Pacific Gas and Electric Company

Application Development Project Complexity and Sizing Worksheet

Legend	
	Enterable/Modifiable
	Overwritten
	Not Updatable
	Default Value

Date Checklist Completed:	4/1/2009
ITWR # (if applicable):	
Proposal Description:	Operate and Maintain
Client Portfolio Lead:	Bill DePrater
Anticipated Start Date of Project (MM/DD/YYYY):	1/1/2011
Anticipated End Date of Project (MM/DD/YYYY):	12/31/2013

Please provide a response for ALL criteria! The responses provided impact the Total Score for the proposed project, which helps determine the Preliminary Project Cost.

#	CRITERIA	RESPONSE	ASSUMPTIONS	SCORE
1	Expected duration of the project (in weeks):	156	(Calculated Based on Anticipated Start/End Dates, above)	6
2	Anticipated ISTS Application Development Labor Days	1425	(Please Enter An Assumption)	3
3	How many 3rd party vendor firms will provide services for this project?	1-2	(Please Enter An Assumption)	4
4	If the technology is known, has it been successfully implemented before at PG&E?	Yes	(Please Enter An Assumption)	6
5	How well are the Requirements for this proposal known by the Business (have the Requirements been documented)?	Medium	(Please Enter An Assumption)	6
6	Is there a pre-existing PG&E support group to maintain/support the application?	Yes	(Please Enter An Assumption)	2
7	What is the level of dependency on other projects (e.g. resources, deliverables, etc)?	Low	(Please Enter An Assumption)	1
8	Will the system exchange or provide data to any entities outside of PG&E (suppliers, customers, regulatory agencies, etc)?	No	(Please Enter An Assumption)	4
9	What is the level of criticality of the system to the users and PG&E customers?	Business Important	(Please Enter An Assumption)	9
10	How many internal PG&E users will be impacted by this project?	>500	(Please Enter An Assumption)	9
11	What is the anticipated amount of formal training that will be required for PG&E users?	Low	(Please Enter An Assumption)	3
12	How many PG&E Lines of Business (LOBs) will be impacted by the project?	1	(Please Enter An Assumption)	3
			TOTAL SCORE:	56

Cell: B18
Comment: Duration is calculated based on the above start and end project dates.

Cell: B19
Comment: High level estimate of application development labor days (project management through service introduction/deployment) including middleware, integration, configuration, etc.

Cell: B20
Comment: This indicates the number of 3rd-party vendor firms, NOT individual contributors and is intended to reflect potential additional project management effort to manage external vendors

Cell: B21
Comment: Has the technology to be implemented during the project been previously implemented at PG&E? How familiar are the project resources with the technology?

Cell: C21
Comment: Yes = The technology has been successfully implemented before at PG&E. Resources are very familiar with the technology.

No = The technology has not been attempted or implemented successfully previously. Resources have little or no familiarity with the technology.

Cell: B22
Comment: Does the Business fully understand their needs in completing the project? Have their needs been agreed to and documented?

Cell: C22
Comment: Low = The Business has no knowledge of the Requirements for the proposal; no Requirements have been discussed or documented.

Medium = The Business has minimal knowledge of the Requirements for the proposal; some of the Requirements have been discussed and documented.

High = The Business has a good understanding of the Requirements for the proposal; many of the Requirements have been discussed and documented.

Cell: B23
Comment: Can the proposed project/application be maintained and supported by an existing PG&E support group (Help Desk, Operations Group, System Administrators, etc)?

Cell: C23
Comment: Yes = The project/application can be maintained and supported by an existing PG&E support group

No = The project/application cannot be maintained and supported by an existing PG&E support group

Cell: B24
Comment: Are any of the proposed project's resources, deliverables, processes, or technology dependent on any other project or initiative?

Cell: C24
Comment: Low = The proposed project has little or no dependency on other projects or initiatives

Medium = The proposed project has some dependency on other projects or initiatives

High = The proposed project is highly dependent on other projects or initiatives

Cell: B25
Comment: Is data being passed through the PG&E firewall? May impact project risk and complexity.

Cell: C25
Comment: No = No data will be passed through the PG&E firewall

Yes = Data will be passed through the PG&E firewall

Cell: B26
Comment: A measure of the criticality of the system to users and PG&E customers

Cell: C26
Comment: Business Critical: requires the highest possible availability; outage/failure recovery time is minutes or hours (e.g., SCADA systems)

Business Important: requires high availability; outage/failure recovery time is less than 24 hours

Business Standard: default category, most systems will fit this category; does not require high availability; outage/failure recovery time is less than 2 days

Business Historical; does not require high availability; outage/failure recovery time is 2-5 days (e.g., storage systems)

Cell: B27
Comment: Measures the degree of change/impact to the organization. Higher numbers imply greater need for change management, training, and number of new/modified business processes.

Cell: B28
Comment: A measure of the total effort required to formally train all users, considering that multiple users may be trained concurrently (e.g., classroom)

Cell: C28
Comment: Low = <7 Hours of Deliverable Content
Medium = 8-14 Hours of Deliverable Content
High = >14 Hours of Deliverable Content

Cell: B29
Comment: The PG&E Lines of Business are:

Energy Delivery
Engineering & Operations
Customer Care
Generation
Energy Procurement
Finance
HR
Risk & Audit
Shared Services

Pacific Gas and Electric Company®

Legend
Enterable/Modifiable
Overwritten
Not Updatable
Default Value

Application Development Preliminary Project Costing Checklist

Date Checklist Completed:	4/1/2009
ITWR # (if applicable):	0
Proposal Description:	Operate and Maintain
Client Portfolio Lead:	Bill DePrater
Anticipated Start Date of Project (MM/DD/YYYY):	1/1/2011
Anticipated End Date of Project (MM/DD/YYYY):	12/31/2013

		Weight
PG&E ISTS Labor Blended Daily Rate per Resource	$941.16	70%
External ISTS Labor Blended Daily Rate per Resource	$1,481.52	30%
COMBINED ISTS BLENDED DAILY RATE PER RESOURCE	$1,103.27	

		Weight
PG&E Business Labor Blended Daily Rate per Resource	$995.28	75%
External Business Labor Blended Daily Rate per Resource	$1,992.69	25%
COMBINED BUSINESS BLENDED DAILY RATE PER RESOURCE	$1,244.63	

APPLICATION DEVELOPMENT LABOR

			PRELIMINARY EFFORT (DAYS)			PRELIMINARY COST		
PRIMARY COST CRITERIA	COMMENTS / ASSUMPTIONS		LOW	MID	HIGH	LOW	MID	HIGH
ISTS APPLICATION DEVELOPMENT								
ISTS Application Development Labor Days (Project Management through Service Introduction/Deployment), including Middleware, Integration, Configuration, etc.	(You Must Enter An Assumption)		1,069	1,425	1,781	$1,179,118	$1,572,157	$1,965,196
		Default Calculated Labor Days:	1,069	1,425	1,781	$1,179,118	$1,572,157	$1,965,196
PG&E BUSINESS	%of App Dev Labor							
PG&E Business Labor	20%	(Default = 20%of App Dev Labor)	214	285	356	$266,040	$354,720	$443,400
TECHNICAL ARCHITECTURE	%of App Dev Labor							
Technical Architecture Labor Days (Analyze/Design/Build/Test) for Development, Execution, and Operations environments necessary to support the Application.	30%	(Default based on Number of Users Impacted)	321	428	534	$353,735	$471,647	$589,559
USER TRAINING & PERFORMANCE SUPPORT	%of App Dev Labor							
User Training and Performance Support Labor Days (Analyze/Design/Build/Test) for the effort to create Training Material and Communications Plan to support the Application rollout.	10%	(Default based on Anticipated Amount of Formal User Training)	107	143	178	$117,912	$157,216	$196,520
		LABOR DAYS SUBTOTAL:	1,710	2,280	2,850	$1,916,805	$2,555,740	$3,194,675
		Project Complexity and Size Factor:	342	456	570	$383,361	$511,148	$638,935
		TOTAL LABOR DAYS:	2,052	2,736	3,420	$2,300,166	$3,066,888	$3,833,610

Application Development Preliminary Project Costing Checklist

Default Value

Date Checklist Completed:	4/1/2009
ITWR # (if applicable):	0
Proposal Description:	Operate and Maintain
Client Portfolio Lead:	Bill DePrater

HARDWARE LABOR, MATERIALS, AND OTHER COSTS

PRIMARY COST CRITERIA	COMMENTS / ASSUMPTIONS	PRELIMINARY COST LOW	MID	HIGH
INFRASTRUCTURE				
Hardware, Network, etc Costs (includes Labor)	(Default based on User Impact)	$1,500,000	$2,100,000	$2,300,000
System/Data Availability and Recovery	(Default Based on System Criticality and Data Protection/Retention Requirements)	$1,125,000	$1,575,000	$1,725,000
USER TRAINING				
User Training Materials Costs	(Default Based on Anticipated Amount of Formal User Training)	$8,500	$14,875	$21,250
MISCELLANEOUS COSTS				
Miscellaneous/Additional Costs (Licensing, Overheads - Facilities Costs, Telephony, etc)	(You Must Enter An Assumption)	$0	$0	$0
	COST SUBTOTAL:	$2,633,500	$3,689,875	$4,046,250
	Project Complexity and Size Factor:	$526,700	$737,975	$809,250
	TOTAL HARDWARE, MATERIALS, AND OTHER COSTS:	$3,160,200	$4,427,850	$4,855,500

	LOW	MID	HIGH
TOTAL PRELIMINARY PROJECT COST:	$5,460,000	$7,495,000	$8,689,000

Project Start Date	Project End Date	work effort in days	duration in days	PM %	PM Days	Plan thru Deploy Days
1/1/2011	12/31/2013	3,420	1,095	10%	342	3,078

Stage	Start Date	End Date	Typical Work Allocation Percentage by Stage	% of stage effort (do not change)	Override stage effort (override Col C)	Stage Work Days	% stage duration	Duration in days	Net Work Days
Project Mgmt	1/1/2011	12/31/2013				342			782
Plan	1/1/2011	3/29/2011	1-5%	8%	8%	246	8%	88	62
Analyze	3/29/2011	7/17/2011	5-10%	10%	10%	308	10%	110	79
Design	7/17/2011	2/21/2012	15-35%	20%	20%	616	20%	219	157
Build	2/21/2012	1/14/2013	25-60%	30%	30%	923	30%	329	235
Test	1/14/2013	8/21/2013	10-25%	20%	20%	616	20%	219	158
Deploy	8/21/2013	12/31/2013	3-5%	12%	12%	369	12%	131	95
				100%	**100%**	**3420**	**100%**	**1,095**	

	Roles	Workday	FTE's															
resource pools:			various	various	various	Env CoE	various App Services	Software QA	DBA CoE	SP&A	Infrastructure	various App Services	Env CoE	Env CoE	various	Business	Deployment CoE	
	Percentage Total	Workday Total	Business Analyst	Project Manager	Application Designer	Configuration Manager	Programmer	Test Lead & Tester	Database Administrator/ Data Architect	Technical Architect	Technical Architect	Technical Architect	Technical Architect	Technical Operations Support Specialist	Integration Solution Architect & Designer	Human Performance Architect Training Administrator	Deployment Lead & Specialist Service introduction Lead	Max FTEs (rounded to the nearest .5 fte)
		3,420	2.0	0.5	0.5	-	1.0	2.0	-	1.0	0.5	0.5	-	0.5	-	1.0	2.0	
	100.0%	342	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
	100.0%	246	2.0	-	-	-	-	-	-	1.0	-	0.5	-	-	-	0.5	0.5	2.0
	100.0%	308	1.0	-	-	-	-	-	-	-	0.5	0.5	-	-	-	1.0	-	1.0
	100.0%	616	0.5	-	0.5	-	-	-	-	-	0.5	0.5	-	-	-	1.0	-	1.0
	100.0%	923	-	-	-	-	1.0	0.5	-	-	0.5	0.5	-	-	-	1.0	-	1.0
	100.0%	616	-	-	-	-	0.5	2.0	-	-	-	-	-	-	-	1.0	-	2.0
	100.0%	369	-	-	0.5	-	-	-	-	-	-	-	-	0.5	-	0.5	2.0	2.0