondent's November 20, 2017 response (page 21) was,

To ensure employees are adhering to procedures, Duquesne Light's supervisors take an active approach in conducting field safety audits.

Respondent's answer is vague, and uses the terms "active approach" and "field safety audits" which it does not define or explain.

- What is the "active approach" that is carried out by Duquesne Light's supervisors?
- What constitutes a "field safety audit?"
- How often are "field safety audits" carried out, and how often are Duquesne Light's supervisors involved?

ANSWER:

34. Complainants October 5, 2017 Set #1 Discovery Request question 9. b. iii. (page 15) was,

Does Duquesne Light condone and authorize the use of a "hot install"?

Respondent's November 20, 2017 response (page 22) was,

The term "hot install" is undefined, thereby making it difficult for Duquesne Light to provide a complete response to this Discovery Request. Where it can be done safely, Duquesne Light does exchange meters without interrupting electric service to the customer.

Respondent's answer mischaracterizes the question, and is unclear. Respondent is incorrect in stating that "hot install" is undefined, when it is defined at the very being of question 9. b. So that there is no misunderstanding,

- does the Respondent routinely condone and authorize the use of a "hot install" (i.e. where the homeowners electrical service is not turned off prior to installation of the Smart Meter) (yes/no)?

ANSWER:

35. Complainants October 5, 2017 Set #1 Discovery Request question 9. b. iv. (page 15) was,

Does Duquesne Light condone and authorize the use of a "hot install"?

Respondent's November 20, 2017 response (page 22) was,

The term "hot install" is undefined, thereby making it difficult for Duquesne Light to provide a complete response to this Discovery Request. Duquesne Light and its installation contractors do not attempt meter exchanges under conditions they deem to pose a safety hazard. As part of the smart meter exchange process, ***Duquesne Light or its installation contractors contact residential customers prior to the exchange, in part to provide the customers with an opportunity to advise the company of any conditions that would impede a meter exchange or if the customer would prefer to shut down operating equipment during the meter exchange.*** *At the time of the exchange, if the* ***installation technician*** *identifies a condition that would make it unsafe to conduct the exchange (e.g., a socket abnormality), he or she stops the exchange and notifies Duquesne Light. Duquesne Light then sends an* ***experienced meter technician*** *to remedy the condition and/or notify the customer of required repairs or service corrections. As part of the installation process the* ***meter exchanger*** *is to attempt to notify the customer prior to meter exchange in the event the customer would prefer to shutdown operating equipment. If the installer identifies a socket abnormality during install, they would stop exchange and notify Duquesne Light to send a* ***meter specialist*** *to make repairs or notify customer of potential service corrections needed.* ***(emphasis added)***

Respondent's answer mischaracterizes the question again, and is unclear. Respondent is incorrect in stating that "hot install" is undefined, when it is defined at the very being of question 9. b.

Respondent's answer is vague and somewhat confusing as different terminology seems to be used at different times to refer to the same personnel or items, and there is a statement made alleging prior contact with residential customers to advise the company of any conditions that would impede a meter exchange, etc.

a. Concerning contact.

- Is the alleged aforementioned contact by Duquesne Light or its installation contractors with residential customers prior to the meter exchange "so that they can advise the company of any conditions that would impede a meter exchange or if the customer would prefer to shut down operating equipment during the meter exchange" carried out in writing (yes/no)?

  If the answer is no, then how does the Respondent know that this is indeed happening as they allege?

b. Concerning personnel.

- Does the designation "installation technician" and "meter exchanger" refer to the same personnel (yes/no)?

  If the answer is no, how are they different?

- Does designation "experienced meter technician" and "meter specialist" refer to the same personnel (yes/no)?

  If the answer is no, how are they different?

- Are "experienced meter technicians" and "meter specialists" certified electricians (yes/no)?

- What is the difference in training, experience, and certifications between "installation technicians" and "meter exchangers" and "experienced meter technicians" and "meter specialists"?

ANSWER:

36. Concerning the routine "visual inspection" of the homeowner's exterior meter box and neutral connections, the only inspection of the homeowner's electrical system that the Respondent states is carried out, complainants October 5, 2017 Set #1 Discovery Request questions 9. d. ii., iii., and iv. (page 16) was,

ii. How many residences have failed this inspection?

Respondent's November 20, 2017 response (page 22) was,

Through the course of the project, Wellington Energy has forwarded investigations at a rate of 0.5 percent consistently for Duquesne Light Specialist. In this 0.5 percent would be potential neutral connection concerns.

iii. What are the observed frequencies and occurrences of

aa. damage or melting around the meter tabs/blades?
bb. pitting in the socket jaws?
cc. loss of spring tension in the socket jaws?
dd. oxidation on the lug wires?

ee. evidence of arcing?
ff. sockets that are unsafe or not up to code?
gg. other abnormal conditions?

Respondent's November 20, 2017 response (page 22) was,

> *The 0.5 percent investigation referenced in the response to Discovery Request #9(d)(ii) above includes the conditions stated in Discovery Request #9(d)(iii)(aa)-(gg).*

iv. What other safety related issues have been observed?

Respondent's November 20, 2017 response (page 22) was,

> *Duquesne Light does not specifically itemize the socket conditions.*

Respondent provided only an overall percentage of occurrences of safety concerns in their meter exchangers' routine "visual inspections". The requested specifics of the occurrences were not provided. Respondent stated that it does not specifically itemize the safety concern conditions which is a questionable; but, it made no such statement with regard to its subcontractor Wellington Energy. To clarify Respondent's statement,

- Does Wellington Energy, or any other of the Respondent's agents or contractors, have this information (yes/no)?
    - If the answer is yes, please provide the requested information?

ANSWER:

37. Complainants October 5, 2017 Set #1 Discovery Request question 10. (page 17) was,

Produce all Documents that relate to Your response to Discovery Request No. 9.

Respondent's November 20, 2017 response (page 24) was,

The following documents are attached:

- *Advanced Meter Exchange Procedure*
- *Verify Service Voltage & Perform Safety Check Procedure*

Respondent did not provide the document "Advanced Meter Exchange Procedure" in its response.

- Is Respondent going to supply this document?

ANSWER:

38. Complainants October 5, 2017 Set #1 Discovery Request question 12. b. (page 18) was,

How is the security of our personal information, of the electricity to our Property, of the electrical infrastructure of the state of Pennsylvania not made significantly more vulnerable by the deployment and proliferation of hundreds of thousands to millions of wireless programmable end-metering devices, such as Your Smart Meters, and Your Collector Meters, Your Repeaters, Your Data Storage Centers, etc, which are effectively hundreds of thousands to millions of open portals into the electrical energy infrastructure of the state?

Respondent's November 20, 2017 response (page 25) was,

This request is argumentative and Duquesne Light rejects its premise. The smart meters being installed in its service territory are not "open portals into the electrical energy infrastructure of the state."

Respondent did not answer the question.

- Does the Respondent operate and maintain the local electrical energy infrastructure in its service area (yes/no)?
- Does the Respondent's local energy infrastructure form part (i.e. a component) of the larger energy infrastructure of western Pennsylvania, and the rest of the state (yes/no)?
- Is each Smart Meter a separate date entry point into the Respondent's Network Mesh grid (yes/no)?
- Has the Respondent deployed hundreds of thousands of Smart Meters throughout its service area (yes/no)?

ANSWER:

39. Complainants October 5, 2017 Set #1 Discovery Request question 18. (page 21) was,

What is the nature and specificity of the customer data being collected by Your Smart Meter system, and how do You intend/ plan to use that customer data?

Respondent's November 20, 2017 response (page 27) was,

Duquesne Light's residential Smart Meters collect hourly and daily electric consumption data for the purposes of billing customers. Smart Meters also collect the following data used for utility grid operations: demand resets; meter tampering events; battery voltage; power outage or restoration events; and voltage thresholds.

Respondent's answer is incomplete. Respondent is well aware of the Public Utility Commission's Implementation Order Docket No. M-2009-2092655 which states that EDC's Smart Meter technology must provide the capability to record 15 minute or shorter interval data electric consumption data, which Respondent does not even acknowledge. The electric consumption data that

Respondent's Smart Meters happen to currently measure does not reflect or acknowledge the full capability of its system.

- What is the shortest data interval of electric consumption the Respondent's Smart Meter is capable of measuring?
- Can each individual Smart Meter on a homeowner's residence be programmed with its own individual data collection interval (yes/no)?
- Can the Respondent change its data collection interval at any time, for any purpose, and at its own discretion (yes/no)?
- Can the Respondent change the data collection interval remotely (yes/no)?
- When operating at this shortest data collection interval of electric consumption, what is the maximum number of Scheduled Reads that the Respondent's Smart Meter is capable of operating at?
- When operating at this shortest data collection interval of electric consumption, what is the maximum Duty Cycle that the Respondent's Smart Meter is capable of operating at?

ANSWER:

40. Complainants October 5, 2017 Set #1 Discovery Request question 18. a. (page 21) was,

Will this personal data only be used for billing purposes internal to Duquesne Light?

Respondent's November 20, 2017 response (page 27) was,

No. As discussed in the response to the preceding request, some data collected by Smart Meters will be used to facilitate grid operations.

Respondent's answer is not clear. There is meter overhead operation, and there is collected personal customer electric usage data. Respondent raises the unrelated subject of grid operations here. The Complainant specifically asked how the personal customer electric usage data will be used. Complainant's question did not ask anything about network or meter overhead operations. It was specifically directed only about and concerning the Respondent's intended use of the personal customer electric usage data it collects.

So, to be clear, Complainant asks again,

- Will this personal customer electric usage data be used only for billing purposes internal to Duquesne Light (yes/no)?

ANSWER:

41. Complainants October 5, 2017 Set #1 Discovery Request question 18. c. (page 21) was,

If this personal data is to be used for other than billing purposes, what are those purposes, and will this be done only with the knowledge and written consent of the customer/homeowner?

Respondent's November 20, 2017 response (page 28) was,

The Pennsylvania Public Utility Commission requires Duquesne Light to provide an Eligible Customer List (ECL), comprising certain customer information, to qualified electric generation suppliers (EGSs). Customers can opt to be removed from the ECL. ECL requirements predate, and are not associated with, Duquesne Light's Smart Meter system. For more information about the ECL, visit the Public Utility Commission's website at:

http://www.puc.state.pa.us/utility_industry/electricity/electric_competitive_market_oversight.aspx

Respondent provided this reference link. Complainant checked this link and found that it points to a webpage which does not exist. So, this question remains unanswered.

- What personal customer information is provided as part of the ECL?
- Other than the ECL, how else and specifically in what other ways does the Respondent intend to use this personal customer electric usage data?
- What protections and restrictions does Respondent have in place to prevent the misuse and abuse of this personal data?

ANSWER:

42. Complainants October 5, 2017 Set #1 Discovery Request question 18. d. (page 21) was,

Will this personal data be used to monitor and/or profile the customer/homeowner?

Respondent's November 20, 2017 response (page 28) was,

To an extent, yes. The primary purpose and function of an electric meter (including both Duquesne Light's legacy meters and its Smart Meters) is to monitor the customer's electric consumption.

Respondent's answer uses the vague and undefined terms "to an extent" and "monitor" without specifically explaining what this means and what this entails. This requires further explanation.

- How, and to what degree, is the customer's electric consumption "monitored"?

- Does the Respondent use all or only part of this collected customer electric usage data to calculate the monthly electric bill (all/part)?
    - Specifically, what percentage of this collected customer electric usage data is actually used to calculate the monthly bill, and what percentage is used for other purposes? What are these other purposes?
    - How is the monthly electric bill actually calculated, and what checks are in-place to ensure its accuracy and reliability?
    - Is this different than the current way that the monthly bill is calculated with the analog electro-mechanical meter (yes/no)?
        - If the answer is yes, how is it different?
- How, and to what "extent" and degree, is the customer profiled?
    - How is the customer's data specifically processed, handled, analyzed, and utilized to create the customer profile?
    - How detailed is this customer profile and what data does it specifically contain?
    - Does the Respondent utilize advanced analytics, either developed in-house or purchased/contracted externally from any outside vendor/contractor, such as utility data analytics companies like ONZO, etc., that have the capability to identify and log specific device, equipment, and electricity usage patterns in the home (yes/no)?
    - Is the Respondent precluded from developing, purchasing, or contracting such advanced utility data analytics in the future (yes/no)?
- How long is this personal electric consumption data retained in the Respondent's possession?
    - Is this personal electric consumption data retained permanently, or is older data purged after a period of time?
    - If older data is purged, when is it purged?

ANSWER:

43. Complainants October 5, 2017 Set #1 Discovery Request question 18. e. (page 21) was,

Have You received any requests for this personal data from any individual, company, or organization for the purposes of profiling, data-mining, etc.?

Respondent's November 20, 2017 response (page 28) was,

Upon information and belief, Duquesne Light has received one request from an external party for customer interval usage data for the purposes of developing customer profiles. Duquesne Light received this request in 2013 and denied it. DLC does not provide customer data to unauthorized parties.

Respondent uses the term "unauthorized parties" without further explanation.

- What parties are authorized to receive this personal customer data?

- Who determines if a party is authorized or not authorized to receive this personal customer data?

ANSWER:

44. Complainants October 5, 2017 Set #1 Discovery Request question 18. h. (page 21) was,

Do You have plans in the future to market this personal data in any way for the purposes of creating new income streams?

Respondent's November 20, 2017 response (page 29) was,

No.

The Respondent is well aware that plans change for many reasons.

- Is the Respondent precluded from offering this personal customer data to any individual, company, or organization in the future (yes/no)?

ANSWER:

45. In Complainants October 5, 2017 Set #1 Discovery Request, Complainants asked a series of simple and straightforward questions in its Set #1 of Discovery Requests. These are presented below:

- Complainants October 5, 2017 Set #1 Discovery Request question 5. (page 11),

  Do You stand behind and guarantee Your claim that Your wireless Smart Meter system is harmless? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for all health and medical consequences that occur as a result of Your wireless Smart Meter system?

- Complainants October 5, 2017 Set #1 Discovery Request question 8. (page 14),

  Do You stand behind and guarantee Your claim that Your wireless Smart Meter system is safe and reliable? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for any and all property damage and personal harm, etc. that occurs as a result of Your wireless Smart Meter system?

- Complainants October 5, 2017 Set #1 Discovery Request question 11. (page 17),

  Do You stand behind and guarantee Your claim that Your manner of installing Your Smart Meters is safe? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for any and all property damage and personal harm, etc. that occurs as a result of the installation of Your wireless Smart Meter?

- Complainants October 5, 2017 Set #1 Discovery Request question 14. (page 19),

  Do You stand behind and guarantee Your claim that Your Smart Meter system is secure? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for any and all Property damage and personal harm, etc. that occurs as a result of the hacking, breach, or abuse of Your Smart Meter security system?

- Complainants October 5, 2017 Set #1 Discovery Request question 17. (page 20),

  Do You stand behind and guarantee Your claim that Your Smart Meter system will not negatively affect the value of our Property? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for any loss in value of our Property that occurs as a result of the installation of Your Smart Meter system?

- Complainants October 5, 2017 Set #1 Discovery Request question 20. (page 21),

  Do You stand behind and guarantee Your claim that our personal data collected by Your Smart Meter system will remain secure and private within Duquesne Light? If so, will You provide a written warranty to that effect indicating that You are accountable and will accept all liability for any loss, abuse, or misuse of our personal data, and any use of our personal information for other than billing purposes without our knowledge and written consent, that is collected and stored by Your Smart Meter system?

In all cases, Respondent's November 20, 2017 response (pages 15, 20, 24, 26, 27, and 29) was,

> *This request is vague, ambiguous, and lacks a factual foundation as it does not indicate how or when Duquesne Light made the alleged statement in question. Duquesne Light reiterates that it is required by law to install smart meters throughout its service territory, which includes Complainants' home. The company's smart meter procurement and implementation plan has been approved by the Pennsylvania Public Utility Commission, which is prima facie evidence that it is safe, reasonable, and in compliance with the law. Duquesne Light's alleged liability for any acts or omissions will be adjudicated through the appropriate legal proceedings based on the facts of each case.*

Complainants object to this characterization, and can only view it as an evasion of what are simple, clear, and straightforward questions requiring a simple, clear, and straightforward yes or no answer.

The Respondent states that these questions lack a factual foundation, when the Respondent has stated in its published literature, in print and online, and in its objections to our Formal Complaint that its Smart Meters and Network Mesh is harmless, safe, reliable, safely installed, secure, etc., and that personal Customer data that is collected will remain secure and private within Duquesne Light. If this is factually incorrect, then Respondent needs to state plainly, and for the record:

- Are Respondent's Smart Meters and Network Mesh:
    - harmless (yes/no)?
    - safe (yes/no)?
    - reliable (yes/no)?
    - safely installed (yes/no)?
    - secure (yes/no)?
    - not a negative impact on the customer's property and property value (yes/no)?
- And, is the personal data that is collected
    - secure and private within Duquesne Light (yes/no)?
- Did the Respondent affirm these matters before the Public Utility Commission in order to gain approval of the Respondent's smart meter procurement and implementation plan (yes/no)?
- In all of these matters where the Respondent answered yes, will the Respondent stand behind that affirmation and provide a written warranty to that effect to the Complainant indicating that the Respondent is accountable and will accept all liability for any and all harm caused by and attributed to the installation and use of their Smart Meter on the Complainants property (yes or no)?

ANSWER:

46. Complainants October 5, 2017 Set #1 Discovery Request question 21. (page 22) was,

How many incidents have occurred, and how many customers have filed concerns and complaints with Duquesne Light, concerning Your Smart Meters with regards to, but not limited to,

a. health?
b. safety, reliability, and fires?
c. privacy?
d. security?
e. electrical and device interference?
f. increased and increasing electrical bills, and over-billing charges?

What were the specifics of these incidents or complaints?

Respondent's November 20, 2017 response (page 29) was,

This request is so vague and broad that Duquesne Light cannot be reasonably expected to form a complete response, but copies of all complaints filed with the Pennsylvania Public Utility Commission are publicly available. The mere fact that a complaint was filed does not in any way suggest that Duquesne Light acted improperly or violated the law.

This question is neither vague nor broad. Complainants did not ask about complaints filed with the Public Utility Commission. Complainants asked about customer Smart Meter complaints and concerns lodged with the Respondent. The Respondent has a customer care department specifically tasked with handling customer complaints and concerns. Respondent has been deploying its Smart Meters since 2014.

The Respondent did not answer the question that was asked, and formed its response to a question that was not asked. Complainants can only view this as an evasion of the question.

Again, Complainants ask,

- How many incidents have occurred, and how many customers have filed concerns and complaints with Duquesne Light, concerning Your Smart Meters with regards to, but not limited to,
    - health?
    - safety, reliability, and fires?
    - privacy?
    - security?
    - electrical and device interference?
    - increased and increasing electrical bills, and over-billing charges?
- What were the specifics of these incidents or complaints?

ANSWER:

47. Complainants October 5, 2017 Set #1 Discovery Request question 22. (page 22) was,

Has Duquesne Light provided any relief or accommodation from their Smart Meter system to any individual, official, group, community, organization, etc. for any reason at any time?

a. If so, list those individuals, officials, groups, communities, organizations, etc., and the reasons for that relief or those accommodations?

Respondent's November 20, 2017 response (page 30) was,

The term "relief or accommodation from their Smart Meter system" is so vague that Duquesne Light cannot be reasonably expected to form a complete response. Duquesne Light reiterates that it is required by law to install smart meters throughout its service territory, and that the applicable laws do not provide for individual customers to "opt out" of having a Smart Meter installed at their premises.

Respondent has been involved in these types of cases before. It is not believable that the Respondent does not understand what "relief or accommodation from their Smart Meter system" means. Settlements are one form of relief or accommodation that the Public Utility Commission advocates; but, the

Respondent does not seem to remember this.

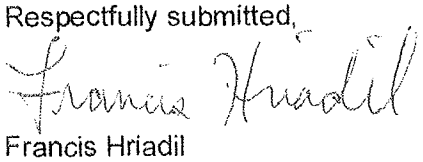
So, the Complainants ask again, and more specifically,

- Has Duquesne Light provided any form of relief or accommodation, including but not limited to settlements, from their Smart Meter system to any individual, official, group, community, organization, etc. for any reason at any time (yes/no)?
- If the answer is yes, what specific form or forms has this relief, accommodation, and/or settlement taken?

ANSWER:

Complainants respectfully ask, in all cases, that the Respondent provide answers to the questions that were asked.

Respectfully submitted,



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Monroeville, PA 15146
December 30, 2017

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Michele Hriadil and Francis Hriadil,	:	
Complainant,	:	
vs.	:	No: C-2016-2571726
DUQUESNE LIGHT COMPANY,	:	
Respondent.	:	

CERTIFICATE OF SERVICE

I hereby certify that I have this day served Complainants Motion to Compel Discovery with ALJ Jeffrey Watson and Complainants Follow-up to Set #1 of Discovery Requests upon the participant listed below in accordance with the requirements of 52 PA. Code § 1.54 (relating to service by a participant):

Jeremy V Farrell, Esquire
Paul S Miller, Esquire
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Counsel for Respondent, Duquesne Light Company

Dated this 30th day of December, 2017

Francis Hriadil

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hriadil@attglobal.net

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

MICHELE HRIADIL and FRANCIS HRIADIL,	:	
Complainants,	:	
vs.	:	No: C-2016-2571726
DUQUESNE LIGHT COMPANY,	:	
Respondent.	:	

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document upon the participant listed below in accordance with the requirements of 52 PA. Code § 1.54 (relating to service by a participant):

Via Regular U.S. Mail
Michele Hriadil and Francis Hriadil
331 Shady Ridge Drive
Monroeville, PA 15146

Via Hand Delivery
Administrative Law Judge Jeffrey Watson
Piatt Place - 301 Fifth Avenue, Suite 220
Pittsburgh, PA 15222

Dated this 5th day of January, 2018

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