Pipeline Safety Enhancement Plan Overview

September 1, 2011

Pipeline Safety Enhancement Plan (PSEP) Overview

The Pipeline Safety Enhancement Plan (PSEP)…

- Reflects new regulatory requirements which establish a known margin of safety across PG&E's gas transmission system
- Incorporates lessons from the San Bruno accident, NTSB recommendations, Independent Review Panel findings, and industry benchmarking
- Has been shared with or incorporates feedback from key regulators, utilities and other interested parties
- Seeks funding for Phase 1 work (2011-2014) only— with Phase 2 costs to be addressed in future proceeding
- Includes shareholder funding of all 2011 Plan work
- Excludes significant San Bruno-related shareholder spending to-date

PSEP- Key Features

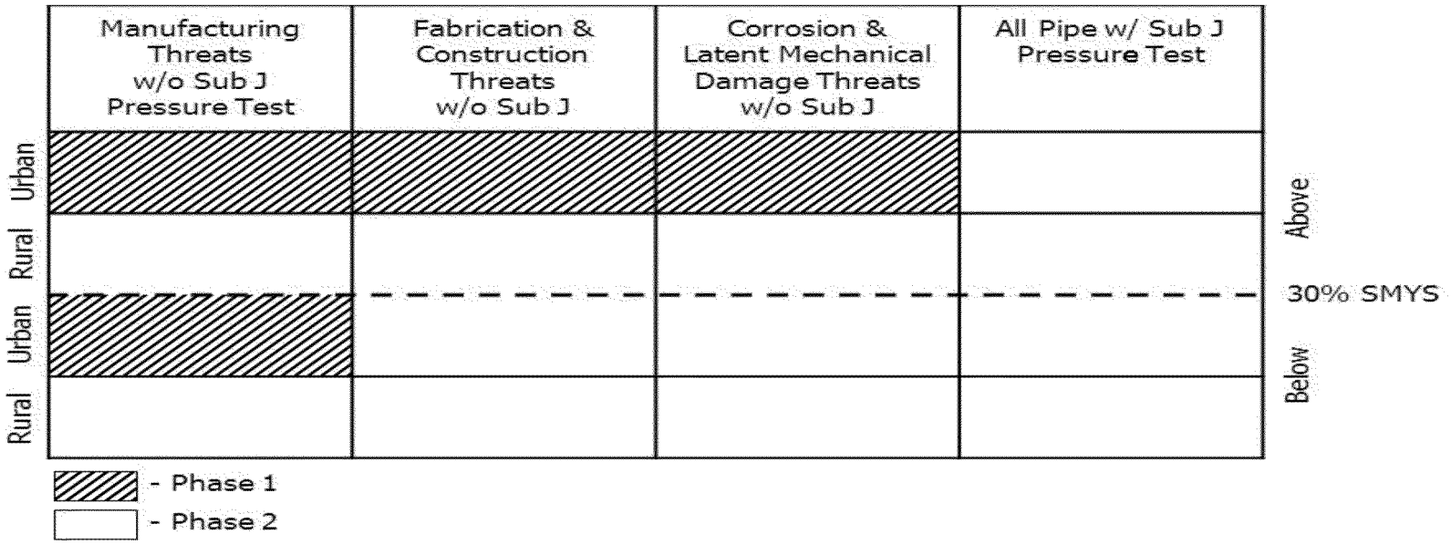
- **Assesses and upgrades all PG&E gas transmission pipeline (5,786 miles) to modern safety standards**
- **Phase 1 (2011-2014) upgrades over 1,200 miles of pipe and 228 valves:**
  - Replace or strength test 969 miles of pipe in the most populous areas
  - Retrofit for in-line inspection (ILI) 199 miles and ILI 234 miles
  - Automate 228 valves
  - Validate and modernize gas transmission asset records
- **Phase 2 (2015 forward) addresses remaining gas transmission system**
- **Continues interim safety measures to assure public safety until pipeline modernization work is completed**
  - MAOP validation
  - Increased leak surveys and patrols
  - Pressure reductions as necessary

PSEP Work Streams

Work Streams	Objective
Pipe Modernization	Assure every gas transmission pipeline operates at or below proven, tested and verified safe operating pressure, "margin of safety" through • Strength Testing • Pipe Replacement • Pressure Reductions • Engineering assessments, MAOP Validations
Valve Automation	Facilitate emergency response to minimize the potential consequences of a natural gas fueled fire
Records Integration	Reflect the NTSB's recommendation for a new standard of "traceable, verifiable and complete" gas transmission records
Interim Safety Measures	Increase public safety of PG&E's gas transmission system prior to completing the work proposed

Pipeline Work Prioritization

- Targets pre-1970 pipe segments that have not been strength tested
- Uses ASME, industry-recognized pipeline threats, physical pipeline attributes, Class location, and operating specified minimum yield strength (SMYS) to define action
- Targets “Urban areas” all Class 2,3,4 and Class 1 HCA w/ high potential impact on people and property
- Project prioritization (annual work plans) based on Class location, HCA, PIR, and customer and public impacts



Valve Work Prioritization

- Targets large diameter/high pressure pipelines located within high population density areas
- ~ 60 percent of Phase 1 automation miles located in the Peninsula/East Bay/South Bay

  Project prioritization based PIR, HCA density and geographic area
- Includes additional SCADA information, tools, and training for gas operators for early detection and quick response to pipeline rupture events

Valve Automation Decision Tree Outcome Summary				
Valve Location	Class 4 pipe segments PIR* > 100 ft.	Class 3 pipe segments PIR > 200 ft.	Class 3 pipe with > 50% HCA , PIR > 150 ft	Active fault, Class 3 or 4 or HCA, PIR > 150 ft
Phase 1 Outcome	**200 Remote Control Valves (PIR > 300, Class 3&4 HCA)** **28 Automatic Shutoff Valve (high threat earthquake fault crossings)**			

* PIR is defined as the radius of a circle within which the potential failure of a pipeline could have significant impact on people or property

PSEP Phase 1 Scope

Over 1,200 miles of pipe upgraded and 228 valves automated 2011-2014

Work Streams	2011	2012	2013	2014	Phase 1
Strength Testing*	236 miles**	185 miles	204 miles	158 miles	**783**
Pipeline Replacements	0.3 miles	39 miles	64 miles	82 miles	**186**
ILI Upgrades	--	78 miles	121 miles	--	**199**
In-line Inspections	--	--	78 miles	156 miles	**234**
Valve Automation	29 valves	46 valves	90 valves	63 valves	**228**
Records Integration	Data Validation, MAOP Calculations, Integrated Asset & Work Management				
Interim Safety Measures	Pressure Reductions, Leak Surveys, Aerial Patrols				

* Mileage reflects actual miles pressure tested

** 2011 strength test miles as of June. 2011 total may change due to records validation efforts

PG&E Proposes 2011-2014 PSEP Costs of $2.2 B over 4 years

Forecast Costs in $MM	Shareholder Funded Costs	PSEP Costs Funded in Rates	
	2011	2012-2014	
Cost Categories	**Expense***	**Capital**	**Expense**
Pipeline Modernization	$123	$895	$285
Valve Automation	$2	$120	$9
Records Integration	$56	$96	$127
Interim Safety Measures	--	--	$3
Program Management	$1	$20	$11
Contingency	$39	$237	$92
PSEP Total Costs	**$222**	**$1,368**	**$527**

* For 2011, in addition to expense, shareholders to pay capital costs ($1.4MM) for projects put in-service

PSEP Shareholder Allocation

Shareholders fund a substantial portion of PSEP and related safety enhancement costs

	2010	2011	2012	2013	2014	Total
2011 Implementation Plan Work*	--	$222	--	--	--	$222
Validation & Testing Post 1970 Pipeline						
Post-1970 MAOP Validation	$0.1	$39	$36	$11	--	$86
Post-1970 Pressure Testing	--	$1	$7	$2	$3	$13
Non-Implementation Plan Costs**	$63	$152	***	***	***	$215
Total Shareholder Cost Allocation	$63	$414	$43	$13	$3	$536

* Includes $220.5 MM in forecast expense and $1.4 MM forecast capital by EOY 2011.

** Includes gas records gathering, leak surveys and repair, emergency response, and responding to data requests from CPUC, NTSB and others.

*** Non-Implementation Plan Cost are not forecasted for 2012 and beyond but are expected to be significant

PSEP Cost Approach

Proposes to put costs of new safety programs and standards not previously required into rates beginning in 2012.

Not in rates:

- Costs directly related to the San Bruno accident
- Non-Implementation Plan activities
- Work already included in 2011 GT&S Rate Case funding
- Pressure testing or validation for post-1970 pipe

Cost Recovery Approach Includes
• 2011 PSEP costs paid by shareholders
• Cost targets for expense and capital w/mid program adjustment request mechanism
• Use of funds limited to PSEP
• Customers pay only for capital projects put in-service
• Expense dollars not spent on PSEP returned to customers after 2014
• Semi-annual reporting for funds budgeted vs. spent, and project status

PSEP Revenue Requirement

- **2011 revenue requirement funded by shareholders**
- **2011-2014 revenue requirement: $768MM for 4 years**

Phase 1 Plan Incremental Annual Rev. Req.					
($ in millions)	2011**	2012	2013	2014	Total
Total RRQ	0	$247	$221	$300	$768

* Assumes non-core customers pay small commercial procurement rates.
** 2011 RRQ (approx. $224 MM) to be funded by shareholders.

PSEP Rate Impacts

Illustrative Class Average End-User Rates
($ per Therm)

	Present June 2011 Rates	Gas Pipeline Safety Rate	Total Rate Including Gas Pipeline Safety Rate	Percent
CORE RETAIL - Bundled				
Residential Non-CARE	$1.223	$.052	$1.275	**4.3%**
Small Commercial Non-CARE	$.975	$.052	$1.027	**5.3%**
Large Commercial	$.766	$.052	$.818	**6.8%**
NGV1 - (uncompressed service)	$.661	$.052	$.713	**7.9%**
NGV2 - (compressed service)	$1.912	$.052	$1.965	**2.7%**
CORE RETAIL - Transport Only				
Residential Non-CARE	$.650	$.052	$.702	**8.0%**
Small Commercial Non-CARE	$.418	$.052	$.470	**12.5%**
Large Commercial	$.248	$.052	$.300	**21.0%**
NONCORE - Transportation Only *				
Industrial - Distribution	$.171	$.025	$.196	**14.6%**
Industrial - Transmission	$.069	$.025	$.094	**36.0%**
Industrial - Backbone	$.042	$.002	$.044	**5.0%**
Electric Generation - Transmission (G-EG-D/LT)	$.029	$.025	$.054	**86.0%**
Electric Generation - Backbone (G-EG-BB)	$.007	$.002	$.010	**28.6%**
NGV4 - Distribution (uncompressed service)	$.155	$.025	$.180	**16.1%**
NGV4 - Transmission (uncompressed service) *	$.055	$.025	$.080	**45.2%**
WHOLESALE CORE AND NONCORE (G-WSL)				
Alpine Natural Gas	$.026	$.025	$.051	**97.1%**
Coalinga	$.026	$.025	$.051	**96.8%**
Island Energy	$.027	$.025	$.052	**90.9%**
Palo Alto	$.025	$.025	$.050	**98.6%**
West Coast Gas - Castle	$.100	$.025	$.125	**24.9%**
West Coast Gas - Mather Distribution	$.123	$.025	$.148	**20.2%**
West Coast Gas - Mather Transmission	$.026	$.025	$.051	**96.0%**

* Noncore end-use rate increases range from 3.5%-5% on total bill, assuming cost of commodity equal to PG&E's core large commercial commodity rates.