



May 25<sup>th</sup>, 2017

Dear Chair Sawant and Members of the Energy and Environment Committee:

On behalf of the ACLU of Washington, I write to express significant concerns regarding Seattle City Light's (SCL) Advanced Metering Program, currently in the process of citywide implementation. The ACLU of Washington is an organization of over 75,000 members dedicated to protecting civil liberties for all in our state. We have consistently advocated for privacy protections and against government surveillance without appropriate checks and balances. Advanced Metering Infrastructure (AMI) is a surveillance-capable infrastructure that is being rapidly implemented in Seattle with little public transparency as to its privacy impacts and how they will be mitigated; without appropriate regard for the principles of Seattle's own Privacy Program; and without a meaningful opportunity for individuals to offer informed consent. Even if AMI implementation is inevitable, Seattleites deserve privacy protections and meaningful choices in the context of that implementation. This committee should ensure they get them.

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**1. AMI, including the associated “smart meters,” are a surveillance-capable infrastructure that can reveal intimate details of individuals’ lives.**

The smart meters to be installed in the homes of Seattleites collect far more granular data than SCL's current, non-connected electric meters. Not only have smart meters been shown to be hackable,<sup>1</sup> but they collect readings far more frequently and with a greater range of metrics than a once-a-month reading of a single power usage metric from the meters they replace. According to the Electronic Frontier Foundation:

“[S]mart meters also [reveal] intimate details about what’s going on inside the home. By collecting energy use data at high frequencies—typically every 5, 15, or 30 minutes—smart meters know exactly how much electricity is being used, and when. Patterns in your smart meter data can reveal when you are home, when you are sleeping, when you take a shower, and even whether you cook dinner on the stove or in the microwave. These are all private details about what’s going on inside your home...<sup>2</sup>

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<sup>1</sup> See, for example: <http://krebsonsecurity.com/2012/04/fbi-smart-meter-hacks-likely-to-spread/>

<sup>2</sup> <https://www.eff.org/deeplinks/2017/03/illinois-court-just-didnt-get-it-we-are-entitled-expect-privacy-our-smart?page=8>

The surveillance capabilities of the technology potentially go even further—for example, German researchers demonstrated the ability to determine what film was being shown on a given TV based on its unique power profile.<sup>3</sup>

- 2. The City must create clear guidelines around what data smart meters collect, who accesses the data, what it can and cannot be used for, and what meaningful and informed consent must be given before the meters are deployed.**

The potential surveillance capabilities of AMI make clear and binding guidelines essential. In considering what safeguards might be appropriate, the City Council must consider the outer envelope of this (or any other) technology’s capabilities and ensure third party verification of those capabilities, rather than rely on the assurances of the very vendors that stand to benefit from potential sale of Seattleites’ data.

- 3. The City’s Privacy Impact Assessment is unclear, inadequate, and leaves key questions unanswered.**

The mission of Seattle’s Privacy Program and the associated Privacy Impact Assessment (PIA) process is to “build public trust about the use and management of personal information.”<sup>4</sup> The PIA is a critical document in that process, intended to provide “a more detailed look at projects or programs to determine all potential privacy impacts and mitigation options.”<sup>5</sup>

Yet the PIA produced for the AMI program<sup>6</sup> fails to fulfil its purpose of transparency and accountability to the public—it is frequently confusing, jargon-laden, vague, and fails to answer key questions or offer binding commitments as to how AMI and the resulting data will be used. While a comprehensive listing of all outstanding questions raised by the PIA would be lengthy, some key concerns include the following:

- **The PIA appears to treat only the “meter ID” element as personally identifying information and protect it as such**, even though additional data should fall into this category and be protected as well.<sup>7</sup> The City’s own “AMI Considerations” document, produced in conjunction with the PIA, notes this issue as well.<sup>8</sup>

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<sup>3</sup> <https://nakedsecurity.sophos.com/2012/01/08/28c3-smart-meter-hacking-can-disclose-which-tv-shows-and-movies-you-watch/>

<sup>4</sup> See, for example:

<https://www.seattle.gov/Documents/Departments/InformationTechnology/privacy/PrivacyProgramIntroductionE-TeamBriefing.pdf>

<sup>5</sup> *City of Seattle Privacy Program*, October 2015, document provided by City of Seattle Department of Information Technology.

<sup>6</sup> <https://www.seattle.gov/Documents/Departments/Tech/AMI-PIA-FINAL-Rev2.pdf>

<sup>7</sup> *Id.*, p.3.

<sup>8</sup> See <http://www.seattle.gov/Documents/Departments/Tech/AMI%20PIA%20-%20FINAL%20-%20Considerations.pdf>, p.5.

- **The PIA fails to clearly delineate acceptable and off-limits uses for the data by the City**, as well as to explicitly commit to how those limits will be enforced. This problem manifests in many parts of the PIA; here are two examples:
  - The PIA’s response to question 5 (how the City uses the collected information) references only uses of CEUD<sup>9</sup> (despite many other metrics being collected by the smart meters) and does not commit to explicit restrictions on the City’s use of the data.<sup>10</sup>
  - The PIA’s response to question 6 (whether the City uses the data for search or scoring purposes) is confusing and leaves the reader unsure as to whether the answer is a yes or no, and if the former, what the nature of the use is.<sup>11</sup>
  
- **The PIA contemplates this deeply private dataset being passed to various third parties, but does not make clear any applicable restrictions on what those third parties can do with it.** For example, one provision of the PIA references “[p]roviding services on behalf of the utility related to meter to cash management and conservation,”<sup>12</sup> without further explanation of what those services might be. Nowhere in the document is there a list of specific third parties touching the data, nor a comprehensive, binding list of what uses they will be limited to. The vague answers in the documents should be replaced with clear commitments that third parties may use the data only for purposes related to provision of electrical service.
  
- **The PIA references the “unique legal nature” of SCL as compelling it to collect raw meter data, without further explanation.**<sup>13</sup> This connects to the unanswered question of what the purpose of AMI implementation is in the first place. While SCL’s presentation to this committee on May 23<sup>rd</sup> focused on “Customer Benefits” of implementation,<sup>14</sup> there has still been no clear articulation of why collection of raw meter data at a four-hour level of granularity must be collected, let alone stored on third party servers. (For example, use of the data for the purpose of grid management and detecting electrical outages is presumably immediate; why must raw meter data be stored beyond that point, when only a monthly aggregate is needed for billing purposes?)

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<sup>9</sup> CEUD is Customer Energy Use Data, as defined in the PIA.

<sup>10</sup> *Id.*, p.6.

<sup>11</sup> The full response is as follows: “Raw meter data and CEUD will be used, searched, queried, or analyzed by SCL for service delivery management, distribution planning (sizing transformers and circuits), asset management (transformer loading and maintenance), and outage management. ... The data may be used to identify anomalies, such as a line loss conditions, power outage, or potential meter tampering. Built-in functionality in the HES supports this his [sic] analysis by monitoring events and alerts City Light staff who respond as appropriate. ... City Light will continue to conduct analysis that identifies customers whose usage or meter activity fluctuates between billing cycles to ensure accuracy of billing practices.”

<sup>12</sup> *Id.*, p.3.

<sup>13</sup> *Id.*, p.5.

<sup>14</sup> *Id.*, p.5.

- **The PIA fails to clearly delineate what AMI data will be retained or to justify that retention schedule, and contemplates making private data available for law enforcement purposes.** To the average Seattleite simply seeking information regarding how their AMI data will be retained, the PIA fails to offer any clarity or a specific retention schedule, instead referencing “compliance with applicable laws and regulations.”<sup>15</sup> At the same time, despite denying that AMI information is particularly revealing of individuals’ whereabouts and lifestyles, SCL contemplates being “compelled” by law enforcement or courts to make AMI data available.<sup>16</sup> Such availability to law enforcement should increase the burden on SCL to clearly delineate and justify what data it collects and for how long it is retained.
- **The PIA evades questions regarding monitoring, enforcement, and training around AMI data.** These sections of the PIA, as well, raise more questions than they answer.<sup>17</sup> To take one example, the answer to question 20 (about record-keeping regarding disclosures outside SCL), in its entirety, is:

“City Light has processes in place to manage disclosures through its Legal Affairs/Public Records Office. Data collected through the AMI Program, including raw meter data and CEUD, does not change any current procedures.”<sup>18</sup>

Subsequent questions elicit similar non-answers rather than specific descriptions of measures taken. Such responses do nothing to further the PIA’s purposes of transparency and accountability as well as public trust.

**4. Even in the assessment of the City’s outside counsel, AMIs raise privacy, data security, and training concerns that should be mitigated.**

At its presentation to the committee on May 23<sup>rd</sup>, SCL referred to the PIA as being “completed and approved.”<sup>19</sup> Yet in the *AMI Privacy Considerations* document, the Seattle IT Department discusses a host of actions—over 20—that are yet to be taken with regard to protecting privacy, data security, and training. Many of these critiques mirror the ones stated above with regard to the PIA.<sup>20</sup> According to SCL’s presentation in committee, smart meter installation in Seattle ramped up in October 2016, and the program itself began many years before that—yet these critical considerations remain unaddressed over six months later. Privacy, data security, and training are core

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<sup>15</sup> *Id.*, p.7. The full response is as follows: “Raw meter data and CEUD is maintained in compliance with applicable laws and regulations with respect to the collection, retention, and destruction. SCL’s retention policy for CEUD information is compliant with requirements of the Federal Energy Regulatory Commission (FERC). FERC requires CEUD be maintained six (6) years. ... Disposition practices and an audit process will be defined as part of project implementation.”

<sup>16</sup> *Id.*, p.3.

<sup>17</sup> *Id.*, pp.12-14.

<sup>18</sup> *Id.*

<sup>19</sup> *Advanced Metering Program Update*, Powerpoint Presentation to Energy and Environment Committee by SCL, May 23<sup>rd</sup>, 2017.

<sup>20</sup> See *AMI Privacy Considerations*, *supra*.

considerations at the heart of AMI implementation, and the City should treat them as such—not as afterthoughts to be implemented after the AMI program has already become a done deal.

**5. The opt-out offered by the City of Seattle is inadequate, expensive, and meaningless until actual privacy commitments around AMIs are offered.**

SCL's presentation showed a low opt-out uptake of 104 individuals,<sup>21</sup> which should hardly be surprising given the many ways in which the opt-out misses the mark. In our letter to SCL dated August 15<sup>th</sup>, 2016—to which the City did not respond—we pointed out the flaws in the proposed opt-out policy. No changes were made in response, which means the opt-out still suffers from the following problems:

- **The opt-out fails to protect privacy.** According to the opt-out currently in place on SCL's website, an individual can opt-out of wireless communications, but it is unclear whether they can opt-out of the granular collection of usage data, which, as described above, is most deeply connected to privacy concerns. SCL's currently available opt-out form<sup>22</sup> describes the choice as one between an "advanced meter" and a "non-communicating digital meter," with no discussion of what data the latter actually collects. Our previous reading of the proposed opt-out policy, however, showed that a non-communicating digital meter still "collects hourly usage information."<sup>23</sup> The current opt-out forces an individual into paying for manual meter reading, even if wireless communication is irrelevant to his or her concern over granular data collection.
- **The opt-out is extremely expensive.** According to the schedule posted, opting out will cost an individual \$124.43 as a one-time "administrative fee," plus \$15.87 per future billing cycle, plus an additional \$84.21 penalty for failure to opt-out within a given window. This means that when monthly billing is implemented, the cost to opt-out in the first year could be close to \$400—an absurd penalty for SCL to impose on those seeking to protect their privacy.
- **Most Seattleites are unaware of the opt-out.** Virtually nobody I have spoken with outside the privacy community is aware of the AMI program, let alone the opt-out option. SCL's presentation to this committee described extensive outreach work to happen in June, but given that implementation is already occurring, this would appear to be too little, too late.
- **Any opt-out is meaningless without clear and publicized use and sharing restrictions for AMI and its associated data.** As pointed out above and by the City's own assessment, a great deal of work remains to be done in determining how AMI's collect data, who touches that data, and what it will be

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<sup>21</sup> *Advanced Metering Program Update*, p.8.

<sup>22</sup> <http://www.seattle.gov/light/ami/docs/1787571.pdf>

<sup>23</sup> ACLU letter to Seattle City Light General Manager and CEO re: Comments on Advanced Metering Program, August 15<sup>th</sup>, 2016.

used for. Only after that point—and after meaningful outreach efforts to communicate resulting restrictions to the public—can an opt-out be considered meaningful consent. In fact, the default should be opt-in—those who want the benefits of this technology should be able to move to do so, rather than a privacy-invasive default being imposed by the City.

6. **This committee should ensure that the City adopts clear and binding commitments around the use of AMI, communicates them transparently, and offers a meaningful opt-out opportunity to Seattleites.**

Throughout the AMI discussion, the City has sought to reassure the Council that AMI implementation will only benefit Seattle consumers, not harm their privacy. While City officials may be acting with those good intentions, they are not enough—this committee should ensure those intentions translate to binding, written commitments that all Seattleites can access. In particular, this committee should:

- **Ensure the creation of an updated PIA** that mitigates the privacy problems identified in the current PIA and by outside counsel, and makes clear how AMIs will be used, and how AMI data will be collected, retained, shared, and deleted.
- **Enshrine the commitments of that updated PIA in a binding policy around the use of AMI**, including rules on collection, retention, sharing, and deletion of data. In particular, a simple and explicit prohibition on the use, sale, or transfer of AMI data for any purpose other than providing electrical service should apply to all parties involved in AMI implementation, including the City. Exceptions to this rule should be discussed and justified.
- **Ensure that all implementation contracts with third parties for AMI include language restricting those third parties' use, sale, or transfer of AMI data** in accordance with the policy.
- **Ensure that information about those commitments is made available, in transparent and simple language, to all Seattleites.** Extra outreach must take place to vulnerable communities.
- **Ensure all Seattleites have a meaningful opportunity to make an informed decision about their participation in the AMI program, including a cost-free opt-out.** The City should take the opportunity to inform Seattleites about their opportunity to opt-out—previous mailers included in SCL bills have referenced only a website, with no mention of the opt-out.

All of this should happen *before* the large-scale rollout of AMI moves ahead. Thank you for considering these concerns. I look forward to further discussion.

Sincerely,  
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