Pacific Gas and Electric Company®

Major Project Business Case

MobileConnect Release 3

Gate 1 of 2

Version 1.2

Helen Burt, Executive Sponsor
Shelly Sharp, Business Owner
Redacted

May 4, 2010

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1. Executive Summary

Project Name: MobileConnect Release 3	**Line of Business**: Customer Care, Energy Delivery
Executive Sponsor: Helen Burt	**Business Owner:** Shelly Sharp
Program Manager: Redacted (Customer Care) and Alain Erdozaincy (ISTS)	**Project Manager:** Redacte (ISTS)
Project Start Date: 05/10/2010	**Project Completion Date**: 03/30/2012
Approval Gate: Gate 1 of 2	**Project Number (WBS#):** P.02771

Executive Project Committee (EPC) Action Recommended:

Customer Care recommends that the EPC approve and recommend Utility President approval of an expenditure of $4.8 million for Gate 1 of MobileConnect Release 3 which will deliver new workforce management capabilities and streamlined Energy Delivery (ED) Restoration Troublemen work processes on the Field Automation System (FAS). Gate 1 approval will allow the project to 1) define to-be field work processes and detailed requirements, 2) create technology solution blueprint including the selection of mapping software, and 3) develop deployment strategy and change management plan. Upon completion of this analysis and a cost estimate refresh, Customer Care (CC) will request Gate 2 project approval from the EPC, anticipated in November of 2010.

The total project is currently forecast to cost $34.0M, which includes $5.6 million or 16.7% in contingency. The reason for seeking gated approval from the EPC is to manage project costs and risks with prudence while increasing the confidence for benefits realization. With an updated cost-benefits analysis and defined deployment strategy, Customer Care will request approval for Gate 2 to complete the remainder of the project to build, test and deploy the new capabilities and work processes on FAS to ED Restoration and CC Customer Field Services.

	Gate 1	Gate 2	Total Project
Total Project Cost	$4.8M	$23.6M	$28.4M
Total Contingency		$5.6M	$5.6M
Total Authorized Amount	$4.8M	$29.2	$34M

A) Project Objective Statement

MobileConnect Release 3 delivers new mobile workforce management capabilities and supports additional ED Restoration Troublemen work on the Field Automation System that will reduce overtime and contractor costs through more efficient work dispatch and increased Troublemen work capacity, at a project cost of $34.0 million, including $5.6 million in contingency, from May 2010 through March 2012.

B) Project Strategic Objective

MobileConnect Release 3 extends the MobileConnect Program which was designed to support progressive mobile computing needs across the Utility, moving
- *From* **Limited-Mobile Capabilities State**: Paper intensive; Manual processing; Multiple handoffs; Rework; Inconsistent processes & data;
- *To* **Mobilized Field Worker Capabilities State:** Electronic work orders; Real-time and automated processing; Integration & standardization across organizations, processes and technology.

PG&E had been one of the first utilities to implement field automation system over 14 years ago, but had subsequently lagged behind industry peers who have implemented more extensible technology solutions while PG&E's field automation system reached its end-of-life use. (See Section 2-2.) Release 3 supports PG&E's goal of becoming the nation's leading utility by delivering advanced mobile workforce management capabilities and expanding the use of these capabilities across PG&E work groups. It improves workforce, asset and compliance

management in the following organizations:
- Customer Care (CC) Customer Field Services (CFS)
- Energy Delivery (ED) Restoration
- Electric Operations & Engineering (EO&E) Electric Operations (EO)
- Shared Services (SS) Gas & Electric Meter Manufacturing & Shop Services (GEMMSS)

Implementation of Release 3 achieves the following strategic objectives:

Improve Customer Service
- Improve CAIDI and SAIDI through the use of Global Positioning System (GPS) and mobile mapping technologies for quicker response to outages
- Increase customer satisfaction and safety through the use of GPS technology for quicker response to customer requests and unsafe situations
- Improve customer satisfaction by using barcode scanners for meter badge reading to reduce manual data entry errors that cause rework or delay in customer service and billing

Operational Excellence
- Increase operational efficiency and capacity through automatic dispatching of field workers
- Streamline work processes across organizations and reduce total cost of ownership through leveraging a common mobile technology platform
- Improve asset management by tracking field activities performed on SmartMeters and meter conditions
- Improve field efficiency by providing field workers with mobile access to job-essential information such as maps, job-aids and standard procedures

Regulatory Compliance
- Ensure regulatory and environmental compliance with better visibility to compliance work requests and completions through enhanced reporting capabilities

C) Project Scope

MobileConnect Release 3 will replace manual, paper-intensive, inconsistent work processes with streamlined, automated and integrated solutions on the FAS platform. Field workers will receive and complete work orders on their mobile laptops rather than on pieces of paper or through other undocumented channels that make it challenging for supervisors to monitor work and resources. Today, approximately 20-30% of the total volume of work performed by the 400 ED Restoration Troublemen are dispatched through FAS, with the remaining 70-80% of work requested, scheduled and dispatched manually and via paper. Release 3 will bring additional Troublemen work processes into FAS, aiming to increase the total volume of Troublemen work dispatched through FAS up to 80-90%.

Other key capabilities introduced in Release 3 will benefit the full FAS user community include CC CFS Electric Meter Techs (EMT) and Gas Service Reps (GSR) and ED Restoration Troublemen:
- Access to Maps & Information – Maps, job aids and other job-essential information will be made available on mobile device, eliminating the need for field workers to return to yard to look up & print maps/info for every job
- Automatic Dispatch – FAS software will be configured to automatically schedule and dispatch CC CFS work based on business rules that match work orders (based on work type, priority, location, number/classification of workers needed, etc.) to appropriate resources (based on availability, required skills or training, proximity to work location, etc.)
- Meter Work & Tracking – Field workers will use barcode scanners for reading meter badges to eliminate manual key-in errors frequently caused by "fat-fingers"; they will also capture common meter problems to reduce re-testing when meters are removed from customer site and returned to the meter plant
- Self Service Reporting – Managers will have better visibility to work and resources through FAS reports that will enable them to more effectively manage workgroup productivity and adherence to compliance plans and schedules.

Release 3 implementation entails:

Gate 1 Scope - $4.8 million dollars completed by October 2010.

I. Business Analysis and Technology Solution
- Develop business process designs and high-level requirements
- Create technology solution blueprint
- Selection of mobile mapping software application and barcode scanner solution
- Develop delivery strategy and change management plan
- Hardware expansion to support additional users and transaction volume

Gate 2 Scope – $29.2 million dollars completed by 2012.

II. Application Design & Development
- Application design, development, testing and deployment
- Configuration of FAS to enable auto-dispatch capabilities for scheduled work
- Integration between FAS to CC&B and to SAP to support end-to-end work processes
- Implementation of mobile mapping software
- Training and deployment for end users

III. Change Management
- Stakeholder Analysis – Release 3 will change how the mobile workforce in CC CFS and ED Restoration receive and complete their work, replacing manual, paper processes with automated, streamlined workflows. The project will identify all stakeholders impacted in the end-to-end business processes from work requestors (Customer Service Reps, Compliance, Engineering) to work schedulers and dispatchers (Schedulers, Distribution Operators, Assistant System Operators, Supervisors) to downstream systems and owners requiring notification of work completion or asset updates. Release 3 will work with identified representatives across all impacted workgroups to manage change, communications, training, and user acceptance.
- Stakeholder Management – Keep senior leadership stakeholders engaged through monthly MobileConnect Steering Committee meetings (Line of Business vice presidents), monthly MobileConnect Program Planning meetings (Customer Care, Energy Delivery, ISTS senior directors and directors) on project status and direction, key decisions, issues & risks; Continue bi-monthly updates with IBEW and ESC leadership and engage craft employees when appropriate.
- Quality Management – Obtain sign-off on project requirements, solution design and user acceptance test results from representatives for all impacted resource owners and process owners.
- Training – Develop and deploy training materials for all impacted roles including documentation, web-based training, instructor-led training, tailboard materials, and other job aids as needed.
- Issues & Risks Management – Issues & risks will be logged as soon as identified and reviewed by the project and at the program level on a weekly basis. Project will leverage established escalation process
- Communications – Engage CFS and ED managers & front-line supervisors through MobileConnect newsletter, quarterly extended leadership meetings, and other targeted communication vehicles.

D) Success Criteria

Gate 1 Success Criteria
- Define to-be field work processes and detailed requirements
- Create technology solution blueprint including the selection of mapping software
- Develop deployment strategy and change management plan
- Refresh cost estimate and update benefits analysis
- Obtain buy-in from impacted Lines of Business on benefits

Gate 2 Success Criteria
- Complete authorized scope of work on schedule and within budget.
- Increase the amount of ED Troublemen work dispatched via FAS from the current 20-30% to 80-90% of total Troublemen work volume.
- Successfully implement auto dispatch functionality for scheduled work.
- Successfully consolidate level one outage dispatching to CC CFS W&R Dispatch, creating a single enterprise dispatch organization.
- Successfully deploy barcode scanners to assist field activities requiring meter badge entries.
- Ensure systems and processes changes are fully defined and agreed upon prior to launch, and that appropriate resources are trained to implement the new technology-enabled processes.
- Successfully monitor and capture expected benefits.

E) Issues and Risks:

Organizational and Change management
- Project will significantly change field work processes and introduce new tasks that require a comprehensive change management plan to minimize disruption to operations. The project has the support of ED and CC senior leadership and intends to collaborate closely with front-line supervisors and managers in developing a comprehensive change management plan and deployment strategy that balances the timing and amount of changes to impacted parties.
- Availability of ED and CC SMEs may be constrained during Release 3 project ramp-up due to Release 2 deployment continuing through August 2010. Release 3 project will coordinate closely with Release 2 project manager plus ED and CC leadership to balance resources availabilities and priorities, as well as identify additional SMEs to support Release 3 requirements analysis.
- Project will require coordination with other concurrent initiatives to clearly manage scope, timeline, dependencies, cost, benefits and change management, including SmartMeter EMR Retirement, Warehouse Management System Replacement, E&O Equipment testing Lean Six Sigma, Business Results Team, Radio Refresh Program, AM/FM Program, and Enterprise Time Collection.

Technology
- The current version of FAS software has a limitation on the maximum number of data fields. The increased work processes and forms to be added as part of Release 3 may hasten the need to upgrade to the next version as one alternative, or there may be more work on data model design to re-use existing data fields. In either case, the cost and schedule could be impacted. The project team plans to perform a full analysis of all data requirements in the Analyze stage and request the software vendor to make a formal recommendation on best path forward.

F) Financial Summary ($000)

Total Cost Table ($000s)	Capital	Expense	Total
Prior Years Cost	$0	$114	$114
YTD Cost	$288	$0	$288
Remaining Project Cost	$23,800	$4,191	$27,991
Total Project Contingency	$4,760	$838	$5,598
Total Project Cost	**$28,848**	**$5,143**	**$33,991**

Requested Approval	**$4,750**		**$4,750**
Requested Contingency			**$0**

Incremental Cost Impacts - Post-Project Implementation ($000s)	Capital	Expense	Total
(A) Annual Increase to Ongoing Costs	$0	$1,215	$1,215
(B) Annual Financial Benefits to Ongoing Costs	$0	$5,794	$5,794
Annual Net Impact to Ongoing Costs (A) - (B)	$0	-$4,579	-$4,579

Cost Types ($000s)	2010 Approved Budget		2011 Approved Target		2012 Approved Target	
	Approved	Needed	Approved	Needed	Approved	Needed
Capital	$4,750		$14,274	$10,555	$0	
Capital (Separately Funded)						
Expense			$4,500		$0	
Expense (Non-Earnings)						
Total	$4,750	$0	$18,774	$10,555	$0	$0

Funding Variance Explanation (This section must be completed if project is not fully funded)

> **Gate 1:** Release 3 is fully funded for $4.75M in 2010 and has the capacity to ramp up with many resources rolling off of Release 2 bringing direct experience and knowledge to Release 3. As the project gains traction upon project approval and if there are funds available, Release 3 will make additional budget requests for 2010 through the Technology Oversight Committee. The 2010 work outlined in this business case, however, is fully funded.
>
> **Gate 2:** The original MobileConnect Release 3 scope is funded for $19.024M CAP and $4.5M EXP in the 3-year operating plan. This scope did not include adding Troublemen work onto FAS, which was intended to be part of Release 4. With the Troublemen scope pulled forward into Release 3, there is a need of $10.6M in 2011 to fully fund the implementation of Release 3. This $10.6M need will be met by pulling forward MobileConnect Release 4 funding in the 3-year operating plan. This will be accomplished by outlining this $10.6M adjustment from Release 4 to Release 3 in the MobileConnect section of QBR2 2010. $.25M is approved for 2012.

G) Cost Recovery

> The project costs of $34.0 million, including contingency, is included in the 2011 General Rate Case (GRC) submittal and expected to be recovered via the 2011 General Rate Case (GRC) filing process.

H) NPV Summary

($000s)	Alternative Description	NPV
For analysis of the alternatives considered and cash flows, please refer to section 3-2 NPV Analysis.		
Status Quo	Do not do MobileConnect Release 3 FAS Enhancements and keep MobileConnect FAS functional capabilities at the level provided by Release 2. This is not recommended as it does position PG&E toward becoming the leading utility given the Utility's lagging mobile capabilities. It also does not address safety or environmental concerns.	$0
Proposal Alt. 1	**FAS Enhancements (original Release 3 scope) plus Troublemen Work – Deliver FAS enhancements as well as move more Energy Delivery Troublemen work onto FAS platform as defined in project scope.**	-$584
Alt. 2	Alternative 1 - Deferred 1 Year – Same scope of work as Proposal, deferred 1 year with incremental escalation costs resulting from deferral and unrealized hard benefits. This alternative is not recommended as it delays the critical functionality needed in the field.	-$2,467
Alt. 3	Original R3 Scope-FAS Enhancements – Provides enhancements to FAS for Customer Care CFS. Energy Delivery Troublemen are out of scope for this release. This alternative is not recommended as it does not leverage the MobileConnect investment to expand its capabilities across more workgroups and does not allow PG&E to realize benefits from increased operational efficiency.	-$11,817

I) Implementation Plan Overview:

Description of the Phases and Key Milestones/Deliverables	Target Completion Date
Executive Project Committee Review for Gate 1 Approval	05/04/2010
Job Estimate Authorization	05/28/2010
Plan Stage	06/18/2010
Analyze Stage	09/17/2010
Executive Project Committee Review for Gate 2 Approval	10/05/2010
Design Stage	12/31/2010
Build Stage	05/27/2011
Test Stage	11/18/2011
Deploy Stage	03/30/2012
Stabilization and Project Close-out	03/30/2012

J) Approval History

#	Updates & Changes	Date of Revision	Updated Total Project Cost ($000s)	Previous Business Case $s Requested ($000s)	Change Description
	N/A				

2. Business Case Background

2-1. Project Description

A. Background

The MobileConnect Program was established to support near and longer term mobile computing needs of PG&E's field workforce. In a comparison study of PG&E's mobile capabilities against representative North American Utilities, PG&E clearly lagged behind in many areas such as possessing a clear enterprise mobile strategy, mobile mapping, automated dispatch and resource management. Critical drivers for setting a clear enterprise mobile strategy and governance included:

- End-of-life of mission critical legacy mobile solutions—Field Automation System and Vegetation Management/Pole Test & Treat—surpassed by 3+ years;
- Broad and uncoordinated adoption of various mobile applications across the Utility has resulted in approximately 30 one-off mobile systems; and
- Evolution of mobile workforce software landscape now allows for the adoption of a common platform across functional areas.

The MobileConnect Program developed a strategy and phased execution roadmap to address these challenges and turn them into opportunities for re-positioning PG&E on the path toward becoming the nation's leading Utility. It adopted a building block approach to modernize the mobility infrastructure, upgrade mobile devices, introduce new capabilities, and expand deployment across PG&E's mobile workforce.
:

Release 1 – Strategy, Platform and PT&T Replacement, Q4 2009

- Deployment of the MobileConnect Platform, comprised of communications infrastructure, software applications and common computing device management. This effort began in July 2008 and was completed in October 2009.
- The Pole Test & Treat (PT&T) mobile solution replacement, including applications interfaces and field hardware, is the first application to be deployed on the new MobileConnect Platform. This effort began in July 2008 and was completed in November 2009.

Release 2 – FAS Replacement, Q1 - Q3 2010

- Release 2 is intended to maintain existing dispatch and mobile capabilities currently provided by FAS. This initiative will upgrade the FAS on a "like-for-like" basis with limited incremental functionality to the CC CFS and ED Restoration teams.
- Business continuity is the primary driver for Release 2, since the current FAS contributes approximately $50-81M in annual benefits. The original business benefits associated with Release 2 included: field force capacity gains ($3M), fleet savings ($0.4 - 1.4M) and dispatch productivity savings ($3.1 - 5M). Because of business continuity concerns due to the high hardware failure rate of current equipment, the functionality that drives these benefits was deferred to Release 3 to allow for an accelerated Release 2 implementation schedule.

Release 3 – FAS Enhancement
The original scope of MobileConnect Release 3 anticipated additional enhancements to the upgraded FAS platform, including:

- New software functionality that will enhance work dispatch through optimized scheduling, routing and mobile mapping capabilities;
- Improved meter badge reading and meter problem tracking processes to reduce back office and field rework, and meter re-testing

Additionally, the Program team believed there are clear advantages to expanding the use of the modernized

MobileConnect platform. With more than 70% of existing ED Restoration Troublemen work currently not routed through FAS, this workgroup held great potential to reap business benefits through operational efficiency gains and improved customer satisfaction, similar to that achieved by the CC CFS organization. Release 3 added the objective to

- Bring the total volume of Troublemen work scheduled and dispatched electronically via FAS up to 80-90% (from the current 20-30%), replacing manual and paper-intensive processes and standardizing work processes across divisions

Releases 4 & Release 5
- Per the original strategy roadmap, Release 4 and Release 5 are intended to continue building upon the MobileConnect platform to support Transmission & Distribution short-cycle (work that is completed in a short timeframe, such as outages or customer-generated work) and long-cycle work (work that is performed over a longer duration, such as construction projects for a new housing development).

B. Project Benefits Description

Benefits Case

MobileConnect Release 3 yields a total of $5.8M in annual hard savings based on conservative estimates of workforce capacity gains, increased efficiency, and reductions in cost that result from the implementation of scope as described. The workforce capacity savings will effectively reduce baseline costs by reducing overtime labor (currently 40% of total field work) and 3rd party contractor work (hard savings). Other efficiency gains will likely be reinvested to complete additional work (soft savings). Furthermore, Release 3 is fully in line with the Utility's strategic objectives to improve reliability, compliance, customer service and operational excellence.

The hard savings have been reviewed with senior executives from the Customer Care and Energy Delivery organizations. In conducting an updated cost-benefits analysis at the end of Gate 1, the project expects to increase the confidence for attaining the currently uncommitted soft savings which is calculated to be $8.9M NPV.

Hard Savings

Annual Savings	ED	CC	Total
Create Workforce Capacity	$5,232K		$5,232K
Increase Efficiency		$450K	$450K
Reduce Material Cost	$112K		$112K
Total Savings			**$5,794K**

- **Create Workforce Capacity:** Streamlining, automating and integrating the high-volume Troublemen work processes—Equipment Testing, Switching, and EC Notification—will result in efficiency gains *(likely scenario)*:
  o Restoration Troublemen $3.59M or 23,055 hours, annual savings
  o ED Clerks: $1.64M or 16,760 hours, annual savings
  The workforce capacity savings will effectively reduce baseline costs by reducing overtime labor (currently 40% of total field work) and 3rd party contractor work (hard savings).

- **Reduced Cost:** Automating the schedule and dispatch of Troublemen field work will reduce costs in:
  o Paper and reprographics costs: $72.5K, annual savings
  o Reduced work procedure errors (WPE): $10K, annual savings
  o Averted overhauls: $30K, annual savings

- **Increase Efficiency:** Using GPS map-based dispatch application will allow dispatchers to select the closest field employee to the work location, reducing travel time, thereby increasing productive time

and avoiding overtime hours.

- o CFS Dispatch efficiency: $450K, annual savings

Soft Savings

The corresponding Economic Analysis (EASOP) to this Business Case includes only hard savings as described above. The project team also modeled the possible scenario of attaining the "best scenario" for Troublemen efficiency gains (instead of the "likely scenario") and of capturing reduction of meter retesting costs. While Line of Business owners have not committed to these savings, the NPV analysis is helpful in depicting the potential return on investment for comparative purposes. **The NPV with these adjustments is $8.9M**.

- **Create Workforce Capacity:** Streamlining, automating and integrating the high-volume Troublemen work processes (Equipment Testing, Switching, and EC Notification) will result in efficiency gains *(best scenario)*:
  - o Restoration Troublemen $5.97M or 37,898 hours, annual savings
  - o ED Clerks: $1.46M or 12,875 hours, annual savings

  The workforce capacity savings will effectively reduce baseline costs by reducing overtime labor (currently 40% of total field work) and 3rd party contractor work (hard savings).
- **Reduce Rework:** Implementing default "pick list" options for field employees to describe meter inventory conditions will enable accurate meter problem tracking. Approximately 50% of all gas and electric meters and 30% of meter gas modules are returned to the meter plant, GEMMSS, without the required documentation which results in multiple handling and testing of the assets. Reduction of meter retesting yields $363K in annual savings.

Additional soft savings include hard savings that are already claimed by other organizations/initiatives but are enabled directly by the implementation of Release 3; these have not been included Release 3 business case to avoid double-counting. Other soft savings include cost avoidance and non-quantitative benefits.

- **Operational Efficiency - Routing:** Currently, CFS field personnel determine their own routes for work assigned. Analysis suggests that intelligent computer routing could save up to 29% in drive time, yielding approximately $3M in annual field capacity. These estimates were validated by entering historical job routing data into Click dispatch software to produce an optimized routing sequence. This has not been identified as a hard benefit to avoid double counting with CC CFS Operational Efficiency.
- **Create Workforce Capacity:** Moving outage dispatch during level 1conditions to CC CFS W&R Dispatch frees up 17 Associate System Operator positions in Electric Operations, or approximately $1.5-$1.9M. These 17 FTEs are claimed by Electric Operations to be utilized to fill Distribution Operator vacancies due to attrition in Electric Operations.
- **Reduce Rework:** Release 3 will provide the capability to barcode scan meter numbers into the field mobile device on a real-time basis, eliminating the high volume of back-office rework and potential job site revisits required to correct errors caused by incorrect meter badge data entries. This benefit was quantified to be $491K to $1.1M annually and is being claimed as a hard saving by and for the Customer Care - Meter to Cash (MTC) organization.
- **Cost Avoidance:** Decrease the chances of CPUC fine/penalty for bad data or inadequate data retention by implementing the re-designed Equipment Testing business process. This is recognized as low risk (2% possibility). The implementation of the EC Notification business process also reduces CPUC record liability and follow-ups.
- **Operational Efficiency:** Increased Troublemen efficiencies and improved visibility to Troublemen work through standardized work processes and mobile technologies will enable Troublemen Supervisors to better monitor productivity and allow Troublemen to perform more company generated work.

Strategic Benefits

- **Compliance:** Increasing capacity within CFS and Restoration will enable increased adherence to compliance plans and schedules.
- **Enhanced Ability to Deploy Future Mobile Solutions:** A goal of the MobileConnect Program is

to deploy a scalable, secure mobile computing infrastructure. Release 3 continues to build upon Releases 1 and 2 to enhance common mobile computing utilities that allow PG&E to effectively launch mobility solutions across other lines of business in the future.

- **Reliability:** Implementation of Release 3 will improve CAIDI and SAIDI metrics by improving response times. Using GPS technology, dispatchers can assign outage work to the closest field resources, improving response times and reducing travel distance.
- **Customer Safety:** Using GPS technology dispatchers can assign gas emergency response work to the closest field resources, improving response times and customer satisfaction.-
- **Customer Satisfaction:** More effective matching of resource skill sets and material requirements to job types will lead to reduced field rework, reduced job site visits and increased customer satisfaction.
- **Employee Engagement:** More effective matching of resource skill sets to job types, increased FAS usability, and access to information in support of job performance will improve employee engagement and work satisfaction.

Benefits Tracking / Realization

Baseline and target metrics to measure workforce productivity and efficiency gains have been identified along with metric owners. (See Section 4-2.) In standardizing work dispatch through a single system, it becomes possible to collect more comprehensive and accurate data on organizational performance. The project will create reports based on these metrics and performance tracking will be incorporated as part of organizational operations.

C. Detailed Scope

The scope of Release 3 is detailed below. Gate 1 includes the Plan and Analysis activities of the project scope, while Gate 2 entails Design, Development, Testing and Deployment. Project management and change management will occur throughout the project.

- **Dispatch Additional Troublemen Work through FAS**
    - Analyze and design to-be business process flow and define requirements

    - Configure FAS and develop interfaces to support new business processes

    - Build integration between SAP and FAS to support new business processes

    - Conduct user acceptance testing and training

        o Additional work types in scope include: Equipment Testing, Switching – Planned & Emergency, Electric Compliance (EC) Notifications, Ad-Hoc Requests, SmartMeter DCU Maintenance, GO 165 Patrols, Program-Driven Special Project Work, SCADA
        o Point Solutions for work types already in FAS: Outages, New Business Work, Disconnect/Reconnect
        o Not in Scope: Work performed by Troublemen that remains outside of FAS: Mark & Locate, Trench Inspections; Work performed by Troublemen already in FAS but not impacted as part of R3: Streetlight Out, RTVI
- **Auto Dispatch and Workforce Availability**
    - Update FAS and CC&B with new job codes

    - Configure FAS with business rules for work scheduling and dispatch based on work type and resource skill set and availability
    - Configure FAS with business rules to date and automatically cancel specific jobs based on expiration date
    - Coordinate with EO&E Electric Operations to define new process for moving level 1 outage dispatch to CC CFS W&R Dispatch
- **Mobile Access to Maps**

Define mobile mapping requirements from CC CFS Gas Service Reps, Electric Meter Techs, ED Restoration Troublemen
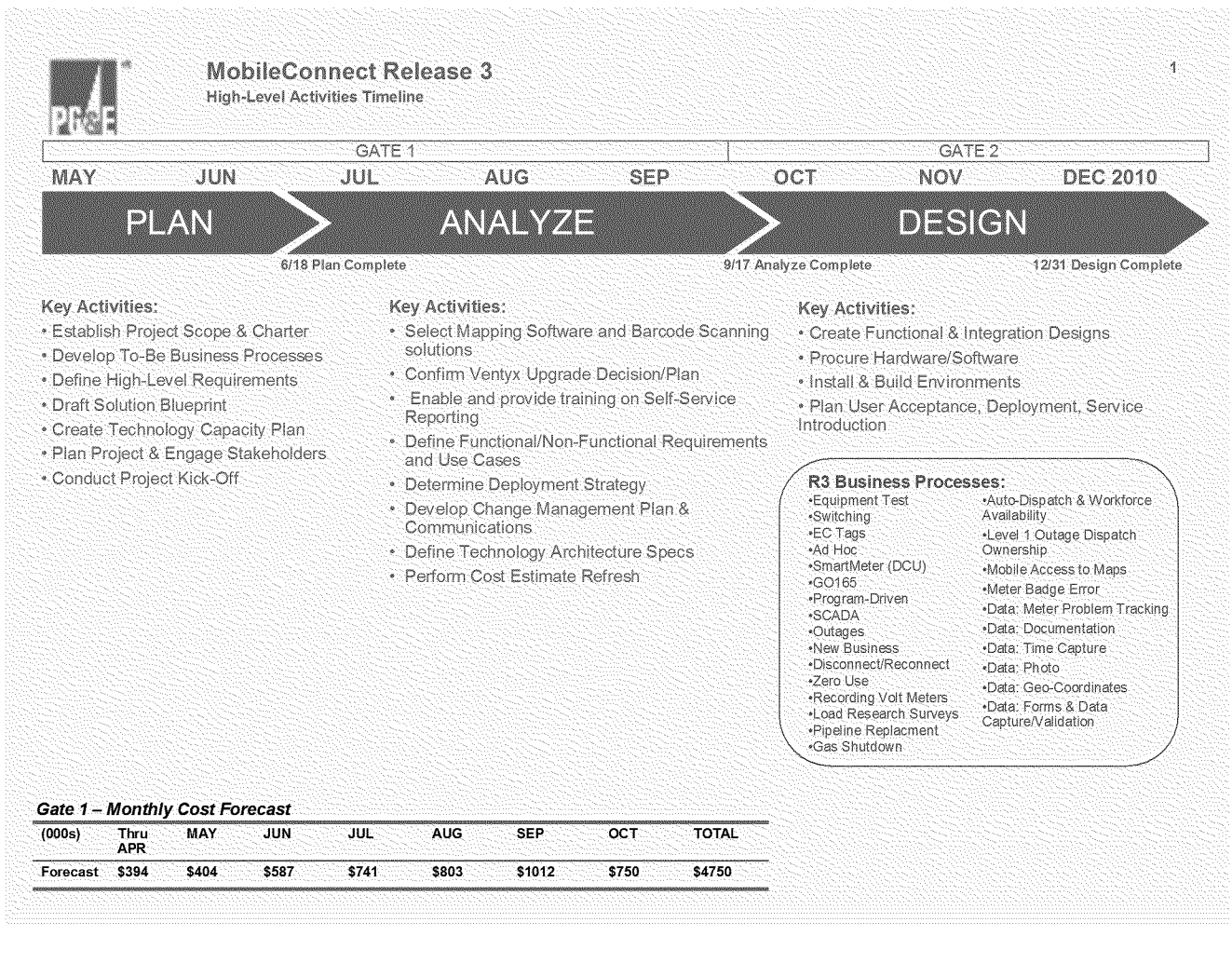
- Work with ISTS Strategic Planning & Architecture group to evaluate and select mapping solution that meets Release 3 and enterprise requirements

- Procure mapping software, if required

- Implement mapping software and required hardware

- **Meter Work and Tracking**
  - Define requirements and new process to incorporate barcode scanning and common meter conditions
  - Evaluate and procure scanners
  - Integrate scanners with FAS and mobile devices
  - Test and deploy to field workers

- **Self-Service Reporting**
  - Identify super-users from CC and ED and analyze reporting requirements
  - Configure Business Objects reporting tool to make data available and set up access profiles
  - Provide training and deploy to super-users

- **Change Management**
  - Identify Change Management lead
  - Stakeholder Analysis – Release 3 will change how the mobile workforce in CC CFS and ED Restoration receive and complete their work, replacing manual, paper processes with automated, streamlined workflows. The project will identify all stakeholders impacted in the end-to-end business processes from work requestors (Customer Service Reps, Compliance, Engineering) to work schedulers and dispatchers (Schedulers, Distribution Operators, Assistant System Operators, Supervisors) to downstream systems and owners requiring notification of work completion or asset updates. Release 3 will work with identified representatives across all impacted workgroups to manage change, communications, training, and user acceptance.
  - Stakeholder Management – Keep senior leadership stakeholders engaged through monthly MobileConnect Steering Committee meetings (Line of Business vice presidents), monthly MobileConnect Program Planning meetings (Customer Care, Energy Delivery, ISTS senior directors and directors) on project status and direction, key decisions, issues & risks; Continue bi-monthly updates with IBEW and ESC leadership and engage craft employees when appropriate.
  - Quality Management – Obtain sign-off on project requirements, solution design and user acceptance test results from representatives for all impacted resource owners and process owners.
  - Training – Develop and deploy training materials for all impacted roles including documentation, web-based training, instructor-led training, tailboard materials, and other job aids as needed.
  - Issues & Risks Management – Issues & risks will be logged as soon as identified and reviewed by the project and at the program level on a weekly basis. Project will leverage established escalation process
  - Communications – Engage CFS and ED managers & front-line supervisors through MobileConnect newsletter, quarterly extended leadership meetings, and other targeted

communication vehicles.

D. Stage Gated Funding Proposal

An Advanced Authorization of $500K was approved in December 2009 to define high-level scope and requirements, schedule, cost and benefits to support the development of the MobileConnect Release 3 business case.

The reason for seeking gated approval from the EPC is to manage project costs and risks with prudence while increasing the confidence for benefits realization. Gate 1 will allow the project to perform detailed planning of scope, schedule, and change management while tightening full project costs with thorough analysis of requirements. With a strengthened cost-benefit analysis and delivery strategy, Gate 2 will complete the remainder of the project to design, build, test and deploy the new capabilities and work processes on FAS to ED Restoration and CC Customer Field Services.

MobileConnect Release 3
High-Level Activities Timeline   1

GATE 1					GATE 2		
MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC 2010

PLAN > **ANALYZE** > **DESIGN**

6/18 Plan Complete   9/17 Analyze Complete   12/31 Design Complete

Key Activities:
* Establish Project Scope & Charter
* Develop To-Be Business Processes
* Define High-Level Requirements
* Draft Solution Blueprint
* Create Technology Capacity Plan
* Plan Project & Engage Stakeholders
* Conduct Project Kick-Off

Key Activities:
* Select Mapping Software and Barcode Scanning solutions
* Confirm Ventyx Upgrade Decision/Plan
* Enable and provide training on Self-Service Reporting
* Define Functional/Non-Functional Requirements and Use Cases
* Determine Deployment Strategy
* Develop Change Management Plan & Communications
* Define Technology Architecture Specs
* Perform Cost Estimate Refresh

Key Activities:
* Create Functional & Integration Designs
* Procure Hardware/Software
* Install & Build Environments
* Plan User Acceptance, Deployment, Service Introduction

R3 Business Processes:

•Equipment Test	•Auto-Dispatch & Workforce Availability
•Switching	
•EC Tags	•Level 1 Outage Dispatch Ownership
•Ad Hoc	
•SmartMeter (DCU)	•Mobile Access to Maps
•GO165	•Meter Badge Error
•Program-Driven	•Data: Meter Problem Tracking
•SCADA	•Data: Documentation
•Outages	•Data: Time Capture
•New Business	•Data: Photo
•Disconnect/Reconnect	•Data: Geo-Coordinates
•Zero Use	•Data: Forms & Data Capture/Validation
•Recording Volt Meters	
•Load Research Surveys	
•Pipeline Replacment	
•Gas Shutdown	

Gate 1 – Monthly Cost Forecast

(000s)	Thru APR	MAY	JUN	JUL	AUG	SEP	OCT	TOTAL
Forecast	$394	$404	$587	$741	$803	$1012	$750	$4750

2-2. Executive Level Diagram

How Does PG&E Compare to Utility Industry Leaders?

A comparison of PG&E's mobile capabilities against representative North American Utilities offers perspective on the magnitude of the potential mobile opportunities.

	Enterprise Mobile Strategy	Electronic Work Order mgmt.	Automated Dispatch & Resource Mgmt.	Real-time Access to Back-Office Info	Mobile Materials Mgmt.	Performance Measurement	GPS / AVL / Street Level Routing	Mobile Mapping / GIS	Automated Time Card Capture	Telematics	Electronic Document mgmt.	Contractor Enablement	Software Distribution
Consumers Energy	●	●	◕	◑	◕	●	●	◕	◕	●	●	◑	●
Duke Energy	◕	◕	●	◑	○	●	◐	●	○	○	○	●	●
National Grid – US	◕	◕	◕	◑	○	●	●	◑	◑	◐	◑	○	●
Nicor	●	◕	●	◑	◑	◕	●	◑	◕	○	◑	●	●
PSE&G	●	●	●	No Data Available	◐	●	◑	◑	◕	○	No Data Available	●	●
PG&E	◐	◑	◑	◐	◐	◑	○	○	◐	○	○	◑	○

● Leading Edge Capability   ◕ Advanced Capability   ◑ Intermediate Capability   ◐ Minimal Capability   ○ No Known Capability

Source: Accenture, Industry Analysis, PG&E Interviews

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Today vs. "Can-Be" Mobile Capabilities

Non-Mobile Field Worker
Paper Intensive, Manual Processing, Multiple Handoffs, Inconsistent Processes & Data

Work Order Management
- **Paper** Work Packets
- **Paper** Completion
- Clerical Data Entry

Dispatch & Resource Mgmt
- **Paper** Printed Out
- Supervisor/ Self Routed
- **Unknown** Vehicle Locations

Advanced Technologies
- **Not Available**

Access to Information
- Call in Requests for Info
- **Drive** Back to Office for Additional Information

Timecard Capture
- Pen and Paper
- **Clerical** Data Entry

Materials Mgmt
- Daily Self Truck Stock
- **Paper** Records of Materials

Telematics
- **Not Available**

Contractor Enablement
- Contractor Self Managed
- Contractor Progress **Unknown**

Document Mgmt
- **Paper**-based
- **Drive** Back to Office for Additional Documents

Mapping/ GIS
- **Paper** Print Outs
- Updates Made on **Paper**
- Drive Back to Office for Additional Maps

GPS/ AVL/ Street Level Routing
- MapQuest Look Ups
- **Self** Routed

Field Performance Measurement
- **Clerical** Data Entry

Mobilized Field Worker
Electronic Work Orders, Real-time/Automated Processing, Integration & Standardization Across Orgs/ Process/ Technology

Work Order Management
- **Electronic** Work Packets
- **Electronic** Completion
- Field Data Entry

Dispatch & Resource Mgmt
- **Automated** Dispatch
- Work Order and Field Status Updates
- Map Based Dispatch

Advanced Technologies
- **Mobile** Printing
- Signature **Capture**
- Photo/ Video

Access to Information
- **Real-time** field access to customer, premise, billing, & asset info

Timecard Capture
- **Automated**
- Validated

Materials Mgmt
- Order materials **from field**
- Auto record materials used

Telematics
- **Automated** Vehicle Data Capture/ Management

Contractor Enablement
- Contractor Dispatch
- Work Order Mgmt
- **Mutual Aid** Crews

Electronic Document Mgmt
- Drawings/ Schematics
- Standards
- Policies & Procedures

Mobile Mapping/ GIS
- **Red Lining**/ As Built Info
- Asset Info
- Maps

GPS/ AVL/ Street Level Routing
- **Vehicle Tracking**
- Driving Directions

Field Performance Measurement
- **Automatic** data collection
- On demand metrics

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3. Financial Analysis

3-1. Financial Analysis

A. 5 Year Cost Forecast

By Cost Types:

Annual Cost Forecast ($000)	Prior Years	2010	2011	2012	2013	2014	Total
Project Cost							
Capital	$ -	$ 4,750	$ 19,231	$ 107	$ -	$ -	$ 24,088
Expense	$ 114.19	$ -	$ 4,045	$ 146	$ -	$ -	$ 4,305
Total Project Cost	$ 114.19	$ 4,750	$ 23,276	$ 252	$ -	$ -	$ 28,393
Ongoing O&M Cost							
Capital	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Expense	$ -	$ -	$ 280	$ 1,191	$ 1,215	$ 1,215	$ 9,978
Total Ongoing O&M Cost	$ -	$ -	$ 280	$ 1,191	$ 1,215	$ 1,215	$ 9,978
Total Cost (Expected)	$ 114.19	$ 4,750	$ 23,556	$ 1,444	$ 1,215	$ 1,215	$ 38,371
Project Cost (Best)							
Capital	$ -	$ 4,527	$ 18,269	$ 101	$ -	$ -	$ 22,898
Expense	$ 114	$ -	$ 3,843	$ 139	$ -	$ -	$ 4,095
Total Project Cost	$ 114	$ 4,527	$ 22,112	$ 240	$ -	$ -	$ 26,993
Ongoing O&M Cost (Best)							
Capital	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Expense	$ -	$ -	$ 266	$ 1,132	$ 1,155	$ 1,155	$ 9,480
Total Ongoing O&M Cost	$ -	$ -	$ 266	$ 1,132	$ 1,155	$ 1,155	$ 9,480
Total Cost (Best)	$ 114	$ 4,527	$ 22,378	$ 1,372	$ 1,155	$ 1,155	$ 36,473
Project Cost (Worst)							
Capital	$ -	$ 5,643	$ 23,077	$ 128	$ -	$ -	$ 28,848
Expense	$ 114	$ -	$ 4,854	$ 175	$ -	$ -	$ 5,143
Total Project Cost	$ 114	$ 5,643	$ 27,931	$ 303	$ -	$ -	$ 33,991
Ongoing O&M Cost (Worst)							
Capital	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Expense	$ -	$ -	$ 336	$ 1,429	$ 1,458	$ 1,458	$ 11,974
Total Ongoing O&M Cost	$ -	$ -	$ 336	$ 1,429	$ 1,458	$ 1,458	$ 11,974
Total Cost (Worst)	$ 114	$ 5,643	$ 28,267	$ 1,732	$ 1,458	$ 1,458	$ 45,965
Project Contingency		$ 892	$ 4,655	$ 50	$ -	$ -	$ 5,598
% of Total Cost		15.8%	16.7%	16.7%			0.0%

B. Cost Assumptions

> **Project Cost -- Expected Case Scenario of Proposal**
>
> The Expected Case is based upon the ISTS Demand Estimate, which takes the nature and complexity of IT application development activities and translates activities to labor hours and costs. From there, infrastructure costs (hardware and installation costs) and PG&E overhead costs were added.
>
> **Project Cost**
> - Labor is based on PG&E and Contractor Blended Rates – 17,123 Total Work Days.
>   1. PG&E ISTS – 8,080 work days at $906/ day
>   2. PG&E Business – 5,580 work days at $995/ day
>   3. ISTS Contractor – 3,463 work days at $1,403/ day
> - Program management overhead $100K/ month or $1.95M total. - Based on R1 and R2 historical data from 2007 – March 2010.
> - Contingency 20% - R2 lessons learned are factored into the R3 business case and the scope for R3 is well defined, therefore 20% speaks to this confidence coupled with the nature and complexity of R3 activities.
> - Materials – Based on PG&E ISTS infrastructure subject matter expert estimates

$1.9M on purchase and installation of servers to support the software increase of the application enhancements
- Material burden is 1% or $19K, based on 2010 planning guidance.
- A&G is 14.4%, based on 2010 planning guidance
- AFUDC $1,050K based on cost, schedule, and average AFUDC rate
    1. ISTS Application – Start Date 4/1/2010 and Operative Date 6/30/2011
    2. ISTS Infrastructure – Start Date 10/1/2010 and Operative Date 3/31/2011
    3. AFUDC 8.79% or $0.7M – Project start date, operative dates, and AFUDC avg rate.

Operations and Maintenance Costs – One-time
- 1400 Technicians and 90 Dispatchers will be trained for 3,160 hours at a one-time cost of $559K.

Operations and Maintenance Costs – Yearly Steady-State – Recurring
ISTS and Business operations support costs are estimated by SMEs to be 7 FTEs (Full Time Employees) and will cost $1.3M/ year (75% confidence). These labor resources will provide operations support for the ISTS and business functionality provided as part of R3.
- ISTS operations support costs are estimated by SMEs to be 3 FTEs and will cost $559K/ year: 1 FTE FAS, 1 FTE SAP, .5 FTE Tester, and .5 FTE Support.
- Business Operations support costs are estimated by SMEs to be 4 FTEs and will cost $659K/ year: 2 FTE ESC Scheduler and 2 FTE Management Distribution Coordinators.

Project Cost -- Best Case Scenario of Proposal

The Project Cost Best Case is based on the assumption that costs would be 5% better than the Expected Case. This may be achieved through use of PG&E labor rather than more costly 3rd party contract labor, resources may be more efficient (e.g. knowledge and expertise carried over from Release 2), or project may be completed sooner than scheduled (e.g. effective management of resources/issues/risks).

Ceteris paribus, "Everything Else Held Constant", the quantitative figures below are intended to illustrate the potential magnitude of difference from the expected case.
- Labor – 16,267 Total Work Days, 851 work days less than expected case.
- Material – $1.8M, $0.1M less than expected case.

Project Cost -- Worst Case Scenario of Proposal

The Project Cost Worst Case is based on the assumption that costs would be 20% greater than the Expected Case, which implies full use of contingency. As mentioned in the cost assumptions, 20% speaks to the confidence of the cost estimate based on Release 2 lessons learned coupled with the nature and complexity of R3 activities. Contributing factors for full use of contingency may be 3rd party contractor labor is used rather than PG&E labor due to lack of internal expertise, labor is less efficient than estimated (e.g. unfamiliarity with new technologies or long ramp-up time), or the project is completed later than scheduled (e.g. competing priorities for resource).

Ceteris paribus, "Everything Else Held Constant", the quantitative figures below are intended to illustrate the potential magnitude of difference from the expected case.
- Labor – 20,548 Total Work Days, 3,424 work days more than expected case.
- Material – $2.0M, $0.1M more than expected case.

C. By Categories:

Project Cost ($000)	Prior Years	2010	2011	2012	2013	2014	Total
Capital							
Labor	$ -	$ 3,506	$ 14,135	$ 95	$ -	$ -	$ 17,736
Material	$ -	$ 689	$ 525	$ -	$ -	$ -	$ 1,214
Contract	$ -	$ -	$ 2,500	$ -	$ -	$ -	$ 2,500
Material Burden	$ -	$ 7	$ 5	$ -	$ -	$ -	$ 12
Employee Related	$ -	$ 431	$ 1,486	$ 12	$ -	$ -	$ 1,928
Other	$ -	$ -	$ -	$ -	$ -	$ -	$ -
AFUDC	$ -	$ 117	$ 580	$ -	$ -	$ -	$ 697
Project Capital Cost	$ -	$ 4,750	$ 19,231	$ 107	$ -	$ -	$ 24,088
Expense							
Labor	$ 113.34	$ -	$ 4,045	$ 146	$ -	$ -	$ 4,304
Material	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Contract	$ 0.85	$ -	$ -	$ -	$ -	$ -	$ 1
Material Burden	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Employee Related	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Project Expense	$ 114	$ -	$ 4,045	$ 146	$ -	$ -	$ 4,305
Total Project Cost (Expected)	$ 114	$ 4,750	$ 23,276	$ 252	$ -	$ -	$ 28,393
Total Project Cost (Best)	$ 114	$ 4,527	$ 22,112	$ 240	$ -	$ -	$ 26,993
% Variance		-4.70%	-5.00%	-5.00%			-4.93%
Total Project Cost (Worst)	$ 114	$ 5,643	$ 27,931	$ 303	$ -	$ -	$ 33,991
% Variance		18.79%	20.00%	20.00%			19.72%
Ongoing O&M Cost ($000)							
Capital							
Labor	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Material	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Contract	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Material Burden	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Employee Related	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other	$ -	$ -	$ -	$ -	$ -	$ -	$ -
AFUDC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Ongoing--Capital	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Maintenance Expense							
Labor	$ -	$ -	$ 280	$ 1,191	$ 1,215	$ 1,215	$ 9,978
Material	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Contract	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Material Burden	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Employee Related	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Ongoing -- Expense	$ -	$ -	$ 280	$ 1,191	$ 1,215	$ 1,215	$ 9,978
Total O&M Cost (Expected)	$ -	$ -	$ 280	$ 1,191	$ 1,215	$ 1,215	$ 9,978
Total O&M Cost (Best)	$ -	$ -	$ 266	$ 1,132	$ 1,155	$ 1,155	$ 9,480
% Variance			-5.00%	-5.00%	-5.00%	-5.00%	-5.00%
Total O&M Cost (Worst)	$ -	$ -	$ 336	$ 1,429	$ 1,458	$ 1,458	$ 11,974
% Variance			20.00%	20.00%	20.00%	20.00%	20.00%

D. Financial Benefits:

Annual Benefits Forecast	Prior Years	2010	2011	2012	2013	2014	Total
Expected Scenario							
Capital		$ -	$ -	$ -	$ -	$ -	$ -
Expense		$ -	$ -	$ (4,346)	$ (5,794)	$ (5,794)	$ (44,905)
Total Benefits (Expected)		$ -	$ -	$ (4,346)	$ (5,794)	$ (5,794)	$ (44,905)
Best Scenario							
Capital		$ -	$ -	$ -	$ -	$ -	$ -
Expense		$ -	$ -	$ (5,989.42)	$ (7,985.89)	$ (7,985.89)	$ (61,891)
Total Benefits (Best)		$ -	$ -	$ (5,989.42)	$ (7,985.89)	$ (7,985.89)	$ (61,891)
% Variance				*37.82%*	*37.82%*	*37.82%*	*37.82%*
Worst Scenario							
Capital		$ -	$ -	$ -	$ -	$ -	$ -
Expense		$ -	$ -	$ (3,259.26)	$ (4,345.68)	$ (4,345.68)	$ (33,679)
Total Benefits (Worst)		$ -	$ -	$ (3,259.26)	$ (4,345.68)	$ (4,345.68)	$ (33,679)
% Variance				*-25.00%*	*-25.00%*	*-25.00%*	*-25.00%*

Benefits Forecast ($000)	Prior Years	2010	2011	2012	2013	2014	Total
Capital							
Labor		$ -	$ -	$ -	$ -	$ -	$ -
Material		$ -	$ -	$ -	$ -	$ -	$ -
Contract		$ -	$ -	$ -	$ -	$ -	$ -
Material Burden		$ -	$ -	$ -	$ -	$ -	$ -
Employee Related		$ -	$ -	$ -	$ -	$ -	$ -
Other		$ -	$ -	$ -	$ -	$ -	$ -
AFUDC		$ -	$ -	$ -	$ -	$ -	$ -
Capital		$ -	$ -	$ -	$ -	$ -	$ -
Expense							
Labor		$ -	$ -	$ (4,261)	$ (5,682)	$ (5,682)	$ (44,034)
Material		$ -	$ -	$ (84)	$ (112)	$ (112)	$ (872)
Contract		$ -	$ -	$ -	$ -	$ -	$ -
Material Burden		$ -	$ -	$ -	$ -	$ -	$ -
Employee Related		$ -	$ -	$ -	$ -	$ -	$ -
Other		$ -	$ -	$ -	$ -	$ -	$ -
Expense		$ -	$ -	$ (4,346)	$ (5,794)	$ (5,794)	$ (44,905)
Total Benefits (Expected)		$ -	$ -	$ (4,346)	$ (5,794)	$ (5,794)	$ (44,905)
Total Benefits (Best)		$ -	$ -	$ (5,989)	$ (7,986)	$ (7,986)	$ (61,891)
Variance %				*37.82%*	*37.82%*	*37.82%*	*37.82%*
Total Benefits (Worst)		$ -	$ -	$ (3,259)	$ (4,346)	$ (4,346)	$ (33,679)
Variance %				*-25.00%*	*-25.00%*	*-25.00%*	*-25.00%*

E. Financial Benefits Assumptions:

* Reference **Section 2-B. Hard Savings** for the benefits that are included in the EASOP calculation. Soft savings and strategic benefits are not included in the EASOP.

The Release 3 team held scoping workshops with representatives across all organizations supporting CC CFS and ED Restoration work processes to define the scope of moving Troublemen work into FAS. Challenges and pain points were highlighted through discussions of as-is manual processes, and opportunities were documented for potential to-be processes. These enthusiastic discussions served as basis for Release 3's high-level requirements as well as sources of potential benefits capture. The project team evaluated each pain point and opportunity and quantified the efficiencies or savings that can be gained by Release 3 solutions. The following table depicts the benefits identified, assumptions and calculations, the resulting amount of savings, and the benefitting line of business.

#	Benefits Capture Description	Assumptions / Calculations	Formula Amount	Classification	Benefitting LoB
EQUIPMENT TESTING					
1.	Costs to Create & Compile Test Rpt Binders	19 Divisions * 2 weeks clerical time * $47.28/hr * 2x per year	$ 143,731	Clerical/ Admin	ED Restoration
2.	Routing & Doing Inspects: Avoid chasing down binders, come back to yard, binder in other vehicle, work already completed	22,000 equip inspects/ year * 5% require * 1hr extra time * $182.7/hr	$ 200,970	Tmen	ED Restoration
3.	Mapping: facilitate locating devices, avoid duplicate tag, device no longer in field	22,000 equip tests/ year * 3% require locating or are duplicate * 1hr extra time * $182.7/hr	$ 120,582	Tmen	ED Restoration
4.	Post Inspect Copying, Documenting, Recording, Storing (record retention)	19 Division Clerical * 4 hrs/ week @ * $47.28/hr * 30 weeks (copies & documenting)	$ 107,798	Clerical/ Admin	ED Restoration
5.	Post Inspect Copying, Documenting, Recording, Storing (record retention)	18 Local compliance analyst * 4 hrs/ wk * 30 wks (analyst & specialist - copies, documenting, unit cost entry) * $47.28/hr	$ 102,125	Clerical/ Admin	ED M&C
6.	Post Inspect Copying, Documenting, Recording, Storing (record retention)	1 RMC clerical typing test sheets into system (DART/CEDSA), 50 weeks * 40hrs * $47.28/hr	$ 94,560	Clerical/ Admin	CC RMC
7.	Sort inspect to nearest point (efficiency gain)	16500 CAPS + 4530 LRS + 5000 REGS; 4530(LRS) * 15 min * $182.7/hr	$ 206,908	Tmen	ED Restoration
8.	PUC Fine/Penalty from bad data or improper record retention; COST AVOIDANCE				PG&E
9.	Error Redux - minimize key-in mistakes/typos/transposition; correct errors while onsite; minimize revisit, validate prior to departure	22,000 equip tests/ year*0.25%* $182.7/hr need re-work due to key-in errors	$ 9,135	Tmen	ED Restoration
10.	By electronic interface - track equipment overhauls systemwide more accurate prioritization	3 potential overhauls averted/ year * $10,000 per overhaul	$ 30,000		ED M&C
11.	Easier EC Tag generation @ inspect locations with improved forms/process	22,000 equip tests/ year* 0.25% * 1hr * $182.7/hr	$ 10,049	Tmen	ED M&C
			$ 1,025,858		
SWITCHING - Planned & Emergency					
12.	Mapping Benefits: Ability to locate devices	32,000 switch logs/yr * 50% on O.T. * 6 min avg savings/log * $182.7/hr	$ 292,320	Tmen	ED Restoration
13.	Reduce map printing costs	400 Tmen * 200 pages per binder * $.82 per page	$ 65,600		ED Restoration
14.	Reduce Mapper Costs - map binder prepar	80 hours per year * 19 division * $92.11	$ 140,007	Clerical/ Admin	ED Restoration
15.	Reduced paper/printing - Equipment Locatic	250 Tmen * Repographics of $27.5 each	$ 6,875		ED Restoration
16.	Ability to notify & plan switching - multiple communication on fly & update electronically				
17	Reduce return trips to yard to pick up Switch Logs	32,000 switch logs/yr *25%*.25hr * $182.7/hr	$ 365,400	Tmen	ED Restoration
18	Reduce errors-WPE's 10%	15 WPE's work procedure errors/yr for restoration * 1/10 * $5000/each in equipment cost/rework	$ 10,000		ED Restoration
19	Ability to pre-check Logs: Safety benefit - identify hazards ahead of time. Time saving - minimize wait time during switching - expedite things	32,000 switch logs/yr *15%*1/4 hour* $182.7/hr	$ 219,240	Tmen	ED Restoration
20	Emergencies - CESO's Customer Experiencing Sustained outage- 20,000 year quicker response due to GPS and more efficient R3 routing	20,000 sustained outages/ year*12 minutes* $182.7/hr *2tmen/ SO*50% on OT	$ 730,800	Tmen	ED Restoration
			$ 1,830,242		
EC TAGS					
21	Mobile Mapping Benefits: Send map with tag;	1,200 created/yr, save 45 min/paper tag, * $182.7/hr	$ 164,430	Tmen	ED Restoration
22	Reduced clerical - paper reduction; hand offs to clerical	18 Div * 1 clerk day * 8 hrs * $47.28/hr * 40 days/ year	$ 1,052,352	Clerical/ Admin	ED M&C
23	Duplicate tag creation - multiple trips (mapping & GPS coord's in R3; includes Tmen & clerical hrs & ops)	500 * 1.0% * 1.5hr * $182.7/hr; Completion of multiple forms (pole test data, etc.)	$ 1,370	Tmen	ED M&C
24	Reduced PUC Record liability & follow-up avoided risk				PG&E
25	Job Jar - electronic ability to receive & send (dispatch) EC Tag (don't have to go to yard to pick up);	1,000/yr * .5 hr travel time * $182.7/hr	$ 91,350	Tmen	ED M&C

F. Financial Statement Impact:

Total project cost will not have a material impact on the company's earnings per share as it is less than $100M.

G. Tax Implications:

The costs of the Project are divided into expense and capital categories.

For the expense category, the tax treatment will basically follow the book accounting treatment. Therefore, there should be no material book/tax differences for these expenditures.

For the capital category, all capital additions except internally developed software use the normalized method of accounting. For internally developed software, federal and state tax law allows PG&E to currently deduct these costs. However, the book accounting method requires these costs be capitalized and amortized.

According to past CPUC practice, PG&E must use the flow-through method of accounting for these costs. Therefore, under this method PG&E must flow-through the tax benefit of deducting these costs immediately to customers. Flowing through the tax benefit of internally developed software could result in a material reduction of the revenue requirement for this project.

H. Accounting Implications:

The following is the preliminary conclusion of Accounting Advice based on the facts and circumstances of the **MobileConnect Release 3** project as presented.

The proposed accounting and classification of the project costs as capital and expense are in accordance with the accounting guidance and PG&E policy. Any change in facts and circumstances may result in a change to the accounting conclusion.

3-2. NPV Analysis

Indicate the cash flow inputs used in EASOP to demonstrate what is being discounted. Please refer to Economic Guide on the CFO website for assistance.

A. Cash Flow Inputs

Study Period:
- The study period is 11 years, beginning 2010 and ending 2020.
- The study period was chosen as a result of 2010 being the first year in which alternatives diverge and 2020 being the year the MobileConnect system is expected to be retired.

Assets:
- Software assets depreciated over 7 years.
- Hardware assets depreciated over 5 years.

Project Costs: Capital and Expense

Operations and Maintenance costs
- One-time
  - 1400 Technicians and 90 Dispatchers will be trained for 3,160 hours at a one-time cost of $559K.
- Ongoing Yearly Steady-State – Recurring
  - ISTS operational support costs are estimated by SMEs to be 3 FTEs (Full Time Employee) and will cost $557K/ year (75% confidence). The ISTS labor resources will provide operations support for the ISTS functionality: SAP, FAS, Testing, and Support.
  - Line of Business operational support costs are estimated by SMEs to be 4 FTEs (Full Time Employee) and will cost $659K/ year (75% confidence). 2 ESC Schedulers and 2 Distribution Management Coordinators will provide operations support.
- Financial Benefit – Yearly Steady-State (Hard Benefits/ Savings per section B)

B. Alternative Analysis

Indicate the net present value of after-tax cash flows using the EASOP program.

Alternatives Considered	Cash Flow Measures			
	NPV	ROE	Payback	PVRR
Proposal (including contingency)	-4071	n/a	never	6,870
Proposal (excluding contingency)	-584	n/a	never	986
Status Quo	0	0	0	0
Alternative 1	-2,467	n/a	never	4,164
Alternative 2	-11,817	n/a	never	19,944

Alternatives Considered	
Proposal (Including Contingency)	FAS Enhancements (original Release 3 scope) plus Troublemen Work – Deliver FAS enhancements as well as move more Energy Delivery Troublemen work onto FAS platform as defined in project scope.
Proposal (Excluding Contingency)	FAS Enhancements (original Release 3 scope) plus Troublemen Work – Deliver FAS enhancements as well as move more Energy Delivery Troublemen work onto FAS platform as defined in project scope.
Status Quo	Do not do MobileConnect Release 3 FAS Enhancements and keep MobileConnect FAS functional capabilities at the level provided by Release 2. This is not recommended as it does position PG&E toward becoming the leading utility given the Utility's lagging mobile capabilities. It also does not address safety or environmental concerns.

Alt. 2	Alternative 1 - Deferred 1 Year – Same scope of work as Proposal, deferred 1 year with incremental escalation costs resulting from deferral and unrealized hard benefits. This alternative is not recommended as it delays the critical functionality needed in the field.
Alt. 3	Original R3 Scope-FAS Enhancements – Provides enhancements to FAS for Customer Care CFS. Energy Delivery Troublemen are out of scope for this release. This alternative is not recommended as it does not leverage the MobileConnect investment to expand its capabilities across more workgroups and does not allow PG&E to realize benefits from increased operational efficiency.

The NPVs above reflect the cash flow costs and benefits using a study period of 11 years. The Alternative with the least negative NPV indicates the most economic alternative.

☒*The Alternative with the highest NPV was selected.*
☐*The Alternative with the highest NPV was not selected because:*

4. Project Metrics

4-1. Company Metrics

A. Impacted Metrics

Tier 1 Company metrics (as per PG&E Tier One Company Scorecard)
- **Earnings from Operations:** MobileConnect Releases 3 will reduce direct expenses and increase field productivity resulting in an increase in earnings from operations.
- **Reliable Energy Delivery Index:** MobileConnect Release 3 will allow for more rapid and coordinated response to storms and outages, potentially improving CAIDI and SAIDI metrics.
- **Employee Engagement Survey:** MobileConnect Release 3 will reduce the amount of rework and administrative tasks, thereby increasing the amount of productive time on the job. Release 3 does pose a significant change from existing work processes, which may result in learning challenges as the Program is adopted.
- **Safety Performance:** MobileConnect Release 3 will help ensure the right people with the right skills are deployed to the job site at the right time with the right tools. It improves emergency response time to reduce safety risks.

4-2. Project Metrics

A. Metrics definitions
Metrics were identified through review of the Customer Care Customer Field Services Director Dashboard and Energy Deliver Restoration Scorecard. The project team assessed which metrics were impacted by the implementation of Release 3 and validated the targets to ensure consistency with the hard savings assumptions and calculations.

The following CFS metrics will be measured to determine the impact of the project:

CFS metrics affected (as per 2008 Customer Care Director Dashboard – Customer Field Services)

Efficiency
- **GSR – EMT – T-men Productivity:** By enabling real-time performance management, MobileConnect will allow supervisors to more effectively manage the efficiency and effectiveness of their employees.
- **Work Unit Production – GSR**: Higher GSR efficiency through map based dispatch
- **Work Unit Production – EMT:** Higher EMT efficiency through map based dispatch
- **Work Unit Production – T-men:** Higher efficiency through map based dispatch
- **Unit cost per tag completed:** The cost of servicing an individual work order will decrease as GSR/EMT/Troublemen efficiency improves.
- **Monitor Standard Rate - GSRs ,EMTs, T-men:** By increasing productivity, the standard billing rate for field technicians can be reduced by billing out more hours to work completed vs. PCC time.

Customer satisfaction
- **Gas leak immediate response:** CFS has a goal of responding to gas leaks within 1 hour of notification. MobileConnect will enable higher compliance with this target through more efficient routing.
- **After Field Visit Survey Q5 Overall Satisfaction**: The MobileConnect Program will increase customer satisfaction and service levels by improving response time and reducing outage durations.
- **After Field Visit Survey Q2 On Time Arrival:** Through optimized routing, and automated dispatch, MobileConnect will allow CFS to be more responsive to customer needs.
- **AFV Q1A Call Aheads CA**

Safety

Emergency response: Using GPS technology dispatchers can assign gas and electric emergency response work to the closest units, improving response times and customer satisfaction and lowering safety risks of delayed emergency response.

The following ED Restoration metrics will be measured to determine the impact of the project (from Restoration Scorecard):

ED Restoration metrics affected
- **Productive Capacity**
- **Hours per FAS Tag**
- **MAT BHe Hours per Unit**
- **MAT BHg Hours per Unit**
- **FI Install per Hour**
- **Equipment Test (Inspects) Hours per Unit**

Metrics Tracking
Release 3 will provide reports measuring identified metrics as well as offer self-service reporting to allow users to create flexible views of various organizational performance data. Performance tracking will be incorporated as part of ongoing organizational operations.

B. Project Metrics Table

Ref #	Performance Metrics	Baseline	Target Performance	Metric Owner
1	GSR Productivity	93%	95%	Shelly Sharp
2	EMT Productivity	80%	80%	Shelly Sharp
3	Quality Assurance Standard 1 – Missed appointments	99.5%	99.5%	Shelly Sharp
4	Immediate Response Gas Leaks – on-site within one hour	93.6%	94%	Shelly Sharp
5	Standard Rate – T-men	$182.50	Monitor	Kirk Johnson
6	Standard Rate – GSR	$117.72	Monitor	Shelly Sharp
7	Standard Rate – EMT	$156.07	Monitor	Shelly Sharp
8	After Field Visit Survey Q5 Overall Satisfaction – GSR	95.1%	95.1%	Shelly Sharp
9	After Field Visit Survey Q5 Overall Satisfaction – Troublemen	85%	88%	Kirk Johnson
10	After Field Visit Survey Q2 On Time Arrival – GSR	<94.8%	>94.8%	Shelly Sharp
11	After Field Visit Survey Q2 On Time Arrival – Troublemen	85%	88%	Kirk Johnson
12	AFV Q1A Call Aheads CA – GSR	75%	76.5%	Shelly Sharp
13	AFV Q1A Call Aheads CA – Troublemen	62%	64%	Kirk Johnson
14	FAS/OIS – Outage Reporting	80%	85%	Kirk Johnson
15	Distribution YTD CAIDI	Meets CAIDI-STIP Metric	Exceeds CAIDI-STIP Metric	Kirk Johnson
16	Restoration Productive Capacity	70%	75% or better	Kirk Johnson
17	Equip Test Unit Metric (Hrs/Unit)	1 Hour	1 Hour or less	Kirk Johnson
18	Electric Emergency & Outage[MWC BH] Unit Metric (Hrs/ Unit)	1.8	1.5 or less	Kirk Johnson

C. Ongoing Monitoring and Reporting

Release 3 project status concerning major milestones, scope, schedule, cost, change management, communications, issues and risks will be reported to the Program Management Team who will report to program sponsors and senior leadership. Examples of reporting activities:

- **MobileConnect Executive Steering Committee:** Update Program status against major milestones and budget, and discuss key issues and risks. Significant Program decisions reviewed and approved. (Monthly)
- **MobileConnect Program Planning Meeting / Senior Advisory Committee:** Discussion with key stakeholders across Functional Areas impacted by the MobileConnect Program (Customer Care, Energy Delivery, Engineering & Operations, ISTS, and Shared Services) to update status of Program, get input on upcoming Program decisions, and gain stakeholder alignment. (Monthly)
- **ISTS Steering Committee:** Presentation to update ISTS leadership on Program status and to highlight key technology and project risks. (Monthly)
- **EPC – Project Executive Reporting:** Completion of Level 1, 2 & 3 (as required) tools input in support of Enterprise Project Council governance policies and procedures. (Monthly)
- **Program Status Report:** Weekly status report that summarizes current Program status across work streams, budget, and timeline. Identifies key upcoming decisions and highlights risks.
- **Release 3 Project Status Report:** Regular progress reporting from R3 project manager to be consolidated into the Program Status Report.
- **Ad-hoc communication** as determined.

5. Risk Assessment

5-1. Risk Assessment

Risk assessment identifies and assesses factors that may jeopardize the success of a project and helps define mitigation strategies to reduce the probability of these factors from occurring.

A. Risk Assessment Table

#	Risk Description – Not Prioritized	Probability of Occurrence (H, M, L)	Difficulty of Timely Detection (H,M,L)	Impact on Project Scope & Schedule (H, M, L)	Impact on Cost	Impact on Project Benefits	Mitigation Strategy, or Contingency Plans
1	Change Management –Release 3 will drive the need for change in daily work processes for CFS, Restoration, ECCO, and back office staff	H	M	H	Cost of dedicated internal labor for training and change management	Complete buy-in required to realize benefits	Identify Change Management Lead to ensure keen focus in this critical area. Deploy broad change management and communications strategy for all impacted roles and organizations, including engagement of labor relations for consultancy
2	Change Management – Business process changes must be defined, agreed upon and adhered to for maximizing investment in MobileConnect solution	M	M	M	Cost of project delay, duplicated efforts, or sunk cost of technology investment without corresponding business solutions	Inability to realize full benefits without supporting organizational support	Perform thorough analysis of business processes, key stakeholder communications and buy-in, along with broad change management
3	Change Management – Coordination with other initiatives impacting same work groups or work processes or with those leveraging potentially common MobileConnect solutions	M	M	M	Cost of duplicate work and technology investments	Reduces benefits for standardized mobile platform	Establish governance and decision model for defining MobileConnect so and ongoing communications & coordination with other initiatives, including SmartMeter EMR Retirem Warehouse Management System Replacement, E&O Equipment testin Lean Six Sigma, Business Results Te Radio Refresh Program, AM/FM Program, Enterprise Time Collection

4	Operational – Operational maintenance of Workforce Availability module in FAS is needed to fully enable auto-dispatch capability	M	M	L	Costs and delays incurred to establish processes and rigor	Delayed benefits realization from enhanced capabilities	Provide sufficient training and stabilization monitoring for Release 2 deployment; engage and communicate with process owners early
5	Operational - Disruption of business activities and productivity loss during transition to new system and processes	M	L	M	Productivity impact to lines of business	Disruption may reduce estimated productivity gains for initial period following implementation	Conduct extensive user acceptance testing; model benefit ramp over long time period (1 year) to ensure full functionality adopted
6	Funding – Project effort is not planned at full capacity due to currently available budget and has potential to ramp up stronger to ensure timely project delivery	M	L	H	Delayed expenditure until 2011	Delayed benefits realization if project delivery is delayed	Plan to make budgetary request to Technology Oversight Committee for additional funding while demonstrating capacity to scale and manage project successfully
7	Organizational – Executive sponsorship for Program must be sustained throughout project and deployment	L	M	M	Cost of delay or rework from failure to identify and resolve issues early	Executive sponsorship / evangelism critical for successful change management and adoption	Continue to maintain cadence of communication with executive steering committee established during Release 1 & 2
8	Technology – FAS software has data field limitations in its current release. Increased work types in FAS may hasten the need to upgrade to Ventyx R9.0.	M	L	H	Internal and vendor labor costs, possible hardware costs	Increases project implementation costs which will impact timing of return on investment	Assessing additional data fields required based on high-level requirements to determine risk of occurrence; Create new data models with re-use of existing data fields; Plan for upgrade
9	Technology – The ability to provide Internet, Intranet and email access to field workers is dependent upon SmartCard (2-factor authentication) deployment driven by the Enterprise Information Protection (EIP) project and clarification of licensing for use.	M	M	M	Cost of delay or rework if Release 3 needs to wait for EIP solution	Inability to meet stakeholder/user expectations on delivering this functionality	Security architect has been identified and assigned to MobileConnect program to drive solutions and deployment strategy for all security-related activities; Release 3 will collaborate closely with this security architect and coordinate with the EIP project on delivery and dependencies.

| 1 0 | Resources – Many business resources (CC CFS and ED Restoration) are still supporting Release 2 deployment through August 2010 and may not be able to support Release 3 requirements efforts, thereby slowing the ramp up of the project. | M | L | M | Cost of schedule delay | Delayed benefits realization if project delivery is delayed | Work closely with Release 2 project manager to balance resource availability and priorities; Identify additional/other business SMEs to support Release 3 in the meanwhile. |

B. Additional Information:

Release 3 will use ISTS PMO's standard project management tool for managing and monitoring project issues and risks. Release 3 will use ISTS PMO's standard project management methodology, PG&E Development Methodology (PDM) 3.0, and tailor and/or waiver activities and deliverables as appropriate for the scope of Release 3.

5-2 Environmental Impact

A. Environmental Impact

Positive environmental impacts:
- **Reduced mileage:** A more efficient routing and directions system will reduce the Company's carbon footprint. Assuming a 5-15% reduction in miles driven on vehicles in use by CFS and Restoration results in a savings of nearly 25,000 metric tons of CO_2.
- **Reduced pollutants:** Faster responses to emergency situations (e.g. gas leaks) will reduce the release of methane and other pollutants into the atmosphere.
- **Reduced paper:** Electronic access to maps and documentation will eliminate need for paper and printing. Electronic dispatch of field orders will eliminate paper tags.

Potentially negative environmental impacts:
- **Disposal of assets:** Mobile devices will require replacement upon reaching their end of life. Devices and computers have limited economic value but may be recycled to prevent potentially toxic materials from entering landfills.

5-3 Project Dependency

A. Project Dependency
- Successful completion of Releases 1 & 2. Of particular note is the successful implementation of the Workforce Availability Module in Release 2. Accurate documentation of employee availability is a dependency for enabling the auto-dispatch capability in Release 3.

6. Implementation Plan

6-1. Implementation Strategies

A. Implementation Strategy Table

WBS #	Critical Tasks	Duration	Schedule Start Date	Schedule Completion Date	Individual Responsible	Related Risk (Y/N)
1.0.	Project Authorization					
1.1	Business Case Approval	6 weeks	03/29/10	05/10/10	Redacted Alain Erdozaincy	
1.2	Job Estimate Approval	3 weeks	05/10/10	05/28/10	Redacted Alain Erdozaincy	
2.0	Project Management	99 weeks	05/10/10	03/30/12	Redacted Alain Erdozaincy	
3.0	Change Management	99 weeks	05/10/10	03/30/12	Redacted Alain Erdozaincy	
4.0	Plan	6 weeks	05/10/10	06/18/10	Redacted Alain Erdozaincy	
5.0	Analyze	13 weeks	06/20/10	09/17/10	Redacted Alain Erdozaincy	
6.0	Design	14 weeks	09/17/10	12/27/10	Redacted Alain Erdozaincy	
7.0	Build	22 weeks	12/27/10	05/29/11	Redacted Alain Erdozaincy	
8.0	Test	25 weeks	05/29/11	11/17/11	Redacted Alain Erdozaincy	
9.0	Deploy	19 weeks	11/17/11	03/30/12	Redacted Alain Erdozaincy	
10.0	Service Introduction	30 weeks	08/01/11	02/29/12	Redacted Alain Erdozaincy	
11.0	Stabilization	19 weeks	11/17/11	03/30/12	Redacted Alain Erdozaincy	

B. Additional Information

Light planning for Release 3 will be accomplished during the December 2009 to April 2010 timeframe since this is a critical period for Release 2.

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Appendix
7. Business Case Feasibility Analysis

7-1. The Company (PG&E) Analysis

A. Flexibility Matrix

	Least Flexible	Moderately Flexible	Most Flexible	Comments
Schedule			X	The schedule will be driven partially by the funding available to perform the work, and partially by business request for targeted deployment timeframes. The full project schedule through deployment can only be firmed up upon thorough analysis and design of solution and dependencies that will drive the deployment strategy.
Scope		X		The MobileConnect Executive Steering Committee wants compelling scope that does not degrade over time. Also end user expectations must be managed by having scope assurance – otherwise their confidence in the technology and functionality will degrade.
Resources	X			Ability to ramp up project will be bounded by funding available in 2010. Project staffing is not a concern from the ISTS standpoint as many IT resources will roll over from Release 2 bringing direct knowledge and experience; however Business SME resources (CC CFS and ED Restoration) may be constrained in continuing support of Release 2 deployment through August 2010.

B. PG&E SWOT Analysis	
Strengths	**Weaknesses**
−Prior Customer Care experience with FAS implementation reduces change management effort for CFS and aids learning curve with ED −Strong engagement from CC CFS and ED Restoration; Restoration extended leadership team indicate enthusiastic support for Release 3 scope −End of lifecycle for FAS, PT&T, Vegetation Management creates strong business support and alignment for project within Customer Care and Engineering & Operations −Launch of numerous large IT solutions over last 18 months gives ISTS significant deployment experience, particularly with recent deployment of Release 2 −Strong Customer Care and ISTS leadership and partner involvement −Enterprise Mobile strategies align with organizational focus on safety and environment	−Limited availability of ED M&C subject matter experts for project due to competing priorities −Large change management effort required to gain acceptance for new technology and processes −Multiple large projects concurrently (SmartMeter, Dynamic Pricing, MARA, MRTU, etc.) may pose resource contention (environments, deployment periods, resources, etc.) −Business SME engagement (CC CFS and ED Restoration) for Release 3 is constrained by ongoing Release 2 deployment through August 2010.
Opportunities	**Threats**
−Increasing maturity of mobile technology solutions for the utilities industry −Potential of Program to yield greater financial and non-financial benefits than claimed (e.g. efficiency gains, safety, compliance, customer satisfaction, environmental, etc.) − Funding secured for initial implementation Releases	−Multiple initiatives impacting same work groups or work processes may blur scope, benefits realization and end-user experiences. −Large deployment relative to other utility deployments raises vendor and technology scalability risks −Relative merits and run rate costs of single application vs. best-in-breed solutions not defined.

7-2. Stakeholder Assessment

Stakeholder Assessment Survey
A. Internal Stakeholders

Stakeholders	Current Assessment	Where they need to be and by when?	Impact	Disruptive or Supportive Change	Importance of Success
MobileConnect Executive Steering Committee (ESC)	Aware		MobileConnect ESC has full decision rights for the Program.	Supportive	High
ISTS Steering Committee	Aware		ISTS SC has oversight into IT budget, schedules, and integration into existing PG&E infrastructure and strategy.	Supportive	High
MobileConnect Senior Advisory Committee / MobileConnect Program Planning Committee	Aware		Ability to influence business case, technology choice, and rollout; build consensus within organization; and influence Executive Steering Committee	Supportive	High
Other Energy Delivery leadership	Aware		Ability to build support within organization and help MobileConnect design a solution to meet organization's needs and capacity for change.	Supportive	High
Other Customer Care leadership	Aware		Ability to build support within organization and help MobileConnect design and implementation plan meet organization's needs and capacity for change.	Supportive	High
Front line CFS team	Aware		Ability to influence design through design process; adoption is critical to success of Program.	Supportive	High
Front line Restoration team	Aware		Ability to influence design through design process; adoption is critical to success of Program.	Supportive	High
IBEW	Aware		Ability to build support through bargaining unit and ensure design incorporates benefits to crews.	Supportive	High
ESC	Generally Aware		Ability to build support through bargaining unit and ensure design incorporates benefits to crews.	Supportive	High

B. External Stakeholders

Stakeholders	Current Assessment	Where they need to be and by when?	Impact	Disruptive or Supportive Change	Importance of Success
1. Regulatory bodies	Unaware		Reviews MobileConnect as part of GRC	Supportive	High
2. Vendors	Aware		Ability to meet schedules and budget	Supportive	High
3. Partners/contractors	Aware		Large number of MobileConnect users as part of Vegetation Management /Pole Test & Treat pilot	Supportive	Moderate

7-3. Communication Strategy:

Ref #	Information	Purpose of communication	Destination: Org & Contacts	Method of Communication	Individual Responsible	Frequency
1.	Executive Program Report	To ensure Management is updated on current project status	Executive Advisory Committee	Executive Advisory Committee meeting and associated materials	Redacted Alain Erdozaincy	Monthly or as requested
2.	Senior Program Report	To ensure Management is updated on current project status	Senior Advisory Committee	Senior Advisory Committee meeting and associated materials	Redacted Alain Erdozaincy	Monthly or as requested
3.	Program Status	Reporting – Status update that summarizes current Program status across work streams, budget, and timeline	ISTS Executive Project Committee	Meeting and associated materials	Redacted Alain Erdozaincy	Bi-weekly
4.	Project Status Report	Present Project/Work Stream Status Report on progress, milestones, issues, risks, new change requests, costs planned	Program Manager and work stream Project Managers	Meeting and status reports	Redacted Alain Erdozaincy	Weekly

		next steps/activities				
5.	Webpage (SharePoint)	Create single clearinghouse of project information to keep Program team and stakeholders apprised of latest Program status	Key selected groups	Intranet	Redacted	Available now
6.	Overall MobileConnect Program IT Status Report	Communicate overall Program progress to all IT Project Managers and Technical leads	MobileConnect IT Project Managers and Technical Leads	Meeting and status report (posted on SharePoint site)	Alain Erdozaincy	Weekly
7	Engagement with IBEW and ESC leadership	Communicate high level Program goals and timing	IBEW and ESC leadership	In person meetings	Redacted	As requested

8. Team Reference and Resource

8-1. Team Resource and Reference

A. Internal Resources

Resource Name	Department	Skills Required	Timeframe Needed mm/yy	Stage/Tasks	% of FTE Needed	Commitment Obtained (Y/N)
Redacted	Customer Care	Program Leadership	05/10-03/12	Program Leadership	100%	Y
Alain Erdozaincy	ISTS PMO	Program Leadership	05/10-03/12	Program Leadership	100%	Y
Redacted	ISTS PMO	Project Management	05/10-03/12	Project Management	100%	Y
Redacted	ED Restoration	Business Team Leadership	05/10-03/12	Business Leadership	100%	Y
Redacted	Customer Care	Change Management	05/10-03/12	Change Management	100%	Y
Redacted	Customer Care	Human Performance Management	06/15-03/12	Human Performance Mgmt	100%	Y
Redacted	ISTS SP&A	Solution Architect	05/10-12/10	Solution Blueprint	10%	Y
Redacted	ISTS Infrastructure Services	Infrastructure Project Manager	05/10-03/12	Infrastructure Project Plan	25%	Y
Redacted	ISTS PMO	Business Analysis	05/10-12/11	Analyze/Design	100%	Y
Redacted	ISTS Apps Serv	Technical Analysis	05/10-12/11	Analyze/Design	50%	Y
Redacted	Finance Business Planning	Business Planner	05/10-03/12	Financials	25%	Y

B. External Resources

Resource Name	Department	Skills Required	Timeframe Needed	Stage/Tasks	% of FTE Needed	Commitment Obtained (Y/N)
Redacted	ISTS SP&A	Solution Architect	05/10-12/10	Solution Blueprint	90%	Y
Redacted	ISTS Infrastructure Services	Technical Architect	05/10-12/10	Technical Architecture	75%	Y

9. Cost Estimating

Total Cost Estimate Confidence Score:	3.8
Contingency: % of Total Project Costs	0%
Spend-to-date: % of Total Project Costs	0.011

Instructions: The yellow cells indicate where your input should be placed. Mark the appropriate Rank for all five Cost Estimate drivers. Once you have entered the appropriate ranks based on the text descriptions, enter a percentage Weight of Confidence

Uniqueness of Work	Rank	Cost Estimate Rigor	Rank	Risk Mitigation Strategy	Rank	Project Scope	Rank
5	Project Team has extensive experience with this type of project, or has developed their estimate in partnership with those who have. Project involves technology or assets currently in service at PG&E.	5	Detailed bottoms-up cost estimate completed, with high certainty of labor, materials, and contract pricing.	5	High confidence that all risks are identified and detailed, feasible mitigation plans are documented, the costs of which are incorporated into the estimate.	5	Project Scope is well defined and the project is similar to other projects PG&E has managed in the recent past. Project Scope is marked as least flexible in the flexiblity matrix	
4		X	4		X	4		4		X
3	PG&E has moderate experience with the project type, or has detailed benchmark from the same work at similar utilities.	3	Detailed bottoms-up cost estimate completed, but significant cost volatility may exist in labor, materials, or contract pricing.	3	Some lower impact risks may not have full mitigation plans.	X	3	Project scope has been defined, but there are expectations that the project scope will have minor revisions over the remainder of the life of the project. Project Scope is moderately flexible in the flexibility matrix.	
2			2		2		2		
1	PG&E has little or no experience with project technology or assets, and neither do any similar utilities.	1	Estimates based on "rule of thumb" or high-level benchmarks.	1	Risks and mitigation plans not identified, or mitigation costs are not included in the estimate.	1	Project scope is not well defined. Project Scope is marked as most flexible in the flexibility matrix	
Weight of Confidence Driver:	30%	**Weight of Confidence Driver:**	25%	**Weight of Confidence Driver:**	20%	**Weight of Confidence Driver:**	25%

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