Date	Issue	Description	Hours	
10/14/15	GP	Read, Review, Initial Analysis: GRC Estimates re Customer	2.00	OF CALIFOR
10/14/13	G1	Engagement, Real Estate	2.00	FII FD
10/14/15	GP	Read, Review, Initial Analysis: GRC Estimates re Energy	1.80	
10/14/15	GP		1.60	7-11-17
10/16/15	CDCT	Procurement CDCW die Doors Lak March	1.00	04:59 PI
10/16/15	GDST	Read, Review, Initial Analysis: GRC Working Papers-Leak Mgmt.	1.00	
10/20/15	GP	Read, Review, Initial Analysis: GRC Estimates re Emergency	2.50	
		Preparedness		
10/20/15	GP	Read, Review, Initial Analysis: GRC Working Papers Vegetation	1.50	
		Mgmt		
10/20/15	GP	Read, Review, Initial Analysis: GRC Working Papers	1.00	
10/20/15	GP	Read, Review, Initial Analysis: GRC Estimates re Pole Asset Mgmt,	1.50	
		Distribution Automation		
10/21/15	INSL	Read, Review, Initial Analysis: GRC Estimates Safety Dept, OSHA	4.00	
10/22/15	GP	Read, Review, Initial Analysis: GRC Estimates A&G	1.30	
10/22/15	GP	Read, Review, Initial Analysis: GRC WP 3-1,4-1,6-7,7-12 Estimates	2.30	
10/22/15	GP	Read, Review, Initial Analysis: Typical Bill Impacts vs Household Ys	0.70	
10/22/15	GP	GRC re Productivity Gains, Safety Dept.Budget	2.00	
10/23/15	GP	GRC draft DR1, ver.1	2.00	
10/28/15	GP	GRC draft DR1, ver.2add "Levelized Costs"	1.00	
10/28/15	GP	GRC draft DR1, ver.2add "Levelized	4.10	
		Costs", "Elect. Dist. Mtce.", "Shared Svces"		
10/29/15	GDST	Read, Review, Initial Analysis: GRC Estimates re Picarro Survey	2.08	
		Program		
10/29/15	GP	GRC draft DR1, ver.2add "Elect.Dist.Mtce.","SharedSvces"	1.00	****
10/29/15	GP	Read, Review, Initial Analysis: 2014 GRC RR Forecasts, Tables 1-4	0.50	
10/30/15	GDST	Read, Review, Initial Analysis: GRC WP Ests re Leak	2.33	
		Mgmt,Emergencies		
10/30/15	INSL	Read, Review, Initial Analysis: GRC Ests re Insurance,Third-Party	2.90	
,,		Damages		
10/31/15	GDST	GRC draft DR1, ver.3add "Picarro",	1.67	
11/02/15	GDST	Read, Review, Initial Analysis: GRC re Gas Dist. Corrective Mtce	0.67	***
11,02,13	0001	FERC 892	0.07	
11/02/15	GDST	Read, Review, Initial Analysis: : TURN Testimony Re Picarro, DIMP	0.58	
11/02/13	GDS1	fm 2014 GRC; PGE Violations Investigation OII	0.50	
11/02/15	INSL	Read, Review, Initial Analysis: GRC re Insurance Expenses,	0.30	
11/02/13	IIVSL	Shareholder Liabilities	0.50	
11/03/15	GP	Read, Review, Initial Analysis: GRC re Shared Svces Exp.	1.20	~~
	·····		 	
11/03/15	GP GP	Read, Review, Initial Analysis: GRC re Balancing Accounts	0.50	
11/03/15	Gr	Read, Review, Initial Analysis: GRC and Form 10K re Interest	0.90	
11/02/15	GD.	Expenses Read, Review, Initial Analysis: GRC re Manage Svce Inquiries	1 40	
11/03/15	GP	, , ,	1.40	
11/02/15	INICI	Expenses Pood Poviow Initial Analysis: CPC to Insurance and Rick	0.00	
11/03/15	INSL	Read, Review, Initial Analysis: GRC re Insurance and Risk	0.60	
11/02/15	INICI	Management Expenses	0.00	
11/03/15	INSL	Read, Review, Initial Analysis: GRC re Injuries and Damages	0.90	
44/04/45		Estimates		~~
11/04/15	GP	Read, Review, Initial Analysis: GRC re Safety Eng. & OSHA	1.50	
		Compliance Exp.		~~~
11/04/15	GP	Read, Review, Initial Analysis: GRC re Cust. Field Svce Work Exp	2.40	
11/04/15	GP	Read, Review, Initial Analysis: GRC re Cust. Field Svce Work Exp	0.60	
		(cont)		
11/04/15	GP	Re-visit GRC re Wokers Compensation Exps	1.00	
11/05/15	GP	Read, Review, Initial Analysis: GRC and Form 10K re	0.60	
		O&M,Deprec.Exp		
11/06/15	GP	Read, Review, Initial Analysis: GRC re Project Estimating Tool (PET)	2.00	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Read, Review, Initial Analysis: GRC re Cust. Care - Complaints, CSOs	1.40	1
11/06/15	GP	11000, 1101101, 1		anna d
11/06/15 11/06/15	GP GP	Read, Review, Initial Analysis: GRC re Cust. Care - Safety Net Prog.	0.30	***

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Date	Issue	Description	Hours
11/06/15	GP	Read, Review, Initial Analysis: GRC re Cust. Care - KPMG Report	1.00
11/12/15	GDST	Read, Review, Initial Analysis: GRC re Corrective vs Preventive	1.50
		Mtce	
11/12/15	GP	Read, Review, Initial Analysis: GRC re Hydro Ops-Manage Bldgs	1.80
11/12/15	GP	Read, Review, Initial Analysis: GRC re Manage Var Bal Acct	0.20
11/12/13	ŭ.	Processes	0.20
11/12/15	GP	Read, Review, Initial Analysis: GRC re Lic. Compliance-Hydro	0.50
11/12/13	GF.	Generation	0.50
11/12/15	CD.	}	0.80
11/12/15	GP CD	Read, Review, Initial Analysis: GRC re Escalation	
11/12/15	GP	Research Z-Factor Mechanism	0.90
11/13/15	GP	Read, Review, Initial Analysis: GRC re Escalation	2.00
11/13/15	GP	Edit GRC draft DR1, ver.8	0.40
11/13/15	GP	Read, Review, Initial Analysis: GRC re Perf. Measurement &	0.60
		Incentives	
11/14/15	GP	Read, Review, Initial Analysis: PG&E SEC Filings re Stock Options,	1.00
		LTI, STI	~~~~~
11/15/15	GP	Read, Review, Initial Analysis: PG&E SEC Filings re Debt, OE, Share	1.40
		Price	
11/16/15	GP	Read, Review, Initial Analysis: PG&E SEC Filings re Debt, OE, Share	0.20
		Price	
11/17/15	GP	Read, Review, Initial Analysis: GRC re Attrition, Escalation, &	0.70
		Inflation	
11/18/15	GP	Research: CPUC PTY Rate-Making Decisions	1.20
11/18/15	GP	Read, Review, Initial Analysis: GRC re Interest and Bank Fee Exp.	0.50
11/19/15	GP	Read, Review, Initial Analysis: GRC re Rate Base Estimates	1.30
11/20/15	GP	Read, Review, Initial Analysis: GRC re Asset Age vs Project	2.20
11, 10, 10	<u> </u>	Prioritisation	2.20
11/20/15	GP	Read, Review, Initial Analysis: GRC re Accts & Energy Consumption	1.70
11/20/13	G,	Ests	1.70
11/20/15	GP		1.00
11/20/13	GF	Read, Review, Initial Analysis: GRC re Illustrative Residential Rates	1.00
11/21/15	CDCT	LRMC, CARE	2.42
11/24/15	GDST	Read, Review, Initial Analysis: GRC re Leak Find Rate vs. Ttl Leaks	2.42
11/24/15	GP	Read, Review, Initial Analysis: GRC re Compliance Items	1.00
11/25/15	GDST	Read, Review, Initial Analysis: GRC re Leak Survey Cycle Impacts	2.75
11/25/15	GP	Read, Review, Initial Analysis: GRC re Compliance Items	1.00
11/25/15	GP	Read, Review, Initial Analysis: GRC re Investment Risk	2.30
11/25/15	GP	Read, Review, Initial Analysis: GRC re Customer Outreach-	1.00
		Switching vs Price	
11/26/15	GP	Read, Review, Initial Analysis: GRC re Customer Outreach-	2.50
		Switching vs Price	
11/28/15	GP	Read, Review, Initial Analysis: GRC re Purchasing & Materials Mgmt	1.40
11/28/15	GP	Read, Review, Initial Analysis: GRC re STIP, Budgeting	2.50
12/10/15	GP	Review CPUC - New FERC Rules for ROE,ROR	1.60
12/10/15	GP	Read, Review, Initial Analysis: GRC -2014 ROE Results, 2015-2017	1.00
		Projections	
12/10/15	GP	Read, Review, Initial Analysis: GRC re Dividend, Available Residual	0.40
, ,		Income	
12/11/15	ESCL	Review: GRC DR#1,A02	0.60
12/11/15	GDST	Review: GRC DR#1,A06	0.20
	ç		
12/11/15	GP ESCI	Review: GRC DR#1,A08	1.50
12/11/15	ESCL	Review: GRC DR#1,A10	0.60
12/11/15	ESCL	Review: GRC DR#1,A16	0.30
12/11/15	ESCL	Review: GRC DR#1,A17	0.10
12/11/15	GDST	Review: GRC DR#1,A14	0.60
12/11/15	GDST	Review: GRC DR#1,A38	0.10
12/11/15	GDST	Review: GRC DR#1,A39	0.10
12/11/15	GP	Review: GRC DR#1,A32	0.10

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Date	Issue	Description	Hours
12/11/15	GP	Review: GRC DR#1,A33	0.10
12/11/15	ELRE	Review: GRC DR#1,A34	0.10
12/11/15	ELRE	Review: GRC DR#1,A34 XLS File	1.00
12/11/15	GP	Review: GRC DR#1,A35	0.20
12/11/15	GP	Review: GRC DR#1,A24	0.10
12/11/15	INSL	Research: BLS Insurance PPI Series	0.50
12/11/15	INSL	Review: GRC DR#1,A16; 2014 GRC Decision re Insurance	0.60
12/12/15	ESCL	Review: GRC DR#1,A15	0.70
12/12/15	ESCL	Review: GRC DR#1,A15-RR Growth Rates	1.20
12/12/15	GP	Review: GRC DR#1,A30	0.40
12/15/15	INSL	Research: Utility Liability Insurance Expenses-Other Jurisdictions,	2.00
		Companies	
12/16/15	INSL	Research: Utility Liability Insurance Expenses-Other Jurisdictions,	0.50
, ., .		Companies	
12/16/15	INSL	Review: Towers, Willis Insurance Industry Reports	0.60
12/16/15	INSL	Review: Fitch re Ratings of Utility Insurance	0.50
12/16/15	INSL	Research: BLS PPI re Insurance - Call to DC	0.10
12/16/15	INSL	Reearch: BLS PPI Non-Auto Liability monthly Δs	0.60
12/16/15	INSL	Review: AEGIS surplus vs PGE paid premiums	1.40
12/16/15	INSL	Review: Bohnert et al re Premium Inflation	0.80
12/10/15	GP	Review: GRC Summary Exhibits-Exp. Tables	0.80
12/17/15	GP GP	Research: Utility Cost Structure Comparisons	0.90
	GP GP	Research: Utility Cost Structure Comparisons Research: Utility Cost per kWh Comparisons	1.70
12/17/15	}	\$ · · · · · · · · · · · · · · · ·	2.30
12/18/15	GP	Review: GRC DR#1,A18	• • • • • • • • • • • • • • • • • • • •
12/18/15	GP	Review: GRC DR#1,A19	0.50
12/18/15	GDST	Review: GRC DR#1,A05, A07	0.10
12/18/15	GP	Review: GRC DR#1,A31	1.00
12/23/15	GP	Review: GRC DR#2,A01	0.40
12/23/15	GDST	Review: GRC DR#2,A11	0.40
12/29/15	GP	Review: GRC DR#2,A06	0.30
12/29/15	GP	Review: GRC DR#2,A10	0.20
12/30/15	GP	Research: Customer Care Ops, Compensation	0.80
12/30/15	GP	Research: Call Center Compensation & Trends	1.50
12/30/15	INSL	Analysis: FRB Liability Prem Trends	1.92
12/30/15	INSL	Analysis: PGE Liability Ins Attrition Estimates vs FRB Trend	2.00
12/30/15	INSL	Analysis: Attachment Point Changes for Liability Insurers-Factors	2.00
		Affecting	
01/04/16	INDO	Research: GRC re Director & Officer Insurance Funding	0.92
01/05/16	INDO	Research: D&O,Liability Trends for Util. Ind.	1.08
01/11/16	INSL	Write DRs for Liability Coverage	0.33
01/11/16	INSP	Analysis: 2017 vs 2014 GRC re Property Insurance Expenditures	1.50
01/11/16	INSP	Write DRs for Property Insurance Differentials	0.25
01/12/16	ELRE	Research: Munasinghe Paper re Determining Optimal Reliability	0.83
		Levels via Economic Analysis	
01/12/16	GDST	Research & Analysis: GRC Figures & DR Response for Unaccounted	0.33
		for Gas Estinates and Picarro-related Savings	
01/13/16	ELRE	Analysis & Write DRs: Risk Register Estimates re Excavation Damage	1.17
~~~~		Freq, Cost, Liability	
01/13/16	GDST	Analysis: Convert pre-2009 PHMSA PG&E Data, Compare with	1.17
		PG&E post-2009 Incident Reports	
01/13/16	GDST	Research: PHMSA Data re PG&E Historical Incident Reports	1.25
01/13/16	GDST	Research: PHMSA Integrity Mgmt Progs; Gas Dist Leaks Statistics re	1.33
•		Causal Factors	
01/13/16	GDST	Research: PHMSA re Expected Service Life, Gas Distribution Pipes,	0.33
		Lines by Type	
01/13/16	INSL	Research & Analysis: Risk Register Estimates re Excavation Damage	1.00
• •	ŧ	Freq, Cost, Liability	

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Date	Issue	Description	Hours
01/13/16	INSL	Analysis & Write DRs: Risk Register Estimates re Excavation Damage	1.17
		Freq, Cost, Liability	
01/14/16	GDST	Analysis: Convert pre-2009 PHMSA PG&E Data, Compare with	1.00
		PG&E post-2009 Incident Reports	
01/15/16	GDST	Analysis: PHMSA Sec191 Records re Unaccounted for Gas vs Leak	1.92
		History per DRs	
01/15/16	GDST	Analysis: PG&E Depreciation Study vs PHMSA Sec191 Records for	1.83
,,		Svce Life Trend	
01/15/16	GDST	Research: PHMSA Sec191 Records, Henry Hub rates for valuation of	0.58
01/15/10	0001	Unaccounted For Costs	0.50
01/20/16	GDST	Analysis: PHMSA Reports re System Mains, Svces, Vintage Changes	0.58
01/20/10	GDS1	since 2004	0.50
01/20/10	CDCT	·	2.00
01/20/16	GDST	Research & Analysis: PGE Budget Report Consistency vs GRC	2.00
04/04/46		'Actuals', Forecasts Gas Dist Corrective, Preventive Mtce Exp	
01/21/16	GDST	Analysis: Gas Dist Leak Forecast vs Budget Report & PHMSA Sec151	1.50
	<b></b>	Leak Records	
01/21/16	GDST	Analysis: PG&E Gas Dist System - Corrective Mtce Causal Factors vs	1.17
		System Components Changes	~~~~~
01/21/16	GDST	Analysis: PG&E Gas Dist System - Corrective Mtce Exo Impact on	0.75
		Asset Useful Life, Depreciation	
01/21/16	GDST	Research: 2014 GRC Decision re Preventive, Corrective Mtce-Gas	0.42
		Dist	
01/26/16	GDST	Research & Analysis: NTSB HCA Pipeline IM Safety Study, vs PGE17	2.17
		Testimony re Routine vs Corrective Mtce	
01/26/16	GDST	Research & Analysis: PGE17 Testimony re Cathodic Protection,	2.00
		PHMSA Report Data re Routine vs Corrective Mtce	
01/26/16	GDST	Research & Analysis: PGE17 Testimony re Inspection Interval &	1.42
,,		Condition; Defn re "Quality" "Consequence" vs NTSB/PHMSA	
		"HCAs"	
01/26/16	GDST	Research & Analysis: PGE17 Testimony re Inspection Interval &	1.42
01/20/10	0031	Conditions vs Risk, NTSB Safety Recommendations	1.42
01/27/10	CDCT	<u>`</u>	0.42
01/27/16	GDST	Research & Analysis: PGE Responses to TURN DRs re Gas Dist.	0.42
04/27/46	CDCT	'Corrective Mtce' Expenses	
01/27/16	GDST	Research & Analysis: PGE17 Testimony re Inspection Interval &	0.83
		Condition; Defn re "Quality" "Consequence" vs NTSB/PHMSA	
		"HCAs"	~~~~~
01/27/16	GDST	Research: US Code & NTSB Definitions of 'Corrective' Actions, Mtce	1.83
01/27/16	INSL	Analysis: CFC Issues List - \$ Valuations per Issue: Liability Insurance	0.33
01/28/16	GDST	Research & Analysis: PGE17 Testimony re Mapping Aging Project vs	1.58
		MWC 'GF' Historical costs, vs Risk Mitigation Stds.	
01/29/16	GDST	Analysis & Write DR: Picarro Surveyor & Leak Mgmt Model	0.33
		Estimates	
01/29/16	GDST	Analysis & Write DR: Picarro Surveyor Impact on Annual Leak Find	4.00
		Rate, and Cost Backwardation	
01/29/16	GDST	Analysis: Comparison of PHMSA Sec151 Reports vs Leak Mgmt	1.83
		Model Figures & Forecast	
01/29/16	GDST	Analysis: PGE 3 re Leak Forecast and Repair Plan - Examination for	0.67
01/23/10	GDS1	Cost Shifting (Backwardation)	0.07
01/20/16	CDST	Research & Analysis: NTSB, EU Optimal Maintenance Models vs	1 25
01/29/16	GDST		1.25
01/20/46	CDCT	Hist PG&E Mtce Practices and Pattern of Non-Labor Exp.	1 17
01/29/16	GDST	Research: NTSB Best Practices re Leak Mgmt	1.17
01/30/16	ELRE	Research & Analysis: Mains, Svces Reliability Mtce - Replacement	0.92
		Costs Forecast vs Hist. PGE Trend. Materials PPI, Unit Cost Errata	
	<b></b>	Update Filing	
01/30/16	GDST	Analysis & Write DRs: Leak Mgmt Model Unit Costs - Assumed	1.75
~~~		Efficiencies in, vs Trends in Materials, Labor	~~~~
01/30/16	GDST	Research & Analysis: Std Accting Treatment of Materials Costs, vs	1.33
	8	Trend Calculation in Leak Mgmt Model	

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Date	Issue	Description	Hours
02/02/16	GDST	Research & Analysis: PGE17 Testimony re Gas Distribution 'Stds of	0.75
		Care', vs NTSB, PHMSA Reporting Requirements	
02/02/16	GDST	Research & Analysis: PGE17 Testimony re Gas Distribution 'Stds of	3.33
		Care', vs NTSB, PHMSA Reporting Requirements, Fed. Register Issue	
8		History	
02/03/16	GDST	Analysis & Write DRs: Gas Dist Costs & Escalation vs Risk Register re	0.67
		Incorrect Operations & PHMSA Stats on Hazardous Leak Causes vs	
		CFR Requirements	
02/03/16	GDST	Analysis & Write DRs: Non-Labor Gas Dist Cost Growth -	0.83
		Relationship to PHMSA Reportable Causes, Cust. Growth;	
		Escalation	
02/03/16	GDST	Analysis: Non-Labor Gas Dist Cost Growth - Relationship to PHMSA	1.75
		Reportable Causes, Cust. Growth; Escalation	
02/03/16	GDST	Research & Analysis: Gas Dist Mtce Categorisations: Routine,	3.00
,,		Preventive, vs Corrective; NTSB Defns; GRC Leak Forecast	
02/03/16	GDST	Research & Analysis: PGE17 Testimony re Gas Distribution 'Stds of	0.33
02,00,10	020.	Care', vs NTSB, PHMSA Reporting Requirements, Fed. Register Issue	0.00
		History	
02/04/16	GDST	Analysis & Write DRs: Gas Dist Leak Mgmt Cost Ests - Corrective vs	2.33
02/04/10	OD51	Preventive/Routine Causes	2.55
02/04/16	GDST	Research & Analysis: Gas Dist Mtce Categorisations: Routine,	2.50
02/04/10	GD31	Preventive, vs Corrective; NTSB Defns; GRC Leak Forecast	2.50
02/04/16	GDST	Research & Analysis: PGE17 re DIMP-Incorrect Ops vs Future	1.42
02/04/10	GD31	Leaks/Mi. vs NARUC Funding Initiatives/ NAPSR Compendium	1.42
02/05/16	GDST	Analysis & Write DRs: Leak Causes - Controllable/Company vs	0.25
02/03/10	GD31	Outside/Uncontrollable, Sec 191 Rpt Data	0.23
02/0E/16	CDST	·	1 00
02/05/16	GDST	Research & Analysis: Re-Allocation of Leak Repair Costs By	1.00
02/05/16	CDCT	Controllability	1 02
02/05/16	GDST	Research & Analysis: Total Leak Repairs & Outstanding Leaks - Reported vs Modeled	1.83
02/06/16	GDST	· · · · · · · · · · · · · · · · · · ·	5.75
02/06/16	וכעט	Research & Analysis: PGE Corrosion & Other Controllable Leak	5.75
02/06/16	CDCT	Performance vs National, CA Utility Averages	0.75
02/06/16	GDST	Research & Analysis: PGE17 Testimony re Threats; PHMSA Report	0.75
02/00/16	INICI	Requirements re Incorrect Operations	0.25
02/09/16	INSL	Analysis: Liability Insurance Expense Issue - Summary Memo for	0.25
02/40/46		Discussion	
02/10/16	ELRE	Research & Analysis: Freeman Sullivan re Valuation of Outages -	1.00
00/44/46		Svce Level Equality Calculation; Reliability CBA Calculation	
02/11/16	ELRE	Research & Analysis: PGE3,WP4-56 Reliability Service Replacement	0.83
00/44/46		Program	
02/11/16	INDO	Research & Analysis: D&O Insurance, Previous Yrs Exp vs 2014 GRC	1.33
00/40/40		Decision	
02/12/16	ELRE	Research & Analysis:Distribution Reliability Replacement Capital	2.58
00/47/46		Plan	
02/17/16	GDST	Research & Analysis: PSEP Program Decision re Corrective vs	1.08
00/47/:-		Preventive Maintenance	
02/17/16	GDST	Research & Analysis: Re-visit GRC and Previous Decisions re Leak	0.17
		Find Rate Directives	
02/17/16	GDST	Research & Analysis: San Bruno Penalty & Funding For System	5.08
		Corrective Maintenance; Pipeline Safety Act Requirements re IM	
02/18/16	GDST	Research & Analysis: NTSB San Bruno Report & CPUC PSEP Decision	1.58
		re Performance-Based Risk Mgmt; Safety Recommendation P-11-22	
		Compliance	
02/18/16	GDST	Research & Analysis: PWC Study re Leak Find Rate Best Practices	2.00
02/19/16	GDST	Research & Analysis: Leak Management Budget-HPR Replacement	0.83
		Program	

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Date	Issue	Description	Hours
02/24/16	GDST	Analysis & Write DR: Update DR#5 draft; Questions re IT, Leak	0.50
		Mgmt; DR#2 and DR#3 follow-ups; Exhibit References, graphics,	
		etc.	
02/25/16	GDST	Analysis & Write DR: Update DR#5 draft; Questions re IT, Leak	3.42
		Mgmt; DR#2 and DR#3 follow-ups; Exhibit References, graphics,	
		etc.	
02/26/16	GDST	Analysis & Write DR: Update DR#5 draft; Qs re Safety Metrics vs	1.58
		NTSB Threat Mitigation Recommendations, CPUC Safety Policy	
03/02/16	GDST	Analysis & Write DR: Update DR#5 draft; Qs re CP Re-Survey vs 3rd	1.08
		Party Property Impingement Cost Recovery	
03/02/16	INSP	Analysis & Write DR: Update DR#5 draft; Qs re CP Re-Survey vs 3rd	1.08
00/00/46		Party Property Impingement Cost Recovery	
03/03/16	GDST	Research & Analysis: PGE18 Updates re Leak Mgmt Forecast Model	2.25
02/04/46	INICI	Revisions	
03/04/16	INSL	Research & Analysis & Write DR: TowersWatson Report on Liability	2.33
03/09/16	INICI	Insurance Trends; Update DR#5 re Excess Liability Insurance Costs	0.03
03/09/16	INSL	Research & Analysis: Review DR#3 Responses; Write Follow-up DR questions - Excess Liability Insurance, Insurance Recoveries	0.92
03/09/16	INSL	Research & Analysis: Review DR#3 Responses; Write Follow-up DR	3.42
03/09/10	IINOL	questions - Excess Liability Insurance, Insurance Recoveries,	3.42
		Unaccounted-For Gas	
03/09/16	INSP	Research & Analysis: Review DR#3 Responses; Write Follow-up DR	1.00
03/03/10	11451	questions - Property Insurance	1.00
03/10/16	INSP	Research & Analysis: Review DR#3 Responses; Write Follow-up DR	0.33
03/10/10		questions - Property Insurance	0.55
03/11/16	ELRE	Research & Analysis: Review DoE/Lawrence & Nexant/Freeman	0.58
00, 11, 10		Sullivan Research re VoS of Elect. Reliability	0.50
03/11/16	ELRE	Research & Analysis & Write DRs: Review DoE/Lawrence &	1.33
, ,		Nexant/Freeman Sullivan Research re VoS of Elect. Reliability	
03/11/16	INSP	Research & Analysis: Property Tax Adjustment for ΔAssets, ΔAsset	2.00
		Prices	
03/15/16	INSP	Research & Analysis & Write DRs: PGE-19 re Property Insurance,	2.58
		DR3Q08 Clarifications, Estimate Growth % of Total Proposed	
		Installations	
03/16/16	ELRE	Research & Analysis: EXAMINE PGE VOS CALCULATOR MODEL,	0.75
		Sensitivity Test Parameter Selections; PGE Dist. Reliability	
		Objectives, Reports, Metrics PPT	
03/17/16	ELRE	Research & Analysis: EXAMINE PGE VOS CALCULATOR MODEL,	0.58
		Sensitivity Test Parameter Selections; PGE Dist. Reliability	
		Objectives, Reports, Metrics PPT	
03/17/16	ELRE	Research & Analysis: Cornerstone Reliability Decision re EDO	2.00
		Planning and Returns on Reinforcement; EXAMINE PGE VOS	
02/25/46	18161	CALCULATOR MODEL	
03/25/16	INSL	Research & Analysis & Write Testimony: Liability Insurance	1.33
02/25/10	INICI	Expenses	1.00
03/25/16	INSL	Research & Analysis & Write Testimony: Liability Insurance - Resolve Table 3-4 w/ WP Table 3-82	1.00
02/25/16	INICI	Research & Analysis & Write Testimony: Liability Insurance - PGE	1 42
03/25/16	INSL	:	1.42
02/25/16	INICD	Forecast vs General Liability Coverage Trend Receasts & Applying Property Value Appropriation in BGE Service	1 75
03/25/16	INSP	Research & Analysis: Property Value Appreciation in PGE Service Area - FHFA Data	1.75
03/26/16	INSL	Research & Analysis & Write Testimony: Liability Insurance - PGE	1.75
03/20/10	IIVJL	Forecast vs General Liability Coverage Trend	1./3
03/26/16	INSL	Research & Analysis & Write Testimony: Liability Insurance - PGE	3.75
20, 20, 10	UL	Forecast vs Property Coverage as Base Trend	3.73
03/26/16	INSP	Research & Analysis & Write Testimony: Liability Insurance - PGE	3.75
20, 20, 10	101	Forecast vs Property Coverage as Base Trend	3.73

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Date	Issue	Description	Hours
03/29/16	INSL	Research & Analysis & Write Testimony: Liability Insurance - PGE	1.50
		Forecast vs Property Coverage as Base Trend	
03/29/16	INSP	Research & Analysis & Write Testimony: Liability Insurance - PGE	1.50
		Forecast vs Property Coverage as Base Trend	
03/30/16	INSL	Research & Analysis & Write Testimony: Liability Insurance - Review	0.42
		DR Responses to Other Intervenors	
03/30/16	INSL	Research & Analysis & Write Testimony: Insurance Costs - Excess	2.67
, ,		Liability - Cyber Security Component	
03/30/16	INSL	Research & Analysis & Write DRs: Insurance Costs - Excess Liability -	7.33
03/30/10		Cyber Security Component, "Cyber Gap" Coverage	7.33
02/21/16	GDST		
03/31/16	וכטט	Research & Analysis: DR5,Q04 re Dig-In Damage Incidents/Sq.Mi. vs	0.58
		Division Area Incomes	
03/31/16	INSL	Research & Analysis & Write Testimony: Liability Insurance - Cyber	0.83
		Risk and CL380	
03/31/16	INSP	Research & Analysis & Write Testimony: Property Insurance	2.00
04/01/16	INSL	Research & Analysis: Use of Archived Testimony; Cyber Risk	0.25
		Insurance (Towers-Watson)	
04/01/16	INSL	Research & Analysis: Discuss Cyber Risk Insurance w/ Towers	0.75
		Watson	
04/01/16	INSP	Research & Analysis & Write Testimony: Property Insurance	0.67
04/01/16	INSP	Research & Analysis & Write Testimony: Property Insurance - Use	6.33
. , . ,		of Property Values in Tax Calculation as Insurance Basis	
04/02/16	GDST	Research & Analysis: Review Exhibits, DRs & Notes re Corrective vs	2.83
04/02/10	GD31	Preventive Maintenance - Gas Distribution	2.03
04/02/16	INICD		2 50
04/02/16	INSP	Analysis & Write Testimony: Property Insurance - Use of Property	2.58
	}	Values in Tax Calculation as Insurance Basis	
04/04/16	ELRE	Research & Analysis: Review Exhibits, DRs re Reliability	1.00
~~~~~	<b></b>	Performance Forecasts vs VoS Model, Benefits per Division	
04/04/16	ELRE	Analysis & Write DRs: Electric Distribution - Reliability Reports,	0.83
	<u></u>	Proposed Modification	
04/04/16	GDST	Research & Analysis: Review Exhibits, DRs & Notes re Corrective vs	0.50
		Preventive Maintenance - Gas Distribution	
04/05/16	GDST	Research & Analysis: Review Exhibits, Gas Dist. Corrective	3.75
		Maintenance Costs - Company-Controllable Factors	
04/05/16	GDST	Research & Analysis: Review Exhibits, Gas Dist. Corrective	2.25
, , , ,		Maintenance Costs - Company-Controllable Factors; Cost Causation	
04/05/16	GDST	Research & Analysis: Review Exhibits, Gas Dist. Corrective Mtce -	3.17
04/03/10	ODSI	Company-Controllable Factors; Cost Causation; Leak Forecast	3.17
		Model, GLSRBA	
04/06/116	CDCT		2 17
04/06/16	GDST	Research & Analysis & Write Testimony: Gas Dist. Corrective Mtce -	2.17
	<u></u>	Cost Incidence	
04/06/16	GDST	Research & Analysis: Gas Dist. Corrective Mtce Expense Pattern vs	0.75
		PCG Share Price	
04/06/16	GDST	Research & Analysis: Review DR Responses to SED,ORA,TURN re	1.92
	<u></u>	Gas Dist. Corrective Mtce - Field Reports	
04/06/16	GDST	Research & Analysis: Review Exhibits, Gas Dist. Corrective Mtce -	1.50
		Company-Controllable Factors; Cost Causation; Leak Forecast	
		Model, GLSRBA	
04/06/16	INSP	Write Testimony: Draft re Uncollectibles Expense (incl.	1.00
		Workpapers) & Property Insurance	
04/07/16	ELRE	Research & Analysis: Reliability Expense Allocations vs VoS Model -	3.00
0 1, 0 / 10		Benefits per Division	3.00
04/07/16	ELRE	· · · · · · · · · · · · · · · · · · ·	1 00
04/07/16	ELKE	Research & Analysis: Reliability Expense Allocations - Alternative	1.00
04/07/11	656-	Methods Literature Survey, CPUC RIIM	4 00
04/07/16	GDST	Research & Analysis: Gas Dist. Corrective Mtce vs Dividends - KM	1.00
	<b></b>	Case Study	
04/09/16	GDST	Research & Analysis: Gas Dist. Corrective Mtce vs Dividends - KM	0.92
	<b>{</b>	Case Study	

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Date	Issue	Description	Hours
04/12/16	GDST	Research & Analysis & Write Testimony: Gas Dist. Expense -	1.75
		Mapping Status vs CFR Location/Site Requirements; Mapping	
		Corrections Reports	
04/12/16	GDST	Research & Analysis & Write Testimony: Gas Dist. Expense - PHMSA	1.67
		Records For Annualized Repair Model vs Actual Repairs Pattern	
04/13/16	ELRE	Research & Analysis: VOS Model - Linear Estimates for PV	1.50
		Weightings for Reliability Investment CBA	
04/15/16	GDST	Analysis & Write Testimony: Gas Dist. Expense; Risk Register Scores	7.58
		by MWCs; PHMSA Reports re Leak Causes; GT&S Testimony	
04/16/16	GDST	Analysis & Write Testimony: Gas Dist. Expense; Risk Register Scores	2.42
		by MWCs; PHMSA Reports re Leak Causes; GT&S Testimony	
04/19/16	GDST	Write Testimony: Gas Dist. Expense - Corrective Maintenance	5.50
04/19/16	GDST	Write Testimony: Gas Dist. Expense - Corrective Maintenance; 2014	2.50
		GRC Requirements re; Risk Register Leak Ratings	
04/20/16	GDST	Write Testimony: Gas Dist. Expense - Corrective Maintenance;	6.92
		Commission Decisions re Planning Horizon, Leak Mgmt	
		Optimisation	
04/20/16	INDO	Write Testimony: Directors & Officers Liability Insurance Expense	1.67
04/20/16	INSL	Write Testimony: Directors & Officers Liability Insurance Expense	1.67
04/21/16	ELRE	Analysis & Write Testimony: Elect. Dist.Reliability Expense; VOS	0.67
, ,		Model Structure - Consistency of Estimates	
04/21/16	ELRE	Analysis & Write Testimony: Elect. Dist.Reliability Expense;	1.25
, ,		Proposed Reliability Reports; D16.01.008	
04/21/16	ELRE	Analysis & Write Testimony: Review DR#s 6,7,8 Responses; Elect.	1.33
,,		Dist.Reliability Expense; Proposed Reliability Reports	
04/21/16	ELRE	Analysis & Write Testimony: Elect. Dist.Reliability Upgrade Expense;	5.08
,,		Project Prioritization Methods	
04/22/16	ELRE	Analysis & Write Testimony: Elect. Dist.Reliability Upgrade Expense;	4.08
, ,		Project Prioritization Methods	
04/23/16	ELRE	Analysis & Write Testimony: Elect. Dist.Reliability Upgrade Expense;	3.08
		Project Prioritization Methods	
04/23/16	INSL	Analysis & Write Testimony: Revise Liability Insurance Expenses	1.25
		Testimony	
04/24/16	INSL	Analysis & Write Testimony: Revise Liability Insurance Expenses	5.08
, ,		Testimony	
04/24/16	INSP	Analysis & Write Testimony: Revise Property Insurance Expenses	4.00
, = ., = -		Testimony	
04/26/16	GDST	Write Testimony: Revisions - Gas Dist. Leak Management /	2.50
- 1, - 2, - 2		Corrective Mtce	
04/26/16	INDO	Write Testimony: Revisions - Director & Officers Insurance	0.67
04/26/16	INSL	Write Testimony: Revisions - Liability Insurance	1.00
04/26/16	INSP	Write Testimony: Revisions - Property Insurance	3.83
04/27/16	GDST	Write Testimony: Revisions - Gas Leak Mgmt / Corrective	3.67
		Maintenance	
04/27/16	INDO	Write Testimony: Revisions - Director & Officers Insurance	0.25
04/27/16	INSL	Write Testimony: Revisions - Liability Insurance; Property Insurance	1.00
04/27/16	INSP	Write Testimony: Revisions - Liability Insurance; Property Insurance	1.00
04/29/16	GDST	Write Testimony: Draft Workpapers re Gas Leak Corrective Mtce	3.00
04/29/16	INSL	Write Testimony: Draft Workpapers re Liability Insurance	0.25
04/29/16	INSP	Write Testimony: Draft Workpapers re Property Insurance	0.92
04/30/16	GDST	Write Testimony: Draft Workpapers re Gas Leak Corrective Mtce	7.83
05/03/16	GDST	Write Testimony: Draft Workpapers re Gas Leak Corrective Mtce	1.50
05/04/16	GDST	Write Testimony: Draft Workpapers re Gas Leak Corrective Mtce	6.67
05/05/16	GDST	Write Testimony: Draft Workpapers re Gas Leak Corrective Mtce	13.33
05/06/16	GDST	Write Testimony: Draft Workpapers re Gas Leak Corrective Mtce	10.17
05/10/16	GDST	DR Response: Gas Leak Management & Corrective Maintenance	6.50

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Date	Issue	Description	Hours
05/10/16	GDST	Research & Analysis & Write Testimony: Review PD re GT&S Case re	0.50
		Corrective Mtce	
05/10/16	GDST	Write Testimony: Finalise Workpapers re Uncollectibles, Gas Leak	5.00
		Corrective Mtce	
05/11/16	GDST	DR Response: Gas Leak Management & Corrective Maintenance	8.33
05/11/16	GDST	Write Testimony: Finalise Workpapers re Gas Leak Corrective Mtce,	2.00
		IT Project Capital Expenditures	
05/12/16	GDST	DR Response: Gas Leak Management & Corrective Maintenance	10.00
05/12/16	GDST	Write Testimony: Finalise Workpapers re Gas Leak Corrective Mtce,	5.17
		IT Project Capital Expenditures	
05/13/16	GDST	Analysis & Write Testimony: Finalise Workpapers re Gas Leak	15.00
		Corrective Mtce' "Deferred Mtce" definition from ASCE, Others,	
		Cross-check PHMSA Data Files	
05/13/16	GDST	Write Testimony: Finalise Workpapers re Gas Leak Corrective Mtce	0.83
05/13/16	GDST	Write Testimony: Finalise Workpapers re Gas Leak Corrective Mtce'	4.17
		"Deferred Mtce" definition from ASCE, Others	
05/14/16	GDST	DR Response: Gas Leak Management & Corrective Maintenance;	9.00
		GLSRBA	
05/16/16	GDST	Write Testimony: Finalise Workpapers re Gas Leak Corrective Mtce,	4.33
		Uncollectibles Expenses	
05/17/16	GDST	DR Response: Finalise Workpapers re Gas Leak Corrective Mtce	1.67
05/18/16	GDST	DR Response: Gas Leak Management & Corrective Maintenance;	3.83
		GLSRBA	
05/18/16	INSL	Write Testimony: Errata - Gas Dist. Leak Management / Corrective	1.50
		Mtce; Liability Insurance	
05/19/16	GDST	DR Response: Gas Leak Mgmt & Corrective Maintenance; Deferred	8.17
		Maintenance Definition	
05/19/16	INSL	Write Testimony: Errata - Gas Dist. Leak Management / Corrective	0.83
		Mtce; Liability Insurance	
05/20/16	GDST	DR Response: Gas Leak Mgmt & Corrective Maintenance; Deferred	7.00
		Maintenance Definition	
05/21/16	GDST	DR Response: Gas Leak Mgmt & Corrective Maintenance; Deferred	1.00
		Maintenance Definition	
06/07/16	GDST	Research & Analysis: Repair/Replace Models; DIMP Program re	2.92
		Repair/Replace; Prob of Failure Models; Repair vs Replace Cost	
		Estimates fm Leak Mgmt Model; Review Utility Leak Mgmt Bulletins	
06/09/16	GDST	Research & Analysis: GT&S Case re \$850M Fine; PHMSA 7100	4.00
	}	Report 2015	

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Date	Issue	Description	Hours
06/11/16	GDST	Research & Analysis: PHMSA Reports re 920 Mile Mains Transfer;	0.83
		PHMSA Communication re Other Category in Reporting	
06/14/16	GDST	Analysis: Gas Distribution - Corrective Mtce Costs re-Distribution	2.83
		over GRC Term - Illustrative Example	
06/14/16	GDST	Analysis: IT Project JCE Exhibit Reconciliation - Error Identification	3.75
, .		and Corrective Measures	
06/15/16	GDST	Analysis: Gas Distribution - Corrective Mtce Costs re-Distribution	2.33
00/13/10	GDS1	over GRC Term - Illustrative Example	2.55
06/15/16	GDST	Research & Analysis: EPA Methods for Estimating Distribution	2.08
00/13/10	GDS1		2.00
06/15/16	CDCT	System Leak Rate; IPCC re Emissions Estimating	2 02
06/15/16	GDST	Research & Analysis: PHMSA Stats on Minimum Leak Rate; Contact	2.83
00 14 0 14 0	CDCT	PHMSA re Leak Rate Benchmarking	
06/16/16	GDST	Analysis: Gas Distribution - Corrective Mtce Costs re-Distribution	1.00
		over GRC Term - Illustrative Example	
06/16/16	GDST	Research & Analysis: Communicate w/ PHMSA re Leak Mgmt Stds	1.67
·····		Coordination w/ EPA	
06/17/16	INSL	Analysis & Write Cross Questions: Excess Liability Insurance	0.75
06/21/16	ELRE	Research & Analysis: Electric Dist. Reliability Test Model	1.00
06/21/16	INSL	Analysis & Write Cross Questions: Excess Liability Insurance; Review	0.58
		Underwriters on Arson Effect	
06/22/16	INSL	Analysis & Write Cross Questions: Excess Liability Insurance; Review	1.92
		Underwriters on Arson Effect; Verisk 2015 Report on Insurance	
		Industry Stats	
06/22/16	INSP	Analysis & Write Cross Questions: Property Insurance	2.00
06/28/16	GDST	Research & Analysis: Leak Repair Management via ALARP; SED	2.25
,,		Paper re ALARP in Rate Cases	
06/28/16	SN	Research & Analysis: Leak Repair Requirements from other CPUC	0.92
00/20/10	314	Decisions, Impact on GRC Settlement Provisions	0.52
06/20/16	ELDE	Research & Analysis: Reliability-Based Pricing for Electricity; Pitfalls	2.00
06/29/16	ELRE		2.00
06/20/46	51.05	of Various Reliability Metrics	4.22
06/29/16	ELRE	Research & Analysis: PG&E Reliability Annual Reports vs New	1.33
		Report Requirements (D.16.01.008)	
06/29/16	ELRE	Research & Analysis: Review PG&E Amended Version of CFC Elect.	0.75
		Dist. Reliability Proposal; Discuss w/ NJ	
06/29/16	GDST	Research & Analysis: Leak Repair Management via ALARP; SED	0.92
		Paper re ALARP in Rate Cases	
07/12/16	GDST	Research & Analysis: EPA Response to CFC Inquiry re Standard Gas	0.33
		Leak Remediation Assumptions; CFR §98 Leak Estimation	
		Requirements	
07/22/16	GDST	Research & Analysis: Follow-up w/ CPUC re Leak Reporting	3.33
		Requirements of SB-1371/R.15.01.008	
07/22/16	SN	Research & Analysis: NERBA Account - Function and Suitability of,	1.25
		re Gas Leak Mgmt; NERBA Treatment in Sempra GRC	
07/26/16	SN	Research & Analysis: Proposed NERBA Account for Settlement;	2.42
. , _ 0, 10	5	TURN re Gas Leak Mgmt BPs	
07/26/16	SN	Settlement Negotiation: NERBA Account - Proposed Article 4	0.92
57/20/10	J14	Content	0.52
07/27/16	CNI	·····	2 17
0//2//16	SN	Research, Analysis & Writing: Commentary re Settlement Proposal	2.17
07/20/10		Disputed Issues - 2020; NERBA	
07/29/16	SN	Research & Analysis: Proposed NERBA Account Compared to	0.58
		Introduction of Sempra NERBA	
08/01/16	SN	Case Mgmt: Update re CFC Settlement Positions re 2020, NERBA	0.17
08/23/16	SN	Case Admin: Read & Analyse Submissions on Settlement Contested	0.75
		Issues (NERBA, 2020); Write comments for BN,NJ	
08/24/16	SN	GRC: Case Admin: Settlement Contested Issue - NERBA; Reply	0.92
		Strategy Discussion; Balancing Account Literature Review	
08/29/16	SN	Case Admin: Read & Analyse Other Party Submissions on	0.67
	Ç.	Settlement Contested Issues (NERBA, 2020)	

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Date	Issue	Description	Hours
08/30/16	SN	Case Admin: Read & Analyse Other Party Submissions on	1.00
		Settlement Contested Issues (NERBA, 2020)	
08/31/16	SN	Case Admin: Discuss ALI Appearance Request re NERBA, 2020 w/ NJ	0.25
01/01/17	SN	GRC Cycle: Workshop re Proposed Change to 4 Year GRC Cycle	0.33
01/13/17	SN	GRC Cycle: Follow Up on Issues from Workshop re Proposed	0.17
		Change to 4 Year GRC Cycle	
		TOTALS by Year	587.7
• • • • • • • • • • • • • • • • • • • •		2015	0.0
		2016	0.0
		2017	0.0
		TOTALS by Issue	587.7
		GP	86.0
		GDST	327.3
***************************************		ELRE	41.6
		ESCL	3.5
		INSL	70.8
		INSP	40.1
		INDO	5.9
		SN	12.5
		W	0.0

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