

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 1

Do you believe the removal of the Schlumberger C1S meter currently installed on the subject property and subsequent installation of a radiating or non-radiating smart meter at the subject property would not create or worsen health issues for Ann V. Sheehan, a medically diagnosed electrosensitive and her pregnant daughter and her daughter's developing fetus?

RESPONSE:

West Penn is interpreting “you” to mean West Penn and any agent, agency, or affiliate thereof.

West Penn and Itron have no reason to believe their metering products are unsafe or harmful to customers. The metering products comply with all safety requirements and standards established by agencies such as the Federal Communications Commission (“FCC”) for radio frequency (“RF”) environmental exposure. Specifically, Itron metering products are certified to comply with FCC Part 15 (247).

The FCC guidelines for human exposure to RF electromagnetic fields were derived from the recommendations of two expert organizations, the National Council on Radiation Protection and Measurements (“NCRP”) and the Institute of Electrical and Electronics Engineers (“IEEE”). Both the NCRP exposure criteria and the IEEE standard were developed by expert scientists and engineers after extensive reviews of the scientific literature related to RF biological effects. The exposure guidelines are based on thresholds for known adverse effects, and they incorporate prudent margins of safety.

In adopting these policies and guidelines, the FCC also worked with agencies including the Environmental Protection Agency (“EPA”), the Food and Drug Administration (“FDA”), the Occupational Safety and Health Administration (“OSHA”) and the National Institute for Occupational Safety and Health (“NIOSH”).

RF exposure from Itron smart meters represents 0.08 percent of the maximum permissible exposure (“MPE”) limit established by the FCC for these types of devices at 8 inches from the device. This exposure level represents a small fraction of what people receive from devices such as cell phones and Wi-Fi routers.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 2

If the answer to question 1 is no, please explain:

- a. the reasoning behind this belief using independent laboratory testing or other scientifically proven methods to support your opinion.

RESPONSE:

Please refer to West Penn's response to AVS Interrogatory I-1. The smart meters have been tested under both laboratory and field conditions to demonstrate compliance with Federal Communications Commission standards.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 3

Have the smart meters installed on neighboring properties (all properties within 300 ft. of subject property), and likewise the smart meter proposed to be installed on Ann V. Sheehan's home, been independently laboratory tested and certified and met safety standards for:

Voltage Variation, Frequency Variation, Harmonic Component, DC and Even Harmonics, Odd Harmonics in the AC Current Circuit, Sub-harmonics in the AC Current Circuit, Reversed Phase Sequence, Voltage Unbalance, Fast Transient Burst Test, Immunity to Electromagnetic RF Fields, AC Voltage Test, Surge Immunity Test, Impulse Voltage Test.

RESPONSE:

Please refer to West Penn's responses to AVS Interrogatories I-1 and I-2. In addition, Itron's metering products are American National Standards Institute ("ANSI") C12.1, ANSI C12.20 and Underwriters Laboratories ("UL") 2735 compliant devices.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 4

If yes, please provide:

- a. Have they been tested in situ on a electromagnetically quiet home such as the subject home, or merely in the field?
- b. the name of the independent laboratory providing the testing
- c. the address of the independent laboratory providing the testing
- d. the name of the professional in charge of the testing
- e. all results of the independent testing

RESPONSE:

- a. Please refer to West Penn's response to AVS Interrogatory I-3.
- b. Itron certified personnel perform the required ANSI tests on metering products commercialized by Itron, Inc. Itron certified personnel are involved early in the development phase of the project therefore acquiring design knowledge of the metering product. Having knowledge of the design, individuals are aware of product behavior and therefore able to detect product anomalies, if any, during all ANSI testing.

UL personnel performed the test to confirm compliance to UL 2735.
- c. See West Penn's response to AVS Interrogatory I-4, Attachments A and B.
- d. Itron, Inc. and Underwriters Laboratories.
- e. See West Penn's response to AVS Interrogatory I-4, Attachments A and B.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 5

Does your company employ or contract with one or more medical professionals whose expertise is in Environmental Medicine or Electrosensitivity?

RESPONSE:

No.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 6

Is it the position of your company that wired smart meters cannot collect the same data and distribute the same data as an RF transmitting smart meter?

RESPONSE:

Wired smart meters do not meet the minimum requirements as defined in Act 129 of 2008, the Pennsylvania Public Utility Commission's Implementation Order dated June 24, 2009 at Docket No. M-2009-2092655, or West Penn's Smart Meter Deployment Plan approved at Docket No. M-2013-2341994.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 7

Does the cost to install, collect data, operate and repair or replace a wired smart meter exceed that of an RF transmitting smart meter?

RESPONSE:

An evaluation of a wired smart meter system was not performed as a wired smart meter does not meet the minimum requirements as defined in Act 129 of 2008, the Pennsylvania Public Utility Commission's Implementation Order dated June 24, 2009 at Docket No. M-2009-2092655, or West Penn's Smart Meter Deployment Plan approved at Docket No. M-2013-2341994. Please refer to West Penn's response to AVS Interrogatory I-6.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 8

Is it the position of your company that an individual suffering from electrosensitivity, a functional disability, should not receive accommodations for said disability?

RESPONSE:

No. Act 129 of 2008 does not allow for an option to opt-out of a smart meter installation.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 9

Is it the position of the company to provide safe service and any alternations or substitutions in or to such service as necessary or proper for the accommodation and safety of its patrons, pursuant to Section 1501 of the Pennsylvania Public Utility Code?

RESPONSE:

West Penn provides adequate, efficient, safe, and reasonable service within the meaning of the Public Utility Code, 66 Pa.C.S. § 1501. Act 129 of 2008 does not allow for an option to opt-out of a smart meter installation.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 10

When was the existing meter on my home installed? When was it last serviced? Has it ever malfunctioned?

RESPONSE:

The existing meter was installed on July 28, 2003. The meter has not required service or malfunctioned since installation.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 11

When, according to your records, did Ann Sheehan first contact the company regarding a stray voltage and or magnetic power quality issue at her home?

- a. What was and when was the company's response to her first request regarding the power quality issue?

RESPONSE:

West Penn objects to AVS Interrogatory I-11 on the grounds that it relates to issues outside the scope of this proceeding, and therefore is not relevant to the subject matter of this proceeding or reasonably calculated to lead to the discovery of admissible evidence.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 12

How has First Energy responded in the past to customer complaints concerning stray voltage/magnetic radiation entering homes?

- a. What mitigation methods in general does the company use to eliminate the power quality issues entering customer's homes?

RESPONSE:

West Penn objects to AVS Interrogatory I-12 on the grounds that it relates to issues outside the scope of this proceeding, and therefore is not relevant to the subject matter of this proceeding or reasonably calculated to lead to the discovery of admissible evidence.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 13

Are most instances of stray voltage/magnetic radiation entering customers' homes due to induction or load current?

RESPONSE:

West Penn objects to AVS Interrogatory I-13 on the grounds that it relates to issues outside the scope of this proceeding, and therefore is not relevant to the subject matter of this proceeding or reasonably calculated to lead to the discovery of admissible evidence.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 14

Concerning the elimination of the stray voltage problems at customer homes, including the Sheehan property:

- a. Were surge arresters used?
- b. Were tap lines relocated away from transmission lines? How far?
- c. Were ground wells drilled?
- d. Was the tap converted to a three phase line to balance the load?
- e. Were isolation transformers installed on tap lines?

RESPONSE:

West Penn objects to AVS Interrogatory I-14 on the grounds that it relates to issues outside the scope of this proceeding, and therefore is not relevant to the subject matter of this proceeding or reasonably calculated to lead to the discovery of admissible evidence.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 15

At what percentage (average) do transmission lines contribute to stray voltage?

RESPONSE:

West Penn objects to AVS Interrogatory I-15 on the grounds that it relates to issues outside the scope of this proceeding, and therefore is not relevant to the subject matter of this proceeding or reasonably calculated to lead to the discovery of admissible evidence.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 16

At what percentage (average) does load current contribute to stray voltage?

RESPONSE:

West Penn objects to AVS Interrogatory I-16 on the grounds that it relates to issues outside the scope of this proceeding, and therefore is not relevant to the subject matter of this proceeding or reasonably calculated to lead to the discovery of admissible evidence.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 17

Is it the opinion of your company that all of your customers can safely sleep with their heads within 6 inches of a company installed meter?

- a. If not, what is the safe distance from a company installed smart meter, at which all of your customers can sleep?
- b. If not, what is the safe distance from a company installed analog meter, at which all of your customers can sleep?
- c. If not, what is the safe distance from a company installed digital meter, at which all of your customers can sleep?

RESPONSE: Yes. Please refer to West Penn's response to AVS Interrogatory I-1.

- a. Not applicable.
- b. Not applicable.
- c. Not applicable.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 18

What does the company consider a safe level of exposure to RF from smart meters in customers' homes and on their property?

RESPONSE:

West Penn relies on the standards developed by the Federal Communications Commission ("FCC") at FCC Part 15 (247) to determine a safe level of radio frequency exposure.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 19

If the customer's home is located 50 feet away from the company powerlines, does the company consider the customer is exposed to a safe level of magnetic radiation from those overhead powerlines?

- a. Has the company ever measured the electromagnetic exposure levels of customers whose properties are located near powerlines?
- b. At what level of exposure to electromagnetic energy does the company believe is safe for growing fetuses and electromagnetically sensitive individuals?
- c. Over what time period?
- d. Does the company believe those exposure levels are safe over long periods of time such as a period of ten years?
- e. Furnish all documents the company relies on for its opinion that such exposure is safe.

RESPONSE:

West Penn objects to AVS Interrogatory I-19 on the grounds that it relates to issues outside the scope of this proceeding, and therefore is not relevant to the subject matter of this proceeding or reasonably calculated to lead to the discovery of admissible evidence.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 20

If the company introduces RF or stray voltage/magnetic radiation to the property, including the residence and nearby properties of an electrosensitive, causes physical illness to the customer and causes her a constructive eviction from the use of parts of her property, would the company acknowledge such cause and effect relationship and take responsibility to remedy the situation, if such remedy did not cause the company a great deal of money?

RESPONSE:

West Penn objects to AVS Interrogatory I-20 on the grounds that it relates to issues outside the scope of this proceeding, and therefore is not relevant to the subject matter of this proceeding or reasonably calculated to lead to the discovery of admissible evidence.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 21

Are wired smart meters in use in Maryland by First Energy? If yes, under what circumstances? List the manufacturers of wired smart meters, the makes and models of them and all technical information regarding them, that are in use by First Energy for its residential customers.

RESPONSE:

West Penn objects to AVS Interrogatory I-21 on the grounds that it relates to issues outside the scope of this proceeding, and therefore is not relevant to the subject matter of this proceeding or reasonably calculated to lead to the discovery of admissible evidence.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 22

What is the transmission distance of the RF transmitting smart meters within 300 ft. of the subject property? At what frequency do these smart meters transmit? What are the number of transmissions per day and night that the smart meters above transmit? What duration is each transmission, and during what times of day do they transmit?

RESPONSE:

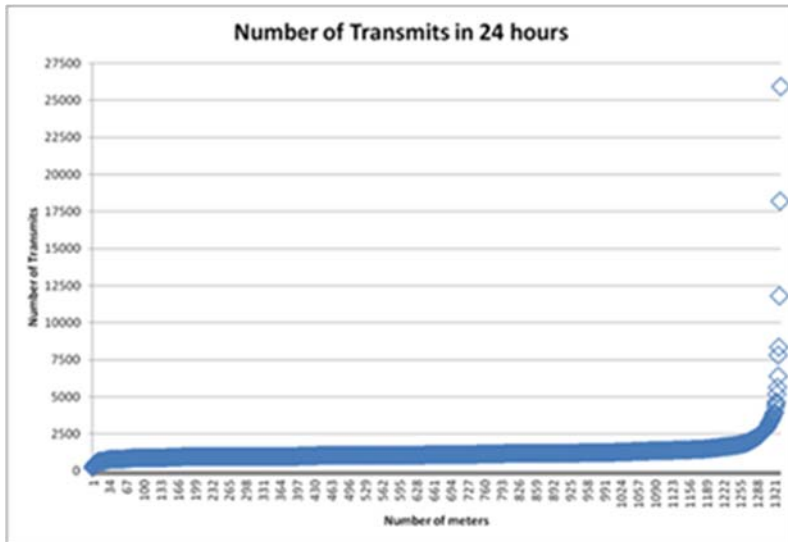
West Penn uses the Itron OpenWay Centron meter. The Itron OpenWay Centron meter transmits at both 900MHz (communicating to/from the head end) and 2.4GHz (local access and Home Area Network). The transmission levels are ~1.1 Watts for the 900MHz radio and 0.16 Watts for the 2.4GHz radio. The propagation of these signals will be highly dependent on the details of the RF environment (RF clutter, etc.) and can vary over time (vehicular movements, etc.). Itron's experience is that meter will generally be able to communicate with nearby meters in a suburban environment at distances up to 780 feet using the 900MHz radio. Distances for the 2.4GHz radios are considerable shorter (~100 feet).

The number of transmissions per day from the meters will be based on the utility's business process, which will determine how they set up their read schedules. Typically, there are three to four scheduled reads from each meter in a 24-hour period.

With a hierarchical network 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, alarms/alerts along with the network traffic needed for security, 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:

1. The average number of transmissions in a 24-hour period is ~1,268 (less than one time/minute);
2. The maximum number of transmissions in a 24-hour period is ~25,916 (18 times/minute or approximately 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% of the meters in this random sample transmitted less than 2,500 times in a 24-hour period.



Each transmission will be up to 150 milli-seconds in duration. The meter transmissions times will have a component that is dependent on the daily read schedule established by the utility along with a more constant level of transmissions for security, command and control messages. It should also be pointed out that all these transmissions add up to, on average, about three minutes of total transmission time per meter, per day or an average duty cycle of 0.21 percent.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 23

Can a customer turn off the RF transmission coming to and from the smart meters that West Penn has installed within 300 feet of the subject residence? Can a customer adjust in any way the RF transmissions coming off the smart meters that West Penn has installed within 2 miles of the subject residence?

RESPONSE:

No. Radio frequency transmissions allow West Penn's smart meters to communicate usage data back to West Penn. "Turning off" RF transmissions is equivalent to causing the smart meter to stop working. Any customer found tampering with West Penn's meters or other equipment is a violation of West Penn's Tariff, which may result in termination of service.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 24

Has First Energy received any health complaints about the model of meter you intend to install on the subject property? If yes, give a complete list of complaints received and how they were resolved. If the complaints are ongoing, list all efforts the company has engaged in to resolve those negative health effects from smart meter installation.

RESPONSE:

West Penn objects to AVS Interrogatory I-24 on the grounds that it is unduly burdensome, relates to issues outside the scope of this proceeding, and is not relevant to the subject matter of this proceeding or reasonably calculated to lead to the discovery of admissible evidence. West Penn further objects to AVS Interrogatory Set I-24 to the extent that it requests confidential or privileged information, including information subject to attorney-client privilege.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 25

To the best of your knowledge, do cell phones or microwave ovens use the same transmissions technology as smart meters? Do they use generally the same transmission frequency as smart meters?

RESPONSE:

Cellular phones operate with radio frequencies typically in the 800MHz and 1900MHz bands (smart meters use 900MHz). These radio signals are similar, although cell phones can transmit at up to 4 watts and are often used in close proximity to the human body.

Microwave ovens operate with radio frequencies in the 2.45GHz (2450MHz) bands. This is close to the same frequency as the Zigbee radio in a smart meter. The key differences in these signals are:

- 1) The microwave oven generates signals at output powers close to 1000 Watts. The smart meter signals are less than 0.2 Watts; and
- 2) The microwave oven concentrates signals to a confined space. Smart meters send signals over a very broad area.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 26

Do transmitting and non-transmitting smart meters create harmonics and transients (so called "dirty electricity") on home wiring?

- a. If yes, how are these harmonics and transients remediated from home wiring?
- b. Does First Energy remediate these harmonics and transients before they enter the home on the whole house wiring?

RESPONSE:

No, Itron's meters do not have an impact on customers' wiring. Itron meters comply with all applicable electrical performance and safety standards, including those set forth by American National Standards Institute ("ANSI"), Institute of Electrical and Electronics Engineers ("IEEE"), Underwriters Laboratory ("UL") and the FCC Section 15.207 (Power Line Conducted Emissions).

- a. Not applicable.
- b. See above.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 27

Have there been complaints, formal or informal, from customers of First Energy showing one or more symptoms of electrosensitivity (heart palpitations, headache, pain at base of skull, tingling of arms or legs, or other symptoms not listed), related to smart meters on homes? If yes, what has First Energy done, under Section 1501, to address these complaints?

RESPONSE:

West Penn objects to AVS Interrogatory I-27 on the grounds that it is unduly burdensome, relates to issues outside the scope of this proceeding, and is not relevant to the subject matter of this proceeding or reasonably calculated to lead to the discovery of admissible evidence. West Penn further objects to AVS Interrogatory I-27 to the extent that it requests confidential or privileged information, including information subject to attorney-client privilege.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 28

What does your company consider a safe level and safe distance for electromagnetically sensitive individuals and developing fetuses to spend time near, considering electromagnetic energy exposure from:

- a. analog meters?
- b. Digital meters?
- c. RF emitting Smart meters?

RESPONSE:

a. All meters installed on the West Penn system comply with safety standards established by a number of utility industry standard bodies including the American National Standards Institute, the Institute of Electrical and Electronics Engineers, the International Electrotechnical Commission, and the National Electrical Manufacturers Association.

b. See West Penn's response to a. above.

c. Itron's metering products comply with all safety requirements and standards established by agencies such as the Federal Communications Commission ("FCC") for radio frequency environmental exposure. Specifically, Itron metering products are certified to comply with FCC Part 15 (247).

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 29

If all neighbors near the subject property sign a petition to request wired meters instead of RF transmitting smart meters in a neighborhood because of health reasons, would First Energy acquiesce to that request at no additional cost to the signers of the petition?

RESPONSE:

No. See West Penn's response to AVS Interrogatory I-6.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 30

Is it the position of First Energy that Act 129 grants the company the legal right to install RF emitting smart meters on the electromagnetically quiet homes of functionally disabled people whose health would be negatively affected by such RF signal?

RESPONSE:

Act 129 of 2008 (“Act 129”) requires electric distribution companies with greater than 100,000 customers, including West Penn, to furnish smart meter technology to all customers. Act 129 does not permit an opt-out from smart meter installation. West Penn disputes that its smart meters negatively impact the health of its customers. The metering products comply with all safety requirements and standards established by the Federal Communications Commission (“FCC”) for radio frequency (“RF”) environmental exposure.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 31

If you answered yes to question 29, please give the wording in Act 129 that grants the company this authority.

RESPONSE:

Act 129 of 2008 states:

- (2) Electric distribution companies shall furnish smart meter technology as follows:
 - (i) Upon request from a customer that agrees to pay the cost of the smart meter at the time of the request.
 - (ii) In new building construction.
 - (iii) In accordance with a depreciation schedule not to exceed 15 years.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 32

What are the date or dates that RF radiating meters were installed on the 10 houses closest to the subject property?

RESPONSE:

A majority of the smart meters in the Complainant's neighborhood were installed in January 2017; other smart meters in the vicinity were installed in February 2015, May 2015, April 2016 and February 2017.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 33

What are the date or dates that remote RF transmissions from the company (from TGBs or through other remote means) were sent to my neighbors smart meters to tune or activate or adjust the signal and to test remote programming, and to test signal transmissions from those smart meters?

RESPONSE:

West Penn assumes that the Complainant is referring to a Tower Gateway Base (“TGB”) station. West Penn’s smart meter solution does not incorporate the use of a TGB.

West Penn’s smart meter solution uses a Cisco Connected Grid Router (“CGR”) to form the smart meter communications network.

See West Penn’s response to AVS Interrogatory I-22 regarding transmission frequencies.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 34

How many TGBs or other remote transmitters and receivers, including but not limited to other smart meters, were involved in sending RF signal to the smart meters in my neighborhood on those dates?

RESPONSE:

See West Penn's response to AVS Interrogatory I-33.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 35

What distance from my home were these TGBs or other remote signaling devices?

RESPONSE:

See West Penn's response to AVS Interrogatory I-33.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 36

Explain the method by which the utility intends to send RF signal to just the smart meter which the utility wants to place on my property. Is this the same method by which the utility sends signal to just my neighbors' homes?

RESPONSE:

The communications from the head end system of the smart meter communications network to the smart meters fall within two categories:

- 1) Multi-cast messages that are targeted to a group of meters; or
- 2) Uni-cast messages that are targeted to only a single meter.

The multi-cast messages are generally group command messages that request a set of meters to respond to data inquiries. Daily meter data reads are triggered through multi-cast messages. Multi-cast messages allow for a single message/packet to be sent to targeted meter populations and significantly reduce the amount of traffic needed on the network.

The uni-cast messages are generally used where a unique set of information is needed from a specific meter (on-demand reads, pings, etc.). These messages are sent to the field area router, which the targeted meter is communicating with and the router will forward the message to the specific meter.

All West Penn smart meters communicate in the same manner.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 37

How far does each TGB or other remote signaling device RF signal travel, when sent?

RESPONSE:

See West Penn's response to AVS Interrogatory I-33.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 38

Does the utility have the capability to send RF signal from its smart meters and its remote towers, if used, in only one direction or does the RF always scatter in all available (i.e., not blocked) directions?

RESPONSE:

The smart meters that West Penn is installing send RF signals in a fixed general pattern that is focused on the 180 degrees in front of the meter (away from the property), causing the highest levels of RF in front of the meter and lower levels behind the meter.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 39

What was the peak power transmitted on the above dates from the remote transmission towers? What intervals were there between those transmissions? What was the duration of each transmission? What specific times, to the closest minute, of the day and night were those transmissions sent? What was the frequency of each transmission and duration of each transmission? What was the duration of each non transmission time between transmissions on those dates?

RESPONSE:

See West Penn's Response to AVS Interrogatory I-22.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 40

Was the utility monitoring the adherence to FCC limits in my neighborhood on those days?

RESPONSE:

West Penn has not monitored radio frequency levels within your neighborhood. West Penn's smart meters have been repeatedly tested in both field and laboratory conditions. All testing indicates radio frequency levels well below those identified by the Federal Communications Commission.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 41

Is the utility required to monitor adherence to below FCC limits ever in its smart meter transmissions and in its remote RF transmissions to smart meters on residential homes? If so, what is the governmental agency and department that the utility is responsible to report that compliance to? If so, please provide a copy of all relevant reports sent to that government agency.

RESPONSE:

The utility is not required to monitor adherence to the Federal Communications Commission (“FCC”) standards and limits regarding radio frequency (“RF”) emissions. As the manufacturer of the smart metering equipment, Itron is required to ensure that its products comply with all applicable FCC standards and limits for RF communications, specifically FCC Part 15 (247), and to demonstrate compliance by having an independent, third-party organization provide testing and certification of compliance.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 42

Does the utility use dosimeters to measure total exposure to residential customers from its structures that transmit RFs?

RESPONSE:

No.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 43

Has the utility reduced the amount of RF transmissions emanating to and from its smart meters in my neighborhood since the dates above? If so, provide complete detail.

RESPONSE:

See West Penn's Response to AVS Interrogatory I-22 for radio frequency transmission information.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 44

Has the utility increased the amount of RF transmissions, in any respect, as to power intensity, number of transmissions, frequency of transmissions, etc., emanating to and from its smart meters in my neighborhood since the dates above? If yes, provide complete detail.

RESPONSE:

See West Penn's Response to AVS Interrogatory I-22 for radio frequency transmission information.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 45

Explain in detail, the actual smart grid system that West Penn has set up covering my neighborhood and the area within 5 miles from my property.

RESPONSE:

West Penn does not have a smart grid system within five miles of the Complainant's property.

ANN V. SHEEHAN
v.
WEST PENN POWER COMPANY
Docket No. C-2017-2630406

AVS Interrogatory Set I, No. 46

Detail the make and model of the smart meters used, the transmission times and the methods by which the company gets and sends usage and outage data to between the customer and the company. Provide all material that the company relied on to determine the safety and reliability as to electrosensitive individuals and developing fetuses and infants regarding the models selected.

RESPONSE:

See West Penn's responses to AVS Interrogatories I-1 and I-22.