

STATE OF IOWA
DEPARTMENT OF COMMERCE
UTILITIES BOARD

IN RE: INTERSTATE POWER AND LIGHT COMPANY	DOCKET NOS. SPU-2018-0007, TF-2018-0029, TF-2018-0030, C-2018-0006, C-2018-0007, C-2018-0008, RG-0150
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FINAL ORDER AND DECISION

(Issued February 6, 2019)

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I. BACKGROUND

A. Procedural History

On March 1, 2018, Interstate Power and Light Company (IPL) filed with the Utilities Board (Board) a proposed tariff regarding non-standard meter alternatives for its electric service customers. Specifically, IPL proposes a \$15 per month charge to customers who elect to opt out of having an Advanced Metering Infrastructure (AMI)¹ meter installed. The proposed tariff is identified as Docket No. TF-2018-0029. On the same day, IPL filed a similar proposed tariff for its natural gas service identified as Docket No. TF-2018-0030. The Board issued an order docketing and suspending the proposed tariffs on March 28, 2018.

The Board has three outstanding informal complaint dockets: C-2018-0006, C-2018-0007, and C-2018-0008. All three complaint dockets involve issues and concerns about IPL's proposed AMI upgrade program and opt-out procedures, including the opt-out charge in the proposed tariffs.

On July 13, 2018, the Board issued an order that consolidated the proposed tariffs, complaint dockets, and Docket No. RG-0150 into Docket No. SPU-2018-0007

¹ AMI meters are also referred to as "smart meters" in many filings, including the tariffs. The Board will refer to them as AMI meters throughout for clarity.

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for purposes of reaching a final resolution on all of the related matters. On July 20, 2018, the Board held a scheduling conference regarding the consolidated dockets.

On August 1, 2018, Kathy Matara (Matara), an IPL customer, filed a petition to intervene. Jonathan Lipman AIA & Associates, Inc. d/b/a MaharishiVastu.org (Lipman) (together with Matara, the Intervenors), also filed a petition to intervene on August 8, 2018. The Board granted both petitions for intervention on August 20, 2018. The Office of Consumer Advocate (OCA), a division of the Iowa Department of Justice, also participated in this case.

On October 12, 2018, the parties jointly filed a statement of issues identifying eleven issues to be addressed by the Board. Of the identified issues, eight were agreed to jointly and three others were proposed by the Intervenors. IPL objected to the inclusion of the additional three issues, and OCA asserted the three additional issues were adequately encompassed by the eight joint issues.

A hearing was held on November 5 and 6 and December 5, 2018. IPL, OCA and the Intervenors presented witnesses for cross-examination and offered exhibits into evidence. IPL, OCA, and the Intervenors filed post-hearing briefs on January 4, 2019.

Additionally, the Board has received numerous complaints, objections, and comments from other stakeholders and members of the public. Prior to the creation of Docket No. SPU-2018-0007, the Board received approximately 375 complaints related to IPL's AMI meters and an additional 100 objections and comments. In

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Docket No. SPU-2018-0007, the Board received more than 300 additional comments and objections.

B. Overview of IPL's AMI Project

IPL witness Randy Bauer testified that IPL has been evaluating an AMI program in its Iowa service territory for a number of years. IPL believes AMI will provide substantial value to its customers compared to the current metering infrastructure. IPL states AMI will allow it to remotely connect customers, remotely read meters in a more accurate manner, enhance the system's reliability, expand future customer offerings, and improve employee safety. Bauer testified that a comprehensive program will also simplify its infrastructure. (IPL Bauer Dir. at 3-4).

IPL decided to move forward at this time based upon a meter replacement schedule dictated by its Electric Metering and Testing Services procedures. IPL intends to replace approximately 500,000 electric meters, of which 470,000 would be for residential and small commercial customers. IPL intends to use Sensus electric meters for residential and small commercial customers, and Honeywell electric meters for commercial and industrial customers. *Id.* at 4-6.

For natural gas meters, IPL's proposal is to install a Sensus SmartPoint module on approximately 228,000 existing meters. This module will allow remote reading using a majority of existing meters. IPL acknowledges some meters will need to be replaced to accept the SmartPoint module. *Id.* at 5-6.

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IPL began deploying AMI metering in October 2017 after the Board granted IPL waivers of its testing rules in Docket Nos. WRU-2017-0004-0150 and WRU-2017-0017-0150. IPL anticipates installation of AMI meters being completed by June 30, 2019, with all meters being read remotely by September 2019. As of August 17, 2018, IPL had completed the transition for about 51 percent of electric meters and 34 percent of natural gas meters. *Id.* at 5-6. Bauer testified that as of the November hearing dates, approximately 320,000 electric AMI meters had been deployed. (Tr. at 42-43).

As part of its program, IPL would consider the AMI meter to be its standard meter. It previously considered a non-transmitting digital meter to be its standard meter. IPL's proposed tariffs include opt-out provisions for customers who do not want an AMI meter on their premises. Customers who opt out would be given a non-transmitting digital meter in place of an AMI meter. The opt-out provisions would be limited to residential customers with a single electric and/or natural gas meter; customers in other rate classes or those with multiple electric meters or multiple natural gas meters would not be eligible to opt out of the AMI meter. Additionally, residential customers utilizing an optional rate code such as time-of-day or net metering would not be eligible to opt out of having an AMI meter. (IPL Bauer Dir. at 7-11; IPL Vognsen Dir. at 9-10).

IPL proposes a monthly charge of \$15 per meter for those who elect the opt-out option. IPL witness David Vognsen testified that the charge was determined

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based on five components, including manual inputs of the reads into IPL's billing system, verification reads, system maintenance, the carrying cost of the non-standard meters, and a meter-reading credit. (IPL Vognsen Dir. at 15).

In addition to the monthly charge, IPL proposes other eligibility conditions, including requiring persons to self-read the meters within a specific four-day period without missing a reading during that period more than once within a 12-month period. IPL intends for its opt-out program to be temporary. Once a customer is disconnected or is no longer the customer of record at a location, the opt-out would end and IPL would install an AMI meter at that location. (IPL Vognsen Dir. at 12-13).

II. ISSUES

The Joint Statement of Issues filed October 12, 2018, lists eight issues the parties jointly agree need to be addressed by the Board. The eight issues include: 1) IPL's choice of alternative meters, 2) the reasonableness of the eligibility criteria and conditions, 3) whether this proceeding is appropriate to determine a monthly opt-out charge, 4) the reasonableness of IPL's proposed charge, 5) the adequacy of IPL's privacy policy, 6) whether IPL's AMI and digital meters present unreasonable health and safety risks, 7) the effect of AMI meters on property values, and 8) the reasonableness of IPL's request to modify the inspection frequency for intrastate gas pipelines that are exposed to the atmosphere.

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Intervenors also argue there are three additional issues: 1) whether AMI and digital meters will affect the market for Vastu homes, 2) whether the demand for analog meters is actually known given the information provided to customers by IPL, and 3) whether there is a large enough group of customers desiring an analog meter to necessitate allowing that choice. Intervenors describe Vastu as an “integrated ancient system” associated with India involving building design principles aiming to improve physical and mental health. (Intervenors Lipman Rebuttal at 3).

The Board will address these issues, including the additional issues of the Intervenors, in this order. Many of the issues listed above are overlapping, and the Board’s decisions regarding each issue may not be separately listed or enumerated. In these consolidated dockets, the Board is presented with issues based upon complaints filed in the informal complaint dockets and issues involving the tariffs proposed by IPL pursuant to Iowa Code §§ 476.3 and 476.6.

The Board generally reviews utility actions under a just and reasonable standard. Iowa Code § 476.3 requires public utilities to “furnish reasonably adequate service at rates and charges in accordance with tariffs filed with the [B]oard.” Pursuant to Iowa Code § 476.3, if the Board, following a hearing, finds the rates, services, or charges to be “unjust, unreasonable, discriminatory, or otherwise in violation of any provision of law,” the Board “shall determine just, reasonable, and nondiscriminatory rates, charges, schedules, service, or regulations to be observed and enforced.” Iowa Code § 476.7 contains similar language requiring “just,

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reasonable, sufficient, and nondiscriminatory” rates, charges, and services. Iowa Code § 476.8(1) further requires utilities to “furnish reasonably adequate service and facilities” at charges that are “reasonable and just.” Iowa Code § 476.6 prevents a public utility from making a new or changed rate or charge effective until the rate or charge has been approved by the Board.

A. Opt-Out Eligibility

1. Arguments of the Parties

At the outset, the Board must first determine whether IPL’s proposed eligibility conditions to opt out of having an AMI meter are just and reasonable, or whether the conditions should be altered or removed.

IPL proposes an opt-out program that is intended to be limited and temporary as a means to eventually transition all customers to an AMI meter. As proposed, the opt-out program would be limited to residential customers. The election to opt out would need to occur before an AMI meter is installed and would only be afforded to customers with a single electric and/or a single natural gas meter at a single point of delivery on the premises. (IPL Vognsen Dir. at 9). Customers who use the Time-of-Day, Net Metering Pilot – Renewable Energy Facilities, Cogeneration & Small Power Production, and Alternative Energy & Small Hydro Production rate codes would not be eligible. *Id.* at 10. The customer would also need to abide by other terms and conditions to maintain eligibility under IPL’s proposed program. If any one condition is not met, IPL would install an AMI meter at that location and the customer would no

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longer be eligible to opt out. See “Electric Tariff,” Docket No. TF-2018-0029, filed March 1, 2018; and “Gas Tariff,” Docket No. TF-2018-0029, filed March 1, 2018.

IPL argues that this transitional option is consistent with customers’ desire for alternate options and IPL’s desire to move to a uniform system of metering. (IPL Br. at 10). IPL states standardizing metering technology will provide economic efficiencies and is important for billing purposes. (Tr. at 290). IPL argues this will balance the desires of the roughly 2,000 customers who have expressed interest in the opt-out option, and been placed on the “hold list,” with the benefits of AMI to the company and the remainder of its customers. (IPL Br. at 11; Tr. at 720-721).

OCA notes that all parties, including IPL, agree that an alternative to an AMI meter is appropriate. (OCA Br. at 2; Tr. at 44; IPL Bauer Dir. at 8; OCA Shi Dir. at 4). OCA argues that the alternative should not be transitional or limited just to those currently on the hold list. For instance, OCA argues customers who move should be afforded the opportunity to continue to have non-AMI meters at their new residences. (OCA Br. at 12, OCA Turner Dir. at 6). OCA witness Brian Turner further asserted that, although it might be inconvenient, it should not be burdensome for IPL to provide some customers with a non-AMI meter upon request. (OCA Turner Dir. at 6). Turner also testified that customers whose meters have already been replaced should be given the opportunity to opt out. *Id.*

The Intervenor generally agree with OCA’s argument, citing to Turner’s direct testimony in support of their argument. (Intervenors Br. at 61). While agreeing that

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the customer of record needs to make the choice to opt out, Intervenor argue that it is not reasonable to restrict the opt-out to a one-time, temporary option as IPL proposes. Intervenor argue that, for example, a sale of a house or the transition from one tenant to the next in a rental unit should not end the ability to opt out from having an AMI meter. (Intervenor Br. at 58-59). Intervenor dispute IPL's contention that the cost of removing or installing an AMI meter at a location may not be acceptable to customers. (Intervenor Br. at 61; IPL Vognsen Rebuttal at 17). Intervenor assert the solution is to offer customers a choice between paying the installation costs or maintaining an AMI meter. (Intervenor Br. at 61).

2. Board Discussion

As discussed further below, customers have provided a variety of reasons for wanting to opt out of having an AMI meter installed on their premises. The objections to AMI meters include health, safety, privacy, and accuracy issues as well as preference for proven technology over new devices. The customers who have these concerns and objections are likely to continue to have them in the future, and the Board finds that a temporary, one-time only opt-out provision does not reasonably balance those customers' objections with IPL's stated goals of standardized equipment and economic efficiencies. The proposal by IPL is instead a phased-in effort to gain the benefits of efficiency to the company without having to address any of the customers' objections over a longer term or on a more permanent basis.

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The Board will therefore require IPL to allow customers to opt out upon request on an ongoing, permanent basis. For example, a customer who desires to move into IPL's territory one year from now, or a customer who wishes to move from an apartment to another, should be able to opt out of an AMI meter just as someone currently on the hold list may choose. Allowing customers to opt out at any time they move to a new location is reasonable and better strikes the balance between the desires of the customers and the desires of the company. Based upon the above discussion, the Board finds IPL's proposal to limit the opt-out provision to a temporary, one-time offer is not reasonable.

B. Opt-Out Conditions

1. Electric Meter Type

One of the primary issues raised by Intervenors and numerous commenters is whether customers may opt for an analog electric meter instead of an AMI or non-transmitting digital meter. This is solely an issue for electric customers because the upgrade to AMI meters for natural gas service means a transmitter module is attached to the existing meter. Those customers who desire to opt out would not have the AMI module installed on their existing natural gas meter. (IPL Bauer Dir. at 5). Consequently, the type of meter being installed for customers who opt out is not an issue for natural gas customers.

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a. Arguments of the Parties

IPL proposes to use the Itron C1S, a non-transmitting digital meter, for those electric customers who desire to opt out. See “Electric Tariff,” Docket No. TF-2018-0029, filed March 1, 2018; (Intervenors Hearing Ex. 53). IPL argues that its Board-approved tariffs, in conjunction with IPL’s experience in metering systems, support deference to IPL in its meter selections. IPL argues its tariffs, which state that it will “install, own, and maintain suitable metering equipment,” require IPL to determine what constitutes “suitable metering equipment.” (IPL Br. at 5); “Interstate Power and Light Electric Tariff Book,” Second Revised Sheet No. 224 (Effective November 3, 2010); “Interstate Power and Light Gas Tariff Book,” Original Sheet No. 230 (Effective April 15, 2002). IPL notes Board rules permit meters to be read electronically, citing rules 199 IAC 19.3(7) and 20.3(6). (IPL Br. at 6). IPL argues that it could have switched out its meters without Board approval, as acknowledged by OCA witness Seth Davison. (IPL Br. at 6; Tr. at 652).

IPL argues that digital technology is superior to analog meters, readily available, and affordable. Bauer testified that 21 test lots representing 227,489 of IPL’s 470,000 electric meters had statistically failed testing twice in a five-year period. Pursuant to IPL’s testing procedures, these meters must be removed from service within four years, or by the end of 2020. (IPL Bauer Rebuttal at 4). The 227,489 meters were all analog and represented 61 percent of the 374,861 analog meters in service prior to the start of IPL’s AMI deployment. Bauer testified that one reason it

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did not offer an analog meter as an option for those customers who opt out was the high statistical failure rate. *Id.* Additionally, the testing of a sample of meters removed from service as part of the AMI project shows that analog meters are testing outside of the acceptable range at a rate 13 times higher than digital meters removed. *Id.* at 6-7.

IPL further argues that its suppliers do not offer new analog electric meters, and IPL only buys new meters. IPL has not purchased new analog meters since at least 2010, and no longer maintains an inventory of new analog meters. (IPL Bauer Dir. at 13). Bauer testified that IPL can purchase new digital meters for the same price as refurbished analog meters. (Tr. at 73). Offering a single option for those customers who opt out will also simplify testing by creating one homogenous test lot and maintaining a single non-AMI meter in inventory. (IPL Bauer Dir. at 14). IPL asserts its determination to no longer use analog meters is reasonable given all of the above. (IPL Br. at 8).

OCA argues that analog meters remain available and viable as an alternative. At the time IPL began implementing AMI meters, analog meters were still the predominant meter in service. (Tr. at 44). IPL installed approximately 75,000 analog meters between 2000 and 2010, and the useful life of an analog meter is approximately 30 to 35 years. (Tr. at 47; OCA Hearing Ex. 101). OCA believes IPL could create a useful inventory from those meters that still have useful lives. (OCA Br. at 3; Tr. at 59). Additionally, the use of existing analog meters would save the

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company the cost of purchasing and installing a new meter. (OCA Br. at 4; OCA Shi Dir. at 5-6). Further, allowing customers to retain their analog meters resolves the health and safety concerns raised by IPL's customers such as the Intervenors. (OCA Br. at 5).

Intervenors argue that IPL's interpretation of its tariffs is mistaken. Intervenors disagree that the tariff requires IPL to determine the suitability of its metering equipment. Instead, the Intervenors argue that suitability element should include a requirement that IPL take into account the customer's choice when the choice is reasonable, objective, and made in good faith. (Intervenors Br. at 44-45).

Intervenors note that Bauer acknowledged that a substantial percentage of persons wanting to opt out also want to keep their analog meters despite IPL stating that was not going to be an option. (Tr. at 81-82).

Intervenors state this issue is especially important in the Fairfield area and specifically with the Maharishi University community. (Intervenors Br. at 45-46). For instance, Maharishi University has expressed a desire to maintain analog meters for its faculty, students and staff as well as the 70 homes where it is the landlord. (Intervenors Hearing Ex. 63). The Intervenors' request to retain analog meters is based in part upon Vastu building principles in an attempt to reduce electromagnetic radiation, including radio frequencies. (Intervenors Br. at 46; Intervenors Lipman Rebuttal at 4). As discussed in more depth below, Intervenors and others are also concerned with conducted emissions and believe analog meters are the preferred

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alternative to AMI meters because they do not create additional conducted emissions.²

Intervenors further argue that IPL's reasons to deny an analog meter as an option are not reasonable and though IPL may not have purchased analog meters since 2010, existing analog meters may continue to last for many years. (Intervenors Lipman Rebuttal Ex. A). For instance, there are a "substantial amount" of analog meters that were installed from 1950 to 1979 that are still in use. (Tr. at 48).

Intervenors contend, similarly to OCA, that an inventory of analog meters could be created from the 75,000 analog meters installed between 2000 and 2010 and the cost savings of having a single testing lot are insignificant and do not justify not having an analog option for those who choose to opt out.. (Intervenors Br. at 52-54; Tr. at 44, 49, 74-77). Intervenors refer to OCA witness Dr. Larry Shi's testimony that IPL's current electric meters are not homogenous and that IPL's testing procedures can handle multiple test lots. (Intervenors Br. at 55; OCA Shi Dir. at 7).

Intervenors assert that analog meters are accurate and that comparing the accuracy of an 80-year-old analog meter with a 10-year-old digital meter is misleading. (Intervenors Br. at 56; Tr. at 63). Intervenors note Bauer could not recall IPL ever having asked the Board to replace analog meters as a class due to their inaccuracy in the past. (Intervenors Br. at 56; Tr. at 98).

² Conducted emissions are described by many customers and objectors as "dirty electricity."

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b. Board Discussion

Board rules 199 IAC 19.3(1) and 20.3(1) require natural gas and electric meters to be owned by the utility. This requirement is to ensure consistency and reliability of service and to allow the Board to address issues that may arise concerning meters or the deployment of meters. The choice of meters to be installed is a business decision subject to the Board's review upon customer complaint or Board review of a proposed tariff regarding a utility's meters. In this instance, IPL has proposed an opt-out program and a charge for opting out of having an AMI meter that have generated hundreds of comments and complaints.

Standardizing equipment and gaining economic efficiencies support having a single meter installed throughout IPL's service territory, but those reasons are not dispositive. IPL's standard meter prior to the implementation of its AMI program was a non-transmitting digital meter. Yet at the time IPL began installing AMI meters, analog meters were still the predominant meter used by IPL. (Tr. at 44). There was no prior indication that IPL's testing costs were extraordinarily high even though it had dozens of different test lots, including the 21 that statistically failed.

The evidence provided in this matter shows that many analog meters may still have useful life left, especially if they were installed after 2000. As noted by both OCA and Intervenors, the expected life of an analog meter is 30 to 35 years. An analog meter installed between 2000 and 2010 could be expected to last another 10

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to 20 years, and some may last far longer given that IPL has some meters installed in the 1930s that are still in use today.

The Board does not believe it is reasonable to replace an existing working analog meter with a non-transmitting digital meter for those customers choosing to opt out of having an AMI meter. The non-transmitting digital meter will not provide any additional functionality over the existing analog meter in such situations and will be replacing a working meter for limited benefit to the customer or IPL.

Consequently, for those customers who currently have an analog meter, and desire to opt out, the Board will require IPL to let those customers maintain their existing analog meter at their premises until it fails or must be removed due to other conditions such as being part of a failed test lot.

For customers who currently do not have an analog meter or whose analog meter fails in the future, IPL will be allowed to use non-transmitting digital meters as the opt-out option. IPL has provided credible testimony that its meter suppliers do not offer new analog meters, and IPL's business decision is not to utilize used or refurbished meters when it replaces meters. (IPL Bauer Dir. at 13-14). The prudence of that business decision from a cost standpoint is not at issue here and may be challenged in IPL's next general rate case. The use of non-transmitting digital meters as the ongoing opt-out meter satisfies the suitability requirement from IPL's tariffs and the reasonableness requirements of the Chapter 476 of the Iowa Code.

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Similarly, for those customers who already have digital meters, it is reasonable for IPL to require those customers to keep their existing non-transmitting digital meter if they choose to opt out of having an AMI meter. Just as the cost of immediately replacing a working analog meter with a non-transmitting digital meter is not reasonable, it is also not reasonable to replace a working non-transmitting digital meter with an analog meter. The Intervenor's argue that non-transmitting digital meters are also unsafe and pose health risks. However, the testimony from Intervenor's witness Dr. Magda Havas indicates that any health risks from non-transmitting digital meters can be mitigated in an economic manner through filters placed on the customer's side of the meter. (Tr. at 580-584).

In addition to the use of a non-transmitting digital meter as the ongoing opt-out meter, IPL should also offer customers the option of an AMI meter that is programmed to pulse only one time per month. IPL witness Marc Reed testified that the AMI meters are programmed to transmit six times a day; however, the meters could be programmed to transmit fewer times or not at all. (Tr. at 353-355). For customers electing this option, the AMI meters would be programmed not to use the buddy system which involves using a meter to repeat another's signal. The option of monthly transmissions would negate the need for a meter reader so long as the monthly transmissions were able to be read, and the transmissions would provide approximately the same information as the non-transmitting digital or analog meters. *See, generally, Id.*

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2. Meter Reading

a. Arguments of the Parties

In its proposed tariffs, IPL would require customers who opt out to self-read their meters within a four-day window.³ A customer who fails to read the meter within that four-day window would be given an estimated bill for the month. If a customer missed two reads in a 12-month period, the customer would no longer be eligible to opt out and would have an AMI meter installed. See “Electric Tariff,” Docket No. TF-2018-0029, filed March 1, 2018; *and* “Gas Tariff,” Docket No. TF-2018-0030, filed March 1, 2018.

IPL argues it is reasonable for opt-out customers to self-read their meters because the major cost-savings benefit of installing AMI meters is the reduction in meter-reading expenses. (IPL Br. at 12; IPL Vognsen Dir. at 16). IPL asserts the self-reading approach, with semi-annual company verification reads, minimizes the costs of the opt-out. (IPL Br. at 12). IPL notes that Board rules require utilities to obtain meter readings on or about the same day each month so as to avoid unexpectedly high bills due to a longer bill cycle. (IPL Br. at 13); 199 IAC 19.3(7) & 20.3(6). IPL also asserts that its billing system, consistent with Board rules 19.3(8) and 20.3(6), only allows for three consecutive estimated bills without manual

³ During the hearing, Vognsen testified that the four-day window was actually an eight-day window, with four days on either side of the actual meter reading date. (Tr. at 272). IPL states in its brief that this was an incorrect statement and that it would revise the language in the tariff to clarify it is a four-day window. (IPL Br. at 12).

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intervention, and its system generates an estimated bill if a reading is not obtained by the fourth day of the read window. *Id.* IPL does not believe the four-day read window or the eligibility condition that customers would be switched to an AMI meter after a second missed read are burdensome. (IPL Br. at 13-14).

IPL notes that it offered an alternative proposal at the hearing, which would have the company read the meter quarterly and issue estimated bills the other eight months out of the year. (IPL Hearing Ex. 218). IPL notes that OCA witness Turner supported this approach at the hearing. (IPL Br. at 14; Tr. at 593).

OCA argues that the self-read obligations are unreasonable and set up the customers for eventual failure. (OCA Br. at 10-11; OCA Turner Dir. at 5). OCA believes a customer could easily miss the window twice in one year if he or she is on vacation one month and on a business trip another. *Id.* OCA proposes an increase in the number of missed self-reads, the implementation of a quarterly billing, or the use of an estimated levelized monthly bill with an annual read for customers choosing the opt-out option. (OCA Br. at 11; OCA Turner Dir. at 5-6). OCA further states that it would support IPL's alternative proposal using estimated bills and quarterly reads.

Intervenors argue that the self-read conditions are unreasonable, and generally support IPL's proposal to allow estimated bills. (Intervenors Br. at 61-62). Intervenors suggest opt-out customers could consent to having more consecutive estimated bills and fewer actual reads, such as only one or two per year, to keep costs and any associated charges lower. *Id.*

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b. Board Discussion

The Board finds that customers should not be required to read and provide their own meter data to IPL. Board rules generally allow for up to three consecutive estimated bills and, with customer permission, more than three consecutive estimated bills. See 199 IAC 19.3(8) and 20.3(6). The Board understands that one of the primary cost-saving measures related to AMI meters is the reduction in meter-reading expenses. The Board believes there are other means of billing customers and obtaining the necessary usage information without requiring customers to self-read their meters.

The Board is concerned that having quarterly reads will increase the costs of the opt-out option significantly. IPL states that its billing system, consistent with Board rules, allows for three consecutive estimated bills. (IPL Br. at 13; IPL Vognsen Dir. at 13). Therefore, IPL could collect actual reads three times per year (every fourth month) and use estimated bills for the remaining nine months out of the year consistent with Board rules without any adjustments to its billing software. Additionally, the Board notes that rules 19.3(8) and 20.3(6) allow for more consecutive estimated reads in unusual circumstances or with customer approval. OCA and Intervenors both propose options that would only require annual or semi-annual meter readings for opt-out customers in an effort to minimize costs to customers opting out.

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The Board finds that it is reasonable to limit the number of required actual meter readings per year for opt-out customers with analog or non-transmitting digital meters to twice per year in order to minimize meter-reading costs. Semi-annual readings, with estimated bills the other ten months per year, will appropriately balance the need for accurate usage measurements without imposing greater-than-necessary costs. By exercising the opt-out option under these conditions, customers would be approving the receipt of more than three consecutive estimated bills, thereby complying with Board rules 19.3(8) and 20.3(6). Customers electing to opt out would also be doing so with the risk that the estimated bills could be inaccurate, and the potential to see a larger-than-expected bill at the time an actual reading is made.

The Board also notes that until the AMI system is operational in the fall of 2019, IPL will continue to read the vast majority of its meters every month. IPL should continue to provide actual monthly readings of the opt-out customers' meters during this interim period to the same extent it continues to do so for its general customer base.

3. Customer of Record

a. Arguments of the Parties

IPL's proposal, as identified in its proposed tariffs, is that the customer of record prior to the installation of an AMI meter must be the person who requests to opt-out. OCA and the Intervenors agree generally that the customer of record must

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be the person to request the opt-out, but they dispute the requirement that only the initial customer of record could request the opt-out and that if that customer were to move or otherwise end his or her service, the next customer of record could not make a similar request.

b. Board Discussion

The customer of record for purposes of this order is the customer who is listed on the account with IPL. Since the Board is requiring IPL to allow customers to opt out of an AMI meter on a permanent basis, the issues surrounding this requirement are largely moot. IPL will be required to offer the opt-out option to all customers of record who otherwise meet the eligibility requirements, even if an AMI meter is already installed at a location. Customers who meet the eligibility requirements will have the option to opt out of having an AMI meter on their residences, and customers moving to a new location, or who are new customers in IPL's service territory, will have the option of opting out from taking service through an AMI meter.

4. Other Eligibility Conditions

a. Arguments of the Parties

As proposed, IPL is limiting opt-out eligibility to those customers who have a single electric meter and/or a single natural gas meter. (IPL Vognsen Dir. at 9-10). IPL argues that multiple electric meters are used in complex billing situations where a single meter is not feasible and often where readings are taken on a 15-minute interval basis. (IPL Br. at 15-16; IPL Vognsen Dir. at 9-10). It is not feasible for

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customers to self-read their meters at such intervals, and absent an AMI meter the data must be manually downloaded by a meter reader using a specific device. (IPL Vognsen Dir. at 10). While the proposed natural gas tariff contains the same provision, IPL states residences with natural gas service would rarely have multiple natural gas meters, thus the condition would rarely, if ever, apply. *Id.*

IPL is also proposing to limit opt-out eligibility to residential customers taking service under the Electric Residential Service or Residential Gas Service tariffs. Electric customers could not be on any other option rate, such as time-of-day, net metering, cogeneration, or alternative energy production rates. See “Electric Tariff,” Docket No. TF-2018-0029, filed March 1, 2018; *and* “Gas Tariff,” Docket No. TF-2018-0030, filed March 1, 2018. IPL notes that OCA is generally supportive of these eligibility criteria. (OCA Turner Dir. at 4-5). IPL argues these rates require more specific metering and meter readings than a customer taking service under the standard residential rate, which AMI meters are capable of performing but an analog or the proposed non-transmitting digital meter cannot. (IPL Br. at 17-21; IPL Vognsen Dir. at 11). For customers with solar panels or other self-generation, IPL further argues that any meter other than an AMI would require monthly meter reads by a company employee, negating much of the cost savings of AMI. (IPL Br. at 18-20). IPL notes that customers who generate their own electricity have been using digital meters for years. (IPL Br. at 21; IPL Hearing Ex. 223; Tr. at 928).

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Similarly, IPL argues that commercial and industrial customers generally have more complex meter configurations and may be billed for both kilowatt and kilovar demands in addition to kilowatt hours. (IPL Br. at 16; IPL Vognsen Dir. at 9). IPL asserts the non-transmitting digital meter would not be appropriate in such situations going forward. (IPL Br. at 16).

The Intervenor argue that many commercial and industrial customers do not have more complex configurations or need kilovar readings. They further note that IPL must have a way of reading such usage without AMI meters, since it has been doing so for years. (Intervenors Br. at 63). Intervenor state they have special concern for entities like hospitals, day care centers, and senior citizen centers, all of which have vulnerable populations. *Id.* Intervenor argue that the restriction for persons electing time-of-day rates is unreasonable for similar reasons. (Intervenors Br. at 64).

Intervenors argue Iowa Code § 476.21, which prohibits discrimination against users of renewable energy sources, prohibits IPL from offering the opt-out to some residential customers but not to persons on the net metering, cogeneration, or alternative energy production rates. (Intervenors Br. at 65). Intervenor further argue that most solar users have non-transmitting digital meters already and, therefore, IPL cannot be correct that those same meters would be infeasible simply because AMI has become the new standard. (Intervenors Br. at 66-67; IPL Hearing Ex. 224).

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OCA witness Turner testified that the proposed qualifications for electing to opt out were generally reasonable. (OCA Turner Dir. at 4). He further testified that it is reasonable to require AMI meters for those customers electing time-of-day, net metering, cogeneration, or alternative energy production rates. *Id.* at 4-5.

b. Board Discussion

The Board finds it is reasonable to limit the opt-out option to residential customers with a single electric and/or natural gas meter on a standard residential rate and not include commercial or industrial customers or those customers taking service under more complex rates. Opting-out of an AMI meter in favor of an analog or non-transmitting digital meter will require IPL to render estimated bills in lieu of a meter reading for the majority of the year. The use of multiple consecutive estimated bills for commercial businesses, industry, and persons taking services under more complex rates such as net metering or time-of-day usage is not appropriate or feasible. This distinction does not violate Iowa Code § 476.21 as Intervenor's assert because it is made based upon metering and energy measurement needs, not the use of renewable energy sources. In other words, it is not the use of solar panels that necessitates the use of an AMI meter for customers on a net metering rate but the need to measure both energy in and energy out.

For clarity, the Board finds that where units in a multi-family residential complex are individually metered, the customer of record would be eligible to elect the opt-out option provided all other eligibility requirements are met. This would hold

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regardless of whether the landlord or the tenant is the customer of record for each meter. The requirement that the customer of record elect the opt-out would remain unchanged. Thus, a landlord could opt-out on a complex-wide basis if the landlord was the customer of record for all meters in the complex. If the tenants are the customers of record, each tenant has the choice of selecting the opt-out option.

C. Moratorium or Community Opt-Out

1. Arguments of the Parties

Intervenors and many commenters ask the Board to institute a moratorium on AMI meters until further study can be done, either on a statewide or a local basis. See, e.g., (Tr. at 803-805; Marshalltown Customer Comment Meeting Tr. at 57-58, 72; Fairfield Customer Comment Meeting Tr. at 100). Others worried about the effects on people in multifamily housing with banks of multiple meters, some of whom may not elect the opt-out option. See, e.g., (Tr. at 554-555; Fairfield Customer Comment Meeting Tr. at 875).

2. Board Discussion

The Board does not believe a state-wide moratorium is appropriate. Many utilities have chosen to implement new metering systems, including AMI meters, across the state without issue. Technology is constantly evolving and improving, and the Board does not wish to impede utilities from increasing the efficiency of their systems. Although the Board has received many complaints and comments raising concerns and opposition to AMI meter installation, the vast majority of customers

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across the state have not objected. Many utilities across the state have been upgrading their metering infrastructure for years without incident.

However, the Board understands that a customer or group of customers located in an area or within a community such as the Vastu community may desire or require limitations on AMI meters or other electrical facilities that transmit using radio waves or other forms of energy. The Board understands that it may not be feasible for an entire municipality to opt out from having AMI meters since many customers within the municipality may want an AMI meter or because, as decided above, commercial and other similar customers will not be provided the option to opt out.

The Board finds that IPL should provide customers in those communities or areas, such as the Vastu community in and around Maharashi University, the option of limiting the emissions associated with electricity, including opting out of having AMI meters in the community. The costs associated with the decision by a community or area to opt out of AMI meter installation, or other electric facilities, would be charged to the customers in that community or area. Such charges would be consistent with past cases allowing specific costs to be charged to a given community. *See, e.g., City of Coralville v. Iowa Utilities Bd.*, 750 N.W.2d 523, 531 (Iowa 2008) (allowing the utility to recover undergrounding costs from customers in the affected community). IPL shall file a tariff that describes how it will address and implement a community opt-out option. This tariff shall include IPL's proposal for the calculation of a community-specific charge which reflects any efficiencies achieved through a

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community opt-out. Implementation of community-specific opt-out charges would require Board approval in a subsequent filing or proceeding.

D. Charges

1. Arguments of the Parties

In its proposed tariffs, IPL seeks to implement a charge of \$15 per month for customers who elect the opt-out option. See “Electric Tariff,” Docket No. TF-2018-0029, filed March 1, 2018; *and* “Gas Tariff,” Docket No. TF-2018-0030, filed March 1, 2018. Since both the gas and electric tariffs include the charge, a customer with both gas and electric service from IPL who elects to opt out would pay an additional \$30 per month. IPL is not currently proposing any one-time, up-front fees in addition to the recurring monthly charge. (IPL Bauer Dir. at 9).

IPL argues the charge is reasonable because it is based upon the incremental costs associated with the opt-out option. *Id.* at 10; (IPL Vognsen Dir. at 15-20). Vognsen testified that the costs include manual inputs into IPL’s billing system, manual read verifications, system maintenance, and the carrying cost of the non-AMI meter. The amount of the charge also includes a credit for meter-reading expenses that are currently included in a customer’s base rate. (IPL Vognsen Dir. at 15). IPL argues that the Board should not prohibit IPL from assessing the charge or require IPL to wait until its next rate case to begin assessing the charge because doing so would “deter utilities from offering new customer-oriented service options” between rate cases. (IPL Br. at 22).

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OCA argues that this is not the appropriate proceeding to implement a charge; instead, IPL's upcoming rate proceedings would be the appropriate venues to make such determinations. (OCA Br. at 12; Tr. at 618). OCA argues that funds for meter reading are already included in IPL's current base rates based upon the company's last electric and natural gas rate cases. (OCA Br. at 13). OCA notes that IPL's electric rates include approximately \$8,000,000 in meter-reading expenses, and IPL's natural gas rates include approximately \$3,200,000 in meter-reading expenses. *Id.*; (OCA Kruger Dir. at 2-3; IPL Vogensen Dir. at 19-20). OCA witness Blake Kruger testified that IPL would retain the vast majority of these meter-reading expenses collected through base rates once AMI is implemented and meter reading is no longer necessary except for those customers who opt out. (OCA Kruger Dir. at 5-6). OCA asks the Board to prohibit IPL from collecting a monthly charge for customers who opt out at this time since IPL's current gas and electric base rates already include substantial funds for meter-reading purposes, and the current rates would more than cover the cost of reading the meters of customers who elect the opt-out option. (OCA Br. at 16).

Intervenors also argue that the proposed charge is unreasonable. Intervenors assert that the implementation of AMI meters will raise everyone's costs, even for those customers who choose the opt-out option. (Intervenors Br. at 68-69). These costs would be in addition to any opt-out charge those customers would pay. Intervenors argue that either everyone should share in the cost of the opt-out

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program or the opt-out customers should be credited for their share of the AMI program's costs since they would not be using that infrastructure. *Id.* at 69.

Intervenors further argue that if opt-out customers are concentrated in an area such as Fairfield, those customers should pay a lower opt-out charge than others in more rural areas who may be more dispersed. (Intervenors Br. at 70-71; Tr. at 262).

2. Board Discussion

IPL expects to complete its AMI project in the fall of 2019 and until that time, most meters will continue to be read by meter readers, even for those customers who have not chosen to opt-out and have had an AMI meter installed. The record reflects that, as of October 2018, only 500 customers were having their meters read electronically. (Tr. at 612). Meter reading expenses are currently included in base rates for both electric and natural gas customers. Yet IPL initially proposed the opt-out charge to go into effect in the spring of 2018, which would effectively require customers who opt-out to pay extra for meter reading services that are still being provided to most customers through base rates.

The Board finds this proceeding is not the appropriate venue to implement a monthly opt out charge. IPL's customers are paying for meter-reading services in current base rates, and those customers who opt out should not be required to pay an extra charge for a service that is included in their base rates and which is still being provided to nearly all customers whether they opt out or not. The Board believes the forthcoming rate cases IPL will bring before the Board are the

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appropriate places to determine what, if any, charges are appropriate for customers who elect the opt-out option. This will also give IPL the opportunity to modify its proposed charges to account for the actions the Board is requiring it to take in this order that differ from IPL's original proposal in this docket.

Because the Board is rejecting IPL's proposed opt-out charges at this time, the remaining questions about the reasonableness of the amount of the proposed charges, including ensuring opt-out customers are not charged rates based on duplicate costs recovered through standard monthly charges, and whether the costs should be socialized among all customers, are premature and need not be answered at this time. Those issues are best left for a future rate case at which IPL may seek such charges and may be challenged at such time.

E. Health and Safety Issues

1. RF Transmissions

a. Arguments of the Parties

Intervenors argue that AMI meters are not safe and are a threat to human health. Intervenors raise two primary arguments on this issue. First, they assert the AMI meters are not being installed in a manner compliant with Federal Communications Commission (FCC) regulations. (Intervenors Br. at 7-20). Second, they assert that radio frequency (RF) radiation emitted when an AMI meter transmits data is harmful even where the AMI meter is correctly installed. (Intervenors Br. at 27-42).

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Intervenors assert the FCC requires a minimum separation distance of 20 cm, or 7.8 inches, from the antenna in the Sensus AMI meter. (Intervenors Br. at 7-9; Intervenors Hearing Ex. 52 at 7). However, a person touching the meter would only be one inch from the antenna. (Intervenors Br. at 9; Tr. at 323-326). Intervenors argue that Sensus incorrectly attempts to obfuscate or otherwise get around this FCC requirement by using maximum permissible exposure and time-averaging concepts based on the meter not transmitting continuously. (Intervenors Br. at 12-13; Intervenors Matara Rebuttal Public Ex. C at 142-163).

Intervenors argue that the transmissions by AMI meters are harmful as shown by numerous studies such as the National Toxicology Program (NTP) Cancer Study. (Intervenors Br. at 29-34; Intervenors Havas Rebuttal Ex. K). Intervenors acknowledge FCC guidelines set maximum permissible exposures, but argue that the NTP study shows that the FCC guidelines are insufficient. (Intervenors Br. at 30, 33-34; Tr. at 519-522; Intervenors Havas Rebuttal at 22-23). According to Intervenors, some portion of the public suffers from electro hypersensitivity, and that percentage of the population would be affected by AMI meters even if the majority of the population would not suffer similar effects. (Intervenors Br. at 37; Tr. at 561-562).

IPL states its meters are safe and secure and the RF transmissions are reasonable in frequency and overall emissions. (IPL Br. at 30-40). IPL asserts that if an AMI meter pulsed 11 times per day, roughly twice as much as it expects to observe when the system is fully tuned, the cumulative annual transmission time

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would equate to using a cell phone or Wi-Fi device for six minutes. (IPL Br. at 31; Tr. at 349). Further, IPL states it chose the Sensus AMI system in part because it uses FCC-licensed channels that allow it to send fewer signals over a longer distance. (IPL Br. at 32-33; IPL Reed Dir. at 3). IPL further argues that RF transmissions do not pose health risks, noting the ubiquity of radio, television and communications transmissions. (IPL Br. at 38-39; IPL Valberg Dir. at 7).

IPL, relying on Reed's testimony, argues that the Sensus AMI meters meet all FCC, American National Standards Institute (ANSI), and Underwriters Laboratory (UL) requirements. (IPL Br. at 34-37; IPL Reed Dir. at 6). This includes the FCC's guidelines for RF exposure. (IPL Br. at 34; IPL Hearing Ex. 215 at 14). IPL argues that the Sensus AMI meter has been certified as a "mobile" device which is "to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained..." between the radiating element and a user or nearby person. 47 C.F.R § 2.1091(b); (IPL Br. at 36-37; IPL Hearing Ex. 215 at 14). IPL notes that Reed testified that the antenna would be more than 20 centimeters from the outer wall of the house when installed, and is thereby compliant with FCC regulations. (IPL Br. at 36-37; Tr. at 326).

b. Board Discussion

This issue is largely moot because the Board has decided to allow residential customers the opportunity to opt out of having an AMI meter regardless of their

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reason for doing so. Consequently, customers who believe an AMI meter is unsafe can choose not to have one at their residence.

The Board understands that some customers are in more complex billing situations or taking service under commercial and industrial rates and will not be eligible to opt out of having an AMI meter. The Sensus AMI meters have the appropriate certifications and authorizations, and even though the Intervenor argue that the meters will be installed in violation of the FCC requirements or that the FCC requirements are too lax, the Board is not the proper venue to challenge violations of FCC regulations. The proper venue to challenge those requirements is the FCC. In the absence of a finding by the FCC that the Sensus AMI meter violates its standards or is being used in a manner that violates the meter's certification or authorization, the Board finds IPL's use of the Sensus AMI meter is reasonable.

2. Conducted Emissions

a. Arguments of the Parties

Intervenors argue that both the AMI meter and the non-transmitting digital meter pose health risks because they create high-voltage transients or conducted emissions, sometimes referred to as "dirty electricity." (Intervenors Br. at 42-44). Dr. Havas testified that these emissions may interfere with biological material just as they can interfere with other electrical equipment. (Intervenors Br. at 42; Tr. at 559). Intervenor assert that conducted emissions are associated with increased risks of cancer, and remediation of such emissions through the use of filters reduces

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symptoms. (Intervenors Br. at 43; Intervenors Havas Rebuttal at 18-20; Intervenors Havas Rebuttal Ex. JJ & KK). Intervenor Kathy Matara testified that she did not believe there are filters that can fully remediate conducted emissions, and therefore an analog meter is required to address the issue. (Intervenors Br. at 43; Tr. at 799-800). Intervenor witness William Bathgate testified that most electronics have filters that reduce such emissions to acceptable levels, but Intervenors do not believe IPL's meters have such filters. (Intervenors Br. at 43-44; Intervenors Bathgate Rebuttal at 4).

IPL states that its AMI meter and non-transmitting digital meter meet all standards for conducted emissions and are otherwise safe. (IPL Br. at 41-45). IPL notes that the FCC regulates such emissions in order to prevent interference between devices and to ensure electromagnetic compatibility; the FCC's regulations are not designed as health-based standards. 47 C.F.R. § 15.107(a); (IPL Br. at 41; IPL Hearing Ex. 220). Citing Dr. Peter Valberg, IPL argues that there is no reliable evidence that conducted emissions on power lines cause deleterious health effects. (IPL Br. at 41-42; IPL Valberg Dir. at 17). IPL further notes that Bathgate had previously testified in another case that its non-transmitting digital meter, the Itron C1S, was a "safe digital meter alternative." (IPL Br. at 44; IPL Hearing Ex. 221 at 13).

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b. Board Discussion

Intervenors are asking the Board to determine that IPL's choice of meters is unsafe and, therefore, unreasonable and unjust. Yet the evidence shows there are ways for customers to mitigate these effects on their own. Dr. Havas testified that she had filters on her home and that such filters were "not unduly expensive." (Tr. at 581, 584). Although Matara did not believe there were filters that can fully remediate conducted emissions, Dr. Havas stated that a person can normally filter an electronic device and that such filtering "would address the issues dealing with dirty electricity." (Tr. at 581-582).

Given that Intervenors' own expert witness testified that such filters can address issues related to conducted emissions and that such filters are not expensive, the Board does not believe this issue makes IPL's meter choices unreasonable. Customers who may be specifically affected or who otherwise desire to remediate any potential conducted emissions have the option to install filters on their side of the meter as they would any other electrical work on their residence. As customers' meters are changed in the future, such as those who currently have analog meters that will eventually fail and need replacement, the Board encourages the customer and IPL to coordinate timing so that any desired installation of filters may be done as expeditiously as possible.

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F. Privacy

1. Arguments of the Parties

OCA argues that IPL's existing privacy policy does not adequately protect consumers and the granular data collected from AMI meters. OCA notes that AMI meters will collect usage on an hourly basis, while existing meters generally provide usage data on a monthly basis. (OCA Br. at 16; Tr. at 53, 56). OCA notes that IPL uses the privacy policy of its parent company, Alliant Energy Corporation, which allows the company to share information with outside parties such as vendors, consultants, and other service providers. (OCA Br. at 17-18; OCA Hearing Ex. 110). OCA notes that the more granular AMI data may allow others to identify customers' usage patterns and load signatures and use that data in ways that are not beneficial to the customer. (OCA Br. at 18; IPL Hearing Ex. 219).

OCA argues the Board should allow customers to opt out of providing granular data since IPL has not demonstrated a use beneficial to customers. OCA also asserts IPL should be required to define more clearly how data will be shared with third parties and for what purposes. More specifically, OCA argues IPL should explicitly state how the granular usage will be shared or commit to not sharing the granular data at all. OCA believes IPL should also be required to notify customers of a data breach immediately using the framework set forth at Iowa Code § 715C.2. OCA asks the Board to require IPL to send each customer an updated version of its

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privacy policy consistent with these revisions to ensure customers have notice.
(OCA Br. at 19).

The Intervenors likewise have privacy concerns related to AMI meters. Intervenors note that electricity consumption data can produce a usage signature that reveals the customers' habits and lifestyles. (Intervenors Br. at 74; Intervenors Schoechle Rebuttal at 12). Intervenors' witness Dr. Timothy Schoechle testified that the best way to secure customer data is not to collect it, since all forms of data storage are "inherently insecure." (Intervenors Schoechle Rebuttal at 16).

Intervenors believe IPL should have an independent third party conduct a cybersecurity risk assessment on its AMI program. (Intervenors Br. at 76). Intervenors also believe the consequences of potential hacking more than outweigh any benefit from being able to rapidly detect outages and remotely connect and disconnect meters. *Id.*

IPL argues that its current privacy policy remains adequate as it deploys AMI meters. (IPL Br. at 46; IPL Bauer Dir. at 17; OCA Hearing Ex. 110). IPL states it is collecting the same data it has always collected, just on a more frequent interval, and the usage of the information will also remain the same. (IPL Br. at 46-47; IPL Bauer Rebuttal at 10). IPL argues that the deployment of AMI meters does not require a sudden need to modify its privacy policies to protect customers. (IPL Br. at 47). IPL uses its parent company's privacy policy. (IPL Bauer Dir. at 17).

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IPL also argues that its system is secure and will not reveal how a customer uses energy inside his or her home or business. (IPL Br. at 45-46). IPL argues the meters will continue to measure the total consumption at a location and will not collect data from inside the home or business or any appliance contained therein. (IPL Br. at 45; IPL Reed Dir. at 6; IPL Reed Rebuttal at 8).

2. Board Discussion

The Board must determine whether IPL's privacy policy is adequate and reasonable. The Board finds that while at the most basic level the data is still aggregate consumption data similar to what IPL currently collects from its meters, the greater details provided by the more granular data collected by AMI meters increases the risks to customers, especially since the policy allows IPL to share the information with third-parties. Although the data cannot provide details about what appliances are being used at a given point in time, the data could provide a relatively clear snapshot of when a customer is home, or perhaps more concerning when a customer is not home, based on how much electricity is being consumed in a given 15-minute or one-hour period. Because there is an extra risk to customers based upon the greater detail provided by AMI data, the Board will require IPL to review and revise its privacy policy.

IPL's current privacy policy is primarily geared toward online privacy, and only briefly refers to the collection of energy usage data. (OCA Hearing Ex. 110). Although the policy does not allow IPL to charge for customer information, it does

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allow IPL to give the information to vendors and third parties for free. Given the extra details and risks associated with data collected from AMI meters, IPL should more explicitly discuss the energy usage data that is collected and the means by which it may be used.

Further, the Board does not believe the sharing of such granular data at the individually identifiable level to third-parties should be done unless the customer consents or where such disclosure may be legally required. In order to protect customer privacy, the Board will require IPL to have customers explicitly opt in to having their energy usage data shared with third parties unless otherwise required by law. The explicit opt-in requirement would not apply to aggregate or de-identified data. A customer who still believes that the privacy policy with these restrictions is not acceptable can opt out of having an AMI meter at his or her residence.

G. Natural Gas Inspection Timeframes

1. IPL's Request

On February 2, 2018, IPL made a request in Docket No. RG-0150 to modify its inspection frequency for atmospheric corrosion for intrastate pipelines. IPL is requesting the modification because, with the implementation of AMI meters, IPL will reduce the number of meter readers it employs. Meter readers traditionally conduct these corrosion inspections. IPL requests a change in its inspection frequency for atmospheric corrosion for intrastate gas pipelines exposed to the atmosphere from once every three calendar years to once every four calendar years (not to exceed 51

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months) outside of business districts, once every calendar year (not to exceed 15 months) inside business districts, and once every three calendar years (not to exceed 39 months) in areas where there may be greater corrosion rates. IPL would also increase distribution leak surveys.

IPL states that the modification will not compromise overall safety, and its Distribution Integrity Management Plan (DIMP) will remain compliant with state and federal law. IPL states it is not aware of any incidents on its gas system related to atmospheric corrosion, and it averages just seven leaks per year. No other party has opposed this change, and no objections have been filed in Docket No. RG-0150.

2. Board Discussion

The Board will grant IPL's request to modify its inspection frequency for atmospheric corrosion for intrastate pipelines. IPL has provided evidence that the changes will provide an equal or improved overall level of pipeline safety. IPL's DIMP will remain compliant with federal and Iowa laws following this modification. IPL has also proposed to increase its number of leak surveys on its distribution system.

H. Customer Notices

1. Arguments of the Parties

OCA and the Intervenors argue IPL's customer notices were deficient. Specifically, OCA notes that installation mailers did not indicate alternative meters were an option or provide timelines for completion of the project. A larger

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informational mailing was only provided to those customers who asked a question about the AMI project's rollout. OCA notes that this larger informational mailing was revised six times from November 2017 to November 2018. (IPL Late Filed Exhibits A-F). OCA also notes that several commenters indicated they did not receive direct mail or the automated phone call prior to having an AMI meter installed. OCA asserts that half of the meters were switched out prior to the Board-directed notice being sent to all customers in August 2018. (OCA Hearing Exhibit 111).

The Intervenor also argue the notice IPL provided to customers was insufficient and inaccurate. The Intervenor argue the notices only inform customers they could object to the proposed charges and not to the additional terms and conditions. The Intervenor also argue the notices and brochures were misleading about the safety of the meters by stating unequivocally that the meters are safe. The Intervenor assert this statement ignores thousands of studies about RF radiation and the meters' alleged non-compliance with FCC safety standards. The Intervenor also argue the brochures misstate the World Health Organization's (WHO) determinations, citing the WHO's classification of RF radiation as a class B carcinogen. (Intervenor Havas Rebuttal Exhibit LL; Intervenor Br. at 79-83).

2. Board Discussion

As noted above, the Board will allow customers to opt out of having an AMI meter. Consequently, many of the issues the parties raise about the customer notices are moot to the extent people may not have known they could opt for an

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alternative prior to an AMI meter being installed. Additionally, arguments that customers did not know they could challenge the terms and conditions are also moot since the Board heard numerous arguments about those terms and is requiring alterations accordingly.

Based upon the decisions made in this order, IPL will be required to file new tariffs with new options for customers. Given those changes, the Board will require IPL to send a new notice to all customers once the compliance tariffs are finalized describing the customers' options and the process required to opt out. IPL should file a proposed notice with the Board for approval at the time it files its compliance tariffs. The Board will review the proposed notice concurrently with the compliance tariffs.

With respect to the other issues raised by the Intervenors regarding the accuracy of claims related to health and safety issues, the Board will review the language proposed by IPL in the notice to customers and address any changes to that language during that review. The Board believes the notice should describe only the opt-out provisions and the associated processes for opting out and does not need to describe every potential issue.

I. Other Issues and Complaints

The Board has received hundreds of other comments, objections and complaints from interested persons that did not formally intervene in this matter. Most of the issues raised by these customers are identical to or encompassed by the issues addressed above. Specifically, the vast majority of commenters objected to

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the proposed charge to opt out of having an AMI meter, which the Board is not allowing at this time. The Board will address the remaining issues or objections below.

1. Fire Safety

Many persons filing comments assert that the AMI meters constitute fire hazards. Reed testified that there were fires associated with a previous generation of Sensus meters, but that those issues had been resolved with the current generation of meters. (Tr. at 338-339). Typically, any fires caused are the result of a poor connection between the meter and the meter socket, thereby causing meters to overheat. *Id.* Reed further testified that Sensus has had no fires with the meter IPL is installing even though millions have been installed nationwide. *Id.* at 339. The Board finds the evidence in the record does not support a determination that the AMI meters are fire hazards.

2. Property Values

Although Intervenors do not raise this argument in their post-hearing brief, there was testimony about the effects of AMI meters on property values, especially in the Fairfield, Iowa area and in Vastu homes specifically. Several commenters also raised this argument. Because the Board is allowing residential customers in general to opt out, the Board considers this issue to be moot. A customer who believes an AMI meter will impact his or her home value may elect the opt-out option.

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3. Trespassing

Several customers complained that they did not want an AMI meter and argue IPL is trespassing on their land by attempting to access the meter. The Board again notes that meters are IPL's property. 199 IAC 19.3(1) & 20.3(1). Further, Board rules require customers to allow utilities reasonable access to their equipment. See 199 IAC 19.4(15)(c)(3) & 20.4(15)(c)(3). If a customer does not wish to have an AMI meter, he or she may elect the opt-out option. However, customers must still allow IPL reasonable access to the meter.

4. High Bills

Many customers argue that AMI meters are inaccurate or at least less accurate than their existing meters and will result in higher bills. The evidence provided in this proceeding does not support a finding that AMI meters are less accurate than other meters. If a customer believes his or her bill is inaccurate, he or she may file a complaint with the Board or ask for the utility to test the meter. The Board notes that there may be a charge for testing pursuant to Board rules 199 IAC 19.6(5) and 20.6(5), which would be refunded if the meter tested outside of the acceptable limits.

5. Constitutional Concerns

Several customers argue that the use of AMI meters by IPL constitutes an unreasonable search in violation of the Fourth Amendment. They assert a recent decision of the Seventh Circuit Court of Appeals supports this finding. *See Naperville*

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Smart Meter Awareness v. City of Naperville, 900 F.3d 521 (7th Cir. 2018). In that case, the court held that the use of smart meters by the city's municipal electric utility constituted a search, but the search did not violate the constitution because it was reasonable. *Naperville*, 900 F.3d at 529. Additionally, unlike the City of Naperville, IPL is not a government entity, and the Fourth Amendment only restricts actions by governments or its agents. Thus, the Fourth Amendment does not apply to IPL or otherwise restrict its conduct in this situation.

III. ORDERING CLAUSES

IT IS THEREFORE ORDERED:

1. The proposed electric tariff filed by Interstate Power and Light Company on March 1, 2018, and identified as TF-2018-0029 is rejected.
2. The proposed natural gas tariff filed by Interstate Power and Light Company on March 1, 2018, and identified as TF-2018-0030 is rejected.
3. Interstate Power and Light Company shall file revised tariffs for Board approval consistent with this order. Specifically, Interstate Power and Light Company's revised tariffs shall:
 - a. Allow residential customers of record to opt out of having an AMI meter on an ongoing, permanent basis.

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b. Allow all residential customers taking service on the general residential rate to opt out. The opt-out option shall not be available to non-residential customers or those taking service under an optional, non-standard rate.

c. Allow the opt-out option without any fee or charge at this time since meter-reading costs are presently included in a customer's base rates.

d. Allow customers who currently have an analog meter to retain that meter as their alternative until such time as the meter fails or otherwise must be replaced.

e. Provide a choice of a non-transmitting digital meter or an AMI meter set to pulse only once per month to other customers electing the opt-out option.

f. Use actual reads twice per year with estimated bills for the remaining months for customers who elect the opt-out option with an analog or non-transmitting digital meter.

4. This order shall not preclude Interstate Power and Light Company from seeking a charge or fee for its opt-out tariff as part of a future rate case.

5. Interstate Power and Light Company shall file a tariff allowing an area-wide opt-out option and setting forth the parameters for such an option.

6. Interstate Power and Light Company shall file a revised privacy policy that limits the selling or giving away of customer information without customer consent within 30 days of the date of this order.

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7. Interstate Power and Light Company shall file a proposed customer notice at the time it files compliance tariffs consistent with this order.

8. Interstate Power and Light Company's request to modify its inspection frequency for atmospheric corrosion for intrastate pipelines, as filed in Docket No. RG-0150 on June 16, 2017, is approved.

9. Utilities Board customer service staff shall issue proposed resolutions for the complaints identified as Docket Nos. C-2018-0006, C-2018-0007 and C-2018-0008 which include a copy of this order.

UTILITIES BOARD

/s/ Geri D. Huser

/s/ Nick Wagner

ATTEST:

/s/ Kelsie Vanderflute

/s/ Richard W. Lozier, Jr.

Dated at Des Moines, Iowa, this 6th day of February, 2019.