**Summary of Comments**

As of September 10, 2018, the Commission has received 11 responses to its July 10, 2018 Notice of Opportunity to File Comments in the AMI Rulemaking in Docket U-180525. Responses were received from: Avista Corporation, Northwest Natural Gas Company, Washington Jural Assembly Members, American Civil Liberties Union of Washington, The Energy Project, NW Energy Coalition, Cascade Natural Gas Corporation, Pacific Power & Light Company, Public Counsel, Puget Sound Energy, and one member of the public (Sammamish).

**Section 1: Data Privacy**

1. *What information pertaining to customers’ energy usage do companies currently collect, retain, or share with third parties?* 
   1. *What incremental or different information will companies collect or retain with the implementation of AMI?*
   2. *Under what circumstances would sharing customer information be necessary for companies to provide utility service?*
      1. *What specific information would it be necessary for companies to share to provide utility service?*
      2. *With whom or with what organizations would it be necessary for companies to share such information?*
   3. *If not necessary for providing utility service, what information do companies anticipate sharing with third parties for the benefit of customers, and for what specific purpose should the utility share the information with third parties?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista Corporation (Avista)* | |
| 1. | Residential – monthly kWh reads  Commercial – monthly kW and kWh reads  Large Commercial/Industrial – kWh, kW, and kVAr at 15-minute increments  Avista collects additional information in its Pullman service area where its AMI pilot program was deployed in 2011. This data includes kWh, kW, voltage, and amps in five-minute increments. These meters transmit additional notifications to Avista about meter performance (e.g., thermal alarms, low and high voltage and tamper alarms) but these notifications are not currently being monitored by the Company.  Only kWh usage information is provided to Aclara (third-party vendor) to enable web presentment to customers with AMI meters in the Pullman service territory. |
| 1a. | Incremental information will include kW, kWh, voltage, and amps in five-minute intervals with notification transmission about the meters’ performance. |
| 1b. | Interval kWh and therm usage information will continue to be shared with the third-party vendor to allow customer access to their personal usage data. |
| 1c. | The usage information is not necessary for providing utility service. Avista does not/will not share customer information with any third-party vendor without the customer’s written permission. |
| *Northwest Natural Gas Company (NW Natural)* | |
| 1. | NW Natural has no current plans to implement AMI but offers select responses to the Notice questions.  The Company collects and retains customer energy usage information as required by WAC 480-90-103(6) by customer account on a current year plus five-year basis. Customer-specific information is shared with the Energy Trust of Oregon, and upon request with agencies that deliver the Company’s low-income assistance programs. NW Natural, upon request, may share aggregated usage information for commercial buildings with a building owner and/or a state, city, or county jurisdiction. |
| *Cascade Natural Gas Corporation (Cascade)* | |
| 1. | Cascade does not anticipate implementing an AMI environment in the near-future but offers select responses to the Notice questions.  The Company collects monthly natural gas energy volume information for billing purposes (customer address, account numbers and rate schedules are also maintained). The information is not shared with third parties unless authorized by the customer. |
| *Pacific Power & Light Company (Pacific Power)* | |
| 1. | Pacific Power does not anticipate deployment of AMI technology in its Washington service territory in the near term as it completed installation of AMR technology in 2010 and 2011. Its responses to the Notice are based on the Company’s experience with AMI deployment in its Oregon and California service areas.  Pacific Power collects and retains monthly usage data for billing purposes with internal usage data for some commercial and industrial installations. Data is not shared externally without customer authorization with the except of third parties with a legal right to obtain the information (*e.g.,* subpoena). No retention period information was provided. |
| 1a. | Residential – hourly usage data (OR/CA) and monthly data (WA)  Non-Residential – 15-minute internal usage data  The Company has the ability to collect outage detection and restoration information (OR/CA). |
| 1b. | Pacific Power currently uses a third party to print and mail customer bills. There are contractual obligations with respect to data confidentiality. To the extent there is a need or requirement to share customer information with third parties who are not company vendors, the Company advocates for robust privacy requirements but did not provide specific recommendations. Depending on the service it may be necessary to share information such as customer name, account number, mailing address, phone number, and billing information. |
| 1c. | Pacific Power does not anticipate a need for sharing information that is not necessary for providing utility service without customer authorization. The Company does share usage information with certain third parties upon customer request (*e.g.,* low-income assistance programs). |
| *Puget Sound Energy (PSE)* | |
| 1.1a. | Current AMR meters include daily energy usage reads, and may include sub-hourly reads for some customers. PSE reports the same kinds of data will be gathered with AMI as the existing AMR meters. Additionally, the AMI meters will transmit diagnostic and connection information and report the amount of energy delivered back to the grid by solar customers. |
| 1b. | PSE engages external vendors to supports it utility services, such as new meter installation and network maintenance activities. Customer data that may be necessary to share with a specific PSE vendor include: customer name, address, and customer contact information. |
| 1c. | PSE does not sell or share customer data without the consent of the customer. Some program require the customer to prove eligibility or compliance with program rules (e.g., low-income and energy efficiency programs). |

1. *With respect to the information provided in response to Question #1, please respond to the following:*
   1. *What kind of historical data, and for what time period, should companies maintain information in order to comply with regulatory reporting needs (load studies, conservation and energy efficiency, reliability)?*
      1. *How will companies dispose of customers’ energy usage information collected from AMI when it is no longer needed or used?*
   2. *What rights do or should customers have with respect to their energy use data (co-owners of the data, right to access, right to share with third-parties)?*
      1. *What type of customer notice should be required regarding the collection, storage, use, and disclosure of customer data (within a company and with third-parties)?*
      2. *How should the companies be required to obtain customer authorization to share data?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 2a. | Billing data is currently retained for six years. The Company has no plan to change that practice unless a need arises to reduce data storage costs with consideration of data needs for back billing. |
| 2b. | Customers are provided access to their billing determinants through their monthly bill, and through the Company’s web portal for those customers with existing AMI meters. The Company believes its current practices for customer notice, and disclosure are sufficient going forward. Annual privacy notices are provided via bill inserts. |
| *NW Natural* | |
| 2a. | NW Natural sees value in retaining historical usage data by rate schedule, and by customer class for an indeterminate period of time. Customer-specific usage is regarded as having a shorter useful life span. The current retention policy is based on meeting billing and payment obligations. |
| 2b. | Customers have on-line access to personal usage data via their account information. NW Natural’s privacy policy protects customer-specific information from being shared with third parties unless the customer has first consented to the release. In the instance of sharing with the Energy Trust, customers have the right to refuse the sharing of their information. |
| *Cascade* | |
| 2. | Cascade indicated information is retained but did not provide a retention period. |
| *Pacific Power* | |
| 2a. | Usage, outage, and billing information is retained for a period of seven years in alignment with the Company’s record retention policies and all reporting requirement. Customer usage data is purged using OPTIM (IBM tool). Offsite tape backup is shredded and destroyed. |
| 2b. | Pacific Power believes customers have a right to their own usage data, and the right to share data with third parties. The Company provides access for the prior two years of usage data through its secure website and additional data upon customer request. Usage data is also included on billing statements. The Company’s privacy policy is provided in a welcome kit when customers open an account, and is available on the company’s website. The Company does not obtain authorization from customers to share data with third-party vendors under contract to perform services. Pacific Power believes its current practice is sufficient. |
| *PSE* | |
| 2a. | PSE complies with all applicable data retention rules including [WAC 480-100-228](http://app.leg.wa.gov/WAC/default.aspx?cite=480-100-228), recognizes the NARUC paper regarding the governance of preserving utility records,[[1]](#footnote-1) and retains information for the longest applicable retention requirement. |
| 2b. | PSE believes currently Commission rules already protect the privacy of customer usage under [WAC 480-100-153](http://app.leg.wa.gov/WAC/default.aspx?cite=480-100-153), and have the right to review and inquire about their usage or share with a third party once they have received the information. The Company does not consider a customer to be “co-owners” of the data, as the utility is obligated to collect the data (*e.g.,* [WAC 480-100-318](http://app.leg.wa.gov/WAC/default.aspx?cite=480-100-318)). PSE provides privacy notices on its website and as part of the customer application. The Company believes requiring a particular technology or method of consent may impede the use of technological improvements. |
| *Public Counsel* | |
| 2a. | Public Counsel believes that Commission rules should be broad to accommodate utilities with AMI and those without access to granular data. However, Public Counsel recommends that if a Company has access to granular data, that data should be required for compliance with regulatory filings. Public Counsel also advocates for timely disposal of individual energy usage data but provides no parameters for consideration. |
| 2b. | Public Counsel believes the data collected by AMI belongs to the customer who generated the energy usage data and recommend the Commission model the Illinois Commerce Commission’s Open Data Access Framework.[[2]](#footnote-2)  Notices (paper or electronic based on customer’s preference) should be provided to customers authorizing the use of private energy usage data and how long it will be kept by the third party. Public Counsel also advocates for a generalized statement for the utility’s internal use of the energy usage data. |

1. *How will companies manage and protect customers’ energy usage data generated by AMI technologies?*
   1. *How should the rules differ for individual customer data and aggregated use data?*
   2. *What data collected by AMI should be classified as personally identifiable customer information (PII)?*
      1. *How should the rules differ for Anonymous Personal Usage Information (defined as data not explicitly classified as PII that may reveal details, patterns, or other insights into the personal lives, characteristics, or activities of individual customers)?*
   3. *How have companies evaluated cyber security risks in the planning, design, or implementation of the AMI system?*
      1. *Did your evaluation cause any changes to the plan or procurement of system components? How?*
      2. *If you are using a third-party vendor for any portion of the AMI network, have you evaluated your supply chain for the necessary data security protections? Are there contractual requirements?*
      3. *In the event of a cyber security incident that impacts AMI meters or back office systems, what is your plan to mitigate the rate impact to customers?*
         1. *Are you purchasing (or do you plan to purchase) cyber security insurance for this project? Does this protection extend to third-party vendors in the event the breach of customer data is beyond your firewall?*
   4. *Should the companies be required to report any breach of customer data to the Commission? If not, what set of parameters or threshold is appropriate to require reporting of a breach?* 
      1. *What timeframe should the companies be required to report the breach to the Commission?*
   5. *Should the National Institute of Standards and Technology (NIST) cyber security standards form a basis for keeping customer data secure? If not, why?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 3. | No change from current Company practice. Interval usage data will be protected just like the customer usage data maintained today. The Company provided additional details about its overarching conduct policy in its response. |
| 3a. | Yes/No response not provided. Avista provided that aggregated data is currently utilized in some of its energy efficiency programs. The Company does not anticipate modifying its data practices under full AMI deployment except to utilize aggregated data in more complex analytics (*e.g.,* comparing consumption with average daily temperature). With a customer’s consent, specific “actionable” data may be shared with a vendor for analytics but subject to data security and contractual requirements related to privacy. |
| 3b. | Avista does not consider data collected by AMI meters as PII under RCW [42.56.590](http://app.leg.wa.gov/RCW/default.aspx?cite=42.56.590), rather considers it “Private Information” under WAC [480-100-153](http://app.leg.wa.gov/WAC/default.aspx?cite=480-100-153). |
| 3c. | Avista uses the NIST framework and best practices from DHS and the Washington National Guard to help inform decision making related to cyber security risks. All meters, communications, and information management systems are subject to the same security standards that protect its entire energy generation, delivery, and customer systems. Technical security questions and requirements are incorporated into the Company’s RFP process with site visits to the selected vendor to better understand the how the vendor manages supply chain risks. Avista does not anticipate altering its procurement plans specifically for AMI deployment. Avista carries $20 million of cyber security insurance (extends to third-party vendor for customer data held beyond the Company firewall), and has an incident response retainer to help mitigate the time to resolve an incident. |
| 3d. | Avista would follow the reporting requirements under state law for breaches of customer PII. |
| 3e. | The Company believes the NIST standards are a valuable resource to manage security risks. |
| *NW Natural* | |
| 3. | No response |
| *Cascade* | |
| 3. | Cascade indicated when AMI technologies are deployed the Company will comply with cyber security guidelines as identified by Federal and State oversight committees and recommendation by the American Gas Association (AGA). |
| *Pacific Power* | |
| 3. | Pacific Power maintains physical assets, computing resources, and procedural safeguards that comply with federal, state, and industry regulations to safeguard customer information. Data is secured by firewall technologies, customized employee access security profiles, and confidentiality contractual requirements for third party vendors.  In its California service territory, the Company recently received approval of two new tariffs that address privacy of consumer data and disclosure to third parties (Rule 27 and Rule 28). |
| 3a. | The Company agrees with the current provisions under [WAC 480-100-153](http://app.leg.wa.gov/WAC/default.aspx?cite=480-100-153). |
| 3b. | No data currently collected by AMI should be classified as PII under [RCW 42.56.590](http://app.leg.wa.gov/RCW/default.aspx?cite=42.56.590). Aggregated usage information that does not allow customer information to be identified with any specific customer should be allowed to be released. |
| 3c. | Pacific Power and Itron complied with NIST guidelines. Pacific Power used a third party auditor for cyber security risks of its AMI program, and uses an additional third party vendor to perform penetration testing. Several changes were made to comply with the NIST standards: (1) additional of two-factor authentication, (2) relocation of systems to a CIP-secure facility, (3) relocation of back-up data, and (4) physical limiters to the number of automated disconnects within a 24-hour period. Pacific Power audited its third-party AMI vendor, performed a post-implementation penetration test, and received a copy of vendor annual SOC 2 Type 2 audits.[[3]](#footnote-3) The Company believes the risk management techniques described provides superior mitigation at lower cost than the purchase of cyber security insurance. |
| 3d. | Pacific Power supports Commission notification in the event of a customer data breach and identified it would be helpful for the Commission to identify a contact person or phone number for these incident reports. The Company will comply with reporting requirement established by applicable state law, and endeavor to notify the Commission as soon as reasonably possible. |
| 3e. | Pacific Power supports the requirement for using NIST standards or the ISO 27001 standards as they are internationally recognized frameworks. |
| *PSE* | |
| 3./3a. | PSE will protect customers’ usage data per its data protection standards and policies – based on classification of data. The Company does not believe individual customer usage data nor aggregated data constitutes PII. PSE does not believe aggregated data should be restricted for utility use. |
| 3b. | PSE’s AMI meters and modules do not track or report insights into the personal lives, characteristics or activities of individual customers. |
| 3c. | PSE evaluated AMI technology in the same manner as other technological deployments and insisted upon an “advanced security system” (this term is not further defined by the Company). Vendors are contractually bound by PSE’s security standards. PSE has already purchased insurance that applies to this project and all other PSE operations. Vendor contracts require privacy liability insurance as primary coverage, with PSE included as additional insured. |
| 3d. | PSE provides other statutory and regulatory provisions already spell out customer notice requirements, and that any new requirement should be consistent with those requirements. The Company also reinforces that is already provides annual reports to the Commission about data security. PSE already follows NIST/CSF standards for protecting data. |
| *Public Counsel* | |
| 3. | Proposes for data privacy rule modifications that provide a framework for standards and expectations for privacy and consumer security issues pointing to California, Illinois, and the U.S. Department of Energy as examples. |
| 3a. | Views the primary difference as a requirement for customer consent to disclose the information. Public Counsel recommends, that prior to drafting rules for individual customer data and aggregated use data, the Commission define the terms *covered entity, covered information or customer data, specific purpose, aggregate data, and anonymized data.* Further, Public Counsel recommends clarifying how a utility handles aggregated data (what renders a data set “sufficiently anonymous”). |
| 3b. | Public Counsel believes PII means data that can be connected to a specific entity (private or proprietary as defined in [RCW 19.29A.010](http://app.leg.wa.gov/RCW/default.aspx?cite=19.29A.010)), and while usage data alone may not strictly be considered PII, if paired with other information may be used to identify specific customers. In creating a methodology for anonymizing customer data, Public Counsel recommends the DOE code of conduct may be useful.[[4]](#footnote-4) |

1. *How will customers have access to their energy usage information collected in AMI?*
   1. *What platform will you use for customer data access?*
   2. *How will you educate customers on viewing and using the platform?*
      1. *Will the usage provided to customers be at the same granularity as programmed into the customer’s smart meter? What type of outage reporting will you provide?*
   3. *What time intervals will you use to send customers their energy usage data (near real-time, sub-hourly, daily)?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 4./4a. | Avista customers will be able to access their energy usage information via the Company’s website. Customers create a personal account by establishing a secure login and password. |
| 4b./4c. | Electric customers can access their usage data in daily, hourly, and five-minute intervals. Natural gas customers can view daily and hourly usage data.  Three-phase communication plan. Phase 1: Context for the project and introduction of technology and customer benefits. Phase 2: Meter installation with targeted communication that includes 90, 60, and 21-day notifications. Phase 3: After meter validation (several weeks post installation) customers notified and introduced to new web enhancements.  Avista will use the AMI meter data to populate its Outage Management Center online through the Company’s website. Customers will be able to choose their choice of notification (phone call, text, or email). |
| *NW Natural* | |
| 4. | No response. |
| *Cascade* | |
| 4. | No response. |
| *Pacific Power* | |
| 4./4a. | Customers may access their usage data (including interval data for OR and CA) on the company’s secure website and on their monthly bills. |
| 4b. | Pacific Power used a multi-faceted communication plan including written communications (letters, flyers, postcards, door hangers), reminder phone calls, door knocks, and a smart meter site with installation information, FAQs, contact information, videos, and smart meter workshop details.[[5]](#footnote-5) Customer usage data can be accessed by the customer at the same interval as collected by the respective meter. Outage updates may be obtained through telephone, internet, mobile app, or text notification. |
| 4c. | Pacific Power customers with an AMI meter may access interval data through the Company’s website, or request paper or electronic records to forwarded to them or a third party. Customers will continue to receive their monthly bill in the same manner. AMI customers may also sign up for text alerts for usage or expense thresholds. |
| *PSE* | |
| 4./4a. | PSE will continue to provide customer access to data in the same manner as today via a user account on its website. |
| 4b. | The Company’s website includes FAQ’s and the means to contact PSE for further assistance. PSE had not defined what if any differences in granularity might be available and already provides outage reporting online. |
| 4c. | PSE does not intend to send energy usage data to customers more frequently than on the existing bill. Customers may have additional data available through their online account, or if they subscribe to particular programs (e.g., energy efficiency customers have awareness tools through PSE’s vendor OPower via a portal with secure login). |

***Data Privacy (General Comments)***

Several commenters provided responses to the issue of data privacy without responses to specific questions posed in the Notice as those questions were more utility directed. A summary of those comments is provided below.

| **Party** | **Summary of Comments** |
| --- | --- |
| TEP | General comments and references regarding the vulnerability of low-income customers that lack a strong voice and may have limited ability to effectively interact with the data collected by AMI. Expressed concern about the granularity of the individual energy usage data collected by AMI systems.  TEP recognizes the Commission’s existing data privacy rule as a good baseline framework for protecting customers’ data providing five modifications for consideration: (1) Privacy rights notice for timing and content, (2) Scope of Use should be expanded beyond marketing for the prohibition of disclosure or sale to third parties, (3) Review the definition of privacy to ensure it encompasses all of the type of information collected by AMI deployment, (4) Private customer information should not be limited data that is obtained “solely by virtue of the utility-consumer relationship,” and (5) Clarification of retention of written consent (similar to that for the record of electronic consent). |
| NWEC | NWEC calls for a robust UTC stakeholder process to foster customer engagement and education to overcome customer obstacles in accessing their information.  Advocates that the ability for any data collection and potential analysis must receive customer approval (either by opt-in or opt-out) with information associated with any meter data being kept to a minimum unless the customer authorizes the utility to use or release the data to a third party. Further, NWEC believes customers should retain complete and unrestricted ownership over their respective data, be able to access their data at no cost, and require utilities or third parties to deter any meter data upon request. |
| ACLU | The ACLU provided a letter of interest in this rulemaking docket urging the UTC to advance transparency, accountability, and fairness considerations in all AMI deployments but does not provide formal comments to the Notice questions. Specifically, the ACLU mentions it championed legislation in Seattle that places strong safeguards around data collection, use, sale, and other dissemination by Seattle City Light and third parties. |

**Section 2: Prepaid Service and Customer Deposits**

1. *What kind of prepaid services will you implement for AMI customers?*
   1. *Will companies keep separate accounting records for prepayment services associated with AMI?*
   2. *Will the prepayments accrue interest?*
   3. *How do companies anticipate changing deposit calculations based on information available from AMI technology?*
   4. *How will you address the issue of customers receiving a double bill for the transition month, which will include both the closing bill for post-read billing and the first month of prepayment?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 5. | Avista does not currently have a plan to offer a prepaid service program. |
| *NW Natural* | |
| 5. | NW Natural has not undertaken any evaluation of how or whether prepaid services would be offered, or how or whether any changes to deposit calculations would be made in an AMI environment. |
| *Cascade* | |
| 5. | Cascade believes its current system (post fixed network for data collection) does not meet the Commission’s definition of AMI. Therefore, the questions regarding prepaid services are not applicable to the Company’s current or near-future plans. |
| *Pacific Power* | |
| 5. | The Company is not considering a prepaid option at this time. |
| *PSE* | |
| 5. | PSE is considering pilots to test whether two common applications for these types of services could work in PSE’s service territory. |
| 5a. | PSE would expect to maintain separate records to allow for proper assignment of costs, contacts, calls, self-service payments, and other elements. |
| 5b. | Prepay credits would expect to apply to near-term future usage and would only be carried for a short time. As such, PSE would not expect the average prepay balance to be a significant sum or to accrue significant interest. |
| 5c. | PSE does not plan to assess deposits for pre-payment customers. |
| 5d. | PSE would develop a proposal to address this concern when we are ready to offer this service. |

1. *How will prepayment systems comply with notice requirements?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 6. | No response. See #5 |
| *NW Natural* | |
| 6. | No response. See #5. |
| *Cascade* | |
| 6. | No response. See #5 |
| *Pacific Power* | |
| 6. | No response. See #5 |
| *PSE* | |
| 6. | PSE will explain and demonstrate how notices for prepay will comply with notice requirements in any proposed prepaid-service tariff schedules. |

1. *How will you incorporate energy assistance into prepayment agreements?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 7. | No response. See #5 |
| *NW Natural* | |
| 7. | No response. See #5. |
| *Cascade* | |
| 7. | No response. See #5 |
| *Pacific Power* | |
| 7. | No response. See #5 |
| *PSE* | |
| 7. | PSE would work collaboratively with its existing community action agency partners on a process to use individual customer past due disconnect notifications and bills to determine customer eligibility for PSE’s electric and natural gas Schedules 129 Home Energy Lifeline Program. |

***Prepaid Service and Customer Deposits (General Comments)***

| **Party** | **Summary of Comments** |
| --- | --- |
| TEP | The Energy Project believes prepaid services should be prohibited in Washington as it can circumvent critical consumer protections, have disproportionately negative impact on low-income customers, and is not consistent with the Washington state legal and policy framework for utility service. TEP believes prepay services sidesteps the protections the Commission has adopted to minimize the likelihood of disconnections. Several examples of the failure of existing prepay service programs from across the U.S. are provided, as well as information from other state commissions that have rejected utility prepay proposals. Additionally, TEP offers that AARP and The National Association of State Utility Consumer Advocates do not support prepay services. Finally, TEP discusses the financial challenges surrounding prepay services (*e.g.,* low-income customers ration essential utility service, additional transaction fees for each payment, utility use of customer funds until the service is provided). |
| NWEC | The Coalition strongly discourages the implementation of prepaid services due to the negative consequences for low-income customers, the sidestepping of critical consumer protections and billing relationships, and the necessity of utility service to modern life and the subsequent threat to health and safety. NWEC recommends that if the Commission elects to allow prepaid service, it undertake a comprehensive and robust study of existing programs across the country in order to determine lessons learned, impacts to customers and customer relationship outcomes. |
| Public Counsel | Public Counsel provides several examples of existing utility prepay service programs to illustrate the arguments for and against prepaid services.  Arguments in support of prepaid services include savings on fees and charges (deposits, disconnect, reconnect, and late fees), consumers have more control over their bills, result in more energy conservation from the awareness of usage, and reduction in theft, fraud, and financial risk (*e.g.,* reduces the amount of uncollectables).  Arguments against prepaid services identify electricity as a necessity with prepay programs devaluing this necessity by rendering electricity as a choice. Additional arguments include the concern that customers (particularly low-income customers) will self-ration electricity consumption during extreme weather, result in a degradation of customer protections (*e.g.,* disconnection notices, deferred payment plans, disconnect/reconnect schedule, billing statements, and financial assistance), and view as an avenue for utilities to eliminate or avoid consumer protections.  While Public Counsel does not believe prepaid programs are favorable to customers, it does provide 11 suggested considerations for consumer protection rules for prepaid program utilizing AMI.[[6]](#footnote-6) |

**Section 3: Remote Disconnection**

1. *What are the advantages and limitations of remote disconnection?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 8. | Advantages: Elimination of transportation expense of field service trips, eliminate the hazards associated with night/winter driving, accessing meters in difficult to reach areas, cost-effectively disconnect service in certain situations (*e.g.,* rental until between tenants), and decreased unbilled usage amounts.  Limitations: Functionality only available to single-phase, residential-type meters. |
| *NW Natural* | |
| 8. | NW Natural has not undertaken any evaluation of the advantages or limitations of remote disconnection. |
| *Cascade* | |
| 8. | Cascade believes its current system (post fixed network for data collection) does not meet the Commission’s definition of AMI. Therefore, the questions regarding prepaid services are not applicable to the Company’s current or near-future plans. |
| *Pacific Power* | |
| 8. | Provides a safe, efficient, and inexpensive means to disconnect service. The disconnects occur in real time, do not require scheduling, can be performed by a call center, or directly by the customer.  One limitation is that it is not possible to determine if new occupant intends to transfer service if no application is made. Since there is no employee on site to disconnect, it is also not possible to know if there are any abnormalities or problems at the property. |
| *PSE* | |
| 8. | Advantages: Reduced labor costs, service start/stop can be scheduled around the customer’s own schedule, minimizes re-noticing for ‘expired’ disconnect orders, increases utility flexibility and efficiency to shorten service windows, allows for better service order prioritization, improves process around unauthorized energy usage and compliance, expedites reconnection by remotely confirming necessary safety precautions.  Limitations: Dependency on AMI network conditions or systems alignment issues in cases of lost or undelivered message. A failed remote connection or disconnection request may result in a site visit of the meter. Remote disconnect/reconnect not available for large power or natural gas meters. |

1. *If the Commission allows remote disconnections for non-payment, in what circumstances would you remotely disconnect customers?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 9. | The Company expects to maintain its current practices in credit and collections cases. Customers will continue to receive a past due notice, a final past due notice, and automated courtesy call prior to disconnection. Avista provided information regarding a remote service program in its Colville and Othello area using remote collar for obstructed/dangerous meters (2008), and its Pullman project that has been using remote service disconnect/reconnect since 2012. |
| *NW Natural* | |
| 9. | NW Natural has not undertaken any evaluation of remote disconnection. |
| *Cascade* | |
| 9. | Cascade believes its current system (post fixed network for data collection) does not meet the Commission’s definition of AMI. Therefore, the questions regarding prepaid services are not applicable to the Company’s current or near-future plans. |
| *Pacific Power* | |
| 9. | The Company has not determined the criteria it would use for remote disconnections in its Washington service territory. In other states, the company’s policies for disconnections regardless of technology has not changed. |
| *PSE* | |
| 9. | PSE envisions that before any remote disconnect would occur, a customer would be allowed sufficient time to call and request same day reconnect. Other circumstances may include safety situations such as a fire, move out due to vacancy, or temporary move out scenarios with customer with other residences. |

1. *What percentage of current disconnection visits result in the customer making a payment to stop the impending disconnection after the service technician makes contact, but before service is disconnected?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 10. | Approximately 13 percent. |
| *NW Natural* | |
| 10. | Approximately 24 percent of residential customers paid a service technician at the door, and approximately 47 percent of commercial customers (2017 data). |
| *Cascade* | |
| 10. | Cascade believes its current system (post fixed network for data collection) does not meet the Commission’s definition of AMI. Therefore, the questions regarding prepaid services are not applicable to the Company’s current or near-future plans. |
| *Pacific Power* | |
| 10. | The Company does not provide a field payment option to company employees for safety reasons. |
| *PSE* | |
| 10. | 33 percent (2017 data). |

1. *Is it necessary to modify current rules governing disconnection or customer notice rules to allow companies to remotely disconnect and reconnect customers?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 11. | The Company believes current rules do not prohibit the use of remote technology to disconnect/reconnect service. Conversely, the Company believes a Commission decision to prohibit the use of remote service connectivity would require a modification of the current rules. |
| *NW Natural* | |
| 11. | Rule changes would likely be necessary to address the differences in customer notice and disconnect/reconnect processes in a remote disconnection/reconnection environment. |
| *Cascade* | |
| 11. | Cascade believes its current system (post fixed network for data collection) does not meet the Commission’s definition of AMI. Therefore, the questions regarding prepaid services are not applicable to the Company’s current or near-future plans. |
| *Pacific Power* | |
| 11. | The Company has not fully assessed the need for rule changes regarding remote disconnections in its Washington service area. In Oregon and California, the Company proposed lower fees for remote disconnections to reflect the lower cost to perform the service. |
| *PSE* | |
| 11. | PSE does not foresee changes to the disconnection process or noticing practices, except to include information within the notices that the disconnection will occur remotely. PSE will offer customers digital notifications in addition to those required by existing rule if the customer signs up for that type of notification method. |

1. *During what time of day should disconnection and reconnections occur (e.g., before noon, 24 hours a day, or during business hours only)?* 
   1. *In the case of a customer disconnected for non-payment, how long will the company take to remotely reconnect service after payment has been received?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 12./12a. | Currently, Avista schedules remote service disconnects between 8 a.m. and 3:15 p.m. Monday through Friday. Except in emergency/safety situations no disconnects are performed on weekends or legal holidays, or on any other day the Company cannot reestablish service on the same or following day. Reconnections are completed 24 hours a day, seven days a week, once the customer has satisfied payment (average reconnection time after payment is a matter of minutes). |
| *NW Natural* | |
| 12. | NW Natural has not undertaken any evaluation of remote disconnection. |
| *Cascade* | |
| 12. | Cascade believes its current system (post fixed network for data collection) does not meet the Commission’s definition of AMI. Therefore, the questions regarding prepaid services are not applicable to the Company’s current or near-future plans. |
| *Pacific Power* | |
| 12. | The Company has not made plans to install AMI metering in Washington. However, if AMI is deployed the Company would perform disconnections before noon. Reconnections would occur 24 hours a day after payment confirmation. For its Oregon and California territories the reconnection on average occurs within 20 minutes. |
| *PSE* | |
| 12. | PSE would consider payment options that would be available for reconnection and enable same-day reconnections to the greatest extent possible. |

***Remote Disconnect (General Comments)***

| **Party** | **Summary of Comments** |
| --- | --- |
| TEP | TEP believes utility service disconnection should be treated as an option of last resort and as such it is essential the existing requirements be retained. Existing rules ([WAC 480-100-128(6)(k)](http://app.leg.wa.gov/WAC/default.aspx?cite=480-100-128) and [WAC 480-90-128(6)(k)](http://app.leg.wa.gov/WAC/default.aspx?cite=480-90-128)) require utility representatives dispatched for disconnection to accept payment during the premise visit. TEP offers the New York PUC reaffirmed the requirement of a site visit prior to disconnect with the advent of AMI and remote disconnection and points to prior UTC proceedings in which Pacific Power was denied an exemption from the ‘premise visit’ rule.[[7]](#footnote-7) TEP also reasons that many low-income customers may also get behind on telephone or Internet bills and would therefore may not receive electronic notifications or be able to make online payments. TEP recommends requiring the utilities provide information about the availability of pay stations as part of this rulemaking. Finally, if remote disconnections do occur, TEP advocates they only occur during business hours (preferably before noon), and within specified times to maximize the time for customers to remedy the delinquent bill on the same day. |
| NWEC | NWEC believes remote disconnection must be handled with additional caution and protocol compared to existing regulations and rules. Rules should be implemented that provide additional opportunities such as multiple channels of communications and preemptive education and outreach. Further NWEC recommends the UTC conduct a survey of best practices and complete a stakeholder process held in various communities to ascertain what additional protections are needed. |
| Public Counsel | Public Counsel views the advantages of remote disconnect as: addressing tampering, preventing phantom usage, reducing costs related to site visits and physical disconnections. In contrast, Public Counsel views the disadvantages as: elimination of payment during site visit, increase in reconnection fees, public safety and wellness issues. Public Counsel recommends the practice of premise visits should be retained with the rule expanded for certain exemptions (low-income and medical necessity customers, temperature prohibition, and limitations on days/hours that disconnections may be performed). Finally, Public Counsel believes written disconnection notices should be expanded from current practice (15 day, 48 hours, and 24 hours in advance). |

**Section 4: Meters**

1. *What meters will the companies be installing in Washington State (brand, make, model)?*
   1. *What are the parameters for measuring and testing the accuracy of the meters?*
   2. *What accuracy range do manufacturer(s) guarantee for those meter sets?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 13. | Itron Openway RIVA electric meters and natural gas modules |
| 13a. | Avista tests electric meters in accordance with it Tariff Schedule 70 “Rules and Regulation”, which is designed per [WAC 480-100-343](http://app.leg.wa.gov/WAC/default.aspx?cite=480-100-343). Initially Avista performs a random sampling of every shipment using MIL Standard 414. If any single fails, the entire shipment is tested with an investigation conducted with Avista and the meter vendor to determine root cause. Avista also field tests a sample of previously installed meter on an annual basis following the MIL Standard 414. |
| 13b. | Avista’s primary meter manufacturer, Itron, follows ANSI Standard C12.20 for meter accuracy. Itron guarantees their meters to be within 0.5% accurate for single phase, self-contained metering, and 0.2% for poly-phase and CT metering. These limits are within the requirements of [WAC 480-100-338](http://app.leg.wa.gov/WAC/default.aspx?cite=480-100-338), which requires meter accuracy to be within 2%. See attachment B of the Company’s response for vendor accuracy specifications. |
| *NW Natural* | |
| 13. | Not applicable to NW Natural. |
| *Cascade* | |
| 13. | Cascade is not planning to install meters with AMI capabilities in the near future. |
| *Pacific Power* | |
| 13. | Pacific Power does not currently have plans to install AMI meters in Washington. |
| *PSE* | |
| 13. | Landis+Gyr’s Gridstream RF Mesh residential and commercial meters for electric customers. Landis+Gyr’s M120 Series residential and GPR commercial & industrial natural gas module for natural gas customers. |
| 13a. | Test procedures are in the Company’s natural gas (WN U-2, Rule No. 25, Section 2.2) and electric (WN U-60, Schedule 80, Section 20.b) tariffs. Testing procedures follow ANSI B109.1, B109.2, and B109.3 for gas and C12.1 for electric. |
| 13b. | All new and rebuilt natural gas meters maintain minimum accuracy of +/- one percent at specified flow rates. L+G rates its residential electric meters with an accuracy class of 0.2 percent. L+G commercial electric meter accuracy depends upon the class of meter and form, but is stated to be either +/- 0.2 percent or +/- 0.5 percent. |

1. *Are you aware of any health or safety concerns related to AMI?*
2. *What research have you conducted concerning health or safety for the meter sets you will be purchasing?*
3. *Please provide copies or electronic links to the research and any studies on which you have relied.* Links are provided within parties’ responses and are not provided within this comment matrix.

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 14./14a. | Avista relies on findings, actions and approvals of regulatory bodies, on codes such as the National Electric Safety Code (NESC), independent standards organizations such as the American National Standards Institute (ANSI), manufacturers’ standards, and industry best practices. The Company is not aware of any established link between conventional AMI metering and any health or safety risks. |
| *NW Natural* | |
| 14. | Not applicable to NW Natural. |
| *Cascade* | |
| 14. | Cascade is not planning to install meters with AMI capabilities in the near future. |
| *Pacific Power* | |
| 14./14a. | Pacific Power relies on findings and research of health and government agencies and makes this information available to its customers.[[8]](#footnote-8) The Company is not aware of any health or safety concerns. |
| *PSE* | |
| 14./14a. | PSE has found no evidence that AMI is actually unsafe or detrimental to health. The Company refers the Commission to a 2014 Washington State Department of Health study that concluded that there is no evidence of harmful effects caused by RF at levels that are above those at which smart meters operation. PSE also engaged an independent expert on non-ionizing radiation and RF to better understand the international guidelines that originated with the International Commission on Non-Ionizing Radiation Protection. Regarding physical safety, Landis+Gyr meters have completed UL 2735 certification, a voluntary safety standard for electric utility meter safety. During its deployment of AMI meters, the Company is using field personnel to conduct inspections of the connection point for any indication of an unsafe condition such as corrosion or physical damage to the meter or the customer’s meter base before exchanging the meter. |

1. *Please explain your current tampering and theft detection process.* 
   1. *How might AMI technology alter that process?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 15. | A report is compiled through field activities that identify meters reported as disconnected that are still registering usage. Trained meter technicians are dispatched to perform a field inspection. Depending on the degree and method of theft, the diversion equipment is removed, safety inspection completed, and if deemed safe, the customer’s service is restored. The theft is then reported to the Billing Department for estimation of the financial magnitude of the theft. |
| 15a. | Rather than relying on primarily inadvertent discovery through field visits, the metering system provides interval readings every five minutes, along with tamper and other others. Theft can be detected when adjacent meters connected to the same transformer do not experience a similar impedance change as the meter in question. Once a likely case of theft is identified in the application, a field technician will be dispatched to investigate. |
| *NW Natural* | |
| 15. | Not applicable to NW Natural. |
| *Cascade* | |
| 15. | Cascade is not planning to install meters with AMI capabilities in the near future. |
| *Pacific Power* | |
| 15. | Pacific Power performs site investigations for locations that experience a significant drop in consumption from previous months, locations coded as disconnected but continue to register consumption and through tips from customers. |
| 15a. | Not applicable. Pacific Power would supplement existing processes with additional analytics from AMI system data. |
| *PSE* | |
| 15. | PSE’s tampering and theft detection processes are kept confidential to ensure those seeking to harm PSE’s equipment are less able to circumvent those processes. |
| 15a. | AMI technology will allow increased visibility and more timely notification of potential tampering or theft. |

***Meters (General Comments)***

| **Party** | **Summary of Comments** |
| --- | --- |
| Washington Jural Assembly Members | Expresses concerns regarding RF radiation from the AMI technology. Advocates the ICNIRP exposure thresholds published in 2007 should be disregarded as the ICNIRP are provided funding that stems from subsidies granted by national and international public institutions, and are therefore biased. Points to The BioInitiative Working Group report regarding the biological effects of low-intensity EMF exposures finding existing standards are not adequate to protect public health. Expresses concerns for various groups being at greater risk to the exposure. Provides information previously sent to the California PUC from an individual expressing concerns regarding the smart meter installation in PG&E service territory. Recommends new ELF/RF limits be established for utility planning/construction, and consider wired alternatives to WI-FI be implemented. Exhibits provided. |
| (1) Individual Public Comment | Concerns regarding RF radiation from the AMI technology. References studies done by the U.S. National Toxicology Program and the Ramazzini Insitute in Italy findings regarding radiation affects on the body biology and should be classified carcinogenic to humans. Advocates that U.S. regulation in the matter have not been updated since ‘The Telecommunications Act of 1996’. Provides personal EMF meter readings to compare against PSE’s brochure indicating pulses of radiation are much higher than cellphone peaks. Uses the Institute of Building Biology guidelines for recommended limitations. Expresses concerns for various groups at greater risk to the exposure. Does not believe smart meter technology is indispensable to provide energy services. Proposes analog meters be provided at no extra cost and prohibited opt-out fees. |

**Section 5: Billing Requirements**

1. *In what circumstances do you believe estimating a customer’s bill will be required with AMI?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 16. | Very rarely – estimating could occur in the case of an infrastructure failure, meter failure or catastrophic failure uploading reads. |
| *NW Natural* | |
| 16. | NW Natural has not undertaken any evaluation of bill estimating practices in an AMI environment. |
| *Cascade* | |
| 16. | Cascade is not planning to install meters with AMI capabilities in the near future. |
| *Pacific Power* | |
| 16. | Estimating a customer’s bill may be necessary if the AMI network or meter itself sustains significant damage. |
| *PSE* | |
| 16. | When PSE’s AMI is fully deployed and operational, the only circumstance that may require estimating a customer bill would be a meter failure or malfunction. |

1. *Generally, what type of reporting will be available on customer bills as it relates to usage? More specifically:*
   1. *What mechanism in customers’ bills will display customer-elected load curtailment and control?*
   2. *What type of reporting will you provide as it relates to tamper and theft detection?*
   3. *What type of reporting will you provide as it relates to voltage reduction?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 17a. | The bill will display an energy graph showing the customer’s current month of usage, plus for historical purposes, each of the previous 12 months. |
| 17b. | Avista does not have a current plan to report theft or tamper statistics on customer bills. |
| 17c. | Avista does not have a current plan to report voltage reduction statistics on customer bills. |
| *NW Natural* | |
| 17. | Not applicable to NW Natural. |
| *Cascade* | |
| 17. | Cascade is not planning to install meters with AMI capabilities in the near future. |
| *Pacific Power* | |
| 17. | Customer usage data on customer bills have not changed as a result of AMI. |
| 17a. | This is not a program in place for Pacific Power customers at this time. |
| 17b. | Tampering and theft notifications occur outside of the billing statement as formal correspondence. The approved tampering fee and appropriate bill adjustments appear on the billing statement. Tampering and theft are rare occurrences that would not require a regular report to the Commission, but would provide upon request. |
| 17c. | Voltage reduction reporting on bill statements currently is not performed by Pacific Power. |
| *PSE* | |
| 17. | PSE has no plans to change its bill print or design pertaining to displaying usage information during or after deployment of its AMI network. |
| 17a. | PSE is still in the early phases of evaluation of any offering of load control services such as demand response. If and when PSE decides to offer additional load curtailment services to customers, it will evaluate the best mechanism for billing and customer payment. |
| 17b. | PSE does not plan to provide customers with meter equipment tampering reports on their bills. |
| 17c. | PSE has no plans to change its bill print and design or to provide any additional reports on customer voltage reduction. |

1. *Will the AMI system give customers the ability to program budget billing and conservation goals?*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 18. | Customers currently have and will continue to have the ability to select budget billing. The ability to program conservation goals will not be available during the initial installation of AMI meters. |
| *NW Natural* | |
| 18. | Not applicable to NW Natural. |
| *Cascade* | |
| 18. | Cascade is not planning to install meters with AMI capabilities in the near future. |
| *Pacific Power* | |
| 18. | AMI customers may sign up for text or email alerts to be notified if their billing is projected to exceed a usage or expense threshold within a billing period. |
| *PSE* | |
| 18. | PSE will continue to offer its budget payment plan option and energy efficiency services to all residential customers during and after the installation of AMI. |

1. *Explain the rate and bill flexibilities you will offer customers in conjunction with AMI deployment.*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 19. | The Company is still reviewing options for customer choice related to rate and bill flexibilities, however will not propose new options until after total implementation of the AMI system. |
| *NW Natural* | |
| 19. | NW applicable to NW Natural. |
| *Cascade* | |
| 19. | Cascade is not planning to install meters with AMI capabilities in the near future. |
| *Pacific Power* | |
| 19. | The Company has not considered changes to its Washington billing rates or structures regarding AMI deployment as there is no current plan to deploy AMI technology in its Washington service area. |
| *PSE* | |
| 19. | PSE is still exploring AMI’s potential for these services. |

**Section 6: Customer Education**

1. *Please identify the policies and education programs will you use to inform customers about the following:*
   1. *How to report suspected equipment malfunction.*
   2. *How to get help reading usage, voltage reduction reports, and outage reports.*
   3. *How to use the AMI technologies to curtail electricity use, and the potential to help control peak demand for all customer classes.*

| **Question** | **Summary of Comments** |
| --- | --- |
| *Avista* | |
| 20. | Avista’s approach includes direct mail prior to AMI installation and through its website. Customers can also obtain answers about usage a reports and equipment malfunction answered by Avista Customer Services representatives and FAQ’s on the website. The Company has no plans to curtail usage or offer peak pricing options using AMI technology. |
| *NW Natural* | |
| 20. | Not applicable to NW Natural. |
| *Cascade* | |
| 20. | Cascade is not planning to install meters with AMI capabilities in the near future. |
| *Pacific Power* | |
| 20. | The Company has not developed education programs for AMI as it does not have plans to install AMI in Washington. In other service territories its experience has been a very small number of customers have questions regarding these topics and customers can call the Company’s toll-free number to request information about their service. |
| *PSE* | |
| 20a. | Reporting of suspected equipment malfunction will be specified on the PSE website such as directing customers to easy self-selection and resolutions or directions to the PSE call center for resolution. |
| 20b. | Customers can get assistance through the PSE website, through videos, an other outreach mechanisms for using a customer’s MyPSE account as a starting point, and additional call options beyond MyPSE. |
| 20c. | If and when PSE elects to offer optional demand response products, customer education on curtailing energy use, and the potential to help control peak demand would be specified in PSE’s proposed tariff schedule(s). |

1. *Regulations to Govern the Preservation of Records of Electric, Gas, and Water Companies*, published by the National Association of Regulatory Utility Commissions. [↑](#footnote-ref-1)
2. *Proceeding to Adopt the Illinois Open Data Access Framework,* Docket 14-05074, Final Order, at 6 (Ill. Com. Comm’n July 26, 2017), <https://www.icc.illinois.gov/downloads/public/edocket/450960.pdf>. [↑](#footnote-ref-2)
3. A SOC 2 Type 2 audit, or Service Organization Control 2, is an audit of a service organization’s non-financial reporting controls as they relate to the Trust Services Criteria – the security, availability, processing integrity, confidentiality, and privacy of a system. [↑](#footnote-ref-3)
4. DOE VCC at 12. [↑](#footnote-ref-4)
5. <http://www.pacificpower.net/smartmeter>. [↑](#footnote-ref-5)
6. Public Counsel comments at pages 27-28. [↑](#footnote-ref-6)
7. *In the Metter of the Petition of PacifiCorp d/b/a Pacific Power and Light Co. Seeking Exemption From the Provisions of WAC 480-100-128(6)(k) Relating To Accepting Payment from Customers at Disconnection Service Address,* Docket UE-130545 and *Inquiry to Consider Whether Changes to WAC 480-90-128(6)(k) and WAC 480-100-128(6)(k) are Warranted,* Docket UE-131087. [↑](#footnote-ref-7)
8. <https://www.pacificpower.net/content/dam/pacific_power/doc/Your_Account/Smart/Meters/PAC_18044_SmartMeter_RF_HealthSafety_UPDATE_081318.pdf>. [↑](#footnote-ref-8)