



### TAP Kickoff Meeting 10/5/2010

No	Details
	dynamic pricing. It is one of the fundamental questions to consider as part of the overall scope and charter for the group.
2.	<p>We leveraged the SDGE charter in developing the TAP charter for PG&amp;E to outline how we continue and complete the SmartMeter program going forward. SM has had its challenges and we would like to leverage the model of having a key stakeholder advisory panel to discuss and prepare for critical areas remaining in the program.</p> <p>█ briefly introduced and presented key areas for the panel to consider:</p> <ol style="list-style-type: none"> <li>1. Meter deployment: suburban deployment vs. urban area challenges. Even with today's deployment numbers there will be unique and new challenges with San Francisco and other urban areas coming up; special classes of customers for billing; Solar Net metering, etc.</li> <li>2. We have been working with vendors to develop technology solutions for difficult RF connectivity locations in urban areas. Especially given that we use two separate technologies, one for gas and one for electric solutions. Not a unique challenge to PG&amp;E but for RF networks in general so PG&amp;E is leveraging the larger body of knowledge in existence for these types of challenges.</li> <li>3. Need to address in more detail within future meetings in coming weeks to discuss various aspects of each area. We expect to set a rapid set of meetings to get through these various topics and familiarize the board rather quickly.</li> <li>4. SM operations and billing. DRA recommended that practices around handling complaints should be added as a separate scope item in the charter.</li> <li>5. Presentation and delivery of usage information. What are good practices for distributing such data? Development and rollout of in-home channels.</li> <li>6. Transition to time-based rates. Today typically customers are billed as they were in meter-reader era. We need to get input as we transition to interval billed methodology. Need to minimize the impact to the customers from this sort of change. █ proposed that changes should be piloted and tested prior to being proposed. Some discussions may lead more towards how rate changes and rate design policies should be introduced and adopted by CPUC not related to how PG&amp;E executes and implements those policies. The focus is intended to be on how PG&amp;E rolls out changes to the customer population.</li> <li>7. Currently this charter is set for the period of time through 2012 when the SM program completes but this committee could continue past that point. DRA recommended the duration be greater to support SmartMeter enabled programs.</li> <li>8. Customer Privacy. Discuss the requirements and implementation for Legislation and SM proceedings dealing with privacy rules. SB1476 Padilla was chaptered on September 29.</li> <li>9. Data security topics not to address details of cyber security but rather implications of transmitting usage data and availability of data</li> <li>10. Customer outreach plans have evolved form the initial rollout phase and minimal predeployment information and advertising. Discuss how best to address unique areas and challenges as we move forward.</li> <li>11. Future integration with Demand Response and distribution of automation. Current deployment is the initial foundation blocks for future programs yet to be introduced. How do we start to build other technologies on top of foundational elements to address known challenges in the near future?</li> </ol>



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	<p>12. Additional suggestions for topics of interest from TURN. 1. PG&amp;E should produce a document on the plans to address the deficiencies identified in the Structural report. 2. Remote shutoff policies and practices if done judiciously will not be viewed as negative impact but otherwise may result in negative reactions.</p> <p>13. DRA agrees with the items and reiterates the need for PG&amp;E to address the plans for Structure report best practice deficiency findings.</p> <p>14. [REDACTED] also asked how we operate this committee - do we hold quarterly meetings or monthly and could we cover the SC reports in each, could we cover topics such as how contingency has been utilized? Could we cover some of the more critical topics introduced in each Steering Committee deck?</p> <p>15. PG&amp;E brought up a couple of additional potential items: 1. Few customers that have specifically asked not to have SmartMeters™. 2. Specific locations and areas that have been found to be extremely problematic for SmartMeter deployment. How do we manage through this given that we need to have 100% coverage?</p> <p>16. ED and DRA - concerns over TAP providing a joint written annual feedback. If there is a desire to do so, TAP members should individually write back to PG&amp;E. [REDACTED] suggested that it would be advisable to avoid that challenge given what he has observed at SDGE.</p> <p>17. [REDACTED] suggested that it may be advisable to have sections where all parties reach consensus and other areas where individuals represent their organizations views. It was agreed that PG&amp;E would write up consensus points, subject to TAP member review, PG&amp;E will incorporate a section that includes items where consensus was reached and will also incorporate other individual organizations' views as necessary in the annual report.</p> <p>18. Meeting minutes will be circulated in draft form to TAP members to assure that each party's position is accurately represented.</p>
3.	<p>1. Feedback on topics of interest for meetings:</p> <ul style="list-style-type: none"> <li>• Setup a TAP meeting to cover PG&amp;E response and action plan to Structure report and findings</li> <li>• Session on remote connect/disconnect capabilities from a technology perspective. Excluding mechanics of proceedings, etc.</li> <li>• Session on how to communicate transition to interval rate billing and changes between anchor billing, interval billing, etc.</li> <li>• Session on Home Area Network.</li> <li>• Session on current plan to complete deployment and replacing meters.</li> <li>• Session on customer outreach plan</li> </ul> <p>2. PG&amp;E will plan on last week of October for a follow up session to cover Program basics, Program Overview, Statistics of where we are (SC and Semi-Annual reports) plus Structure report response and action plans. We will need more than 1-1/2 hour block of time to cover.</p> <p>3. Going forward, it was suggested to have monthly meetings to cover the suggested areas. DRA recommended quarterly TAP meetings, following this.</p> <p>4. DRA recommended that TAP meetings coordinated with other PG&amp;E SmartMeter meetings, such as the semi-annual reports.</p> <p>5. TURN would not support the TAP meetings being open to public. ED recommends</p>



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No	Details
	having an open and closed session for the meeting format similar to SDGE. Could consider having meeting material open to public but not have public attendance. PG&E will take this input in suggesting a format going forward.

**3. Action Items**

No	Details	Owner	Due
1.	Setup rapid set of meetings for deep dives into the various topics of discussion and bring group up to speed.	█	Monthly
2.	Add to scope an item on practices for dealing with handling customer complaints.	█	10/15/2010
3.	Email █ any additional thoughts on scope	All	10/15/2010
4.	Provide Input on Charter document	All	10/15/2010
5.	Provide additional topics of interest for future sessions	All	10/15/2010
6.	Next TAP session: SM Program statistics & PG&E action plan and response to the Structure Report	█	Oct 25 Wk



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**TAP Meeting Minutes 11/3/2010**

Date	Nov 3, 2010
Time	10:00pm – 12:00pm
Location	Conf Room 2420 – 77 Beale St, San Francisco Conf Call#: 415-972-7028
Topic	TAP second session (SmartMeter™ Program Overview and Current Status)
Attendees	<p><u>PG&amp;E:</u> [REDACTED] (PwC)</p> <p><u>CPUC-ED:</u> [REDACTED]</p> <p><u>CPUC DRA:</u> [REDACTED]</p> <p><u>California Energy Commission:</u> [REDACTED] (Phone)</p> <p><u>EnerNex:</u> [REDACTED] (Phone)</p> <p><u>TURN:</u> [REDACTED]</p> <p><u>Customer Representative:</u> [REDACTED] (Phone)</p>

**1. Agenda**

No	Details
1.	Review and approve minutes of 10/5 meeting and final Charter
2.	SmartMeter™ Program Overview and Current Status: <ol style="list-style-type: none"> <li>SmartMeter™ Q3 highlights</li> <li>Meter Deployment</li> <li>Meter Performance</li> <li>Communicating the SmartMeter™ Value Proposition</li> <li>Enhancing the Customer Experience</li> </ol>
3.	Discuss schedule and content for next meeting

**2. Discussions**

1.	<ol style="list-style-type: none"> <li>Minutes of the 10/5 meeting were distributed with final edits and accepted by the panel.</li> <li>The Charter document was also distributed in its revised version. The only modification requested was to incorporate into the scope that the Best Practices as defined by the Structure Report will not only be reviewed and discussed, but PG&amp;E's action plans to meet them as necessary will also be included in the presentation. The document was accepted as final with that change.</li> </ol>
2.	<p>[REDACTED] presented the deck on "SmartMeter™ Program Overview and Current Status" and the panel members participated with the following questions and discussions:</p> <ol style="list-style-type: none"> <li>On slides 3 and 4, [REDACTED] asked if the difference between 6M SmartMeter™ system billing vs. 7M installed meters relates to the lag due to meter transition and if the transition timeline is still around 3-4 months? [REDACTED] confirmed and also validated that the duration is coming down. PG&amp;E has made improvements as well in communicating to the customers what stage of meter transition they are in to reduce confusion.</li> <li>What is the goal for bringing down the transition time? In general under three</li> </ol>



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- months.
3. [REDACTED] asked if PG&E's use of 4x10 crews is utilized for electric and gas? Has that changed since the beginning of the project? PG&E confirmed that it has generally been that way. For a period prior to the upgrade, there was more of a focus on gas until the upgrade decision. Over the last few months there has been an increase in electric, but overall electric and gas rates are about equal at a maximum of about 12,000 par day combined.
  4. [REDACTED] indicated that his gas meter was installed in Jan 2010, but his electric in July 2010, and he believes he transitioned in September. PG&E could provide him the history on his account specifically if [REDACTED] would like by providing his account information. It was discussed that while crews are equipped to perform both electric and gas at the same visit, there may be various reasons to delay one or the other (physical access issues, and gas maintenance crews being onsite for maintenance and performing the exchange as well are two reasons).
  5. There was a question regarding access to online tools. Once account has transitioned, the customer will have access to online tools. [REDACTED] indicated he did not receive a booklet explaining the transition. [REDACTED] said that some efforts were halted due to the San Bruno incident, but will look into [REDACTED] account.
  6. [REDACTED] suggested that it would be good to be able to take advantage of My Account tools without having to signup for eBills. [REDACTED] will follow up to see if this is already possible and if not get back to the group with a timeline for the current plan if it is already within IT's future deployments.
  7. [REDACTED] asked if extra data is being gathered at time of installation such as GPS, meter location, meter height, obstructions, etc. Some Utility clients are gathering that type of information to better build information data-bases for use in such things as RF studies. PG&E currently gathers GPS data but not other information. PG&E gathered such data through the meter readers during the earlier part of the project and utilized the data for strategic planning for the greater Bay Area deployments.
  8. [REDACTED] asked on slide 5 if we have a feel for volumes of customer refusals. [REDACTED] indicated that it is approximately 9,000 customers to date. Overall there are about 140,000 UTC's but those include instances of technical access difficulties and not just customer refusals. Strategy to date with customer refusals has been not to be aggressive and either reach out through customer support or shift schedule to later date.
  9. The group also asked about the areas on hold. In general PG&E is developing strategies for dealing with various types of situations (Political, San Bruno related holds, and Employee Safety related holds).
  10. The labeling on the map was also discussed as it was related to meter reading offices rather than counties. General strategy for office closures was also presented (Stage I – down to 2-4 meter readers only, Stage II – down to 500 meters, Stage III no meters left). Sacramento has been the only one to reach office closure Stage II.
  11. Transition to SmartMeter billing was discussed again and indicated that PG&E halted transitions for a period to confirm and address questions that had been raised by external parties during that period and has now been working to reduce the backlog.
  12. [REDACTED] asked if Structure had referred to the transition lag issue and [REDACTED] recalled that they had indicated it was due to not building out network ahead of deployment. [REDACTED] indicated that it was an example of a Best Practice that was not accurately evaluated or stated. PG&E agrees with the practice of deploying network ahead of deployment and had already been in compliance with. Structure simply assumed



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	<p>that the issue had to do with Network build out when it was really related to delays in transitioning.</p> <p>13. Customer complaints were discussed and the pattern of escalated volumes decreasing was presented. Media and political climate was discussed as being factors that may have contributed to the peaks in the pattern in general terms and now that the commission report on meter accuracy has been distributed publically the volume of concerns has been decreasing.</p> <p>14. The capabilities timeline on slide 9 was discussed. [REDACTED] suggested that exit interviews may be a useful vehicle to obtain ways for improving SmartRate program effectiveness. [REDACTED] feels that in particular customers having to commit to 3 days of alternate usage may not be the best motivator for continuing with the program. PG&amp;E will discuss with [REDACTED] and PG&amp;E will add SmartRate program to be covered as a deep-dive session with TAP.</p> <p>15. For HAN, [REDACTED] asked if the communications system is capable of supporting the delivery of pricing options and information, as customers should have the right to know pricing information and ability to respond in their own way. [REDACTED] confirmed and indicated that in general there are 3 data points supported with that concept in mind: usage, price, and controls messaging.</p> <p>16. Revised Meter deployment strategy and moving from Meter reading office to a City by City approach was discussed and the activities that are required prior to deployment and their timeline was presented.</p> <p>17. The current plan for Kern redeployment was briefly outlined. The panel agreed that as much as possible, the deployment needs to be complete ahead of warm season or rate changes that are anticipated and 4/30 would be too late. [REDACTED] indicated that the 4/30 date was completion of UTC's and that mass deployment would probably be ahead of that by about a month. In addition [REDACTED] indicated the enhanced approach to monitoring/resolving issues with installed meters to stay ahead of any problems.</p>
<p>3.</p>	<p>Due to the time, the remainder of the slides would have to be reviewed by the panel and any feedback provided via email. During the next meeting, we will cover some of the remaining slides along with the Structure report.</p> <p>The next meeting was tentatively agreed for December 6, or possibly another day that week in December.</p>

3. Action Items

No	Details	Owner	Due
1.	[REDACTED] will follow up regarding SmartMeter booklet / door hanger distribution related to [REDACTED] account	[REDACTED]	Information sent 11/5
2.	[REDACTED] will follow up to see if access to My Account tools is already possible without signing up for eBills and if not get back to the group with a timeline for the current plan if it is already within IT's future deployments.	[REDACTED]	12/6/2010
3.	Add to the list of TAP deep-dive sessions, SmartRate program and discuss utilization of customer Exit interviews.	[REDACTED]	12/6/2010
4.	Schedule next TAP session	[REDACTED]	11/19/2010

# Pacific Gas and Electric Company's SmartMeter™ Testing

November 3, 2009





PG&E SmartMeter™ Testing – DRAFT – For Discussion Purposes Only

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# Agenda

<b>PG&amp;E's Testing Efforts to Date</b>	<b>3</b>
<b>PG&amp;E's Technology Action Plan</b>	<b>8</b>
<b>Independent Third-Party Testing</b>	<b>10</b>





PG&E SmartMeter™ Testing – DRAFT – For Discussion Purposes Only

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# PG&E's SmartMeter™ Testing Efforts to Date



PG&E SmartMeter™ Testing – DRAFT – For Discussion Purposes Only

# SmartMeter™ Meter Accuracy Testing

**Vendor Assembly**

**All Meters**

- 1.8 M meters shipped - 100% tested and passed; 1.7 M meters installed
- Comply with industry standards
- Use certified testing equipment
- PG&E additional onsite QA inspections
- Long history of solid quality manufacturing performance

**Shipping/Loading Dock**

**Systematic Sampling of All Meters**

- Statistically valid samples re-tested at shipping dock
- PG&E receiving dock tests statistically valid batch samples (6,068 meters tested YTD 10/13/09, all batches passed)

**Field**

**As Requested by Customer and PG&E**

- Journeyman technicians certified by the State of California
- Field tests conducted with industry certified equipment
- Defined standard practice for meter accuracy tests
- 729 Field Accuracy Tests conducted system-wide, with 312 meters tested in Bakersfield