

OPOWER, Inc. (“OPOWER”) offers the following responses to questions raised in the Smart Metering Implementation Programme: Data Privacy and Security issued in July 2010:

Question 1: *Do you have any comments on our overall approach to data privacy?*

OPOWER takes consumer privacy concerns seriously and works with our 42 utility partners in the United States to protect consumer data and circumscribe its use. Thus, OPOWER shares the Government’s commitment to protecting consumer privacy and agrees that, “controls therefore need to be in place to ensure that industry and third parties manage data correctly and that consumers have appropriate rights and are sufficiently protected.” Pursuant to these and other Government goals, OPOWER would seek to clarify the meaning and intent of some of the specific language in the Government’s report. If not clarified, some language could inadvertently restrict business processes that would help the Government and utilities meet regulatory duties cost-effectively for the taxpayer/ratepayer. As suggested in section 2.11, there are energy efficiency and management companies like OPOWER that can use energy consumption data to “provide tailored packages to consumers” and therefore drive deeper consumer energy savings than would otherwise be possible. It is currently unclear, however, whether certain business practices would or would not be acceptable under the Government’s draft privacy plan.

As the Government develops its initial privacy impact assessment, we would seek to understand better section 3.11, which states that, “**...the consumer should choose in which way consumption data shall be used and by whom, with the exception of data**

required to fulfil regulated duties.” The meaning of “choice” is unclear in this excerpt. It could connote any active decision by the consumer to provide his or her data to a utility or third party, including through an “opt-out” or “opt-in” approach, or could be more narrowly circumscribed. Furthermore, it is unclear what would qualify as a “regulated duty.” For example, if the Government has an economy-wide energy efficiency goal and seeks to derive a percentage of that energy savings from residential energy use, would such home energy savings qualify? OPOWER seeks additional clarity on these questions and offers the following proposal and justification to inform the Government’s responses.

Proposed Language:

In order to reconcile important privacy concerns with cost-effective ways to meet energy efficiency and other related policy goals and regulatory duties, OPOWER proposes the following language to the Government:

“The consumer or the utility should choose in which way consumption data shall be used and by whom either through an opt-out or opt-in decision as appropriate to fulfill regulated duties, such as meeting efficiency goals.”

OPOWER would further suggest that, pursuant to the Data Protection Act of 1998, a company that was contracted by a utility to analyze consumption data on a contractual basis be considered a “data processor” and thus not as such a “third party.” As a “data processor,” the company must adhere to the data privacy and security requirements of the contracting entity (i.e., the utility provider).

I. Objectives guiding privacy language

In crafting regulations that will protect consumer privacy, it is OPOWER's position that the privacy language should allow:

1. Utilities to hire data processors, such as OPOWER, to provide data analysis and other information-based customer engagement tools to help the utility pursue efficiency and customer engagement goals.
2. Customers to permit third parties to analyze energy usage data with cooperation from the utility, so long as such data collection and transfer does not result in undue cost or privacy risk to ratepayers; and

While privacy is a critical component of both objectives, the Government should distinguish between the two. The first objective allows a service with independently verified energy savings in the U.S. -- i.e. behavior-based efficiency under an opt-out model -- to expand to the UK. The key distinction between the two models is the role of the utility. The second objective takes something that is currently either difficult or impossible -- i.e. passing on utility provided energy usage data -- and makes sure that it is both permissible and safe.

II. Distinguishing between utility sponsored programs, and direct-to-consumer

programs.

Lasting regulation requires a nuanced understanding of the current status of the market, and how utilities and third party vendors are situated within that market. At present there are two dominant models in the U.S. for displaying customer energy information and that could translate for the UK market:

Utility-contractor model (OPOWER, etc.) -- As with other services contracted by the utility (e.g., billing services), this model allows the utility to contract with a **data processor** to parse individual usage data and provide customer engagement or efficiency products direct to the end-customer. From the customer perspective, the relationship between the utility and the vendor is seamless; the customer views the output as a utility service. From the utility perspective this approach allows the utility company to engage external vendors to work on behalf of the utility in servicing customers. Most importantly, the vendor is providing this service under the explicit direction of the utility company.

Direct-to-consumer model (Google, Microsoft, etc.) -- Under this model, a customer may choose to transfer his or her data provided by the utility to a **third party vendor** so that they may individually take advantage of the third party's product. In this case the third party is not beholden to the utility company's data security and privacy standards. The agreement is between the third party, the customer and whomever the third party relies on to generate revenue in support of the service or product (i.e., consumer fees, advertising).

Vendors that employ one of these models, including OPOWER, will be affected by the outcome of this discussion. It is imperative, if the Government wishes to protect consumer privacy and achieve its utility objectives for efficiency, that the privacy language be crafted at a minimum with these two distinct business models (i.e., Data Processor vs. Third Party Vendor) in mind. Language that focuses too heavily on one model will materially change the program design and administration for the other.

For example, if there were a legal requirement that data processors ex ante obtain an individual's consent to access that customer's data, OPOWER would not be able to operate under an opt-out design, resulting in much lower aggregate savings and engaging only a small percentage of customers. Conversely, if third parties that interact exclusively with the customer were required to have a contractual agreement with the utility in order to ensure the security of the data, customers may be prevented from selecting their energy management platform of choice.

III. Benefits of utility-contractor partnerships

Retaining Customer Relationship: The most evident benefit of the utility-contractor model is that it allows the utility to direct innovative products to the customer without assuming development risks and while retaining the customer relationship. Additionally, both the utility and its customers can benefit by partnering with a contractor that operates in multiple service territories and has different core competencies than the utility.

Leveraging Insights Across Regions: Contractors have the ability to partner with multiple

utilities across different regions and thus gain important insight into best practices that drive efficiency and customer engagement. OPOWER, as one such vendor, has been able to build a highly targeted platform by leveraging insights obtained through a number of ongoing deployments. By keeping essential program characteristics in place -- such as opt-out design, ex-post measurement, and test and control groups -- OPOWER is able to apply new unique lessons from effective programs as new clients are deployed, and thus deliver an optimized product to consumers across multiple utilities.

Opt-Out Yields High Participation Rate: Of the essential program characteristics listed above, robust opt-out program design is unique to the utility contractor model, while the direct-to-consumer model is limited to an opt-in strategy. It is OPOWER's experience that opt-out design is a critical component of behavior-based programs; they do not work as an opt-in strategy. By using an opt-out program design, OPOWER programs are able to engage more than 80% of customers receiving Home Energy Reports -- far more than would be possible with any opt-in program design. At the same time, the number of participants who opt-out of the program is relatively small -- less than one-percent in most implementations. High participation rates (and low opt-out rates) mean that small savings on a per household basis add up to significant savings in aggregate.

By contrast, engagement in opt-in programs is far lower. Opt-in programs are significantly more difficult to administer in a cost-effective manner, because far fewer people will actually sign-up. The Direct Marketing Association (DMA) in the U.S., a

research- oriented trade association for companies that rely on direct mail, is a leading source of reliable direct marketing research. Its 2009 report found that even when consumers had already expressed interest in receiving direct marketing (i.e. by indicating that they would like to be contacted with future offers) the average response rate to that marketing was only 3.69%.

Opt-Out and EM&V: Opt-out program design also allows for rigorous evaluation, measurement, and verification (EM&V). Strong EM&V is in the interest of both the Government and the taxpayers, who shoulder the cost of these programs. By contrast, an opt-in program would be difficult to measure with certainty. This is because the most significant challenge when measuring an opt-in program is the creation of a relevant and unbiased comparison group. Although there are a variety of statistical techniques one can use to match participants with non-participants based on observable characteristics -- such as housing data, demographic data, and census data -- none of these methods addresses differences in unobservable characteristics like attitudes, beliefs, behaviors, attention paid to direct mail, etc. While a “matched” comparison group may appear to be similar to the treatment group, it is likely that undetected biases will render the measured savings invalid. This is especially true in the case of opt-in programs: the act itself of opting-in signals a difference from those who did not opt-in. In the world of surveys, this is known as survey responder (or selection) bias.

Opt-out program design avoids these issues by assigning customers to the participant and non-participants groups at random. The randomization procedure ensures that these

unobservable characteristics are balanced between the participant and non-participant groups. As a result, one can draw a causal, unbiased inference about the impact of the program.

IV. OPOWER & Privacy

Privacy is protected in the contract between the utility and OPOWER, and privacy is central to the design of OPOWER's products, processes, and business model. Although OPOWER does require access to personally identifiable information in order to provide its services, OPOWER does not acquire any continuing rights to personally identifiable information. Moreover, OPOWER cannot take any action absent the utility's approval.

As a result, OPOWER is a subcontractor to the utility -- a company, akin to a billing service provider, that the utility hires to provide a specialized service.

This model has led utilities in some of the most privacy conscious states (e.g., California) in the U.S. to choose OPOWER to provide behavior-based efficiency (and likewise use opt-out program design to achieve efficiency goals). Moreover, in each state where OPOWER is working, it is delivering scalable, cost-effective energy savings. These savings are rigorously measurable, and have won acceptance through independent verification.

Privacy safeguards for usage data shared between a utility and a contractor resulting from this process could reflect current practices, while affording appropriate protection for UK consumers. OPOWER, for example, takes extensive steps to ensure data security. As a

subcontractor hired by utilities, OPOWER maintains privacy in accordance with all state laws and the utility's own internal guidelines with every OPOWER program. All data that is sent to OPOWER from its utility clients is sent through a secure ftp transfer, is encrypted, and stored in a SAS-70 Type II storage facility. Access to data within OPOWER is strictly restricted to those individuals who have a need to review the data to generate Home Energy Reporting. Reports, once generated, are sent to the printer using image files that enhance security because they cannot be disaggregated. And the reports themselves are designed so that neighbor comparisons are made to groups small enough to be motivating, yet large enough to protect anonymity. Furthermore, OPOWER retains no rights to personally identifiable information under either under its agreement with the Companies or with any utility. Therefore, if a contract with a utility is terminated, OPOWER is required to destroy all record of consumer data.

Conclusion:

OPOWER shares the Government's commitment to protecting consumer privacy and achieving energy savings goals. Pursuant to our comments above, it is our hope that the Government will clarify some of its policies so that companies like OPOWER can take full advantage of business processes that are both privacy-friendly and can help meet regulatory duties cost-effectively for the taxpayer/ratepayer.

Sincerely,

OPOWER comments, 10/28/2010

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