

PUBLIC UTILITIES COMMISSION  
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San Francisco CA 94102-3298



**Pacific Gas & Electric Company**  
**ELC (Corp ID 39)**  
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**As of July 13, 2023**

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**PUBLIC UTILITIES COMMISSION**  
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From: Energy Division PAL Coordinator

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December 5, 2022

**Advice 6778-E**

(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

**Subject: PG&E EV Submetering Implementation Plan**

**Purpose**

Pursuant to Ordering Paragraph 3 of Decision (D.) 22-08-024 (Decision), Pacific Gas and Electric Company (PG&E) hereby submits its implementation plan proposal to implement the Plug-In Electric Vehicle Submetering Protocol (EVSMP) and proposed changes to relevant rates and tariffs.

**Background**

Senate Bill 626 (Chapter 355, Statutes of 2009) enacted new Public Utilities Code Section 740.2. Section 740.2 requires the California Public Utilities Commission (CPUC) to evaluate policies to overcome any barriers to the widespread deployment and use of plug-in electric vehicles.

In D.11-07-029 and D.13-11-002, the Commission directed the large investor-owned utilities (IOUs), to implement a submetering pilot program and develop rules to incorporate customer-owned submeters into their billing and metering systems for PEVs. The Commission split the submetering pilot program into two phases, with the goal of gathering data on the costs, benefits, and demand for submetering and order the IOUs to select a third party to evaluate the pilot program.

At a June 24, 2019 workshop, the third party presented its findings and recommendations, and parties raised several questions related to the findings and gaps in analysis. Following discussions at the workshop, the assigned Administrative Law Judge (ALJ) issued a ruling on January 23, 2020, directing the IOUs to file and serve responses to outstanding questions related to the development of a PEV Submetering Protocol that were not resolved. On May 22, 2020 and September 30, 2020, the IOUs jointly hosted two public workshops to discuss outstanding issues. On December 21, 2020, the IOUs filed a final PEV Submetering Protocol.

On August 4, 2022, the CPUC issued D.22-08-024 adopting a plug-in EV submetering protocol and EV supply equipment communication protocols. Ordering Paragraph 3 of D.22-08-024 directs PG&E and other utilities to file a Tier 2 advice letter within 120 days of the issuance of the decision that includes:

- Revisions to all relevant electric vehicle rates and tariffs applicable to electric vehicle charging to reference the Plug-in Electric Vehicle Submetering Protocol
- Implementation plan containing a timeline to modify the utility's billing system to incorporate the Plug-in Electric Vehicle Submetering Protocol
- Timelines and process for resolving billing disputes
- Estimated costs associated with implementing the requirements of this decision
- A standardized data format and transfer protocol to share data between an electric vehicle service provider/meter data management agent and a utility.

This advice letter addresses these requirements in the following sections:

- I. Relationship Structure
- II. Implementation Plan for an Automated Billing Solution
- III. Timeline for Billing System Automation
- IV. Manual Billing Period
- V. Estimated Costs
- VI. Proposed Tariff Changes

**I. Relationship Structure**

This section defines the relationships between the three main parties involved in submetering: PG&E - the Utility Distribution Company (UDC) – the Electric Vehicle Service Provider (EVSP) and Meter Data Management Agent (MDMA), referred to collectively as MDMA in this Advice Letter, and the Customer. These relationships, combined with defined obligations, roles, and functions adopted in the EVSMP, form the basis for PG&E's overall implementation plan.

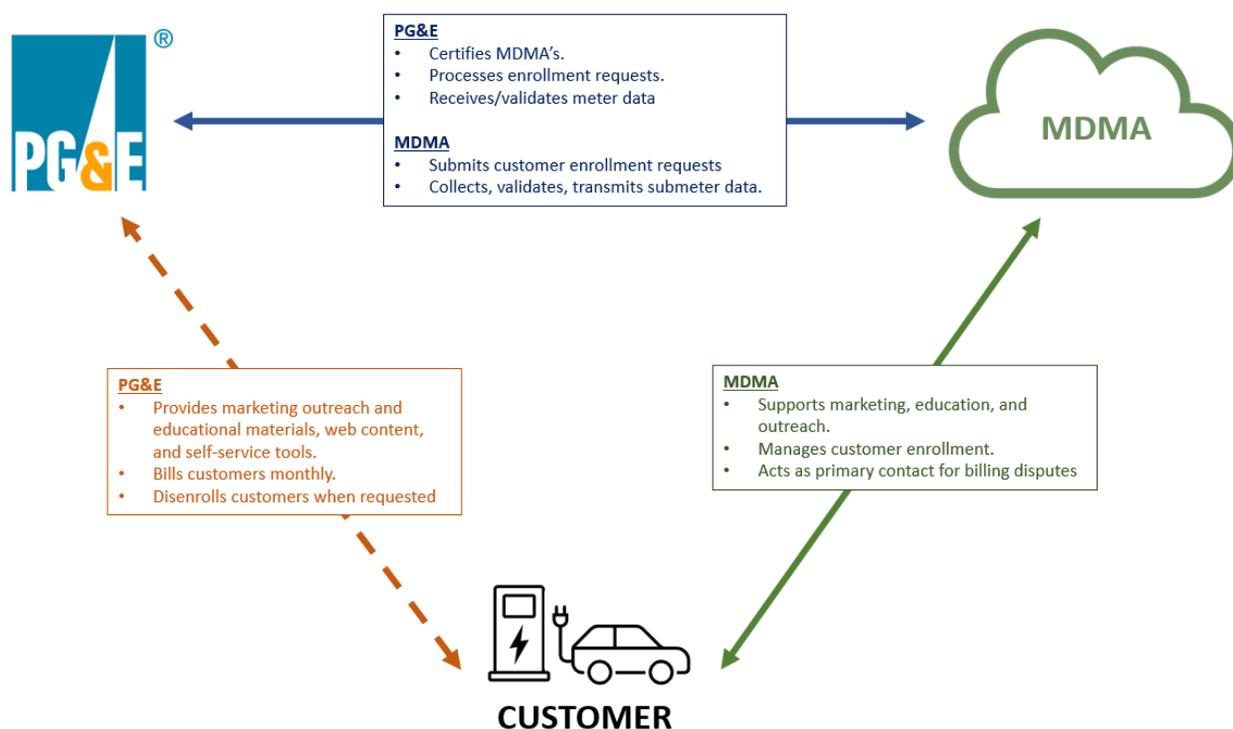
In general, and as reflected in Figure 1 below, most of the relationship between PG&E and the customer as it relates to third-party owned submeters will be managed through the MDMA. For scenarios where the MDMA is different from the equipment or service provider, the expectation is the MDMA manages all additional relationships to properly execute all roles and responsibilities outlined in this implementation plan.

- PG&E and the MDMA: As noted in Chapter D Section I.1 and I.2 of the Plug-in Electric Vehicle Submetering Protocol (The EVSMP) – Attachment A of the Decision<sup>1</sup>, the responsibilities of the Utility Distribution Companies (UDC) are primarily to register and approve MDMA certification and receive and validate data from the MDMA. In turn, the MDMA will be generally responsible for reading and retrieving submeter data, validating and editing submeter data, and transferring to PG&E, among other roles and functions. PG&E's primary transactional relationship will be with the MDMA, and the MDMA will own the relationship directly with the customer.
- The MDMA and the Customer: The MDMA will be the primary point of contact for the customer with responsibilities including customer enrollment and being the primary point of contact for billing disputes. In addition, the MDMA would be a support channel of Marketing, Education and Outreach (ME&O) by offering a streamlined and efficient way to educate potential customers as they have a direct link to the submeter customer. This is particularly applicable when considering more complex arrangements, such as those for multiple customers of record (MCOR), where submeter customers could be associated to a PG&E master meter linked to a different customer.
- PG&E and the Customer: PG&E will directly present bills to customers that display their EV submeter loads and will provide information, marketing and educational materials that help guide customers through the enrollment and billing dispute process. PG&E will provide this information through customer service representatives trained to field questions related to EV submetering service. Additionally, PG&E will provide web content with the same information and materials, including, but not limited to, Frequently Asked Questions (FAQs), an approved product list (APL) of EV chargers and MDMAs, among other content. Finally, PG&E will process any termination of service when the customer reaches out directly to PG&E to disenroll from the service and notify the MDMA.

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<sup>1</sup> [R. 18-12-006: Attachment A - Plug-in Electric Vehicle Submetering Protocol](#)

Figure 1 – EV Submetering Relationship Structures



## II. Implementation Plan for an Automated Billing Solution

The EVSMP will provide customers the option to separate their EV load from their building or house load behind the same primary meter. Customers will have the opportunity to enroll in a non-EV specific rate tariff for their primary meter and subtract their EV load, using submeters tied to their EV chargers, to enroll in an EV-specific rate tariff.

PG&E's plan for implementing the requirements listed in the EVSMP and Decision can be segmented into four general categories that represent components of the submetering process. These include Pre-Enrollment, Enrollment, Meter Data Transfer, and Billing. The following are PG&E's plans for implementation under each category:

### Pre-Enrollment

The pre-enrollment category captures all known activities and processes, both required and value-add, before a customer can enroll in EV submetering. These include approved product lists (APL); MDMA certification and registration; ME&O; and Customer Enablement Tools.

### *Approved Product List*

PG&E plans to make an Approved Product List (APL) of qualified submeter equipment available to customers through PG&E's website. Ultimately, customers will be able to identify eligible EVSE that is available for submetering within PG&E's service territory through the APL. In general, EVSPs and other suppliers interested in offering submetering service to their customers associated with PG&E electric accounts will be required to submit a request for approval to be listed in the APL.

PG&E plans to leverage Southern California Edison's (SCE) APL approval process. Under this format, the same EVSP and supplier vendors that qualify for SCE will also qualify for PG&E. PG&E believes that this will reduce duplicative processes of EVSPs needing to go through multiple approvals to operate in different territories across the same state. Additionally, this type of relationship already exists for much of PG&E's transportation electrification infrastructure programs. Currently, PG&E uses SCE's approved list of vendors from their suite of Charge Ready programs for its own EV Fleet program. PG&E has found success in being able to collaborate with SCE to help in the simplification of vendor approvals for EVSPs.

The APL approval process will involve reviewing EVSE hardware and ensuring it complies with all requirements listed in the EVSMP Protocol, the Decision<sup>2</sup>, and SCE's approval process. Some of these requirements include, but are not limited to:

1. Meeting Submetering Certification Testing Requirements including Testing & Certification from a National Recognized Testing Lab (NRTL) and all certificate testing aligned with the California Department of Measurement and Standards' California Type Evaluation Program (CTEP), and
2. For any EVSE hardware that will be part of a future PG&E administered transportation electrification infrastructure program, compliance with the EVSE Communication Protocols as detailed in the Final Decision.

### *MDMA Registration*

Finding an approved and certified MDMA is a pre-requisite to any customer applying for submetered billing. Therefore, any MDMA interested in serving submeter customers will need to register and certify with PG&E. Following registration and certification, the MDMA will be listed on PG&E's website as an approved MDMA eligible for EV Submetering. PG&E envisions the MDMA Registration process including, but not being limited to, the following steps:

1. Submission of a completed MDMA Registration Form (to be developed by PG&E and made available to MDMA's after approval of the Implementation Plan). The

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<sup>2</sup> [Decision 22-08-024 \(p. 17\)](#)

form will cover general MDMA information, terms and conditions reflecting roles and responsibilities as adopted in the protocol, and associated service and equipment providers, among other things,

2. MDMA completes PG&E's Third-Party Security Review (TSR) process, as noted in the EVSMP Protocol<sup>3</sup>,
3. MDMA completes data transfer tests to verify its ability to transmit and receive data according to established data format and protocols, and
4. MDMA is registered as an authorized third party by PG&E.

Of note, per Chapter E Section VI of the EVSMP<sup>4</sup>, PG&E may refuse any 3<sup>rd</sup> party as an MDMA that has a demonstrated pattern of non-conformance. This is defined as when more than 1% of the service accounts served by a 3<sup>rd</sup>-party MDMA, or 20 accounts, whichever is greater, are found to be non-conforming and are not remediated during the first 6 months of submetering participation; and when more than 0.5%, or 10 accounts, whichever is greater, are found to be non-conforming and are not remediated during any 6 consecutive months thereafter.

#### *Marketing, Education & Outreach*

During the manual billing phase of submetering, PG&E plans to provide some basic educational information using PG&E's website. Content will include how submetering works, how the customer benefits, how to enroll, and an APL of eligible hardware. In addition, PG&E will train our Customer Service Representatives on submetering to field customer questions.

Once a fully integrated and automated billing system is online – as detailed in Sections II and III of this document – PG&E believes a concentrated ME&O effort will provide increased levels of enrollment in submetering and value to customers. The approach will be continued education on the benefits of submetering along with targeted outreach to customers with the highest bill savings potential. Outreach channels will include PG&E owned assets, earned media, paid digital media, email outreach, and potential MDMA/EVSP message integration.

#### *Customer Enablement Tools*

These web-based energy management tools help customers compare their cost of utilization under different residential or commercial rates. Integrating submetering functionality into the current suite of tools will allow enrolled customers a consolidated view of their energy usage and new customers the ability to assess potential benefits of submetering. Moreover, these tools have been shown to increase customer satisfaction

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<sup>3</sup> [Plug-in Electric Vehicle Submetering Protocol](#) (p. 13)

<sup>4</sup> [Plug-in Electric Vehicle Submetering Protocol](#) (p. 16)

and have been designed specifically to help customers self-manage their energy use. Submetering can be very complex, and PG&E believes these tools will help customers assess and understand the potential value of submetering. Additionally, the functionality of these tools could potentially help generate interest among customers.

### **Customer Enrollment**

As detailed above, one of the primary responsibilities of the MDMA is to serve as the point of contact for customer enrollment and dispute resolution. As such, PG&E requires all customer applications be submitted by a certified and registered MDMA. This streamlines the enrollment process by ensuring critical upstream steps have occurred before a customer entering the enrollment funnel. Furthermore, the customer application (to be developed by PG&E after approval of the Implementation Plan) will cover complex customer relationships and PG&E actions for non-payment. This is especially important for complex multiple customers of record (MCOR) situations as it drives communication and agreement between the submeter applicant, the primary meter customer of record, and the MDMA as a prerequisite to submission. Customer enrollment will generally follow the steps below:

1. The customer installs an eligible submeter from PG&E's APL.
2. The customer identifies the MDMA providing service for the installed submeter and verifies MDMA certification by checking PG&E's EV Submetering website.
3. The customer contacts the MDMA and requests enrollment in PG&E's EV Submetering service.
4. The MDMA re-verifies the customer's EV submeter eligibility and initiates customer enrollment process.
5. The MDMA completes customer enrollment application (to be developed by PG&E and made available to MDMA's after approval of the Implementation Plan).
6. The MDMA submits compliant enrollment file to PG&E – as detailed in the following subsection.
7. PG&E confirms receipt, reviews the customer enrollment application, and creates an EV submeter account in its billing system.
8. PG&E notifies the MDMA of successful enrollment and the MDMA begins sending interval data.

## **Meter Data Transfer**

### *Standardized Data Format and Transfer Protocol*

The Decision Ordering Paragraph 3 directs the utilities to propose a data format and transfer protocol that can be standardized across the utilities.<sup>5</sup> The EVSMP Protocol references the Electric Data Interchange (EDI) and Energy Service Provider Interface (ESPI) as possible formats for transferring utilization data between the MDMAs and the utilities. However, using either of these formats could pose challenges for the EVSPs, MDMAs, and IOUs in the short term. Both EDI and ESPI could require time and resources from EVSPs and MDMAs to develop solutions to meet these requirements and could ultimately impact MDMAs ability to participate. As a result, PG&E along with the other utilities is proposing a data format and transfer protocol that can be used in the short term and long-term automated solution.

In accordance with other utilities, PG&E's proposed data format and transfer protocol involves transferring flat files via PG&E's Enterprise Secure File Transfer (ESFT) folders. This approach can simplify the process of transferring data between MDMAs and utilities. It is a process that is well established and used in various applications and minimal set up and minimal training to operate. Furthermore, this approach will standardize the process across utilities, avoiding the need for MDMAs to be subject to different data transfer protocols across utilities. This proposed protocol is intended to support PG&E's Manual Billing Period and seamlessly adopted for PG&E's automated solution. As demand for EV submetering grows and merits a more malleable data format and transfer process, PG&E can work with the other utilities and MDMAs to develop a solution involving EDI or ESPI or other more optimal formats. PG&E has included as an appendix to this Advice Letter a working draft of the proposed data format and transfer protocol – Attachment A.

## **Billing**

After data from the submeter is validated and processed, PG&E's billing system will apply customer selected, eligible rates to the EV load and non-EV load and bill accordingly. PG&E plans to leverage existing rates to minimize costs compared to developing new rates. This will accelerate availability of submetering and simplify the enrollment process.

PG&E is confident there are customer segments that will experience savings from submetering their EV load. These customers will be able to benefit from separating their EV and non-EV loads and enroll in the most optimal rate for each load. Commercial EV customers will be able to access PG&E's business EV rates (BEV1 and BEV2) with the use of submeters that, today, can only be accessed through separate metering. While residential EV customers do not need a separate meter to enroll in an EV rate, customers who want their EV load separately billed on a rate different from their non-EV load are required to install a separate meter. A submeter will allow them to achieve this without

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<sup>5</sup> [Decision 22-08-024 \(p. 43\)](#)

the installation of a separate meter. PG&E's plan for submetering participation is to extend EV2A eligibility to residential submetering customers and extend BEV 1 and BEV 2 eligibility to commercial customers. As demand for submetering scales up and PG&E launches additional EV rates (e.g., PG&E's Commercial Electric Vehicle Day-Ahead Hourly Real Time Price rate (DAHRTP-CEV RTP)), PG&E will assess the opportunity to incorporate additional EV rates for submetering, and potentially create new rates for customers billed through a submeter as part of our normal course of business.

Ultimately, PG&E plans to present a bill to customers that displays loads specific to their EV charging and non-EV charging/building, each associated to their selected eligible rate. Presenting a bill in this form will require additional IT architecture development in PG&E's IT and billing systems to validate energy charges and deliver accurate bills to customers. The following section discusses resolution of customer disputes arising from potential discrepancies in utilization or billing data.

### **Billing Dispute Resolution Process and Timeline**

As of the writing of this implementation plan, PG&E envisions three main types of data and billing disputes will exist with respect to submetering. These include instances where the MDMA fails to send data files for an enrolled customer, instances where interval data fails PG&E's validations, or instances where customers dispute a discrepancy on their bill ("customer-borne disputes"). However, given the novelty of this service, additional dispute types may arise, and subsequent processes may need to be created to ensure effective resolution. All processes and timelines will be in line with the findings of the decision, some of which are described below:

- The utilities, EVSPs, and/or MDMAs are best positioned to resolve submetering data and billing disputes (Findings of Fact 16).
- Storing PEV submeter data onsite for 30 days and remotely for 90 days would ensure any billing disputes can be accurately addressed with the stored consumption data (Findings of Fact 14)
- If the utility, EVSP, and/or MDMA are unable to resolve submeter billing or data issues, the Commission should require the utility to bill the customer at the primary meter rate for the time intervals during which the disputed charging occurred (Conclusion of Law 9).
- The MDMA will be the single point of contact for all submeter data issues (Chapter C Section II.3 of the EVSMP).
- The MDMA will provide a technical help desk (Chapter D Section II of the EVSMP).

- At a minimum, the MDMA will perform spike checks, high average daily usage checks, sum checks, and hardware checks before sending interval data to the UDC (Chapter D Section V.1. of the EVSMP).
- Once data is received the UDC will perform checks on associated customer metadata, interval count, time stamp accuracy, unit of measure, and ensure submeter usage does not exceed the primary meter usage for any interval (Chapter D Section V.2. of the EVSMP).
- Upon the occurrence of undisputed failure, the MDMA is responsible for making corrective actions within 7 calendar days (Chapter E Section VI. of the EVSMP).

### *Types of Disputes and Resolutions*

The following section details the resolution processes and proposed timelines for the three main types of billing disputes PG&E anticipates arising from EV Submetering. Each dispute type below presents the steps PG&E proposes and timing for resolving the respective dispute. Due to most disputes and resolution allowing up to 7 days, bills may be held and/or delayed if dispute resolution extends past customers scheduled billing cycles.

#### Missing MDMA Data

These are instances where disputes are caused by the MDMA failing to send daily data files for an enrolled customer. For these disputes, PG&E proposes the following resolution process:

1. PG&E will notify the MDMA of a data transmittal failure and log it for performance tracking purposes.
2. PG&E will record the usage for all affected intervals as 0 (zero).
3. The MDMA shall submit missing data within 7 calendar days and pass PG&E's validation checks. PG&E will then update the affected intervals to reflect corrected data. Otherwise, recorded usage from previous step shall be used for billing purposes and the customer will be billed for all usage at the primary meter rate for the time intervals during which the disputed charging occurred

#### Invalid MDMA Data

These are instances where disputes are caused by data intervals that fail PG&E's validation checks. For these disputes, PG&E proposes the following resolution process:

1. PG&E will notify the MDMA of the interval data's failure and log for performance tracking purposes.
2. PG&E will record the usage of all intervals affected by data quality issue(s) as 0 (zero).
4. The MDMA shall submit corrected data within 7 calendar days and pass PG&E's validation checks. PG&E will then update the affected intervals to reflect corrected data. Otherwise, recorded usage from previous step shall be used for billing purposes and the customer will be billed for all usage at the primary meter rate for the time intervals during which the disputed charging occurred.

### Customer-borne Disputes

These are instances where the customer notices a discrepancy on their bill and reports an issue to the MDMA or PG&E. For these disputes, PG&E proposes the following resolution process:

1. The receiving party (MDMA or PG&E) will document the customer issue, inform the customer of the dispute resolution process and timeline, and promptly notify the counterparty. For the MDMA, this will be a call or email to PG&E and for PG&E, this will be a call or email to the MDMA help desk.
2. Within 30 calendar-days of mutual notification, the MDMA will perform all necessary checks and due diligence to exclude their hardware, systems, and processes as the root cause of the dispute. If issues are found, the MDMA is solely responsible for resolving this dispute with the customer.
3. In parallel and within 30 calendar-days of mutual notification, PG&E will perform all necessary checks and due diligence to exclude PG&E systems and processes as the root cause of the dispute. If issues are found, PG&E will provide a modified bill to the customer.
4. If no issues are found by either the MDMA or PG&E, a joint resolution process will be initiated by the MDMA. Given the novelty of submetering, this joint resolution process will be documented and refined as issues rise to this level and in accordance with the findings of this decision referenced above. Both parties will make a concerted effort to finalize resolution within 30 additional calendar-days. In total, the goal is to resolve billing disputes within one to two billing cycles.

### **III. Timeline for Billing System Automation**

Over the next several years, PG&E will have very limited bandwidth for billing system changes. It is undergoing a multi-year billing system modernization initiative expected to

run through 2026. PG&E is also working diligently to implement already approved and soon to be approved decisions such as the adopted DAHRTP-CEV RTP opt-in rate (D.21-11-017), the adopted E-ELEC electrification rate (D.21-11-015), the pending Percentage of Income Payment Plan pilot rate, the DAHRTP-CEV non-NEM export compensation pilot rate (A.20-10-011), and the residential, small business and large business RTP pilot rates (A.19-11-016), and is preparing for the significant billing system programming changes necessary to implement the Net Billing tariff (R.20-08-020), expected to be adopted at the end of 2022, as of the submission of this Advice Letter. These projects already in the pipeline are being carefully planned to be implemented alongside upgrading PG&E's two legacy billing systems with the goal of minimizing the risks of causing delays in completion of the billing system upgrades and the need to build twice – once in the legacy system and once in the new system.

As a result of these competing priorities, PG&E's target completion date for EV Submetering billing and IT upgrades, as listed in the previous section, is December 2024. The upgrades are targeted to support automated customer enrollment and billing by January 2025. The upgrades necessary to support the requirements of the EVSMP Protocol and the Decision will require an estimated 14 months and is estimated to start Q4 2023. Depending on technical requirements laid out during design phases, as well as any changes to any of the billing system implementation projects listed above, PG&E's timeline could ultimately change.

#### *Automation Plan Upgrades*

As PG&E develops the detailed business requirements necessary for a fully automated billing solution and translates them into functional and technical requirements, the approach may shift or change in certain areas. In general, PG&E will need to make significant upgrades and modifications to its billing and IT systems to support EV submetering. As noted above, PG&E will need to balance these required upgrades with other competing priorities for its billing system infrastructure. As a result, PG&E's goal is to meet all of these required billing system upgrades while developing a cost effective scalable automated solution for EV submetering.

Automating submetering functionality will require enhancement of a broad suite of tools and platforms touching every part of the EV submetering process: pre-enrollment, enrollment, meter data transfer, and billing. Based on PG&E's current understanding of the requirements to fulfill the directives of this decision, these upgrades include, but are not limited to:

- Expanding customer enablement tools that provide customers a user interface platform to assess rate comparisons and understand the value of submetering;
- Building an MDMA data exchange application that will establish a platform to registers MDMAs, enroll customers, transfer utilization data, and communicate validations between the MDMA and PG&E;

- Expanding capability of PG&E's Meter Data Management System (MDMS) – the application that manages the collection, storage, and transmission of Smart Meter reads for PG&E – to collect and process third party submeter data;
- Upgrading PG&E's existing field automation system (FAS), which is an enterprise application to support requests for work to be performed, that will involve updating field activity codes that support service requests for submeters; and
- Upgrading PG&E's customer care and billing system to properly establish relationships between customer accounts and their submeters, associate the correct rates to each account, and process and present bills to the customer.

Introducing and upgrading these system components will enable an automated end-to-end functionality that facilitates the ability to register MDMAs, enroll customers, transfer data from 3<sup>rd</sup> parties, and bill customers accordingly. Ultimately, these are complex upgrades and modifications that will require balancing enterprise-wide resources with multiple competing billing system changes.

#### **IV. Manual Billing Period**

As noted above, PG&E's target completion date for a fully automated billing solution for EV customers will be December 2024. The Decision directs the utilities, in Ordering Paragraph 3, to begin accepting applications and performing billing reconciliation after approval of this advice letter and "while completing the necessary upgrades to their billing systems."<sup>6</sup> Therefore, PG&E expects to perform manual enrollment and billing reconciliation for customers during a period of approximately 18 – 24 months.

The processes and upgrades described above in Section II of this document reflect efforts necessary to upgrade PG&E's IT and billing systems to support automated billing for EV customers. The majority, if not all of those processes will need to be manually executed during the manual billing period. This will require significant resources, staff time, and financial allocation to support EV Submetering. Our goal is to serve as much of the expected demand as feasible while executing a cost-effective approach to billing reconciliation during the manual billing period.

Using the EV Submetering phases categorized above, the following are the high-level steps PG&E will manage during the manual billing period:

##### **Pre-Enrollment**

As described in Section II above, an MDMA will need to submit an MDMA Registration Form, complete a Third-Party Security Review (TSR), and complete a data transfer test. During the manual billing period, the expected IT infrastructure will not be available to support automated processing of these procedures. Therefore, the MDMA Registration

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<sup>6</sup> [Decision 22-08-024](#)

Form will be manually validated by PG&E staff and processed for approval. Additionally, an MDMA will need to manually upload data for testing that PG&E can access via ESFT.

### Enrollment

The steps for enrolling a customer during the Manual Billing Phase are listed, below. These steps happen once for each enrollment case per customer.

1. A customer enrollment application form will be developed by PG&E after approval of this Implementation Plan for use by the MDMA during the manual billing period. A customer will complete the application form and submit to their associated MDMA.
2. The MDMA will transfer the customer's enrollment form to PG&E via ESFT, for PG&E staff to review manually. If the form is incomplete or invalid, PG&E staff will notify the MDMA.
3. Once customer enrollment information is reviewed, PG&E staff will manually set up separate account characteristics using a Unique Identifier (UUID) for the submeter account.
4. With the separate account characteristics set up, PG&E will create a "virtual meter" with a serial number in PG&E's meter inventory that allows the submeter to be recognized as a meter.
5. PG&E staff will then prepare a billing spreadsheet with the customer's validated enrollment data to begin the enrollment process into PG&E's billing system.
6. Next, PG&E staff will create a new Service Point and Service Agreement for the submeter and associate it with the customer's selected, eligible EV rate.
7. Finally, PG&E will notify the MDMA that the customer has been enrolled.

### Meter Data Transfer and Validation

After enrollment is complete, PG&E can begin accepting data from the MDMA to process customer bills. The steps for processing that data are described below.

1. The MDMA sends PG&E the customer's submeter utilization data in the form of a flat file via PG&E's dedicated ESFT, daily.

2. PG&E staff manually screen the data for any discrepancies and according to the requirements in Chapter D Section V.2 of the EVSMP<sup>7</sup>. If staff identify any issues, they send the data back to the MDMA to correct.

Note: Screening and validating the data can be a resource and time intensive process. For instance, screening data at the interval level - which could include over 2,800 intervals per customer per month – to ensure number of intervals expected match those delivered or to check if any interval exceeds the load of any interval from the main meter for every customer daily, will be time intensive. Because of the frequency of the data and the quantity of data points, any corrections or irregular data can have cascading effects that require additional time to resolve.

3. Once PG&E validates the data, it manually uploads it to PG&E's Meter Data Management System (MDMS), which in turn feeds into the internal billing system.

While these three general steps may appear straightforward, due to the magnitude of data PG&E staff will have to manually review, they will require a significant amount of time from PG&E staff to validate before preparing for billing and energy calculations.

### Billing

PG&E's current billing system cannot accommodate customer account configurations necessary for submetering. Therefore, PG&E staff will have to manually establish account relationships and configurations that will allow the subtractive relationship submetering requires for final billing. Below are the steps necessary for billing an EV customer manually:

1. When data reaches PG&E's billing system, staff must manually hold a customer's bill from being automatically sent to the customer to validate the data. Staff will create a work item that triggers a notification to review the customer's data when a bill is generated.
2. When the bill is generated, staff will validate that the bill reflects utilization for EV load and non-EV load by cross checking with the main meter at the premise. If there are no discrepancies, PG&E's billing system, will calculate energy charges according to the associated rates.
3. After calculation, PG&E bills the customer.

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<sup>7</sup> [Plug-in Electric Vehicle Submetering Protocol](#) (p. 15)

4. For Direct Access (DA) and Community Choice Aggregator (CCA) customers, PG&E sends billing data to the associated DAs/CCAs for charges.

The manual billing process will trigger significant manual validation and processing of data to confirm accurate billing. If there are any issues encountered, staff will need to investigate various possibilities including upstream processes or billing logic to make sure there were no errors triggered along the process. This can also be a time intensive process that can vary depending on the case.

#### Manual Billing Period Plan

As detailed above, manual enrollment, meter data transfer and validation, and billing is a highly complex process. It requires significant coordination across multiple teams to perform time intensive tasks to ensure an accurate bill is sent to the customer. At times, validation of data requires additional internal and external communication—further complicating and extending the billing process. Given these complex procedures, PG&E staff will need specialized training, which can take between four-to-six months of ramp-up, to manage the manual billing process.

While the EV Submetering Pilot Phase 2 provided PG&E a lens into processing manual billing for EV submetering customers, participation in the pilot was limited to residential single customers of record (SCOR). With the EVSMP Protocol open to commercial customers, MCOR, and DA and CCA customers, there will be additional complexity to every step listed above. Over 200 customers participated in the pilot, which required four full time employees from PG&E to manage and coordinate the steps above. However, given the complexities anticipated from the wider span of customer participation, PG&E expects that more time will be required by each full-time employee to manage the manual billing process per customer.

In assessing how to balance future demand with training enough staff to cost effectively deliver EV submetering services manually, SCE, on behalf of the utilities, issued a survey across EVSPs to gauge EVSP and MDMA participation and expected customer demand. The EVSP contacts came from SCE's Charge Ready program, as well as the EV Submetering Pilots. Out of 42 EVSPs/MDMAs that SCE reached out to, only 5 responded that they had interest in participating. The limited survey response rate is one indicator of potentially limited initial interest. Therefore, PG&E finds it most prudent to take a cost-effective approach of deploying resources according to how demand organically evolves throughout the manual billing period.

As such, PG&E is prepared to hire, train, and manage up to 15 full-time employees (FTE), and estimates that these resources can support the enrollment and manual billing of up to 500 customers. However, PG&E finds it most cost-effective to train and deploy staff according to how demand grows throughout the manual billing period. Therefore, PG&E will ramp up to a maximum of 15 FTE's to support demand. Furthermore, PG&E expects that experience over time may generate increased efficiencies of the manual billing

process. If PG&E can improve billing reconciliation processes by a 25-50% efficiency margin, it may be able to support up to 750 customers in total while PG&E upgrades its system for automated billing.

### Communication with MDMA's on Customer Demand

It is difficult to forecast exact demand for EV Submetering, and particularly during the manual billing period. Noting the anticipated cost of manual billing resources and the enrollment approach proposed above, PG&E will request proactive forecasts from MDMA's to better monitor demand and keep MDMA's informed of internal billing capacity saturation to inform additional customer intake. This will help MDMA's and EVSPs manage their customer engagement processes and customer expectations to preserve a positive customer experience. As demand broadens and customer applications reach a saturation point with PG&E's capacity, PG&E will work with the MDMA's to develop a waitlist for future enrollment. As PG&E enhances efficiencies, it will look to the waitlist for additional customer intake and maximize customers within PG&E's resource constraints.

### **V. Estimated Costs**

The total estimated cost for implementing submetering is \$8.9M. These estimates were developed with input from subject matter experts and third-party vendors using best available information at the time. As such, these cost estimates and the distributions presented for each year and category in the table below may be readjusted over time as the execution of work becomes more definitive.

Cost Category	Year			Total
	2023	2024	2025	
Manual Billing	\$1,548,000	\$2,064,000	\$ --	<b>\$3,612,000</b>
Full Automated Integration	\$436,847	\$2,621,084	\$ --	<b>\$3,057,931</b>
Customer tools	\$ --	\$731,000	\$731,000	<b>\$1,462,000</b>
ME&O	\$50,000	\$ --	\$285,000	<b>\$335,000</b>
Program Management	\$190,000	\$150,000	\$75,000	<b>\$415,000</b>
<b>Total:</b>	<b>\$2,224,847</b>	<b>\$5,566,084</b>	<b>\$1,091,000</b>	<b>\$8,881,931</b>

- **Manual Billing:** This estimate assumes manual billing starts no earlier than April 2023 and the maximum customer threshold is saturated by January 2024. Also, assumes a monthly cost of approximately \$11,500 per FTE up to a maximum of 15 FTE's.
- **Full Automated Integration:** This estimate assumes full automation as detailed above in Section III, including building an MDMA data exchange application, upgrades to FAS, MDMS, and PG&E's billing systems.

- Customer Tools: These estimates include expanding the customer enablement tools described in Section II and the upgrades mentioned in Section III.
- ME&O: This estimate assumes the materials and platforms described in Section II, including development of education information, content on PG&E's website, customer service training, and targeted outreach at the point of full automation.
- Program Management: This estimate assumes managing and coordinating all requirements across the manual billing phase, billing system integration and stabilization, and customer enablement tool enhancement.

PG&E will closely monitor customer demand and make adjustments to the implementation plan as needed. PG&E will provide periodic updates to inform the Commission on the state of customer demand for submetering.

## **VI. Proposed Tariff Changes**

The Decision requires that the IOUs “update their respective electric rules to reflect the adopted PEV Submetering Protocol.”<sup>8</sup> PG&E has identified a list of tariffs that include both electric rules and rates that will need revisions to reflect the requirements of the EV Submetering Protocol. These tariffs include the following:

- Electric Rule 9
- Electric Rule 11
- Electric Rule 16
- Electric Rule 18
- Electric Rule 29
- Electric Schedule BEV
- Electric Schedule EV2
- Electric Schedule NEM
- Electric Schedule NEM2

Each tariff will reflect the following language:

*“Where electricity is furnished for Electric Vehicle charging, a Customer may use an EV submeter to measure Electric Vehicle charge load, and ancillary EV charge service (i.e., demand response, vehicle-grid integration, etc.). All EV submeters used for submetering purposes must be approved by PG&E and meet the requirements established in Decision 22-08-024, Decision Adopting Plug-in Electric Vehicle Submetering Protocol and Electric Vehicle Supply Equipment Communication Protocols.”*

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<sup>8</sup> [Decision 22-08-024 \(p. 43\)](#)

These changes will reflect the eligibility of EV submetering for metering and billing electricity that is furnished for EV charging in each of the electric rules and tariffs listed above. EV submetering is a highly complex service with a potential to impact how various tariffs are interpreted. Based on PG&E's current understanding, PG&E has identified the tariffs listed above as rules and rates needing to reflect the Decision's language. Due to the high complexity of EV submetering, any subsequent impact to the rules listed above, or others not currently identified, will be monitored and modified to reflect PG&E's best understanding of EV submetering.

A copy of each tariff listed above with redlined modifications is included in the appendix of this Advice Letter as Attachment B.

The revised clean tariffs listed above are included in the appendix of this Advice Letter as Attachment C.

### **Protests**

Anyone wishing to protest this submittal may do so by letter sent electronically via E-mail, no later than January 10, 2023 which is 36 days<sup>9</sup> after the date of this submittal. Protests must be submitted to:

CPUC Energy Division  
ED Tariff Unit  
E-mail: EDTariffUnit@cpuc.ca.gov

The protest shall also be electronically sent to PG&E via E-mail at the address shown below on the same date it is electronically delivered to the Commission:

Sidney Bob Dietz II  
Director, Regulatory Relations  
c/o Megan Lawson  
E-mail: PGETariffs@pge.com

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter (General Order 96-B, Section 7.4). The protest shall contain the following information: specification of the advice letter protested; grounds for the protest; supporting factual information or legal argument; name and e-mail address of the protestant; and statement that the protest was sent to the utility no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Section 3.11).

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<sup>9</sup> The protest period was granted extension by Administrative Law Judge Brian Korpics on November 16, 2022 to account for the holiday season.





# ADVICE LETTER SUMMARY

## ENERGY UTILITY



MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No.: Pacific Gas and Electric Company (ID U39 E)

Utility type:

- ELC       GAS       WATER  
 PLC       HEAT

Contact Person: Kimberly Loo

Phone #: (415)973-4587

E-mail: PGETariffs@pge.com

E-mail Disposition Notice to: KELM@pge.com

EXPLANATION OF UTILITY TYPE

ELC = Electric      GAS = Gas      WATER = Water  
 PLC = Pipeline      HEAT = Heat

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 6778-E

Tier Designation: 2

Subject of AL: PG&E EV Submetering Implementation Plan

Keywords (choose from CPUC listing): Compliance

AL Type:  Monthly  Quarterly  Annual  One-Time  Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #: D.22-08-024

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

Summarize differences between the AL and the prior withdrawn or rejected AL:

Confidential treatment requested?  Yes  No

If yes, specification of confidential information:

Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information:

Resolution required?  Yes  No

Requested effective date: 1/4/23

No. of tariff sheets: 25

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: See Attachment 1

Service affected and changes proposed<sup>1</sup>: N/A

Pending advice letters that revise the same tariff sheets: 6682-E-A

<sup>1</sup>Discuss in AL if more space is needed.

**Protests and correspondence regarding this AL are to be sent via email and are due no later than 20 days after the date of this submittal, unless otherwise authorized by the Commission, and shall be sent to:**

California Public Utilities Commission  
Energy Division Tariff Unit Email:  
[EDTariffUnit@cpuc.ca.gov](mailto:EDTariffUnit@cpuc.ca.gov)

Contact Name: Sidnev Bob Dietz II. c/o Megan Lawson  
Title: Director, Regulatory Relations  
Utility/Entity Name: Pacific Gas and Electric Company  
  
Telephone (xxx) xxx-xxxx:  
Facsimile (xxx) xxx-xxxx:  
Email: PGETariffs@pge.com

Contact Name:  
Title:  
Utility/Entity Name:  
  
Telephone (xxx) xxx-xxxx:  
Facsimile (xxx) xxx-xxxx:  
Email:

CPUC  
Energy Division Tariff Unit  
505 Van Ness Avenue  
San Francisco, CA 94102

Clear Form

# **Attachment A**

Working Draft of Proposed Data Format and  
Transfer Protocol

## INTRODUCTION

This document is intended to describe the data format and data transfer processes necessary between a Submeter Meter Data Management Agent (MDMA) and an Investor-Owned Utility (IOU). This data format is based on the prior Electric Vehicle (EV) Submetering Pilot (Pilot).

Submeter MDMA's are expected to meet certain performance standards in the EV Submetering, including transferring submeter data to the California Investor-Owned Utilities (IOUs) for the purpose of Subtractive Billing. This document provides information on EV Submeter data formats and transfer methods to be used.

## TERMS AND DEFINITIONS

**CSV** – Comma Separated Values. The spreadsheet file format used in the Minimal Transfer Requirement.

**DUNS number** - Data Universal Numbering System. A nine digit number assigned by Dun & Bradstreet unique to a single business entity.

**UTC Time** - Coordinated Universal Time (UTC).

## DATA FILE FORMATS

This section describes the data file formats being considered for the implementation for EV Submetering. Consideration is given that some IOU's (and MDMA's) may require a period with manual receipt and processing of the files before a fully automated approach can be implemented. A CSV (comma separated) format will be used as this file format can be read and managed with standard desktop tools such as Excel, as well as easily imported and translated into an application for automation. The spreadsheet format allows Submeter MDMA's to transfer in one file EV Submeter data for multiple submeters and multiple days.

Note: For fields that may contain a comma such as address, the field must be "escaped" by enclosing them in double quotes.

The following events were identified as interactions between the MDMA and IOU to support EV Submetering.

Event	Sender	Event	Description
1	MDMA	Enrollment request	<ul style="list-style-type: none"> <li>Initial Enrollment request created by the MDMA. All requests must come through the MDMA and not from the customer.</li> <li>One request per submeter. Additional submeters under a primary meter would have separate requests.</li> </ul>
2	IOU	Enrollment Response	<ul style="list-style-type: none"> <li>Provide information of Acceptance/ Rejection of enrollment request.</li> <li>Include IOU Submeter ID.</li> </ul>

Event	Sender	Event	Description
3	IOU	De-enrollment Notice	<ul style="list-style-type: none"> <li>Customer termination of service                             <ul style="list-style-type: none"> <li>Customer Move Out (IOU)</li> <li>Disconnect for non-pay (IOU)</li> </ul> </li> <li>This will only be triggered from the IOU to the MDMA</li> </ul>
4	MDMA	Interval data	<ul style="list-style-type: none"> <li>Share previous day submeter interval consumption data.</li> </ul>

The preliminary file layouts and fields are included below. Note that the final file layouts may include additional timestamp or other fields to support processing as needed.

### Enrollment Request

Field Title	Field Description
MDMA ID	MDMA assigned identifier
Request ID	Unique ID for each request to allow for tracking and response
First Name	Customer first name
Last Name	Customer last name
Street Address	Customer street address
City	Customer city
Zip Code	Customer zip code
Service Agreement ID	IOU Contract/Contract Account
Primary Meter Number	IOU Meter Number
IOU Submeter ID	Assigned by IOU, only used in the request if Submeter is re-enrolled for new party
EVSE Submeter ID	EVSE submeter number
Submeter Install Date	datetime stamp when submeter was installed
Submeter Service Date	datetime stamp when submeter was activated

### Enrollment Response

Field Title	Field Description
MDMA ID	MDMA assigned identifier
Request ID	Unique ID for each request to allow for tracking and response
IOU Submeter ID	IOU assigned submeter ID to be used for all future interactions

### De-enrollment Request

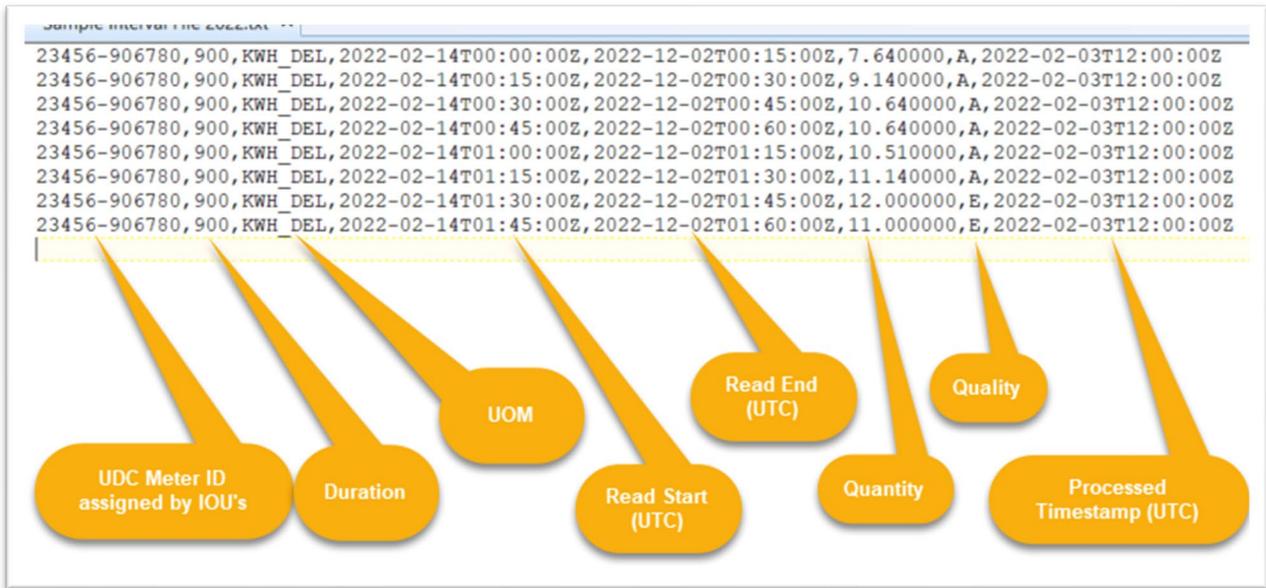
Field Title	Field Description
MDMA ID	MDMA assigned identifier

IOU ID	IOU Identifier
Request ID	Unique ID for each request to allow for tracking and response
IOU Submeter ID	IOU assigned ID for Submeter
Close Date	Date of move out or end of contract/agreement (MDMA)
Reason Code	Disconnect, Move out, Customer request

### Interval Data

Field Title	Field Description
IOU Submeter ID	Assigned by IOU after a Registered Submeter MDMA completes the Customer enrollment with the IOU.
Interval Duration	Duration of data interval for the Read Quantity represented in seconds. Interval Duration is “0900” for 15 minute intervals
Unit of Measurement	Indicates unit of measure (eg kWh) and whether energy is delivered or received - future proof for possible Load to Grid
Interval Start Date & Time	Date & Time for the <b>start (beginning)</b> of the data interval. Read Date & Time is expected to be on the quarter hour for 15 minute intervals (e.g., UTC Time equivalent of 10:15 am, 10:30 am, 10:45 am, 11:00 am). A read Date & Time record is required for every interval every day, even when the Read Quantity is zero. (Formatted UTC Time, see terms and definitions)
Interval End Date & Time	Date & Time for the End ( <b>Ending</b> ) of the data interval. Read Date & Time is expected to be on the quarter hour for 15 minute intervals (e.g., UTC Time equivalent of 10:15 am, 10:30 am, 10:45 am, 11:00 am). A read Date & Time record is required for every interval every day, even when the Read Quantity is zero. (Formatted UTC Time, see terms and definitions)
Interval Quantity	Formatted Decimal 12/6 with zero padding on the right, and none on the left
Interval Quality	Actual/Estimated
Date Processed	Date the data was loaded into the CSV File by Submeter MDMA. (Formatted UTC Time, see terms and definitions)

Below is an example of the Interval Data CSV file:



### File Transfer Approach

To facilitate data processing and possible data troubleshooting, minimum data transfer requirements are defined.

1. No partial day data will be processed by the IOU.
  - a. Spreadsheet files shall contain a minimum of 24 hours of interval data. (e.g., 96 consecutive intervals assuming 15-minute intervals)
  - b. Spreadsheet files shall contain a Interval Date & Time record for every interval, even when the interval's Read Quantity is a zero or a missing value.
  - c. Missing values shall be represented with zero values.
2. IOUs recommend daily file transfers.
  - a. Daily file transfers may contain Date & Time records for multiple days.
  - b. Daily file transfers containing Date & Time records for multiple days, shall contain all expected consecutive intervals (e.g., no missing intervals or gaps in intervals)
  - c. Daily file transfers may contain repeated or corrected Date & Time records. IOU will use the most recently received and processed interval record(s), when billing the submeter data. IOU may not correct Date & Time records for intervals previously billed.
3. Date & Time records should not be delayed by more than three days.
  - a. Records delayed by more than three days may not be processed for billing, due to the requirement that meter data is to be sent one day after the customer's billing period.
4. Data transfer method  
Files Inbound to IOU\*:

IOU’s will require the following from the Registered MDMA:

- a) IOU’s will use Password authentication for inbound sFTP file transfers. IOU’s will provide credentials to MDMA.
- b) MDMA’s IP address (Should be static IP)
- c) Name, email, and telephone number of MDMA’s connectivity contact person(s).
- d) Once IOU receives the items above, their internal teams will complete the set up to accept MDMA files. IOU will provide the MDMA with a sFTP logon ID and other Details to start Connectivity Testing

Files Outbound from IOU\*:

Following information is required from MDMA for transferring outbound files (IOU to MDMA)

- a) IP Address/Host
- b) 2) User/Password, if password authentication.
- c) 3) Drop off location (Directory)
- d) 4) Name, email, and telephone number of MDMA’s connectivity contact person

\*IOU will provide the MDMA with PGP Public Key

### Spreadsheet File Name Structure

The CSV spreadsheet files transferred by the Submeter MDMA to SCE/PG&E/SDG&E/etc shall use the following file naming structure:

“MDMA-DUNS\_IOU-DUNS\_EVSP\_ENROLL\_YYYYMMDDHHMMSS.CSV”

File Name Component	Component Description
MDMA-DUNS	The nine digit DUNS Number of the Submeter MDMA registered with the IOU and provided to the IOU as part of the Submeter MDMA’s Registration process. (Format numeric 9, all formatting dashes omitted)
IOU-DUNS	The nine digit DUNS Number of the IOU and provided by the IOU as part of the Submeter MDMA Registration process. (Format numeric 9, All formatting dashes omitted)
EVSP	Hard coded “EVSP” to identify the file as part of the EV Submetering application.
File Content	Denotes the content of the file based on the formats above: <ul style="list-style-type: none"> <li>- “ENROLL”</li> <li>- “ENROLL_RESP”</li> <li>- “INTERVAL”</li> <li>- “DEENROLL”</li> </ul>
YYYYMMDDHHMMSS	The date and time the spreadsheet file was created by the Submeter MDMA, based on MDMA’s local time as determined by MDMA. Purpose of this file name component is to determine time sequence of files sent from an individual MDMA.
Example file name: “987654321_123456789_EVSP_ENROLL_20130428245959.csv”	

## **Attachment B**

### Proposed Tariff Changes

The redlined modifications in this attachment only include sheets with language revisions. Sheets that merely show location (L) changes are not included.





**ELECTRIC SCHEDULE EV2  
RESIDENTIAL TIME-OF-USE**

Sheet 1

**SERVICE FOR PLUG-IN ELECTRIC VEHICLE CUSTOMERS**

**APPLICABILITY:** Except as noted below, this optional schedule applies to electric service to customers for whom Schedule E-1 applies and who have a currently registered Motor Vehicle, as defined by the California Motor Vehicle Code, which is a battery electric vehicle (BEV) or plug-in hybrid electric vehicle (PHEV) recharged via a recharging outlet at the customer's premises. This schedule is not available to customers with a conventional, charge sustaining (battery recharged solely from the vehicle's on-board generator) hybrid electric vehicle (HEV). Low speed electric vehicles and electrically powered motorcycles or bicycles, as defined by the California Motor Vehicle Code, are not eligible for this rate option. In addition, this schedule is available on a pilot basis to customers that have installed battery storage as described in Special Condition 8. It is also available to customers with electric heat pumps, as described in Special Condition 9. Service under this schedule is provided at the sole option of PG&E and based upon the availability of metering equipment and customer infrastructure improvements necessary for charging.

Customers taking service on this rate schedule cannot exceed 800% of their annual baseline allowance, measured as the total usage for the customer over the last 12 months divided by the total annual baseline allowance using the approved baseline allowances for those months. Customers at premises with total usage in excess of 800 percent of baseline over 12 months will be moved to Schedule E-TOU-D and will be prohibited from taking service on any electric vehicle rate schedule for 12 months. Customers must have 12 months of consecutive usage on this Rate Schedule before being subject to the requirement of being moved from Schedule EV to Schedule E-TOU-D as a result of exceeding the 800 percent of baseline 12-month threshold.

The provisions of Schedule S—Standby Service Special Conditions 1 through 6 shall also apply to customers whose premises are regularly supplied in part (but not in whole) by electric energy from a nonutility source of supply. These customers will pay monthly reservation charges as specified under Section 1 of Schedule S, in addition to all applicable Schedule EV charges. See Special Condition 6 of this rate schedule for exemptions to standby charges.

Customers on Rate A of Electric Schedule EV2 but not enrolled in NEM may use an EV submeter to measure Electric Vehicle charge load and ancillary Electric Vehicle charge service (i.e., demand response, vehicle-grid integration, etc.). All EV submeters must be approved by PG&E and comply with the Plug-in Electric Vehicle Submetering Protocol and Electric Vehicle Supply Equipment Communication Protocols as established in Decision 22-08-024. (N)

This rate schedule applies to whole house service where the residential usage and the electric vehicle charging usage is metered together (that is, the electric vehicle charging usage is not metered separately-) and to Customers using EV submeters to measure Electric Vehicle charge load. Bills issued under Schedule EV2 will be identified as EV2A. (T)

**TERRITORY:** This rate schedule applies everywhere PG&E provides electric service.

**RATES:** Total bundled service charges are calculated using the total rates below. Customers on this schedule are subject to the delivery minimum bill amount shown below applied to the delivery portion of the bill (i.e. to all rate components other than the generation rate). In addition, total bundled charges will include applicable generation charges per kWh for all kWh usage.

Direct Access (DA) and Community Choice Aggregation (CCA) charges shall be calculated in accordance with the paragraph in this rate schedule titled Billing.

(Continued)

<i>Advice</i>	6646-E	<i>Issued by</i>	<i>Submitted</i>	July 12, 2022
<i>Decision</i>	21-11-016	<i>Meredith Allen</i>	<i>Effective</i>	October 24, 2022
		<i>Vice President, Regulatory Affairs</i>	<i>Resolution</i>	



**ELECTRIC SCHEDULE NEM  
NET ENERGY METERING SERVICE**

Sheet 1

**APPLICABILITY:** This net energy-metering schedule is applicable to a customer who uses a Renewable Electrical Generation Facility (REGF) as defined below with a capacity of not more than 1,000 kilowatts that is located on the customer's owned, leased, or rented premises, is interconnected and operates in parallel with PG&E's transmission and distribution systems, including wind energy co-metering customers as defined in California Public Utilities Code Section 2827.8, and is intended primarily to offset part or all of the customer's own electrical requirements (hereinafter "eligible customer-generator" or "customer"). Notwithstanding the definition of "eligible customer-generator" above, eligible customer generator also includes (i) the California Department of Corrections and Rehabilitation (CDCR) pursuant to Special Condition 8 of this tariff and (ii) the United States Armed Forces ("Armed Forces") pursuant to Special Condition 9 of this tariff. For a NEM REGF paired with storage, see Special Condition 11.

Subject to the requirements of Special Condition 7, Load Aggregation to determine the customer's own electrical requirements is permitted. Certain incremental billing and metering costs set forth in this schedule that are related to net energy metering are applicable to Electric Service Providers (ESPs) serving eligible customer-generators.

Pursuant to Decision 22-08-024, the Plug-in Electric Vehicle (PEV) Submetering Protocol is not extended to NEM customers at this time.

(N)  
(N)

This service is not applicable to a Direct Access (DA) customer where the customer's ESP does not offer a net energy metering tariff. In addition, if the tariffs for the customer's ESP do not permit Load Aggregation, as described in Special Condition 7, this option is not available to the DA customer. In addition, if an eligible customer-generator participates in direct transactions with an ESP that does not provide distribution service for the direct transactions, the ESP, and not PG&E, is obligated to provide net energy metering to the customer.

**NEM Cap:** This rate schedule is available on a first-come, first-served basis to customers that provide PG&E with:

- (a) a completed Net Energy Metering Application including all supporting documents and required payments; AND
- (b) a completed signed Net Energy Metering Interconnection Agreement; AND
- (c) evidence of the customer's final inspection clearance from the governmental authority having jurisdiction over the Electrical Generation Facility,

until the earlier of:

- (i) July 1, 2017, or
- (ii) such time as the Total Rated Generating Capacity used by eligible customer-generators and Qualified Customers on Rate Schedules NEM, NEMV and NEMVMASH exceeds the larger of five (5) percent of PG&E's Aggregate Customer Peak Demand or 2409 megawatts of nameplate generating capacity. Customers meeting these conditions are referred to as "NEM Transition Eligible Customers".

Once this cap has been reached, Schedules NEM, NEMV and NEMVMASH will be closed to new customers. The NEM Transition Provisions below will apply here.

**Total Rated Generating Capacity:** -The total rated generating capacity of eligible customer-generators will be calculated as the sum of all of the following:

- 1) For each PV generating facility, PG&E will use the California Energy Commission's (CEC) AC rating; or where the CEC AC rating is not available, PG&E will multiply the inverter AC nameplate rating by 0.86.

(Continued)

<i>Advice</i>	4940-E	<i>Issued by</i>	<i>Date Filed</i>	October 18, 2016
<i>Decision</i>	14-05-033 & 16-04-020	<b>Steven Mainight</b>	<i>Effective</i>	February 22, 2017
		<i>Senior Vice President</i>	<i>Resolution</i>	
		<i>Regulatory Affairs</i>		
		<i>Internal</i>		



**ELECTRIC SCHEDULE NEM2  
NET ENERGY METERING SERVICE**

Sheet 1

**APPLICABILITY:** This net energy-metering schedule pursuant to Decision (D.) 16-01-044 is applicable to a customer who takes service on an applicable time-of-use (TOU) rate schedule<sup>1,2</sup> and who uses a Renewable Electrical Generation Facility (REGF) as defined below that is located on the customer's owned, leased, or rented premises, is interconnected and operates in parallel with PG&E's transmission and distribution systems, and is intended primarily to offset part or all of the customer's own electrical requirements (hereinafter "eligible customer-generator" or "customer"). For a NEM REGF paired with storage, see Special Condition 9.

Notwithstanding the definition of "eligible customer-generator" above, eligible customer generator also includes (i) the California Department of Corrections and Rehabilitation (CDCR) pursuant to Special Condition 7 of this tariff.

Subject to the requirements of Special Condition 6, Load Aggregation to determine the customer's own electrical requirements is permitted. Certain incremental billing and metering costs set forth in this schedule that are related to net energy metering are applicable to Electric Service Providers (ESPs) serving eligible customer-generators.

Pursuant to Decision 22-08-024, the Plug-in Electric Vehicle (PEV) Submetering Protocol is not extended to NEM customers at this time.

(N)  
(N)

This service is not applicable to a Direct Access (DA) customer where the customer's ESP does not offer a net energy metering tariff. In addition, if the tariffs for the customer's ESP do not permit Load Aggregation, as described in Special Condition 6, this option is not available to the DA customer. In addition, if an eligible customer-generator participates in direct transactions with an ESP that does not provide distribution service for the direct transactions, the ESP, and not PG&E, is obligated to provide net energy metering to the customer.

This rate schedule is available to customers that provide PG&E with:

- (a) a completed, signed Net Energy Metering Application and Interconnection Agreement as described in Special Condition 3 including all supporting documents and required payments; AND
- (b) evidence of the customer's final inspection clearance from the governmental authority having jurisdiction over the REGF,

See Special Condition 8 for NEM2 Legacy Provisions.

<sup>1</sup> Customers on Schedules such as ET, ES, and ESR, which have no corresponding TOU Rate, are not required to switch to TOU rates, unless and until such a rate becomes available.

<sup>2</sup> Customers, including those on Load Accounts on NEMA as described in Special Condition 6, switching from Schedule NEM to this NEM2 successor tariff are required to take any applicable TOU rate, beginning at the time the customer switches to the NEM successor tariff, pursuant to D.14-03-041 and D. 16-01-044.

(Continued)

Advice Decision 6242-E

Issued by  
**Robert S. Kenney**  
Vice President, Regulatory Affairs

Submitted	July 8, 2021
Effective	July 8, 2021
Resolution	

Internal



**ELECTRIC RULE NO. 11**  
DISCONTINUANCE AND RESTORATION OF SERVICE

Sheet 10

H. UNSAFE APPARATUS OR CONDITION (Cont'd.)

- 2. When relocation or replacement of electric service by PG&E is necessary, the service, including ~~the~~ metering facilities owned by either PG&E, the Customer, or a Third Party, will be installed in locations mutually acceptable to PG&E and the Customer or a Third Party, and which conform to current applicable codes, regulations and standards. If no such mutually acceptable location can be agreed upon, PG&E shall discontinue service until the Customer or Third Party and PG&E reach agreement with PG&E. (T)
- 3. SERVICE RESTORATION
  - a. When the Customer's service has been terminated either because of a determination by PG&E that an unsafe apparatus or condition exists on the premises, or because the customer has threatened to create a hazardous condition, service will not be restored until PG&E determines the Customer's electrical wiring or equipment or the use of either, has been made safe. When service is denied or terminated solely under these sections, the customer may seek remedies before the CPUC. (T)
  - b. When the customer's service has been terminated because of an order of termination issued to PG&E by a governmental agency, service will not be restored until PG&E has received authorization to restore the service from the appropriate governmental agency. It is the customer's responsibility to resolve the matter with the governmental agency.
- 4. PG&E does not assume the responsibility of inspecting or repairing the customer's facilities, appliances or other equipment for receiving or using service, or any part thereof. In the event the customer has knowledge that the service is in any way defective, it is the customer's responsibility to notify PG&E at once. PG&E shall not be liable or responsible for any plumbing, appliances, facilities, or apparatus beyond the point of delivery which it does not own or maintain in accordance with these rules.

(Continued)

Advice Decision	1436-E	Issued by <b>Robert S. Kenney</b> Vice President, Regulatory Affairs	Date Filed Effective Resolution	June 1, 1993 July 12, 1993
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**ELECTRIC RULE NO. 16  
SERVICE EXTENSIONS**

Sheet 5

**B. METERING FACILITIES (Cont'd.)**

2. NUMBER OF METERS. Normally only one meter will be installed for a single-family residence or a single non-residential enterprise on a single Premises, except:

- a. When otherwise required or allowed under PG&E's tariff schedules;
- b. At the option of and as determined by PG&E, for its operating convenience, consistent with its engineering design; or,
- c. When required by law or local ordinance;
- d. When additional services are granted by PG&E.

A single meter is required for each single enterprise operating in one building or group of buildings or other development on a single Premises such as, but not limited to, a commercial business, school campus, industrial manufacturer or recreational vehicle park, unless otherwise approved by PG&E. See Rule 18—Supply to Separate Premises and Submetering of Electric Energy for more information.

e. Where electricity is furnished for Electric Vehicle charging, a Customer may use an EV submeter to measure Electric Vehicle charge load, and ancillary Electric Vehicle charge service (i.e., demand response, vehicle-grid integration, etc.). All EV submeters used for submetering purposes must be approved by PG&E and meet the requirements established in Decision 22-08-024, Decision Adopting Plug-in Electric Vehicle Submetering Protocol and Electric Vehicle Supply Equipment Communication Protocols. (N)

3. MULTIPLE OCCUPANCY. In a building with two or more tenants, or where more than one meter is used on the same Premises, the meters normally shall be grouped at one central location, or as otherwise specified by PG&E, and each meter position or socket shall be clearly and permanently marked by Applicant, customer, or owner of the Premises to indicate the particular unit, occupancy, or load supplied by it.

- a. RESIDENTIAL. For revenue billing, electric service shall be individually metered to every residential unit in a residential building or group of buildings or other development with multiple tenants such as, but not limited to, apartment buildings, mobile home parks, etc., except as may be specified in Rule 18 and applicable rate schedules.

(Continued)



**ELECTRIC RULE NO. 18** Sheet 2  
SUPPLY TO SEPARATE PREMISES AND SUBMETERING OF ELECTRIC ENERGY

C. FURNISHING AND METERING OF ELECTRICITY

1. RESIDENTIAL SERVICE

PG&E will furnish and meter electricity to each individual residential dwelling unit, except:

- a. Where electricity is furnished under a rate schedule that specifically provides for resale service; or
- b. Where a customer, or his predecessors in interest on the same premises, was a customer on June 13, 1978, receiving electricity through a single meter to an apartment house, mobile home park, or other multifamily accommodation, and the cost of electricity is absorbed in the rental for the individual dwelling unit, there is no separate identifiable charge by such customer to the tenants for electricity, and the rent does not vary with electric consumption; or
- c. Where a customer or his predecessors in interest on the same premises was a customer on December 14, 1981, and submeters and furnishes electricity to residential tenants at the same rates and charges that would be applicable if the user were purchasing such electricity directly from PG&E; or
- d. Where a mobile home park or manufactured housing community developer, owner or operator who installs, owns and operates the electric distribution system within the park, submeters and furnishes electricity to residential tenants in each occupancy, charges the same rates that would be applicable if the user were purchasing such electricity directly from PG&E, unless construction of a new mobilehome park, or manufactured housing community commenced after January 1, 1997.

e. Where electricity is furnished for Electric Vehicle charging, a Customer may use an EV submeter to measure Electric Vehicle charge load, and ancillary Electric Vehicle charge service (i.e., demand response, vehicle-grid integration, etc.). All EV submeters used for submetering purposes must be approved by PG&E and meet the requirements established in Decision 22-08-024, Decision Adopting Plug-in Electric Vehicle Submetering Protocol and Electric Vehicle Supply Equipment Communication Protocols. (N)

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(Continued)

Advice	6097-E	Issued by	Submitted	February 22, 2021
Decision	D. 21-01-018	<b>Robert S. Kenney</b>	Effective	March 24, 2021
		Vice President, Regulatory Affairs	Resolution	



**ELECTRIC RULE NO. 18**

Sheet 3

**SUPPLY TO SEPARATE PREMISES AND SUBMETERING OF ELECTRIC ENERGY**

C. FURNISHING AND METERING OF ELECTRICITY (Cont'd.)

1. RESIDENTIAL SERVICE (Cont'd.)

- e. Nothing in this section shall prevent PG&E from furnishing separately-metered service to electric equipment used in common by residential tenants or owners.

2. NONRESIDENTIAL SERVICE

PG&E will furnish and meter electricity to each individual nonresidential premises or space, except:

- a. Where electricity is furnished under a rate schedule that specifically provides for resale service; or
- b. Where a customer is receiving electricity through a single meter and the cost of electricity is absorbed in the rental for the individual premises or spaces, there is no separate identifiable charge by such customer to the tenants for electricity, and the rent does not vary with electric consumption; or where all of the following conditions are met:
  - 1) Service is supplied to a high-rise building<sup>3\*</sup> which is owned or managed by a single entity on a single premises; and (T)
  - 2) Where a master-meter customer installs, owns, and maintains electric submeters on its existing building's distribution system for cost allocation of dynamic pricing and/or conservation incentive purposes the cost of electricity allocated to the commercial building tenants will be billed at the same rate as the master meter billed by PG&E under the CPUC approved rate schedule servicing the master meter.
- c. Where, in the sole opinion of PG&E, it is impractical for PG&E to meter individually each premises or space. In such a case, PG&E will meter those premises or spaces that it is practical to meter, if any.
- d. Where the Commission has authorized PG&E to supply electric service through a single meter and to furnish service to nonresidential tenants on the same basis as in 1.c. above.

<sup>3\*</sup> See Rule 1 for definition of High-Rise Building. (T)

(Continued)



**ELECTRIC RULE NO. 18** Sheet 4  
SUPPLY TO SEPARATE PREMISES AND SUBMETERING OF ELECTRIC ENERGY

C. FURNISHING AND METERING OF ELECTRICITY (Cont'd.)

2. NONRESIDENTIAL SERVICE (Cont'd.)

e. Where electricity is furnished for Electric Vehicle charging, a Customer may use an EV submeter to measure Electric Vehicle charge load, and ancillary Electric Vehicle charge service (i.e., demand response, vehicle-grid integration, etc.). All EV submeters used for submetering purposes must be approved by PG&E and meet the requirements established in Decision 22-08-024, Decision Adopting Plug-in Electric Vehicle Submetering Protocol and Electric Vehicle Supply Equipment Communication Protocols.

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3. MARINAS AND SMALL CRAFT HARBORS

Notwithstanding any other provision of this rule, PG&E will furnish electrical service to the master-meter customer at a privately or publicly owned marina or small craft harbor. The master-meter customer may submeter individual slips or berths at the marina or harbor but may not submeter any land-based facility or tenant.

If the master-meter customer submeters and furnishes electricity to individual slips or berths, the rates and charges to the user must not exceed those that would apply if the user were purchasing such electricity directly from PG&E.

4. COLD-IRONING LOAD

Cold-ironing load is defined as the use of shore-supplied electricity for the lights, heating, cooling, machinery, and other needs of an ocean-going vessel while at berth or otherwise electrically connected, as replacement for the vessel's auxiliary internal electric generation.

- a. A master-metered customer may submeter a ship's cold-ironing load aboard an ocean-going vessel at the Port of San Francisco or the Port of Oakland but may not submeter any other load or land-based facility.
- b. If the master-metered customer submeters cold-ironing load to an ocean-going vessel, the rates and charges to the sub-metered user must not exceed those rates and charges the master-metered customer is billed by PG&E for such services.

5. RECREATIONAL VEHICLE (RV) PARKS

PG&E will provide electric service to all spaces in an RV park through one meter unless the condition under c. below applies. PG&E will not provide individual metering to each RV space.

(Continued)

Advice	6097-E	Issued by	Submitted	February 22, 2021
Decision	D. 21-01-018	<b>Robert S. Kenney</b>	Effective	March 24, 2021
		Vice President, Regulatory Affairs	Resolution	



**ELECTRIC RULE 29**  
**EV INFRASTRUCTURE**

Sheet 7

C. METERING FACILITIES.

1. GENERAL

- a. METER ALL USAGE. Delivery of all electric power and energy to the Charging Station will be metered.
- b. METER LOCATION. All meters and associated metering equipment shall be located at some protected location on Applicant's Premises as approved by PG&E.
- c. METER OWNERSHIP. PG&E shall own and maintain all meters and associated metering equipment unless otherwise allowed by PG&E's tariffs.

2. NUMBER OF METERS. Normally only one meter will be installed for a single enterprise on a single Premises, except:

- a. When otherwise required or allowed under PG&E's tariff schedules;
- b. At the option of and as determined by PG&E, for its operating convenience, consistent with its engineering design; or,
- c. When required by law or local ordinance;
- d. When additional services are granted by PG&E.

A single meter is required for each single enterprise operating in one building or group of buildings or other development on a single Premises such as, but not limited to, a commercial business, school campus, industrial manufacturer or recreational vehicle park, unless otherwise approved by PG&E. See Rule 18—Supply to Separate Premises and Submetering of Electric Energy for more information.

- e. Where electricity is furnished for Electric Vehicle charging, a Customer may use an EV submeter to measure Electric Vehicle charge load, and ancillary Electric Vehicle charge service (i.e., demand response, vehicle-grid integration, etc.). All EV submeters used for submetering purposes must be approved by PG&E and meet the requirements established in Decision 22-08-024, Decision Adopting Plug-in Electric Vehicle Submetering Protocol and Electric Vehicle Supply Equipment Communication Protocols. (N)

(Continued)



**ELECTRIC RULE NO. 9**  
**RENDERING AND PAYMENT OF BILLS**

Sheet 2

**B. PRO RATA CORRECTION (Cont'd.)**

When one or more regularly scheduled meter readings have been missed, the proration factor for the next regularly scheduled meter reading shall be 1.000 times the number of monthly billing cycles in the period. When an interim bill based on a special reading for a period other than 27 to 33 days has been issued during the interval since the last regularly scheduled meter reading, the proration factor for the regularly scheduled bill shall be the factor derived above, less the proration factor applied to the interim bill. However, where daily equivalents are used, there will be no pro rata correction. Instead, the calculation shall use the number of days in the billing period by the daily equivalent charge.

**C. ESTIMATED BILLS**

If for reasons beyond the meter reading entity's control, the customer's meter cannot be read on the Scheduled Meter Reading Date, or if for any reason accurate usage data are not available, PG&E will bill the customer for estimated consumption during the billing period. Estimated consumption for this purpose will be calculated considering the customer's prior usage, PG&E's experience with other customers of the same class in that area, and the general characteristics of the customer's operations.

When PG&E is unable to access and change the existing meter to the SmartMeter™ system, PG&E may bill the customer for estimated consumption until the meter has been changed.

Unless estimated bills result from inability to access and change the existing meter to the SmartMeter™ system, inaccessible roads, the customer, the customer's agent, other occupant, animal or physical condition of the property preventing access to PG&E's facilities on the customer's premises, other causes within control of the customer, or a natural or man-made disaster such as a fire, earthquake, flood, or severe storms<sup>1</sup>, the issuance of estimated bills shall be considered "billing error" for the purposes of applying Rule 17.1.

**D. READINGS OF SEPARATE METERS NOT COMBINED**

For the purpose of making charges, each meter upon the customer's premises will be considered separately, and the readings of two or more meters will not be combined, except as follows:

1. Where combinations of meter readings are specifically provided for in rate schedules.
2. Where PG&E's operating convenience or necessity shall require the installation of two or more meters upon the customer's premises instead of one meter.

3. Where electricity is furnished for Electric Vehicle charging, a Customer may use an EV submeter to measure Electric Vehicle charge load, and ancillary Electric Vehicle charge service (i.e., demand response, vehicle-grid integration, etc.). All EV submeters used for submetering purposes must be approved by PG&E and meet the requirements established in Decision 22-

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(Continued)

Advice	5378-E	Issued by	Date Filed	September 7, 2018
Decision	18-08-004	<b>Robert S. Kenney</b>	Effective	October 7, 2018
		Vice President, Regulatory Affairs	Resolution	



**ELECTRIC RULE NO. 9**  
RENDERING AND PAYMENT OF BILLS

Sheet 2

08-024, Decision Adopting Plug-in Electric Vehicle Submetering Protocol and Electric Vehicle Supply Equipment Communication Protocols.

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(N)

<sup>1</sup> PG&E will temporarily suspend estimating of bills, discontinue billing and/or will prorate minimum delivery charges for customers affected by a disaster as described in the Emergency Consumer Protection Plan definition in Electric Rule 1.

(Continued)

Advice 5378-E  
Decision 18-08-004

Issued by  
**Robert S. Kenney**  
Vice President, Regulatory Affairs

Date Filed September 7, 2018  
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Resolution

Internal

Cal P.U.C. Sheet No.	Title of Sheet	Cancelling Cal P.U.C. Sheet No.
54754-E	ELECTRIC SCHEDULE BEV BUSINESS ELECTRIC VEHICLES Sheet 7	46657-E
54755-E	ELECTRIC SCHEDULE EV2 RESIDENTIAL TIME-OF-USE SERVICE FOR PLUG-IN ELECTRIC VEHICLE CUSTOMERS Sheet 1	53681-E*
54756-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 1	37636-E
54757-E	ELECTRIC SCHEDULE NEM2 NET ENERGY METERING SERVICE Sheet 1	50613-E
54758-E	ELECTRIC RULE NO. 11 DISCONTINUANCE AND RESTORATION OF SERVICE Sheet 10	13149-E
54759-E	ELECTRIC RULE NO. 16 SERVICE EXTENSIONS Sheet 5	47823-E
54760-E	ELECTRIC RULE NO. 18 SUPPLY TO SEPARATE PREMISES AND SUBMETERING OF ELECTRIC ENERGY Sheet 2	48869-E
54761-E	ELECTRIC RULE NO. 18 SUPPLY TO SEPARATE PREMISES AND SUBMETERING OF ELECTRIC ENERGY Sheet 3	48870-E
54762-E	ELECTRIC RULE NO. 18 SUPPLY TO SEPARATE PREMISES AND SUBMETERING OF ELECTRIC ENERGY Sheet 4	48871-E
54763-E	ELECTRIC RULE 29 EV INFRASTRUCTURE Sheet 7	52203-E
54764-E	ELECTRIC RULE NO. 9 RENDERING AND PAYMENT OF BILLS Sheet 2	43019-E
54765-E	ELECTRIC RULE NO. 9 RENDERING AND PAYMENT OF BILLS Sheet 3	
54766-E	ELECTRIC RULE NO. 9 RENDERING AND PAYMENT OF BILLS Sheet 4	46804-E

Cal P.U.C. Sheet No.	Title of Sheet	Cancelling Cal P.U.C. Sheet No.
54767-E	ELECTRIC RULE NO. 9 RENDERING AND PAYMENT OF BILLS Sheet 5	49760-E
54768-E	ELECTRIC RULE NO. 9 RENDERING AND PAYMENT OF BILLS Sheet 6	49761-E
54769-E	ELECTRIC RULE NO. 9 RENDERING AND PAYMENT OF BILLS Sheet 7	47337-E
54770-E	ELECTRIC RULE NO. 9 RENDERING AND PAYMENT OF BILLS Sheet 8	47338-E
54771-E	ELECTRIC RULE NO. 9 RENDERING AND PAYMENT OF BILLS Sheet 9	47339-E
54772-E	ELECTRIC RULE NO. 9 RENDERING AND PAYMENT OF BILLS Sheet 10	47340-E
54773-E	ELECTRIC TABLE OF CONTENTS Sheet 1	54752-E
54774-E	ELECTRIC TABLE OF CONTENTS Sheet 2	53684-E*
54775-E	ELECTRIC TABLE OF CONTENTS Sheet 6	54049-E
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54777-E	ELECTRIC TABLE OF CONTENTS Sheet 19	53093-E
54778-E	ELECTRIC TABLE OF CONTENTS Sheet 21	52994-E





**ELECTRIC SCHEDULE EV2  
RESIDENTIAL TIME-OF-USE**

Sheet 1

**SERVICE FOR PLUG-IN ELECTRIC VEHICLE CUSTOMERS**

**APPLICABILITY:** Except as noted below, this optional schedule applies to electric service to customers for whom Schedule E-1 applies and who have a currently registered Motor Vehicle, as defined by the California Motor Vehicle Code, which is a battery electric vehicle (BEV) or plug-in hybrid electric vehicle (PHEV) recharged via a recharging outlet at the customer's premises. This schedule is not available to customers with a conventional, charge sustaining (battery recharged solely from the vehicle's on-board generator) hybrid electric vehicle (HEV). Low speed electric vehicles and electrically powered motorcycles or bicycles, as defined by the California Motor Vehicle Code, are not eligible for this rate option. In addition, this schedule is available on a pilot basis to customers that have installed battery storage as described in Special Condition 8. It is also available to customers with electric heat pumps, as described in Special Condition 9. Service under this schedule is provided at the sole option of PG&E and based upon the availability of metering equipment and customer infrastructure improvements necessary for charging.

Customers taking service on this rate schedule cannot exceed 800% of their annual baseline allowance, measured as the total usage for the customer over the last 12 months divided by the total annual baseline allowance using the approved baseline allowances for those months. Customers at premises with total usage in excess of 800 percent of baseline over 12 months will be moved to Schedule E-TOU-D and will be prohibited from taking service on any electric vehicle rate schedule for 12 months. Customers must have 12 months of consecutive usage on this Rate Schedule before being subject to the requirement of being moved from Schedule EV to Schedule E-TOU-D as a result of exceeding the 800 percent of baseline 12-month threshold.

Customers on Rate A of Electric Schedule EV2 but not enrolled in NEM may use an EV submeter to measure Electric Vehicle charge load and ancillary Electric Vehicle charge service (i.e., demand response, vehicle-grid integration, etc.). All EV submeters must be approved by PG&E and comply with the Plug-in Electric Vehicle Submetering Protocol and Electric Vehicle Supply Equipment Communication Protocols as established in Decision 22-08-024.

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This rate schedule applies to whole house service where the residential usage and the electric vehicle charging usage is metered together (that is, the electric vehicle charging usage is not metered separately) and to Customers using EV submeters to measure Electric Vehicle charge load. Bills issued under Schedule EV2 will be identified as EV2A.

(T)  
(T)

**TERRITORY:** This rate schedule applies everywhere PG&E provides electric service.

**RATES:** Total bundled service charges are calculated using the total rates below. Customers on this schedule are subject to the delivery minimum bill amount shown below applied to the delivery portion of the bill (i.e. to all rate components other than the generation rate). In addition, total bundled charges will include applicable generation charges per kWh for all kWh usage.

Direct Access (DA) and Community Choice Aggregation (CCA) charges shall be calculated in accordance with the paragraph in this rate schedule titled Billing.

(Continued)



**ELECTRIC SCHEDULE NEM  
NET ENERGY METERING SERVICE**

Sheet 1

APPLICABILITY: This net energy-metering schedule is applicable to a customer who uses a Renewable Electrical Generation Facility (REGF) as defined below with a capacity of not more than 1,000 kilowatts that is located on the customer's owned, leased, or rented premises, is interconnected and operates in parallel with PG&E's transmission and distribution systems, including wind energy co-metering customers as defined in California Public Utilities Code Section 2827.8, and is intended primarily to offset part or all of the customer's own electrical requirements (hereinafter "eligible customer-generator" or "customer"). Notwithstanding the definition of "eligible customer-generator" above, eligible customer generator also includes (i) the California Department of Corrections and Rehabilitation (CDCR) pursuant to Special Condition 8 of this tariff and (ii) the United States Armed Forces ("Armed Forces") pursuant to Special Condition 9 of this tariff. For a NEM REGF paired with storage, see Special Condition 11.

Subject to the requirements of Special Condition 7, Load Aggregation to determine the customer's own electrical requirements is permitted. Certain incremental billing and metering costs set forth in this schedule that are related to net energy metering are applicable to Electric Service Providers (ESPs) serving eligible customer-generators.

Pursuant to Decision 22-08-024, the Plug-in Electric Vehicle (PEV) Submetering Protocol is not extended to NEM customers at this time.

(N)  
(N)

This service is not applicable to a Direct Access (DA) customer where the customer's ESP does not offer a net energy metering tariff. In addition, if the tariffs for the customer's ESP do not permit Load Aggregation, as described in Special Condition 7, this option is not available to the DA customer. In addition, if an eligible customer-generator participates in direct transactions with an ESP that does not provide distribution service for the direct transactions, the ESP, and not PG&E, is obligated to provide net energy metering to the customer.

NEM Cap: This rate schedule is available on a first-come, first-served basis to customers that provide PG&E with:

- (a) a completed Net Energy Metering Application including all supporting documents and required payments; AND
  - (b) a completed signed Net Energy Metering Interconnection Agreement; AND
  - (c) evidence of the customer's final inspection clearance from the governmental authority having jurisdiction over the Electrical Generation Facility,
- until the earlier of:
- (i) July 1, 2017, or
  - (ii) such time as the Total Rated Generating Capacity used by eligible customer-generators and Qualified Customers on Rate Schedules NEM, NEMV and NEMVMASH exceeds the larger of five (5) percent of PG&E's Aggregate Customer Peak Demand or 2409 megawatts of nameplate generating capacity. Customers meeting these conditions are referred to as "NEM Transition Eligible Customers".

Once this cap has been reached, Schedules NEM, NEMV and NEMVMASH will be closed to new customers. The NEM Transition Provisions below will apply here.

**Total Rated Generating Capacity:** The total rated generating capacity of eligible customer-generators will be calculated as the sum of all of the following:

- 1) For each PV generating facility, PG&E will use the California Energy Commission's (CEC) AC rating; or where the CEC AC rating is not available, PG&E will multiply the inverter AC nameplate rating by 0.86.

(Continued)



**ELECTRIC SCHEDULE NEM2  
NET ENERGY METERING SERVICE**

Sheet 1

**APPLICABILITY:** This net energy-metering schedule pursuant to Decision (D.) 16-01-044 is applicable to a customer who takes service on an applicable time-of-use (TOU) rate schedule<sup>1,2</sup> and who uses a Renewable Electrical Generation Facility (REGF) as defined below that is located on the customer's owned, leased, or rented premises, is interconnected and operates in parallel with PG&E's transmission and distribution systems, and is intended primarily to offset part or all of the customer's own electrical requirements (hereinafter "eligible customer-generator" or "customer"). For a NEM REGF paired with storage, see Special Condition 9.

Notwithstanding the definition of "eligible customer-generator" above, eligible customer generator also includes (i) the California Department of Corrections and Rehabilitation (CDCR) pursuant to Special Condition 7 of this tariff.

Subject to the requirements of Special Condition 6, Load Aggregation to determine the customer's own electrical requirements is permitted. Certain incremental billing and metering costs set forth in this schedule that are related to net energy metering are applicable to Electric Service Providers (ESPs) serving eligible customer-generators.

Pursuant to Decision 22-08-024, the Plug-in Electric Vehicle (PEV) Submetering Protocol is not extended to NEM customers at this time.

(N)  
(N)

This service is not applicable to a Direct Access (DA) customer where the customer's ESP does not offer a net energy metering tariff. In addition, if the tariffs for the customer's ESP do not permit Load Aggregation, as described in Special Condition 6, this option is not available to the DA customer. In addition, if an eligible customer-generator participates in direct transactions with an ESP that does not provide distribution service for the direct transactions, the ESP, and not PG&E, is obligated to provide net energy metering to the customer.

This rate schedule is available to customers that provide PG&E with:

- (a) a completed, signed Net Energy Metering Application and Interconnection Agreement as described in Special Condition 3 including all supporting documents and required payments; AND
- (b) evidence of the customer's final inspection clearance from the governmental authority having jurisdiction over the REGF,

See Special Condition 8 for NEM2 Legacy Provisions.

<sup>1</sup> Customers on Schedules such as ET, ES, and ESR, which have no corresponding TOU Rate, are not required to switch to TOU rates, unless and until such a rate becomes available.

<sup>2</sup> Customers, including those on Load Accounts on NEMA as described in Special Condition 6, switching from Schedule NEM to this NEM2 successor tariff are required to take any applicable TOU rate, beginning at the time the customer switches to the NEM successor tariff, pursuant to D.14-03-041 and D. 16-01-044.

(Continued)



**ELECTRIC RULE NO. 11**  
**DISCONTINUANCE AND RESTORATION OF SERVICE**

Sheet 10

H. UNSAFE APPARATUS OR CONDITION (Cont'd.)

- 2. When relocation or replacement of electric service by PG&E is necessary, the service, including metering facilities owned by either PG&E, the Customer, or a Third Party, will be installed in locations mutually acceptable to PG&E and the Customer or a Third Party, and which conform to current applicable codes, regulations and standards. If no such mutually acceptable location can be agreed upon, PG&E shall discontinue service until the Customer or Third Party reach agreement with PG&E. (T)
- 3. SERVICE RESTORATION
  - a. When the Customer's service has been terminated either because of a determination by PG&E that an unsafe apparatus or condition exists on the premises, or because the customer has threatened to create a hazardous condition, service will not be restored until PG&E determines the Customer's electrical wiring or equipment or the use of either, has been made safe. When service is denied or terminated solely under these sections, the customer may seek remedies before the CPUC. (T)
  - b. When the customer's service has been terminated because of an order of termination issued to PG&E by a governmental agency, service will not be restored until PG&E has received authorization to restore the service from the appropriate governmental agency. It is the customer's responsibility to resolve the matter with the governmental agency.
- 4. PG&E does not assume the responsibility of inspecting or repairing the customer's facilities, appliances or other equipment for receiving or using service, or any part thereof. In the event the customer has knowledge that the service is in any way defective, it is the customer's responsibility to notify PG&E at once. PG&E shall not be liable or responsible for any plumbing, appliances, facilities, or apparatus beyond the point of delivery which it does not own or maintain in accordance with these rules.

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**ELECTRIC RULE NO. 16  
SERVICE EXTENSIONS**

Sheet 5

**B. METERING FACILITIES (Cont'd.)**

2. **NUMBER OF METERS.** Normally only one meter will be installed for a single-family residence or a single non-residential enterprise on a single Premises, except:

- a. When otherwise required or allowed under PG&E's tariff schedules;
- b. At the option of and as determined by PG&E, for its operating convenience, consistent with its engineering design; or,
- c. When required by law or local ordinance;
- d. When additional services are granted by PG&E.

A single meter is required for each single enterprise operating in one building or group of buildings or other development on a single Premises such as, but not limited to, a commercial business, school campus, industrial manufacturer or recreational vehicle park, unless otherwise approved by PG&E. See Rule 18—Supply to Separate Premises and Submetering of Electric Energy for more information.

e. Where electricity is furnished for Electric Vehicle charging, a Customer may use an EV submeter to measure Electric Vehicle charge load, and ancillary Electric Vehicle charge service (i.e., demand response, vehicle-grid integration, etc.). All EV submeters used for submetering purposes must be approved by PG&E and meet the requirements established in Decision 22-08-024, Decision Adopting Plug-in Electric Vehicle Submetering Protocol and Electric Vehicle Supply Equipment Communication Protocols.

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3. **MULTIPLE OCCUPANCY.** In a building with two or more tenants, or where more than one meter is used on the same Premises, the meters normally shall be grouped at one central location, or as otherwise specified by PG&E, and each meter position or socket shall be clearly and permanently marked by Applicant, customer, or owner of the Premises to indicate the particular unit, occupancy, or load supplied by it.

a. **RESIDENTIAL.** For revenue billing, electric service shall be individually metered to every residential unit in a residential building or group of buildings or other development with multiple tenants such as, but not limited to, apartment buildings, mobile home parks, etc., except as may be specified in Rule 18 and applicable rate schedules.

(Continued)











**ELECTRIC RULE NO. 9**  
**RENDERING AND PAYMENT OF BILLS**

Sheet 2

**B. PRO RATA CORRECTION (Cont'd.)**

When one or more regularly scheduled meter readings have been missed, the proration factor for the next regularly scheduled meter reading shall be 1.000 times the number of monthly billing cycles in the period. When an interim bill based on a special reading for a period other than 27 to 33 days has been issued during the interval since the last regularly scheduled meter reading, the proration factor for the regularly scheduled bill shall be the factor derived above, less the proration factor applied to the interim bill. However, where daily equivalents are used, there will be no pro rata correction. Instead, the calculation shall use the number of days in the billing period by the daily equivalent charge.

**C. ESTIMATED BILLS**

If for reasons beyond the meter reading entity's control, the customer's meter cannot be read on the Scheduled Meter Reading Date, or if for any reason accurate usage data are not available, PG&E will bill the customer for estimated consumption during the billing period. Estimated consumption for this purpose will be calculated considering the customer's prior usage, PG&E's experience with other customers of the same class in that area, and the general characteristics of the customer's operations.

When PG&E is unable to access and change the existing meter to the SmartMeter™ system, PG&E may bill the customer for estimated consumption until the meter has been changed.

Unless estimated bills result from inability to access and change the existing meter to the SmartMeter™ system, inaccessible roads, the customer, the customer's agent, other occupant, animal or physical condition of the property preventing access to PG&E's facilities on the customer's premises, other causes within control of the customer, or a natural or man-made disaster such as a fire, earthquake, flood, or severe storms<sup>1</sup>, the issuance of estimated bills shall be considered "billing error" for the purposes of applying Rule 17.1.

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<sup>1</sup> PG&E will temporarily suspend estimating of bills, discontinue billing and/or will prorate minimum delivery charges for customers affected by a disaster as described in the Emergency Consumer Protection Plan definition in Electric Rule 1.

(Continued)



**ELECTRIC RULE NO. 9**  
**RENDERING AND PAYMENT OF BILLS**

Sheet 3

D. READINGS OF SEPARATE METERS NOT COMBINED

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For the purpose of making charges, each meter upon the customer's premises will be considered separately, and the readings of two or more meters will not be combined, except as follows:

1. Where combinations of meter readings are specifically provided for in rate schedules.
2. Where PG&E's operating convenience or necessity shall require the installation of two or more meters upon the customer's premises instead of one meter.
3. Where electricity is furnished for Electric Vehicle charging, a Customer may use an EV submeter to measure Electric Vehicle charge load, and ancillary Electric Vehicle charge service (i.e., demand response, vehicle-grid integration, etc.). All EV submeters used for submetering purposes must be approved by PG&E and meet the requirements established in Decision 22-08-024, Decision Adopting Plug-in Electric Vehicle Submetering Protocol and Electric Vehicle Supply Equipment Communication Protocols.

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Vice President, Regulatory Affairs

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**ELECTRIC RULE NO. 9**  
**RENDERING AND PAYMENT OF BILLS**

Sheet 4

**E. BILLS DUE ON PRESENTATION**

(L)

Bills for electric service are due and payable upon presentation. Payments shall be received at the address imprinted on the payment stub attached to PG&E's bill, a business office of PG&E, or by an authorized agent of PG&E. Payments shall be made using the following options:

1. Cash, check, money order; or
2. Electronic data interchange (EDI) for commercial customers or recurring automatic bank debit (Wherein the customer requests the automatic monthly withdrawal of payment for utility services from a designated checking/banking account); or
3. Debit card, credit card, automatic bank debit the customer initiates (A transfer or transaction fee over and above the PG&E bill amount may be charged to the customer for these services). These services are available through a third-party operated pay-by-phone service, authorized bill payment kiosk, PG&E online, or PG&E downloadable mobile application; or
4. A third party (payor) may elect to make a gift payment on a PG&E customer's energy bill by using the PG&E Gift Payment Form (Form 79-1205).
5. Credit on a customer's account, at the option of PG&E, unless otherwise required by the Commission, may be used for payment of any balances due on the Customer's bill including Community Choice Aggregator, Electric Service Provider, or Core Transport Agent charges, or
6. By other means mutually agreeable to PG&E and the customer.

If a Customer makes only partial payment on a bill, the partial payment received will be allocated among the following components of the bill in proportion to the amount owed on each or as otherwise specified in PG&E tariffs (utility users taxes will be treated in accordance with current utility procedures and are not subject to this section). The bill components include PG&E charges, CTC charges, and other energy-related charges. Customer failure to pay any of the components set forth herein, except residential customer third-party products and services, or as otherwise specified in PG&E tariffs, will be subject to service termination as set forth in Rule 11.

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**ELECTRIC RULE NO. 9**  
**RENDERING AND PAYMENT OF BILLS**

Sheet 5

**F. CLOSING BILL PAYABLE ON PRESENTATION**

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Closing bills are due upon presentation. Before service will be connected or reconnected, PG&E may require payment of all outstanding bills, including deposits, special bills or reconnection fees.

**G. ARREARAGE MANAGEMENT PROGRAM**

Residential customers<sup>1</sup> may be eligible to participate in an Arrearage Management Program (AMP) if they are enrolled in the California Alternate Rates for Energy (CARE) or Family Electric Rate Assistance (FERA) program, have been a customer for a minimum of six months, made at least one on-time payment of their current charges in full within the most recent 24 months, and have a total balance of at least \$500, any of which is 90 days or more in arrears.

Both bundled and unbundled customers may participate.<sup>2</sup> Eligible AMP arrearages include PG&E charges and may include Community Choice Aggregator (CCA) charges and/or Direct Access (DA) provider charges if the CCA or DA provider has elected to participate in the AMP. Other charges such as on-bill financing and other non-energy usage charges are not eligible.

This plan is detailed as follows:

1. A Customer can join the plan in any month of the year. A Customer currently on a payment plan may voluntarily switch to the AMP if they become eligible.
2. Once enrolled, PG&E shall forgive 1/12 of a participating Customer's eligible arrearage after each on-time payment. PG&E will forgive the participating Customer's eligible arrearage (up to \$8,000) after 12 on-time payments. Customers may request at the time of AMP enrollment that the monthly payments be levelized for the 12 months of the program.
3. If a customer receives Low-Income Home Energy Assistance Program assistance, that assistance will be applied to the participant's monthly bills, not the AMP eligible arrearage.

<sup>1</sup> Net-energy metered customers are not currently eligible to participate in the program.

<sup>2</sup> Each third-party service provider must inform PG&E within 45 days of PG&E's AMP proposal submittal date of September 9, 2020, that they elect to participate in the initial roll out of the AMP. If third-party service providers decide to participate at a later date, they should provide PG&E with at least 45 days advance notice.

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**ELECTRIC RULE NO. 9**  
**RENDERING AND PAYMENT OF BILLS**

Sheet 6

G. ARREARAGE MANAGEMENT PROGRAM (Cont'd.)

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- 4. A participating Customer may miss up to two non-sequential payments and remain in the program if they make up the payment on the next billing due date with an on-time payment of both the current and missed payments.
- 5. A customer that misses two sequential payments will be removed from the program.
- 6. If a participating Customer is removed from the program because they do not comply with the program rules or otherwise elect to no longer participate before reaching 12 on-time payments, there will be no impact on the 1/12 debt forgiven for previous on-time AMP payments.
- 7. A participating Customer must wait 12 months to re-enroll in the AMP after they (1) complete the program or (2) leave the program because they are removed or elect to no longer participate. The 12-month waiting period begins the first month after the participating Customer completes the program or leaves the program because they are removed or elect to no longer participate.

H. BUDGET BILLING

Residential and small commercial customers whose energy is supplied and billed by PG&E on Rate Schedules: E-1, E-6, EM, ES, ESR, ET, E-TOU-B, E-TOU-C, E-TOU-D, EM-TOU, EV, EV2, A-1, A-6, B-1, B-6 and BEV-1 and wish to minimize variations in monthly bills, may elect to participate in the Budget Billing plan. Qualifying California Alternate Rates for Energy (CARE) customers taking service on the above rate schedules in conjunction with Schedule D-CARE may also elect to participate in the Budget Billing plan. This plan is detailed as follows:

- 1. A Customer can join the plan in any month of the year. The plan will remain in effect until it is terminated by PG&E or the customer.
- 2. Participation is subject to approval by PG&E.
- 3. Meters will be read and billed at regular intervals.
- 4. Customers will be expected to pay the Budget Billing amount shown due.
- 5. The Budget Billing amount will be one-twelfth of the annual bill as estimated by PG&E, based on the customer's historical billings for the most recent year at the time of the calculation, or, if that is not available, the usage pattern of either the premises comparable customers similarly situated.

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**ELECTRIC RULE NO. 9**  
**RENDERING AND PAYMENT OF BILLS**

Sheet 7

H. BUDGET BILLING (Cont'd.)

- 6. Budget Billing amounts will be reviewed at least three times a year and adjusted no more than three times in a year if required to reduce the likelihood of a large imbalance between actual charges and Budget Billing charges. Customers will be notified on their bill of any change in the Budget Billing amount.
- 7. Participants are subject to removal from the plan and subject to termination of service if a bill containing a prior unpaid Budget Billing amount becomes delinquent as defined in Rule 11.

I. RETURNED CHECK CHARGE

If a payment, tendered in payment of amounts owing PG&E, is not honored by a bank and is returned to PG&E unpaid, PG&E will add to the customer's bill a charge of \$7.00 for processing each returned payment. Where service is subject to discontinuance under Rule 11, the returned payment charge shall be included in the total amount due and payable.

J. FIELD COLLECTION CHARGE

PG&E may require payment of a Field Collection Charge of \$10.00 when an authorized PG&E representative makes a field call to a customer's premises to discontinue electric service in accordance with Rule 11 for nonpayment of a past due billing for service. PG&E may also require payment of the \$10.00 Field Collection Charge when an authorized PG&E representative makes a field call to discontinue electric service for nonpayment of a credit deposit that was requested in accordance with Rule 6.

Pursuant to D.14-06-036, PG&E shall not require any special needs profiled customers that have previously been identified as Medical Baseline, Life Support, or has self-certified that they have a serious illness or condition that could become life threatening if service is disconnected, who receives a field visit to pay a fee associated with that field visit.

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**ELECTRIC RULE NO. 9**  
**RENDERING AND PAYMENT OF BILLS**

Sheet 8

**K. RESIDENTIAL CHANGE OF PARTY**

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When a residential customer commences or terminates service in accordance with Rule 3 or 11, respectively, the energy use assigned to the customer for the purpose of calculating the opening or closing bill shall be determined by: (1) using the recorded meter registration on the date requested by the customer that service commence or terminate, (2) multiplying the average daily use during the billing period (as computed by dividing the total metered use by the number of days in the billing period) times the number of days the customer received service, or (3) actual usage data beginning on the day the customer commences service or ending on the day the customer terminates service.

**L. SUMMARY BILLING**

Summary Billing is a special billing service PG&E provides whereby Customers with service at multiple premises can receive a single bill (Summary Bill) with summarized billing data for these services under one account (Summary Billing Account). A Summary Billing Account summarizing the multiple Service Agreements associated with those services may be established under the following conditions:

1. Participation in the Summary Billing Program is subject to approval by PG&E.
2. Residential and nonresidential Service Agreements may not be summarized under the same Summary Billing Account.
3. Up to one hundred (100) Service Agreements may be summarized under one Summary Billing Account.
4. If the correctness of a Summary Bill or any Service Agreement is questioned or disputed by the Customer, the Customer must request an explanation from PG&E within ten (10) days of receiving the Summary Bill and pay the undisputed amount. If PG&E determines that the billing was incorrect, an adjustment will be applied to the next month's bill. If PG&E and the Customer fail to agree on the amount of a disputed bill, in lieu of paying the disputed amount to PG&E, the Customer may submit the dispute the California Public Utilities Commission in accordance with Rule 10.

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**ELECTRIC RULE NO. 9**  
**RENDERING AND PAYMENT OF BILLS**

Sheet 9

**M. ELECTRONIC BILL PRESENTATION AND PAYMENT**

(L)

The Customer may elect to receive, view, and pay regular bills for service electronically and to no longer receive paper bills and legal and mandated notices. Customers who make an electronic payment through PG&E's payment services may automatically be enrolled in electronic billing after the next regular billing cycle following PG&E's receipt of the payment. Customers may request to end electronic billing at any time and the request would be effective the next billing cycle after PG&E has processed the request. Access to legal and mandated notices shall be included with PG&E's electronic transmittal; except, however, all 7-Day and 48-Hour notices of termination of service for nonpayment shall be delivered by U.S. Mail. Either party may discontinue Electronic Billing upon 30 days prescribed notice.

Customers choosing to use an alternative payment method, such as a bill aggregator or financial institution, may be charged a fee by the third party. All complaints regarding alternative payment methods shall be directed to PG&E.

**N. PRIVACY OF CUSTOMER INFORMATION**

To preserve customer privacy, PG&E will not release confidential information, including financial information, to a third party without the customer's electronic signature or the written consent. Privacy and security of customer usage information will be maintained in accordance with PG&E's Electric Rule 27, Privacy and Security Protections for Energy Usage Data.

**O. BILL CREDITS FOR CUSTOMERS IN THE SAN BRUNO GAS PIPELINE ACCIDENT AREA**

A natural gas accident on a natural gas pipeline occurred in the City of San Bruno on September 9, 2010. In order to continue to mitigate the harm caused by the San Bruno accident and to help return the community back to normalcy, for customers associated with an address that is currently eligible to receive bill relief, PG&E will continue to provide bill credits through the May 2025 billing cycle as described in this Section N. Such bill credits will be at PG&E shareholder expense using a bill relief credit.

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**ELECTRIC RULE NO. 9**  
**RENDERING AND PAYMENT OF BILLS**

Sheet 10

O. BILL CREDITS FOR CUSTOMERS IN THE SAN BRUNO GAS PIPELINE ACCIDENT AREA (Cont'd) (L)

1. Customer Accounts Eligible for Bill Credits:

- i. Customer accounts for each premises located in the affected area of San Bruno will receive bill credits as described in this Section.
- ii. Customer accounts for temporary service to premises located in the affected area during reconstruction will receive bill credits as described in this Section.
- iii. The customer of record whose residence in the affected area was rendered uninhabitable will receive bill credits for the account at a temporary residence as described in this section. PG&E will handle complex or unique temporary residence situations on a case-by-case basis.

Duration of Bill Credits:

Homeowners whose residence in the affected area of San Bruno whose residence was destroyed or rendered uninhabitable as determined by officials of the City of San Bruno will continue to receive bill credits for the February 2019 billing cycle through May 2025 unless the eligible customer no longer qualifies for the San Bruno Relief Program prior to May 2025. Regular billing intervals will then resume.

- 2. For customers who have either returned to or have sold their residence or property during this period, bill credits will end effective on the date of such occurrence with resumption of regular billing to occur with the following month billing cycle.
- 3. Description of Bill Credits: Bill credits will apply to all charges due under the customer's otherwise applicable rate schedule including, but not limited to, usage charges, customer charges, and applicable taxes and fees. Customers in the affected area participating in the Budget Billing will receive bill credits for the amount of the Budget Billing payment. The bill credit amount will be equal to the total charges due during the applicable billing period. Customer accounts enrolled for donations to the REACH program will not be billed for the REACH amount during the duration of bill credits to the account.
- 4. Implementation of Bill Credits: Customer in the affected area generally will not receive bills for billing periods during which they are eligible for bill credits.

P. SMARTMETER™ OPT-OUT – BI-MONTHLY METER READING

For customers participating in the SmartMeter™ Opt-Out Program, PG&E will read the meters on a bi-monthly (every two months) basis. Pursuant to Resolution E-4723, PG&E will implement bi-monthly meter reading as soon as possible but no later than March 1, 2016. PG&E will provide an estimated bill in months when the meter is not read and true-up the bill following the next meter read.

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**PG&E Gas and Electric  
Advice Submittal List  
General Order 96-B, Section IV**

AT&T  
Albion Power Company

Alta Power Group, LLC  
Anderson & Poole

Atlas ReFuel  
BART

Barkovich & Yap, Inc.  
Braun Blaising Smith Wynne, P.C.  
California Cotton Ginners & Growers Assn  
California Energy Commission

California Hub for Energy Efficiency  
Financing

California Alternative Energy and  
Advanced Transportation Financing  
Authority  
California Public Utilities Commission  
Calpine

Cameron-Daniel, P.C.  
Casner, Steve  
Center for Biological Diversity

Chevron Pipeline and Power  
City of Palo Alto

City of San Jose  
Clean Power Research  
Coast Economic Consulting  
Commercial Energy  
Crossborder Energy  
Crown Road Energy, LLC  
Davis Wright Tremaine LLP  
Day Carter Murphy

Dept of General Services  
Don Pickett & Associates, Inc.  
Douglass & Liddell  
Dish Wireless L.L.C.

East Bay Community Energy Ellison  
Schneider & Harris LLP  
Engineers and Scientists of California

GenOn Energy, Inc.  
Goodin, MacBride, Squeri, Schlotz &  
Ritchie

Green Power Institute  
Hanna & Morton  
ICF

iCommLaw  
International Power Technology  
Intertie

Intestate Gas Services, Inc.

Johnston, Kevin  
Kelly Group  
Ken Bohn Consulting  
Keyes & Fox LLP  
Leviton Manufacturing Co., Inc.

Los Angeles County Integrated  
Waste Management Task Force  
MRW & Associates  
Manatt Phelps Phillips  
Marin Energy Authority  
McClintock IP  
McKenzie & Associates

Modesto Irrigation District  
NLine Energy, Inc.  
NRG Solar

OnGrid Solar  
Pacific Gas and Electric Company  
Peninsula Clean Energy

Pioneer Community Energy

Public Advocates Office

Redwood Coast Energy Authority  
Regulatory & Cogeneration Service, Inc.

Resource Innovations

SCD Energy Solutions  
San Diego Gas & Electric Company

SPURR  
San Francisco Water Power and Sewer  
Sempra Utilities

Sierra Telephone Company, Inc.  
Southern California Edison Company  
Southern California Gas Company  
Spark Energy  
Sun Light & Power  
Sunshine Design  
Stoel Rives LLP

Tecogen, Inc.  
TerraVerde Renewable Partners  
Tiger Natural Gas, Inc.

TransCanada  
Utility Cost Management  
Utility Power Solutions  
Water and Energy Consulting Wellhead  
Electric Company  
Western Manufactured Housing  
Communities Association (WMA)  
Yep Energy