

**Advance Preparations to Support Consultant Engaged by CPUC**  
**for Independent Assessment of PG&E's AMI/Billing Systems**

1. See attached scope of assessment. PGE to prepare whatever is needed to support the scope.
2. Establish dedicated PG&E team (from executive level down to operations, across different functions) serving as point of contact.
  - a. Provide Org charts.
3. Provide broad access to documents.
  - a. Deployment logs, process/manuals, design docs, customer files, audit records, etc.
  - b. Including documents already obtained by CPUC in connection with AMI assessment.
4. Establish dedicated facilities for ~6 consultants.
  - a. Appropriate network connections and printing support.
  - b. Building access/badging.
5. Protocols for
  - a. Handling or testing of PG&E equipment or systems
  - b. Access to meters for testing (incoming, already installed, removed)
  - c. Contact with customers
  - d. Access customer records
  - e. Access to secure areas

**PROPOSED SCOPE OF WORK TO**  
**ASSESS PG&E'S AMI SYSTEM (INFRASTRUCTURE & BILLING)**

**BACKGROUND**

PG&E is currently deploying smart meters, pursuant to California Public Utilities Commission (CPUC) decisions D.06-07-027 and D.09-03-026. The deployment began in Kern County with first-generation Distribution Control Systems, Inc. (DCSI) smart meters in 2007 (about 250,000 installed). By the end of 2008, the deployment switched to second-generation Silver Springs Network (SSN) smart meters. To date, more than 1 million smart electric meters have been installed throughout PG&E's service territory (about 5M total electric meters are expected to be installed by 2012, along with 4M gas modules on a separate system). The terms AMI and smart meters here refer only to electric meters.

By fall of 2009, the CPUC had received a number of consumer complaints about "unexpectedly high" bills and allegations that the new smart meters are not recording electric usage accurately. In response to these complaints, the CPUC committed to independently investigate the situation to determine whether PG&E's smart meter system is measuring and billing energy usage correctly.

**PROJECT**

The objective of the project is to independently assess whether PG&E's smart meter system (end-to-end, including meter, communications, meter data management system (MDMS), and billing) has been and is measuring and billing electric usage appropriately. The contractor will also be expected to evaluate PG&E's smart meter system for any safety and security issues. The project will also include an evaluation of PG&E's management of its smart meter deployment in Kern and Fresno counties in terms of following industry best practices.

The CPUC will engage a prime contractor to lead the independent assessment as described below. The exact structure and scope of this project is to be determined based on available expertise and input of the selected contractor(s). Pending further refinement, the contractors are expected to address the following areas of inquiry (the "scope of work"):

1. Is PGE's AMI system measuring and billing electric usage accurately at the current time? Did it do so at all times since the deployment began? The AMI system here refers to:
  - a. metering hardware (including a random sampling of meters, to be defined, installed in the field, meters removed and replaced with smart meters, and an appropriate subset, to be defined, of the meters associated with customer complaints of unexpectedly high bills),
  - b. communication systems and associated software (connecting the meters to the grid and utility billing systems),
  - c. data collection and processing, and

- d. any system involved in producing consumer bills.
2. An analysis of the actual billing and usage history, including bill estimations, re-bills, or other adjustments by PG&E (before and after smart meter installation), of customers filing complaints for the purpose of determining problems in the AMI system related to deployment.
  - a. This will likely require interviewing a sample of customers whose usage patterns are unexplainable using conventional analyses such as comparing usage to weather data.
3. Did the AMI system, including billing, not perform correctly (or as expected) at any time in the past or present with respect to measuring and billing usage accurately?
  - a. Were there issues with performance or deployment practices in the past, particularly involving the earlier DCSI meters in Kern County that may have contributed to customer complaints?
4. Were industry best practices used by PG&E in Kern and Fresno counties with respect to deployment, operation and billing, particularly in regards to PG&E's efforts to maintain quality control, equipment safety, data security and the overall functioning of its AMI system?

At the conclusion of the investigation, the contactor shall file a report summarizing the findings with respect to the above issues. In addition, progress reports are expected at four week intervals summarizing status, any interim findings, and next steps. The contractor may be required to present its findings to the Commission or discuss them with outside organizations and media, in consultation with CPUC staff.

Contractor(s) will be engaged for all of the work associated with the above inquiry. A prime contractor would be selected to lead the project under CPUC oversight. The prime contractor will assemble a team of other sub-contractors (to be reviewed and approved by CPUC), as needed to complete the required assessment.

The contracts with consultants will be funded by PG&E. The CPUC expects to expedite the selection of contractor(s) and initiate project by February. The target for completing items 1 and 2 of the project above is the 1<sup>st</sup> quarter of 2010. The timeline for the remaining items of inquiry is the 2<sup>nd</sup> quarter of 2010. These timeframes are subject to modification pending further discussion with the prime contractor.