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PG&E's SmartMeter<sup>TM</sup> Program Reporting Highlights

415.973 7000

A note about this document: Some terms used in the utility industry may differ from the words' standard context. For example, the word "quarantine" as used in this industry means something that is removed or withheld from service, which is not the same context as its common use.

- PG&E's SmartMeter<sup>TM</sup> program is not only one of the first advanced metering programs in the United States, it is also among the largest technology rollouts ever. It is a \$2.2 billion dollar capital program in which we are replacing a 100-year-old technology, represented in 10 million gas and electric meters across a highly varied statewide geography.
- The highly detailed work papers that we are releasing today span roughly four years and reflect several different stages of this program, including two independent work-streams—IT development and meter deployment. We and our vendors developed the programming to support meter deployment, and during meter deployment started to develop further programming. As a result, you may see discussions of IT issues that arose during deployment. Those IT issues were independent of our deployment efforts.
- These work papers reflect challenges that we experienced over the course of the project. In fact, these documents reflect virtually all issues we have faced over this period and their real time discussion. As such, there are numerous references to "issues," "risks," "defects" and "delays." These are normal events in a project of this scale and we have worked diligently with our vendors for a solution that minimizes their effect on our customers. In fact, references to "risks" are only hypothetical events, items that PG&E proactively recognizes as potential issues and that it monitors to ensure they do not occur.
- Similarly, while you may see "quarantines" or "holds" on groups of meters, in which either our vendors or PG&E discovered a problem, that generally means that only a part of our supply chain may need additional review.
- In addition, these work papers discuss "alarms," which are essentially selfdiagnostics that the meters themselves provide to highlight internal issues within the equipment. These do not necessarily correspond to problems with the meter or bill but provide PG&E with substantial information to address issues before they affect customers.
- In the document that follows, we highlight "sample texts" that describe a sample of issues that PG&E encountered and addressed. Such sample texts or variations of them may appear multiple times throughout the monthly reports.

#### Limited Failure of Silver Springs Network's Network Interface Card ("NIC") Capacitor Component

#### Location in CPUC Report:

Sample Text: "Silver Springs Networks determined that a component in the NIC was failing, causing the meters to cease operating." (March 2010, page 5)

#### Context:

- In March 2010, Silver Springs Network alerted PG&E that a component called a "capacitor" on its "network interface card" or "NIC" had failed in some cases. Silver Springs reported that this was neither a meter-accuracy nor a safety issue, but that the failed capacitor caused a small number of meters to stop working altogether.
- A "network interface card" is a computer hardware component designed to allow computers to communicate over a computer network. A "capacitor" is an electric component on the NIC that stores energy.

- Although PG&E had ordered a significant number of General Electric and Landis + Gyr meters containing this NIC, PG&E had only days earlier begun deploying these meters to customers' homes.
- Consequently, the Company only installed approximately 7,800 such meters, and has closely monitored these meters since. If any of these meters fails, it is replaced immediately.
- As for the remainder of the meters that PG&E purchased, PG&E put approximately 290,000 meters on "hold" until they can be repaired.



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### **Deployment Status Update**

	Budget (Budget / CPI)	2010 Forecast (2010 EAC / CPI)	Scope	Schedule	Resources	Issues	Risks
Deployment: (ITD)							mining of a stand of a
Deployment: YTD – February, 2018		and a second					
Endpoints (2010 YTD)							
Gas Network (2010 YTD)							
Electric Network (2010 YTD)							
Cirallenges Costs & CPIs are direct we	prixstream labor & related costs. Un	it matarial costs not included.	Actions/Status				
<ul> <li>Electric inventory (Single Phase)</li> <li>Electric inventory (Polyphase) require a patch to</li> <li>TOU deployment temporarily deferred</li> </ul>	fix a false alam		<ul> <li>SSN informed PG&amp;E meter types. SSN d operating. SSN isol, case of the failure there are no accuration working. SSN vert PG&amp;E has installed confirming whether a PG&amp;E initially had at meters that PG&amp;E initially had at meters that PG&amp;E initially had at meters that PG&amp;E has installed confirming whether a PG&amp;E initially had at meters that PG&amp;E has installed confirming whether a production lot. SSN hold" status. PG&amp;E production lot status.</li> <li>GE accelerate</li> <li>PG&amp;E has tak by Landis + G</li> <li>Currently he g</li> <li>Factory patched me</li> <li>SM engineering is d.</li> <li>SSN is developing a</li> <li>TOU deployment str 2010</li> </ul>	E that letermined that a compo- ated a non-functioning of cy of stafety issues, asso fied that the capacitor is 7,800 meters that conta all 7,800 are in fact impa- n additional 340,000 series add in inventory were on , through its ongoing pro- now has 290,000 meters. This supply chain issu d produc ion of 50,000 en other measures, incl yr to minimize project in boroject expects to miss t ters have been released eveloping local patch or a schedule for over-the-a rategies are pending est	h anent in the NIC was fail component – a capacitor success confined to a limit is component – a capacitor success confined to a limit is the type of NIC that is acted chimeters in its inventory hold pending SSN's com coluction lot analysis, has rs "on hold" in inventory to e has resulted in he follo new meters uding adjus ing deployment occess for approval air patch application proc- timate for IT effort; deploy	ad experienced fa ng, causing the me on he NIC arcuit education of the meter s ed number of NIC potential y impact . The 340,000 po hope ion of its analy cleared 50,000 G un il further notice owing: ent areas and acco h April 2010 by up ess yment is intended	indures in one of its sters to cease board – as he SN confirmed that imply stops production lots, led, but is tentially impacted ysis of each E meters from "on from SSN on the elerating production to to 10%
Electric Network * Alternate backhaul solutions are required	ni schedule		<ul> <li>Phase 2 solutions of scenarios will be cor</li> <li>Deployment strategi</li> <li>Targeted deploymen from system averag communication chal</li> <li>Oakland and San Fr</li> <li><u>Électric Network</u></li> <li>Plans to conduct a</li> </ul>	pileted by July 2010. es completed for 60% o t strategies for Richmo es. Initiated San Jose e lenges in basement mel rancisco strategy develo pilot test for a satellite b	scenarios completion tal of the Urban and 35% of I nd/Berkeley resulted in a nhanced network design ter locations. opment on target for April nackhaul solution being de	the Suburban Office n ~35% reduction to address module and May respection eveloped with SSN	e the remaining s in UTCs to date e to network vely. V; completion
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#### A Number of Landis + Gyr Meters Have Experienced Data Storage Issues

#### Location in CPUC Report:

Sample text: "Landis + Gyr Focus meters with firmware version 5.33 require a patch" (March 2010, page 10)

#### Context:

- In March 2010, Landis + Gyr notified PG&E that one of its meter-types, under certain circumstances, stopped retaining or transmitting the meter's otherwise-accurately-measured data.
- Landis + Gyr confirmed that there are no accuracy or safety issues associated with this issue.
- Not all of these meters exhibit the problem.
- Of the roughly 240,000 such meters that PG&E purchased, PG&E has deployed approximately 90,000, of which about 11,000 have exhibited this behavior.
- This issue results in an under-billing of impacted customers. PG&E will not seek to back-bill customers for these amounts.

- PG&E stopped deploying the meters.
- PG&E put the remaining approximately 150,000 meters on "hold" in our warehouse.
- PG&E repaired and redeployed 34,000 of the meters.
- The remaining 117,000 meters could not be repaired and were sent back to Landis + Gyr under warranty.



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### **Issues Summary**

ų	Target Resolution Date	lssues	Impact	Owner	Status Summary
1	5/30/2010	SSN issued a temporary hold on electric supply chain due to a meter capacitor problem	Endpoint deployment slow down, hold on electric meter inventory. Meter accuracy, data, or safety not impacted	James Meadows	Approximately 290K meters remaining on hold in inventory, potential for excessive NIC card (capacitor) failure.
2	4/28/2010	Landis & Gyr Ficcus meters with firmware version 5.33 require a patch	Hold on meter inventory until paich application process has been accroved and centiled	James Meadows	These meters have been marked for return to vendor for firmware patch.
з					
4	6/1/2010	TOU deployment deferred to resolve meter connectivity and read recovery process issues	Customer impact due to potential for estimated or delayed bills	James Meadows	TOU deployment strategies to be finalized by 6/1/10.
5	5/31/2010	Increased resources and cost of activities related to fitigation support, independent testing and CPUC responses	Increased costs, delayed schedule and resource contention	Colin McDonagh	SmartMeter team is reviewing cost estimates and impacts of new activities. New costs related to litigation support and independent testing activities will be reported against project Estimate at Complete (EAC) and contingency budgets.
6	6/30/2010	Need to improve timeliness on resolution of operational data collection performance issues	Deployment and benefits realization delays, increased operational costs and potential negative customer impact	William Devereaux	issue resolution meetings with vendors and stakeholders are ongoing to address specific populations of meters that cannot be read consistently. Transitioned meters are being prioritized to minimize customer impact.





#### PG&E Paid Performance Recognition Awards to Its Employees

#### Location in CPUC Report:

Sample text: Appears as a line item entitled "Performance Recognition" (line item appears in each monthly report throughout 2008, beginning in February)

#### Context:

- In late 2007, PG&E switched from its existing mainframe system to a more modular architecture. This transition is a key enabler of the benefits that SmartMeter<sup>TM</sup> is providing to customers.
- The Company transferred to this system to enable it to process the hourly and quarter-hourly interval data that its digital SmartMeters<sup>TM</sup> would generate in contrast to the one read per month that PG&E meter readers historically collected from analog, electromechanical meters.
- PG&E's SmartMeter<sup>™</sup> group worked particularly hard on this very important project.
- During the last few months of 2007, a team of more than 330 employees worked virtually every night and weekend to develop this new platform that would enable our SmartMeter<sup>TM</sup> deployment.
- In recognition of their loyalty and hard work, to compensate them for the extra hours that they had worked, and to thank them for their considerable effort, the Company paid them bonuses on average, less than \$2,600 per person.
- This is a customary practice in most companies.
- No officers received this bonus
- This IT upgrade enabled approximately \$5 million in annual savings related to ongoing IT cost efficiencies
- This issue does not relate to the accuracy or safety of our SmartMeters<sup>TM</sup>.

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## **Appendix – SmartMeter Contingency Reconciliation**

SmartMeter Contingency Reconciliation	Total (\$000)	
1. Business Case Approved Contingency	\$128,773	
Total PDRs Adopted by Steering Committee	\$2,856	
Remaining Contingency Balance	\$125,918	
Workstream Budget Under Allocations (expect some offset	et by future project underruns)	
CC&B Date Move 1	\$58,183	
CC&B Date Move 2	\$22,300	
Technology assessment	\$7,500	
Non-retrofittable gas meters	\$3,315	
SM 1 hardware parallel environment	\$2,997	
Vendor termination fees		
Performance rocognition 2007	\$854	
Use anchor reads to bill in CC&B	\$747	
Labor Day OT Meter Reading	\$630	
Manual review of customer bills	\$596	
IVR Outage (Go Live)	\$573	
TOU Deployment Deferrals	\$448	
CC&B Memory Upgrade	\$416	
Upgrade 4 servers from their current memory	\$386	
PG&E failed to order from tendor		
SmartTrack system	\$150	
MBCDW architectural review	\$126	
Vendor technical support for ongoing testing	\$115	
Other	\$616	
Subtotal PDRs	\$102,508	
Total PDRs	\$105,364	

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#### PG&E Experienced Higher IT Costs at the Start of the Program

#### Location in CPUC Report:

Sample text: "Cost overruns may be up to \$166 million (beyond CPUC authorization) for IT and substation installations" (December 2007, page 3)

#### Context:

- PG&E's SmartMeter<sup>™</sup> launch necessitated considerable IT work in the early years of the program.
- Moving from a nearly 100 year old technology to a modernized, digital system represents a considerable IT challenge.
- Indeed, this program required a tremendous IT commitment to enable actual meter deployment.
- As a result, you will see in the early monthly reports that we initially exceeded our IT budget by roughly \$166 million. However, we have made up those costs through other savings and efficiencies in the project.

- To a certain degree, however, we anticipated this. In the business case that PG&E submitted to the CPUC, the Company submitted a contingency amount that anticipated a strong possibility for IT overruns.
- That contingency, which was roughly \$129 million, was to cover several possible costs, but primarily IT.
- Today, PG&E's SmartMeter<sup>TM</sup> program is on budget. From month to month in any particular report, there may be budget overruns and shortfalls for a variety of reasons, including unanticipated IT costs, but they generally offset against savings from added efficiencies.
- This issue does not relate to the accuracy or safety of our SmartMeters<sup>TM</sup>.



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### Smartivieter<sup>™</sup> Overail Release



**Key Achievements** 

- First SmartMeter sourced bills to be printed 12/10/07.
- As of Thursday, 12/06/07, installed 247,666 meters, 42 substations, and 457 Data Collection Units. EOY projection: 264,000 meters.
- · Benefits realization now at \$830,000, with at least 20,000 activated meters anticipated in December

Challenges (key focus areas)	Actions
EAC: Cost overruns may be up to \$1636 million (beyond CPUC authorization) for IT and substation installations Officies: 1) Actual endpoint installation cost efficiencies - \$35 million 2) Potential use of RF network in certain areas - \$90 million	EAC: 1) Continue pilots test of advanced radio frequency Hex-Electric networks for electric network 2) The Project projects to ultimately draw \$41M of contingency funding
Scope: 1) SmartRate billing release (April 08) scope to be finalized. 2) SmartMeter™ Upgrade project technology undetermined.	<ul> <li>Scope:</li> <li>1) Active with CC&amp;B scope prioritization effort to find release dates for further SmartMeter™ releases</li> <li>2) Upgrade technology being testing; selection expected in 1<sup>st</sup> quarter, 2008</li> </ul>
<u>Schedule:</u> 1)Five meter deployment functions undelivered. 2)Other System Deliverables for benefits realization remained unscheduled	Schedule: 1) Deployment functions to be delivered by end of December 2007.
Risks: 1)Unsecured DCU attachment rights. 2)Risk of production billing not working	<b><u>Risks</u>:</b> 1) DCU site acquisition task force includes new strategy for payments, new pole permits 2) Bills all hand reviewed; sustain minimum number of SM billed accts for a stabilization period of 90 days
Org Readiness: 1) Final look and feel of System Deliverables for mass meter deployment remain unknown.	Org Readiness: 1) Request UAT for specific new processes
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# In Some Cases, SmartMeter<sup>TM</sup> Devices Interfered With Customers' GFI Circuit Breakers

#### Location in CPUC Report:

Sample text: "Pilot test to identify common causes for interference revealed multiple causes." (May 2009, page 9)

#### Context:

- PG&E has seen instances where the Silver Spring Networks Electric SmartMeter<sup>TM</sup> device can interfere with certain types of GFI (ground fault interrupter) circuit breakers in meter panels adjacent to the meters.
- The interference causes the circuit breaker to trip, causing a partial interruption in power to the customer's premise.
- This was first observed by Modesto Irrigation District in its smart meter deployment and generally is indicative of meter panels that do not meet UL standards.
- This issue does not relate to the accuracy or safety of our SmartMeters<sup>TM</sup>.

- PG&E began working with SSN to develop a solution to enable meter-installation despite such proximity between the meter and the panel.
- During this time, our installers bypassed 21,600 customer premises with this proximity issue to avoid any interruption in service.
- We now have developed a solution for this concern, and will resume SmartMeter<sup>TM</sup> deployment to these 21,600 customer premises.





### Issues Summary

#**	Target : Resolution Date	Issues	Impact	Owner	Status Summary
1	6/30/2009	GFT problems identified. with SSN meters.	Cost and schedule impact due to skipped meter installs (+ 12000 skipped between 3/31 + 5/20). Customer impact + once an SSN meter is installed, the GFI is tripping in the customer's breaker panel.	Dan Partridge	Pilot test to identify common causes for interference revealed multiple causes. A possible solution biliser a lower watt meter when certain panel configurations siexist left titled. A field pilot test underway tovient if 1) a lower power radio eliminates false equipment operation, and 2) retwork performance is acceptable when some low power meters are interspersed with normal power meter s. Field process polition guidance on identification and skipping of meters with GF1 problem issueu to minim the schedule and productivity impact.
2	TBD	MDM usage estimation due to inability to recognize outage,	Negative customer impact due to estimated usage being posted to CWP. No impact to billing.	Christopher Vana	Service Request on non-estimation of data gaps during power outages is under review. Discussions on a long term solution are in progress with vendors.
3	5/31/2009	Poor read performance (< expected 96%) on +12.65% of the installed Actara electric meters.	Ability to turn on and read Aclara electric meters.	Vic Gorden	Per SmartMeter Senior Management decision to stand down further deployment of Adara electric technology, enhancements or modifications to the Aclara electric technology to as oke performance issues are not being actively pursued. Aclara electric meters are expected to be replaced by Ag in 10 per Rev. 10 deployment schedule. During the period when FS& Econtinues, to gerate the system, Aclara enhancements or modifications may be considered on a case by case bars, and maybe implemented per PG&E's discretion. Project is considering firmware update to imprive performance on installed Aclara electric meters, is underway.

#### PG&E Ceased Sending Customer Letters in 2007 Before Resuming in 2009

#### Location in CPUC Report:

Sample text: "The requirement of sending letters to customers in advance of impending installs is cancelled, however door-hangers must continue to be installed at each visit." (May 2007, page 11)

#### Context:

- PG&E made this decision at the start of SmartMeter<sup>TM</sup> device installation, at which time approximately 200,000 devices had been installed
- At that time, the company had received no customer inquiries or complaints.

- After PG&E experienced customer service issues in the Summer of 2009, the company substantially modified its customer-facing communications processes including, but not limited to:
  - A detailed welcome kit;
  - Community meetings prior to implementation;
  - Establishment of Answer Centers in areas including Bakersfield, Fresno and Oakland.
- This issue does not relate to the accuracy or safety of our SmartMeters<sup>TM</sup>.





SmartMeter\*

- The requirement of sending letters to customers in advance of impending installs is cancelled, however door-hangers must continue to be used after each visit.
- 2) The SM 1.0 release Go Live date is moved from 5/28 to 9/4.
- 3) Additional funding to IT/CC&B with budget transfer amount of \$21.9 million associated with new release date of 9/4.
- Additional funding to Deployment with budget transfer amount of \$0.4 million associated with new release date of 9/4.
- 5) Additional funding to IT/CC&B with budget transfer amount of \$52.5 million currently in over/under allocation category.
- 6) Additional funding to PMO with budget transfer amount of \$4.7 million currently in over/under allocation category.
- 7) Staffing requests for five positions shown in Appendix.

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#### PG&E's Steering Committee Reports Reflect Periodic Project Delays and Issues Encountered While Developing and Rolling Out the Underlying SmartMeter<sup>TM</sup> Information Technology Capabilities

#### Location in CPUC Report:

Sample Text: "Delay in project completion due to revisions in test plans and approach; requires contingency draw" (October 2009, page 4)

#### Context:

- The IT-development work associated with the implementation of advanced AMI capabilities on the scale that PG&E has undertaken 10 million meters is unprecedented in the industry.
- Implementing this technology on such a massive scale necessitated addition of operational systems to receive, manage, process and analyze the enormous volume of data that SmartMeter<sup>TM</sup> devices provide.
- To put this in perspective, these advanced meters provide hourly- and quarterhourly interval data, whereas we read our traditional electromechanical meters just twice monthly.
- This systems-development work makes this data available to customers via the Internet, enables its use in billing to permit time-based pricing, and facilitates the improvement of the reliability and efficiency of the electric grid.
- Through the course of this project work, PG&E partnered with such key vendors as Oracle, Ecologic Analytics, SSN, and Aclara to design, develop, test and deploy these advanced capabilities.
- The reports represent the SmartMeter Steering Committee's real-time discussions, as reflected in these detailed work papers, regarding the issues that the Company encountered and overcame throughout the development of these systems.
- The systems had to meet high quality and reliability standards before deployment. Rigorous testing plans were developed and continuously enhanced. Like any major IT-initiative in any industry, we closely monitored the progress of these initiatives, and adjusted plans and schedules as appropriate in order to ensure system-deployment with a high level of quality and reliability.
- Through the hard-work and dedication of PG&E employees and technology partners, these issues have consistently been overcome, enabling the current and future delivery of the smart grid's benefits to our customers.



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### 2009 Release Status Update

Status as of 10/8/09

	Funded Budget	EAC / YTD	Scope	Schedule	Resources	Issues	Risks
IT Releases (ITD)							
Release I - Plan/Analyze							
Release J - Plan/Analyze		·					
Release O - Plan/Analyzé							
Release X - Plan/Analyze							
2009 Other Cap. Projs. (IT PMO, 08 carry over, SM Apps, DC)							
2009 Operating expenses (CC&B, Stabilization)							

Challenges	Actions/Status
<ul> <li><u>Release I</u></li> <li>Initial target for Plan/Analyze completion by 12/15/09 to meet June 2010 at risk due to pending scope finalization and resource allocation</li> </ul>	Release I         * Scope walk-through sessions and resource allocations are progressing         Release J         * Scope defined; budget submitted for approval         Release O         * Verbal approval from SMEs received for Recommendations and Roadmap.
<ul> <li>Release X         <ul> <li>Delay in project completion due to revisions in test plans and approach; requires contingency draw</li> <li>UIO 3.9 test confirmed scalability to 2M SIM meter population, test for 3M meter population failed (3.9 certified for 2M meter scalability). UIQ 4.1 will need to be deployed by Q1-2010 to allow system scalability to 3M meters.</li> </ul> </li> <li>Overall         <ul> <li>EA vendor delivery dependencies exist for all IT releases.</li> <li>HAN operating model and finalization of initial HAN pilot scope being finalized.</li> </ul> </li> </ul>	<ul> <li>RFA for Plan/Analyze to be updated by 10/9/09 for PMO review.</li> <li><u>Release X</u></li> <li>PCR identifying revised approach, remedial actions, schedule and cost impact (contingency draw) completed. Completion forecasted to11/20/09 (best case) or 12/31/09 (worst case) against initial target of 11/2/09</li> <li>Project projecting to reach 3M meter deployment threshold in Q1-2010. UIQ 4.1 release meeting project scalability targets available in Nov-09. Plans to test and deploy UIQ 4.1 by Q1-2010 to be developed.</li> <li><u>Future Releases</u></li> <li>Creating integrated SM Upgrade and future release plan by 8/31/09.</li> <li>Add Upgrade scope.</li> </ul>
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to PU Code Section 583

#### PG&E Experienced Communication Difficulties With Its Earlier-Generation Electric SmartMeter Technologies: DCSI and Aclara Electric.

#### Location in CPUC Report:

"Poor read performance (< expected 96%) on  $\sim$  13,674 of the installed Aclara electric meters." (May 2009, page 9)

"High defects relating to DCSI code in TNG 1.6." (September 2007, page 6)

#### Context:

- PG&E found that its earlier-generation electric SmartMeter<sup>™</sup> technologies, both DCSI and Aclara Electric (also known as Hexagram Electric) did not communicate at the high level that we expected.
- For example, our reports reflect "Poor read performance (< expected 96%) on ~ 13,674 of the installed Aclara electric meters." This read performance is lower than the 99+% read rates that we have experienced with our current technology: Silver Springs Network.
- While Aclara Electric's technology provided adequate performance for basic functionality, PG&E discontinued the use of the Aclara Electric technologies and began phasing it out in 2009.
- Moreover, DCSI's initial technology, called power-line carrier ("PLC"), which we selected based on available market technologies in 2005, was in practice more expensive than we initially believed and was not going to be able to provide the advanced functionality that later technologies were able to provide.
- The initial AMI order anticipated this likelihood, requiring PG&E to monitor for such advancement in AMI technologies and evaluate transitioning to those technologies ("referred to as "Technology Monitoring" in the AMI Order). PG&E did exactly that, leading it to propose an upgrade to the new Silver Springs network technology.
- With the approval of PG&E's upgrade-proposal, PG&E began to transition to the SSN-based technology presently in place which is meeting the expectations of advanced AMI capabilities and represent a significant improvement over the previous technologies.





### **Issues Summary**

#	Target Resolution Date	Issues	Impact	Owner	Status Summary
1	6/30/2009	GFI prot/erns identified with SSN meters.	Cost and schedule impact due to skipped meter installs (~ 12000 skipped between 3/31 - 5/20). Customer impact - once an SSN meter is installed, the GFI is tripping in the customer's breaker panel.	Dan Partridge	Pilot test to identify common causes for interference revealed multiple causes. A possible solution to use a lower watt meter when certain panel configurations exist identified. A field pilot test underway to verify if 1) a lower power radio eliminates false equipment operation, and 2) network performance is acceptable when some low power meters are interspersed with normal power meters. Field process providing guidance on identification and skipping of meters with GFI problem issued to minimize schedule and productivity impact.
2	TBD	MDM usage estimation due to inability to recognize outage.	Negative customer impact due to estimated usage being posted to CWP. No impact to billing.	Chrístopher Vana	Service Request on non-estimation of data gaps during power outages is under review. Discussions on a long term solution are in progress with vendors.
3	5/31/2009	Poor read performance (< expected 96%) on -13 674 of the installed Aclara electric meters.	Ability to turn on and read Aclara electric meters.	Vic Gorden	Per SmartMeter Senior Management decision to stand down further deployment of Aclara electric technology, enhancements or modifications to the Aclara electric technology to resolve performance issues are not being actively pursued. Aclara electric meters are expected to be replaced by April '10 per Rev. 10 deployment schedule. During the period when PG&E continues to operate the system, Aclara enhancements or modifications may be considered on a case by case basis, and may be implemented per PG&E's discretion. Project is considering firmware update to improve performance on installed Aclara electric meters. Pilot to test firmware on a small number of meters is underway.



# **Issues** Dashboard

	lssues a	re categorized as CRITICAL and HIGH by the following definitions:
	Critical:	Major threat to success (as measured against
		balance of quality, schedule, and budget).
•	High:	Significant disruption to successful delivery of objectives,

### **Critical and High Impact Issues**

products, and benefits.

Project/Roleane	Request No.:	Priority:	Description:	Request Status:	Created On:	Committed Resolution Date:	Data Issue Resolved:
Smart Meter Project 1.0	<u>32401</u>	High	High Defects relating to DCSI code in TNG 1.6	Assign	June 12, 2007	September 14, 2007	
Smart Meter Project 1.0	<u>33170</u>	High	Analysis and development of the potential fixes for the SM Data Conversion meter install date issue (Defect 2202) will not allow enough time for IT Ops and AMS Operations to fully practice operating	In Progress	September 6, 2007	October 7, 2008	
Smart Meter Project 1.0	<u>31934</u>	High	Agreement with Southern California Edison for Streetlight & Poles in Area 4	Ready for Review	May 24, 2007	December 31, 2007	

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**Critical and High Impact Issues** 



Issues are categorized as CRITICAL and HIGH by the following definitions: <u>Critical:</u> Major threat to success (as measured against balance of quality, schedule, and budget).

High: Significant disruption to successful delivery of objectives, products, and benefits.

Project'Ralesse	Request No.:	Priority:	Description:	Request Status:	Created On:	Committed Resolution Date:	Date Issue Resolved:
Smart Meter Project 1.0	<u>32401</u>	Hìgh	High Defects relating to DCSI code in TNG 1.6	Assign	June 12, 2007	September 14, 2007	
Smart Meter Project 1.0	<u>33170</u>	High	Analysis and development of the potential fixes for the SM Data Conversion meter install date issue (Defect 2202) will not allow enough time for IT Ops and AMS Operations to fully practice operating	In Progress	September 6, 2007	October 7, 2008	
Smart Meter Project 1.0	<u>31934</u>	High	Agreement with Southern California Edison for Streetlight & Poles in Area 4	Ready for Review	May 24, 2007	December 31, 2007	

Data Sm

Comments:

Confidential - Submitted Pursuant to

PU Code Section 583

roe: PPMC Tool 09/17/07 / Reporter: Sob Fredianell / Norm Sweeney of Undate: Weekly

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