



May 5, 2022

Pennsylvania Public Utility Commission
Attn: Secretary

Via E-Filing

Docket No. M-2021-3029018

Re: Investigation into Conservation Service Provider and Other Third-Party Access to Electric Distribution Company Customer Data

In response to the Pennsylvania Public Utility Commission's ("PUC or Commission") Secretarial Letter dated February 8, 2022 (Docket No. M-2021-3029018), Enerwise Global Technologies, LLC d/b/a CPower Energy Management ("CPower") respectfully submits responses to the questions posed in Attachment A. CPower appreciates this opportunity to discuss the importance of third-party data access to customers' Electric Distribution Company (EDC) utility meter data. Commonwealth residents and businesses depend on Conservation Service Providers (CSPs) and other third parties for various advanced energy management services to help lower energy use and save money, as well as participate in various utility and PJM-distributed energy resources to support efficient and reliable operations of the electric grid. Efficient access to customers' data, with customer authorization, is vital to providing such services.

CPower is a leading, national energy solutions provider guiding customers towards a clean and dependable energy future by managing over than 5.3 GW of distributed energy resource capacity across the U.S. Headquartered in Baltimore, Maryland, CPower also has an office in Kennett Square, Pennsylvania. CPower is a registered Conservation Service Provider under Act 129 and a curtailment service provider in PJM, serving customers throughout the Commonwealth.

As the Commission proceeds in its investigation of third-party data access, CPower looks forward to discussions with the PUC and stakeholders as an active participant in this proceeding and as a resource to support the evolution of Pennsylvania's electricity sector. Thank you again for your interest in the important topic of third-party data access. We believe these proceedings can help create a robust and responsive energy landscape in the Commonwealth of Pennsylvania.

Questions Related to the Commission’s Investigation into Conservation Service Provider (CSP)
and Other Third-Party Access to Electric Distribution Company Customer Data

1. Electric Distribution Company (EDC) Smart Meter Customer Data Access by CSPs and Other Third Parties Technical Concerns:

- a. *Is it possible to develop a path in which certain CSPs or other third parties are granted authorization to access EDC smart meter customer data electronically in a secure manner?*

Many states have established third-party data access protocols over the last decade, beginning when the California Public Utilities Commission asked its electric utilities to create data-sharing platforms in 2011.¹ California was followed by other states in establishing rules and regulations to support third-party data access, including Colorado; Connecticut; Washington, D.C; Illinois; Maine; Maryland; Michigan; Nevada; New Hampshire; Oklahoma; Oregon; Texas; and Utah.² New York is currently looking to create a state-wide portal, the Integrated Energy Data Resource (IEDR), in a similar mold to Smart Meter Texas.³ While many of the states recommend the use of Green Button Connect My Data, it has not been adopted in every state. Green Button is the common name for the NAESB REQ.21 ESPI standard, which the Green Button Alliance helps companies incorporate into their platforms through education, testing, and certification. EDCs using this standard may also have their own requirements in addition to those outlined with Green Button Connect, requiring third parties to tailor the platforms for individual EDCs.

- b. *Can the web portals available to electric generation suppliers be utilized for this access, or is an alternate pathway necessary?*

Electronic data interchange (EDI) access, currently available to electric generation suppliers (EGSs), is an appropriate method for CSPs and other third parties to access customer-authorized data. Other methods may include accessing a company’s web portal through a web-scraping tool and then designing a utility-specific parser to extract data or requesting data manually via email with attached LOAs in PDF form. While none of these methods is perfect, EDI is the most transparent and considered the gold standard of electronic data access. By using a standardized format, this computer-to-computer technology speeds up the data transfer, allowing customers to be paid weeks, or even months, earlier than with alternative methods. EDI also allows the utility to provide

¹ California Public Utilities Commission, *Decision Adopting Rules to Protect the Privacy and Security of the Electricity Usage Data of the Customers of Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company*, Docket No. D-11-07-065 (2011).

²American Council for an Energy-Efficient Economy, *State and Local Policy Database: Data Access*, <https://database.aceee.org/state/data-access> (last visited April 27, 2022).

³ New York State, IEDR RFP, <https://www.nyserda.ny.gov/All-Programs/Integrated-Energy-Data-Resource> (last visited April 27, 2022).

additional information and keeps a record of the data transaction, which is an added value from a customer data protection perspective.

- c. *Do individual EDCs already maintain an alternative method of data access for CSPs and other third parties? If yes, please explain your system for this access.*

Yes, some EDCs currently maintain alternative methods to deliver data to CSPs and other third parties. However, these methods are not uniform throughout the Commonwealth or even within parent companies. More importantly, these methods, which include creating web-scraping tools along with utility-specific parsers or sending manual requests with attachments, are not able to keep up with the growth and technological advances being made in the energy management sector.

- d. *How are CSPs provided customer data when performing services under ACT 129?*

Under Act 129, customer-authorized utility meter data used for performance calculations in demand response programs has been provided by the EDCs through the same methods as programs not associated with Act 129.

- e. *What technical limitations currently prevent EDCs from providing smart meter data electronically to CSPs or other third parties?*

CPower does not know all the technical limitations that utilities have, but at times, we have been informed by utilities that third-party curtailment service providers are not able to access customers' smart meter data to enable participation in PJM programs. This is deeply problematic because PJM tariffs state that if customers have smart meters, smart meter data must be utilized for measurement and verification (statistical sampling methods of measurement and verification are not allowed if smart meters are present). Such a limitation makes it impossible for any provider other than the utility itself to enroll residential and small business customers in PJM programs.

- f. *Aside from CSPs, what other third-party entities should be considered for potential access?*

The energy space is rapidly innovating, providing customers with potential options to save money and support the grid that weren't available just a couple of years ago. It is essential Pennsylvania removes any barriers, including access to customer-authorized data, for those customers who choose to benefit from these new business models and services. Various types of energy management companies and technology providers need access to their customers' data to provide services. Some third parties, like CPower, have been approved as Conservation Service Providers (CSPs) by the Pennsylvania Public

Utility Commission under Act 129.⁴ However, the CSP designation is not applicable other third parties who rely on authorized customer data to carry out their business. When the Pennsylvania General Assembly drafted Title 66 § 2807(f)(3), it did not dictate which third parties should or should not be given access to their customers' data. The statute uses the third-party term inclusively. The term includes third parties such as EGSs and CSPs, but it is not limited to only those types of third parties.⁵ If a third party, whether working as a CSP or not, can demonstrate they have the technical ability to access usage data while also maintaining robust data protection practices, the statute requires that they be given a means to retrieve customer-authorized data.

- g. *What criteria should the EDCs utilize to determine eligibility for CSPs and other third parties? Should there be different standards and/or different levels of access to data for different types of CSPs and other third parties?*

All third parties will need to formally agree to proper customer authorization practices, data maintenance, and confidentiality requirements. These requirements could also prohibit the use of customer data for marketing purposes. In addition, EDCs will want to make sure the third parties have the necessary technical ability to access data outputs in a standardized format. For those third parties requesting the data through EDI, an EDC will need to test the system before transferring actual customer data.

While CSPs and most energy management companies need individual customer usage data with customer authorization, others such as government bodies and academic researchers may seek access to aggregated and anonymous data without customer authorization, for example for benchmarking and research projects. EDCs may want outline differentiated practices for the two categories of third-party data access – with and without customer authorization. CPower does not have a position on access to aggregated and anonymized data access by third parties.

- h. *Should the EDCs require financial security instruments, such as bonds, to help protect data confidentiality? If yes, are rules required to implement these financial security requirements? Also, if yes, should there be different security thresholds required for different types of CSPs and other third parties? If no financial security should be required, please explain why not.*

No, EDCs do not need to require financial security instruments to help protect data confidentiality. Access to a customer's data is not an economic arrangement. Third parties should be required to agree to reasonable rules that support data confidentiality but requiring financial security instruments would not help protect customers' data and only create an unnecessary barrier to market entry and participation.

⁴ Act 129 of 2008, P.L. 1592.

⁵ 66 Pa. C.S. § 2807(f)(3).

- i. *What types of tools should be required to ensure that CSPs and other third parties accessing utility systems have access to help features, such as online trouble ticket systems or technical documentation, to enhance their customer experience? What other features may be necessary?*

Some EDCs have already created successful online trouble ticket systems on their web portals, which CPower has found useful. For example, a system might clarify the reason for a denial, such as noting there is an inactive account. This helps CSPs and other third parties target and correct problems much quicker than if they received a simple denial. A feature that provides status updates to the third parties, which a few EDCs have implemented, may be even more beneficial. These updates include notices such as received, processing, complete, error, etc., allowing the third party to easily track their requests and quickly catch any problems that may occur. Additionally, systems that include the ability to attach images help EDCs and third parties troubleshoot and diagnose issues. Finally, an easily accessible FAQ section along with a browsable and searchable knowledgebase, which should include user guides and help documents, would be useful reference sources. These simple features ultimately end up saving the EDC, the third party, and the customer time and money.

- j. *How should costs incurred for this purpose be recovered?*

EDCs have been supplying EGSs customer usage data for many years, so the costs for setting up a parallel system should be nominal. Allowing CSPs and other third parties to systematically access authorized customer data, especially through EDI, will actually save the EDC money by reducing the amount of time their staff will need to spend processing the requests. This will become increasingly true with the trend toward increased electrification along with more C&I and residential customers participating in energy management programs. For manual or abnormally large requests, which may require substantial additional labor, EDCs could calculate a reasonable and appropriate charge, perhaps at a fixed hourly rate for the effort. In most cases, data should be available free of charge to the third parties.

2. EDC Smart Meter Data Access by CSPs and Other Third Parties Legal Concerns:

- a. *What legal limitations currently prevent EDCs from providing smart meter customer data electronically to CSPs or other third parties?*

We know of no current legal limitations preventing EDCs from providing smart meter customer data electronically to CSPs and other third parties, other than those assuring customer authorization. In fact, statutory law, as written in Title 66 Pa. C.S. § 2807(f)(3) states:

Electric distribution companies shall, with customer consent, make available direct meter access and electronic access to customer meter data to third parties,

*including electric generation suppliers and providers of conservation and load management services.*⁶

To ensure customers are authorizing the release of their data to third parties, Pennsylvania Code 52 § 54.8(a) notes:

(a) An EDC or EGS may not release private customer information to a third party unless the customer has been notified of the intent and has been given a convenient method of notifying the entity of the customer's desire to restrict the release of the private information. Specifically, a customer may restrict the release of either the following:

- (1) The customer's telephone number.*
- (2) The customer's historical billing data.*

And (b) of the same section:

*Customers shall be permitted to restrict information as specified in subsection (a) by returning a signed form, orally or electronically.*⁷

The Pennsylvania Public Utility Commission has recognized the precedence of Title 66 Pa. C.S. § 2807(f) in many dockets since the passage of Act 129 of 2008.⁸ In 2009, the Commission confirmed EDCs were legally required to share customers' smart meter data with customers and their third-party partners:

In order for customers to be empowered they, or their designated representatives, must have direct access to their consumption data and price data. Therefore, the Commission directs that all covered EDCs must provide at least the following access to their smart meters and data:

- 1. Non-discriminatory access for retail electric suppliers and third-parties, such as EGSs, and conservation and load management service providers;*
- 2. Open, non-proprietary two-way access for electric suppliers and third-parties, such as EGSs, and conservation and load management service providers; and*
- 3. Full electronic access to customers and their representatives to meter data upon customer consent.*⁹

⁶ 66 Pa. C.S. § 2807(f)(3).

⁷ 52 Pa. Code § 54.8(a) and (b).

⁸ Pennsylvania Public Utility Commission, *Smart Meter Procurement and Installation Implementation, Implementation Order*, Docket No. M-2009-2092655 (filed 6/24/2009); Pennsylvania Public Utility Commission, *Smart Meter Procurement and Installation, Final Order*, Docket No. M-2009-2092655 (entered 1/25/2013); Pennsylvania Public Utility Commission, *Submission of the Electronic Data Exchange Working Group's Web Portal Working Group's Solution Framework for Historical Interval Usage and Billing Quality Interval Use, Final Order*, Docket No. M-2009-2092655 (entered 9/3/2015).

⁹ Pennsylvania Public Utility Commission, *Smart Meter Procurement and Installation Implementation Order*, Docket No. M-2009-2092655 (entered 6/24/2009), at page 24.

As part of the implementation order, the Commission also directed the EDCs to establish electronic data interchange (EDI) for the more efficient transfer of customer-authorized data.¹⁰

In 2015, the Commission limited third-party access of EDC web portals to only licensed EGSs and CSPs working under an EDC as part of Act 129, as specified in *The Pennsylvania Web Portal Working Group Solution Framework*, Section 2.1.¹¹ Though Section 2.1 also included demand response and load management providers (“These include EGSs themselves, Conservation Service Providers [considered by PaPUC as “CSPs”], and demand response / load management providers [also known as Curtailment Service Providers, considered by PJM as ‘CSPs’]”),¹² the categorization is not always clear to EDCs or third parties and has created a barrier for many companies working in the Commonwealth. The order also acknowledged the complication of issue and reserved the right to revisit third-party data access in the future.¹³

- b. *How do EDCs protect their data when it is provided to CSPs performing services under Act 129 to ensure it is not abused? Can this method be extended to other CSPs or other third parties not under contract to perform Act 129 services for the EDC?*

In CPower’s experience, data is transmitted encrypted, where appropriate, and stored on encrypted volumes. Data is shared between internal employees on a need-to-share basis and accessed via authentication and least-privileged permissions. These methods are also used by third parties not under contract to perform services under Act 129.

- c. *Could the EDCs utilize contracts to protect the confidentiality of the data? If yes, what limitations currently exist that prevent the utilities from implementing these contracts?*

Contracts are not the most effective or efficient way to ensure customer data is protected and kept confidential. Tariffs, created by the EDCs in partnership with third parties and under the jurisdiction of the Commission, should be used to create rules outlining data protection and confidentiality requirements. By implementing tariffs rather than contracts, the rules would be standardized and accessible to all parties.

¹⁰ Ibid., page 7.

¹¹ Pennsylvania Public Utility Commission, *Submission of the Electronic Data Exchange Working Group’s Web Portal Working Group’s Solution Framework for Historical Interval Usage and Billing Quality Interval Use, Final Order*, Docket No. M-2009-2092655, (entered 9/3/2015), at page 13.

¹² Pennsylvania Public Utility Commission, *Pennsylvania Web Portal Working Group Solution Framework*, Docket No. M-2009-2092655 (entered 2/26/2015), at page 4.

¹³ Pennsylvania Public Utility Commission, *Submission of the Electronic Data Exchange Working Group’s Web Portal Working Group’s Solution Framework for Historical Interval Usage and Billing Quality Interval Use, Final Order*, Docket No. M-2009-2092655 (entered 9/3/2015), at page 13.

- d. *Would the EDCs need to include any provisions created in these proceedings in a tariff in order to apply them to CSPs and other third parties? What other terms of use should be included?*

Yes. Tariffs, informed by these proceedings, would be the most appropriate way to address data access for CSPs and other third parties. Tariffs communicate requirements in a standardized and transparent manner for all CSPs and third parties. The Pennsylvania Public Utilities Commission would also be able to review the tariffs at regular intervals and amend them if circumstances or technology advancements require it.

- e. *How should a CSP or other third party obtain customer consent for access to data from EDC systems? Would the EDC determine if a CSP or other third party has obtained the proper customer authorization before customer data is provided? If yes, how? If no, please explain why not.*

Prior customer consent should unequivocally be necessary to access data from the EDCs. However, with the proliferation of new electric products and programs, sending the traditional LOAs to the EDCs for every single customer is not sustainable. The current system often requires customers to print out a hard copy of an LOA, sign, scan, and send it to the CSP or attach an electronic signature. CSPs and other third parties then email the electronic version of the LOA to the EDC. For small numbers of customers, the process may not be problematic. But if you begin to imagine hundreds or thousands of these requests, it is easy to see why the current system needs to be updated for the 21st century.

Instead of relying on the current time-consuming and cumbersome authorization process, EDCs should implement a system requiring CSPs and other third parties to attest they have obtained customer authorization to receive usage data. Using attestations would allow for the safe, quick, and effective transfer of the needed data. To ensure the attestations are valid, EDCs should have the right to review the authorizations at any time, with the understanding that if they find serious inaccuracies, the third party may lose access to customer data.

In addition to refining how customer authorization records are shared and maintained, the traditional LOA format will also need to change to adapt to the increase in advanced energy programs and technologies. We live in a digitized world; customers are used to making purchases and carrying out myriad transactions online, particularly after the pandemic. Most customers today actually expect, and prefer, to use digital consent forms, which save time and resources. And likewise, it makes sense for third parties to replace the current LOA forms with digital consent forms, when applicable. That said, hard copies of customer authorization forms will need to remain available for those customers who choose them.

- f. *How would the EDC be notified when a customer grants consent for a CSP or other third party to access its' EDC-maintained customer data?*

Ideally, once they have been properly registered with an EDC, a CSP or other third party would be able to send a request for the customer's authorized usage data through EDI. If an EDC or third party does not have the ability to use EDI, a third party could use a secure EDC web portal to relay the request.

- g. *How should a customer withdraw previously granted consent for CSP or other third-party access to the EDC's data? How would the EDC be notified of this withdrawal of consent?*

Pennsylvania Code 52 § 54.8 requires customers grant consent for EDCs to share their data with a CSP or other type of third party.¹⁴ CSPs and other third parties need to make it as easy as possible for their customers to withdraw their consent. Customers could declare withdrawal of consent through various methods, including an online form, email communication, or speaking directly with the CSP or other third party. These details should be outlined in a tariff, so CSPs, third parties, and the EDCs understand the accepted process. Generally, an EDC would be notified a customer was no longer authorizing their data when a third party simply stops requesting access to that customer's data.

- h. *How would the EDCs monitor data access to determine if a CSP or other third party becomes a "bad actor" by violating its agreements (failing to maintain data confidentiality, pulling data for a customer without proper authorization, etc.)? What processes could be used to remove access and prevent misuse?*

An EDC should be able to review customer authorization forms at any time. They may choose to do so with each new customer request or use a schedule, such as quarterly or annually. If an EDC finds a third party has failed to abide by the tariff language or is alerted to a violation, the EDC should notify the Commission. Pennsylvania may want to model their process of dealing with "bad actors" on California's experience. Rather than the EDC unilaterally cutting off access to customers' data, the California Public Utility reviews the actions of third parties who have been accused of misusing customer data and decides on consequences, which could include losing access to EDC data, thereby removing the responsibility of policing third parties from the EDCs.¹⁵

- i. *For third parties that serve as both a Distributed Energy Resource Aggregator under FERC Order 2222¹⁶ and a CSP, what limitations on the use of data should be placed on them to prevent unauthorized use between roles?*

¹⁴ 52 Pa. Code § 54.8.

¹⁵ California Public Utilities Commission, *Decision Authorizing Provision of Customer Energy Data to Third Parties Upon Customer Request*, Docket No. D-13-09-025 (entered 9/19/2013), at page 34.

¹⁶ Available at https://ferc.gov/sites/default/files/2020-09/E-1_0.pdf.

To conduct their business, third parties will only need specific limited data within a fixed time period. For third parties that serve as both a Distributed Energy Resource Aggregator under FERC Order 222 and a CSP, data can be restricted to only what is required to participate in the wholesale market. Use limitations on data privacy will be outlined in PJM's participation rules as well as applicable Market Monitor and regulatory rules.

- j. *Should a utility be held accountable for the improper or illegal acts of a customer-authorized CSP or other third party?*

No, the utility should not be held accountable for improper or illegal acts of a CSP or other third party. If outlined properly in a tariff, the CSP or other third party will have formally agreed to requirements for obtaining customer authorization as well as maintaining and protecting customer data once they have accessed it. Any third party who disregards the requirements should face appropriate sanctions, including potentially losing privileges to access to EDC customer usage data, following an investigation by the Commission. Further, if the third party's actions were indeed illegal, the third party would be criminally and civilly liable to law enforcement and the to the victims of data breaches.

- k. *What action, if any, can the Commission take against CSPs and other third parties that misuse their access to customer data or the data itself? Please cite to any statutes or regulations that support your answer.*

In the case of CSPs, those who do not fulfill the requirements listed by the Pennsylvania Public Utility Commission will not be reapproved by the Commission.¹⁷ Registrants must apply every two years, so the denial of an application would seriously affect a CSPs ability to conduct business in the Commonwealth of Pennsylvania. In addition, the Commission also has oversight over third parties who are not currently working as registered CSPs through their jurisdiction over the EDCs and, "every other person or corporation subject to the provisions of this part, affected by or subject to any regulations or orders of the commission or of any court, made, issued, or entered under the provisions of this part, shall observe, obey, and comply with such regulations or orders, and the terms and conditions thereof."¹⁸

As the Commission considers how to structure third-party data access rules, they may want to look at other how other states, such as California, have handled third parties who misuse access to customer data. The California Public Utilities Commission investigates and rules on cases where third parties are accused of violating data access terms and mishandling customer data. If they find a third party has violated customer data access

¹⁷ Pennsylvania Public Utility Commission, Implementation of Act 129 of 2008, *Phase 2 – Registry of Conservation Service Providers*, Docket No. M-2008-2074154 (entered 7/16/2013).

¹⁸ 66 Pa. C.S. § 501(c).

rules, they may order the EDC terminate the third party's access to data.¹⁹ Some provisions for redress or appeal, including dispute resolution protocols, will also need to be incorporated into any guidelines or tariff language.

3. Utility Usage Data and Meter Access:

- a. *What customer data should the utility share with CSPs and other third parties? Should different types of CSPs and other third parties have different access to customer data?*

CSPs and other third parties need access to customer-authorized data to help the customer analyze their current energy use and potential energy management capabilities. Generally, third parties would need to receive specific data categories, such as peak load contributions (PLC), network service peak loads (NSPL), load profile, and rate classification. Researchers requesting anonymized, aggregated data may have different access needs than CSPs and other third parties. Traditionally, CSPs and other third parties have requested the previous twelve months of customer's usage data records. However, because of the PJM delivery year (June 1 – May 31) and PJM's requirement for separate PLCs for summer and winter, a third party may need more than twelve months in order to measure winter usage.

- b. *What types of data should the EDCs withhold from CSPs and other third parties? Do the EDCs' current systems allow for this data to be restricted?*

CSPs and other third parties would have no need for a customer's personal or financial information, including billing and payment history; credit details; a customer's relationship with their generation supplier; personal or economic characteristics, including vulnerable individual records; or participation in targeted utility programs, such as customer assistance programs.

- c. *In what format should the data be given? Should the data from each EDC be in an identical format (similar to the Electronic Data Exchange Working Group web portal data)? What other technical standards should be applied to the data?*

Delivering the customer usage data through EDI would be the most efficient method for both the EDC and third parties. While EDI is considered the gold standard for data transmission, it currently is reported monthly. If EDCs could report more current data, as close to real time as possible, it would help reduce errors and speed up processing times. EDCs usually respond to data requests within 24 hours through their web portals; this should be a minimum requirement. In either case, data from each EDC should be in identical format and settlement quality, having gone through the validation, estimation,

¹⁹ California Public Utilities Commission, *Decision Authorizing Provision of Customer Energy Data to Third Parties Upon Customer Request*, Docket No. D-13-09-025 (entered 9/19/2013), at page 34.

and editing (VEE) process. Third parties may also need the original raw interval data as well as the start and end times of an event.

- d. *Should aggregated data (i.e. – benchmarking or geographic data) be made available? Should aggregated data be available to a wider array of CSPs and other third parties?*

CPower does not take a position.

- e. *Should the Commission establish standard protocols and communication mediums for providing direct access to usage information from the meter to the Home Area Network? If so, what should those be?*

Yes. If access to data through a Home Area Network is sufficiently accurate for participation in PJM programs, protocols should be adopted. Access to data through Home Area Networks holds the promise to facilitate device-level metering for devices, such as vehicle chargers and smart appliances, that would dramatically expand opportunities for customers. CPower does not presently have the experience to suggest protocols but remains very interested in working on solutions in this area to expand opportunities for customers.

- f. *Should CSPs and other third parties be provided direct access to the meter? What policies or regulations should this Commission promulgate to ensure that these CSPs and other third parties are provided timely access under reasonable terms and conditions to the EDC's customer metering facilities?*

Yes, CSPs and other third parties need direct access to meters, but not in any way that would interfere with the EDC meter controls. Typically, third parties interact with utility meters through read-only devices, such as pulse generators and data loggers, which are attached to the outside of the meter, or other wireless energy monitors. These tools allow a third party to poll the meter periodically and record data at utility-grade accuracy, which is required to participate in PJM programs.

Direct access is necessary where, for example, the customer is participating in the PJM Synchronized Reserves market. For this program, one minute interval meter data is required, and typical EDC meters do not have the capability to offer one minute interval data. In this situation, the data is obtained directly from the meter and time-stamped to create one minute interval data.

It is essential the Commission require EDCs provide CSPs and other third parties timely access to the customer-authorized data, which should be provided to third parties no more than one business day after the data is available or a request has been submitted.

- g. *What communications, software or hardware can facilitate this direct access to the meter for customers and their approved CSPs and other third parties, and should the Commission establish requirements and or standards to facilitate this access?*

The means of direct access must be able to facilitate an accurate metering solution. Accuracy is a critical issue and can be a concern in direct access situations. If a CSP is getting direct access through some type of pulse generator or data logger, that logger is considered part of the metering solution. In this very common situation, although the data is derived from an EDC meter, the additional hardware renders the metering solution as customer-owned metering and not EDC metering. Participation in the PJM market requires a +/- 2 percent accuracy across the full range of the meter, as verified by a qualified independent laboratory test. Depending upon how the data is communicated from the meter to the pulse generator or data logger, there can be a loss of fidelity in the accuracy of interval data. If such problems stem from the meter itself and cannot be resolved, the customers may be unable to participate in the program. The Commission should work with stakeholders to establish agreed-upon standards to ensure this does not happen.

- h. *What electronic access to customer meter data do CSPs, other third parties, and EGSs need from EDCs, that they currently do not have? Provide specific examples where these entities do not have such access currently, and provide examples, if available, of electronic transactions that can be adopted to facilitate access.*

CPower does not take a position.

4. Home Area Network (HAN) Protocols:

- a. *Should there be interconnectivity between the smart meter and other equipment in the home? If so, how much? [read capability vs. two-way communication]*

Yes. As customers continue to adopt various Internet of Things (IoT), interconnectivity between the smart meters and other equipment and products will become increasingly important. At a minimum, read capability is essential, but there are scenarios in which an EDC may need two-way communication abilities.

- b. *Can CSP or other third-party equipment installed in a customer's home interact with the HAN or the smart meters?*

Yes, equipment installed by CSPs or other third parties is able to interact with the HAN and smart meters, usually with only read-only access. As technology advances and IoT adoption accelerates, there may be more reasons for third parties to interact with smart meters, the HAN, or future innovations.

- c. *Do CSPs or other third parties that have installed equipment in a customer's home still need access to customer data from the EDC?*

The decision to use supplemental metering equipment is made on a case-by-case basis, depending on ISO/RTO requirements, the third party's needs, and a customer's preferences. It would be cost prohibitive for third parties to attach data recording devices for every customer, particularly for the residential sector. More importantly, these devices do not always supply revenue-grade accuracy or provide robust cybersecurity protections. The data coming directly from the EDC is the highest standard of accuracy and should be the basis for settlement with the customer.

5. Automatic Control:

- a. *How can smart meters "effectively support" automatic control of a customer's electricity consumption by customers, utilities, and the customer's CSPs or other third parties?*

Act 129 required large EDCs in the Commonwealth install smart meters as part of an effort to reduce energy consumption, particularly at peak times during the day.²⁰ As the Commission recognized in 2009, "The Commission believes that the true usefulness of smart meters is to provide information to empower customers to control their electric use, for knowledge itself is power."²¹ With smart meters, customers can now remotely control consumption to take advantage of time-of-use rates or participate in various demand response programs managed by the EDC or third-party energy management providers. Smart meters are an important tool to help educate consumers about the benefits of taking charge of their energy use and their energy data, which ultimately reduces strain on the grid and lowers the cost of energy for everybody. But if a customer doesn't have control over their energy usage and billing data, the advantages of smart meters are greatly diminished.

- b. *How is the smart metering system engaged in the initiation, maintenance, relinquishment, and verification of the automatic control of customer consumption?*

Smart meters are simply tools used by EDCs and third parties to record customers' energy usage data. It is the data, which belongs to the customer, that unlocks to potential to participate in the new business models, programs, and technologies that are revolutionizing the energy sector.

²⁰ 66 Pa. C.S. § 2807(f).

²¹ Pennsylvania Public Utility Commission, *Smart Meter Procurement and Installation Implementation Order*, Docket No. M-2009-2092655 (entered 6/24/2009), at page 24.

- c. *What smart metering protocols and communication mediums are needed to implement these automated controls? Should the Commission establish standard protocols and standards for this purpose?*

CPower does not take a position.

- d. *What energy consuming customer assets can be controlled by these smart meter systems for each of the customer segments, and how is control of these assets impacted by the choice of communication medium and protocol?*

CPower does not take a position.

6. Additional Concerns:

Please address any additional questions or raise any additional concerns you have regarding CSP or other third-party access to EDC customer data systems.