

**SoCalGas
2013 TCAP**

2/22/2013 Update Filing

**Workpapers to the Prepared Written Testimony of
Gary Lenart
Cost Allocation**

SoCalGas

2013 TCAP

Table of Contents

Section 1 - Long Run Marginal Customer Cost Model

<p>Tabs: RD Format Cust MC Cust 2 Cust 3 Cust 5 Cust 6 Cust 7 Wholesale Meter Cost Cust 8 Cust 10 2010 RECC</p>	<p>Results of Customer Cost LRMC Study Calculation of Customer-Related marginal unit cost Customer count data by class Detail segmentation of Service/Regulator/Meter data Data:Service/regulator/Meter investment by customer class Data: big GEMS by customer class NonCore meter cost Escalation of wholesale meter cost Data: Meter cost for wholesale customers Data: Customer-related O&M expenses by customer class Calculation of weighted average RECC and Replacement Factors RECC Model Output</p>
---	---

Section 2 - Long Run Marginal Distribution Cost Model

<p>Tabs: Model Info In_general In_customers In_Peak_Month In_Peak-Day In_Investment_History In_Investment_Forecast In_O&M Etc Out_Customers Dist'n cust Out_Peak_month_Demand Out_Peak_Day_Demand Out_Investment_History Out_Investment_Forecast Out_MP_Regression</p>	<p>brief description of the model contains Misc. parameters, including Starting & Ending Periods for Historical and Forecast data. estimate # of New Customers Cost Driver for High Pressure Distribution Mains Cost Driver for Medium Pressure Distribution Mains. Historical inputs needed to estimate Annualized Investment-related LRMC Forecasted inputs needed to estimate Annualized Investment-related LRMC. parameters for O&M, A&G, GP and M&S cost categories Number of Customers by Customer Class for the Analysis Period,and Number of Additional Customers Served by Customer Class. Summary of Historical & Forecast # Customers Summary of Historical & Forecast Peak Month Demand Summary of Historical & Forecast Peak Day Demand Summary of Historical Investment Summary of Investment Forecast Regression of Medium Pressure CAPEX Vs Demand</p>
--	--

Out_HP_Regression	Regression of High Pressure CAPEX Vs Demand
Out_O&M_Etc	Distribution-related LRMCs for O&M, A&G, GP and M&S cost categories
Out_MP_LRMC	Calculation of Medium Pressure LRMC marginal unit cost
Out_HP_LRMC	Calculation of High Pressure LRMC marginal unit cost
Output	Output tab used to transfer data to Cost Allocation model

Section 3 - O&M Loaders Model for LRMC Studies

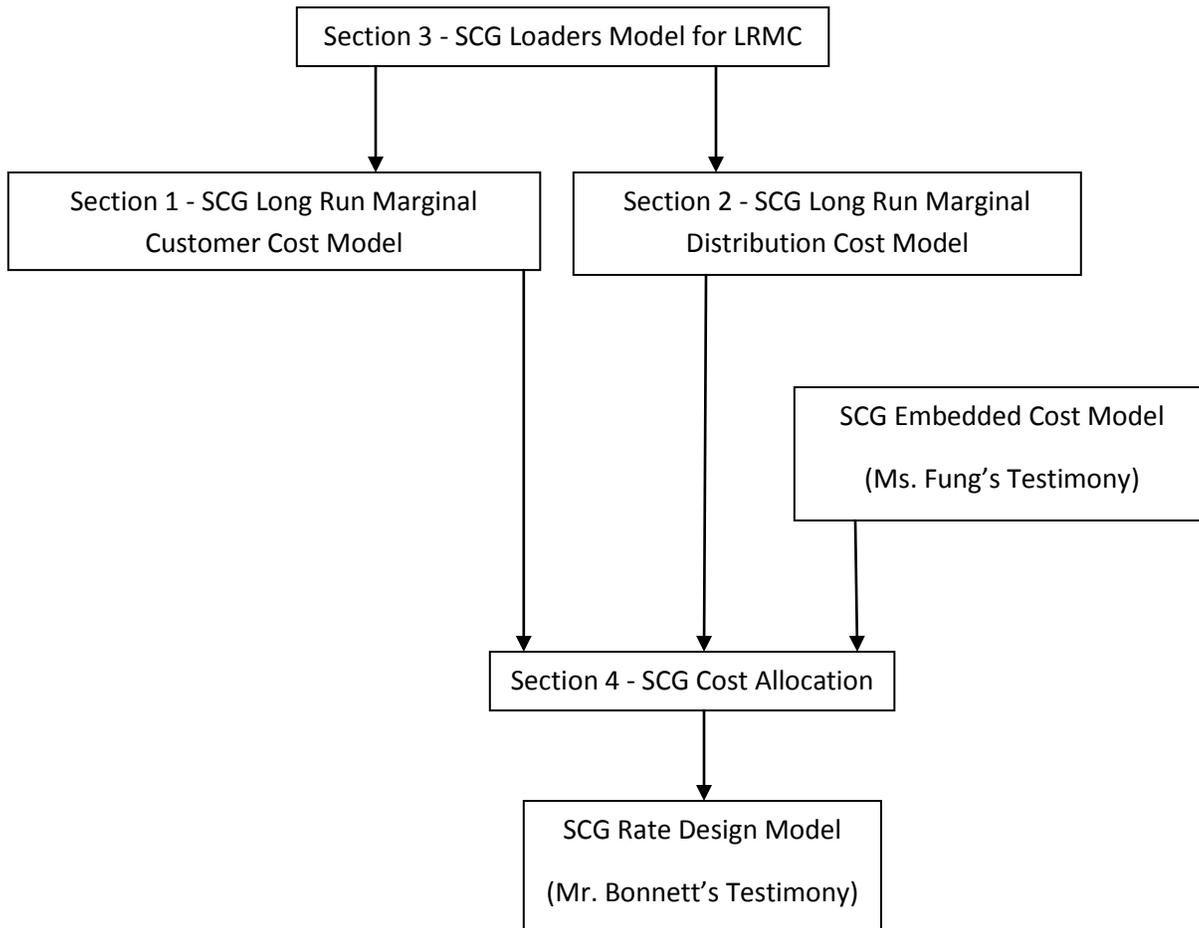
Tabs: Output	Data output for Customer Cost and Distribution LRMC Models
Net O&M	O&M Costs used in A&G Loader
A&G	A&G and Payroll Tax Loading Factor
A&G 1	Marginal Vs Non-Marginal Summary
A&G 2	2010 recorded costs
A&G 3	2010 recorded copsts (continued)
GP1	Weighted Average RECC% for General Plant
Gen Plant	Calculation of General Plant Loading Factor
M&S	2010 recorded costs
M&S 1	2010 recorded costs (continued)
M&S 2	M&S Annual Cost Factor
2010 RECC	Results of RECC/Levelized Annual Capital Cost Model
Escalation Factors	Capital and O&M Escalation factors
EC Data	% of A&G and General Plant allocated to transmission & storage functions

Section 4 - Cost Allocation Model

Tabs: Cost Allocation	Allocation of Base Margin
-----------------------	---------------------------

**SoCalGas
2013 TCAP**

Cost Allocation Flowchart



**Workpapers to the Prepared Written Testimony of
Gary Lenart**

SoCalGas
2013 TCAP

2/22/2013 Update Filing

Section 1
Long Run Marginal Customer Cost Model

Workpapers to the Prepared Written Testimony of
Gary Lenart

SCG 2013 TCAP

LRMC Customer Cost/Rental Method

RD Format

[2/22/2013 Update Filing](#)

	Residential	CCI	G-AC	G-GEN	NGV	Total Core
<u>Marginal Customer Unit Cost @ various LRMC Allocation Methods</u>						
1 Customer Cust \$/Cust/Year Rental Method	\$216.19	\$758.25	\$4,404.06	\$5,098.75	\$4,562.15	
2 Customer Cost \$/Cust/Year NCO Method	\$104.11	\$331.21	\$2,620.18	\$1,368.61	\$1,414.99	
3 Customer Cost \$/Cust/Year NCO Method w/Replacement Cost	\$193.49	\$638.58	\$3,365.80	\$3,924.72	\$2,997.21	
<u>Output to CA Model - Select from Methods in Lines 1-3</u>						
5 Customer Cust \$/Cust/Year Rental Method	\$216.19	\$758.25	\$4,404.06	\$5,098.75	\$4,562.15	
<u>Input from O&M Loader Model:</u>						
8 Marginal A&G/Payroll Taxes Loading Factor as a % of O&M expenses	48.69%	SCG LRMC O&M Loaders				
9 General Plant Loading Factor as a % of O&M expenses	24.46%	SCG LRMC O&M Loaders				
10 Annualized Distribution Customer Related Costs \$000/yr	\$1,142,307	SCG LRMC O&M Loaders				
11						
12 2010-13 Factor: Capital	1.0840	SCG LRMC O&M Loaders				
13 2010-13 Factor: O&M	1.0817	SCG LRMC O&M Loaders				

SCG 2013 TCAP

LRMC Customer Cost/Rental Method

RD Format

[2/22/2013 Update Filing](#)

	NCCI	EG Tier 1	EG Tier 2	EOR	Total Retail NonCore	Long Beach	SDG&E	South West Gas
<u>Marginal Customer Unit Cost @ various LRMC Allocation Methods</u>								
1	Customer Cust \$/Cust/Year Rental Method	\$33,737.82	\$32,635.00	\$118,467.35	\$49,696.43	\$612,659.58	\$1,346,910.45	\$509,981.28
2	Customer Cost \$/Cust/Year NCO Method	\$14,685.05	\$20,064.99	\$33,392.23	\$11,795.62	\$62,764.16	\$50,670.69	\$106,243.38
3	Customer Cost \$/Cust/Year NCO Method w/Replacement Cost	\$22,696.39	\$27,973.16	\$75,582.65	\$27,008.98	\$286,516.96	\$578,111.48	\$270,524.59
4	<u>Output to CA Model - Select from Methods in Lines 1-3</u>							
5	Customer Cust \$/Cust/Year Rental Method	\$33,737.82	\$32,635.00	\$118,467.35	\$49,696.43	\$612,659.58	\$1,346,910.45	\$509,981.28
6								
7	<u>Input from O&M Loader Model:</u>							
8	Marginal A&G/Payroll Taxes Loading Factor as a % of O&M expenses							
9	General Plant Loading Factor as a % of O&M expenses							
10	Annualized Distribution Customer Related Costs \$000/yr							
11								
12	2010-13 Factor: Capital							
13	2010-13 Factor: O&M							

SCG 2013 TCAP

LRMC Customer Cost/Rental Method

RD Format

[2/22/2013 Update Filing](#)

	Vernon	Total Whole sale	DGN	UBS	Total Noncore	SYSTEM TOTAL
<u>Marginal Customer Unit Cost @ various LRMC Allocation Methods</u>						
1	Customer Cust \$/Cust/Year Rental Method	\$279,066.41		\$80,125.13	\$0.00	
2	Customer Cost \$/Cust/Year NCO Method	\$5,630.44		\$14,347.22	\$0.00	
3	Customer Cost \$/Cust/Year NCO Method w/Replacement Cost	\$116,891.71		\$41,112.29	\$0.00	
4	<u>Output to CA Model - Select from Methods in Lines 1-3</u>					
5	Customer Cust \$/Cust/Year Rental Method	\$279,066.41		\$80,125.13	\$0.00	
6						
7	<u>Input from O&M Loader Model:</u>					
8	Marginal A&G/Payroll Taxes Loading Factor as a % of O&M expenses					
9	General Plant Loading Factor as a % of O&M expenses					
10	Annualized Distribution Customer Related Costs \$000/yr					
11						
12	2010-13 Factor: Capital					
13	2010-13 Factor: O&M					

SCG 2013 TCAP
LRMC Customer Cost/Rental Method
Marginal Unit Costs
2/22/2013 Update Filing

	Core										Core			Noncore Retail			
	Residential				Non-Residential						Non-Residential			G-30 - Noncore C&I			
	Single Family (Detached homes)	Multi Family	Master Meter (up to 100,000 therms/year)	(100,001 therms per year and	Residential Total or Avg.	Commercial/Industrial Very Small - up to 300 therms/year	Small - 301 to 3,000 therms/year	3,001 to 50,000 therms/year	50,001 to 250,000 therms/year	Very Large - Over 250,000 therms/year	Average	Air Conditioning	Natural Gas Vehicle	Gas Engine	Distribution	Transmission	Total
2010 Number of Customers	3,572,881	1,632,925	121,143	54	5,327,003	82,618	71,471	49,166	2,440	333	206,028	12	395	708	590	34	624
Marginal Investment: 2013 \$/Customer																	
Meter & House Reg	\$488.49	\$273.44	\$2,735.36	\$27,310.05	\$473.94	\$1,026.41	\$2,254.03	\$5,445.91	\$14,223.41	\$61,662.10	\$2,761.23	\$14,329.43	\$31,668.80	\$9,524.76	\$131,713.51	\$274,611.44	\$139,499.61
Service Lines	\$777.43	\$869.60	\$2,057.98	\$11,437.79	\$834.91	\$2,438.68	\$2,863.25	\$3,574.96	\$7,941.06	\$13,924.70	\$2,940.85	\$4,741.55	\$6,345.04	\$35,084.26	\$55,671.61	\$68,677.97	\$56,380.29
Exclusive Use Facilities	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,136.93	\$10,710.05	\$5,440.59
Total	\$1,265.92	\$1,143.04	\$4,793.33	\$38,747.84	\$1,308.85	\$3,465.10	\$5,117.28	\$9,020.87	\$22,164.48	\$75,586.80	\$5,702.08	\$19,070.98	\$38,013.84	\$44,609.02	\$192,522.05	\$353,999.46	\$201,320.50
Weighted RECC factors used to annualize SRM capital costs																	
Meter & House Reg	9.46%	9.41%	9.51%	9.58%	9.45%	9.50%	9.52%	9.51%	9.50%	9.63%	9.52%	9.49%	9.65%	9.51%	9.67%	9.66%	9.66%
Service Lines	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%
Exclusive Use															9.82%	9.82%	9.82%
Annualized Marginal Investment: \$/Cust.																	
Meter & House Reg	\$46.19	\$25.72	\$260.22	\$2,614.99	\$44.79	\$97.47	\$214.61	\$518.10	\$1,351.23	\$5,938.83	\$262.77	\$1,359.86	\$3,057.13	\$905.77	\$12,737.08	\$26,526.19	\$13,476.62
Service Lines	\$69.52	\$77.76	\$184.03	\$1,022.83	\$74.66	\$218.08	\$256.05	\$319.69	\$710.13	\$1,245.22	\$262.99	\$424.01	\$567.41	\$3,137.41	\$4,978.44	\$6,141.53	\$5,041.81
Exclusive Use Facilities	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$504.51	\$1,051.86	\$534.34
Total Annualized Marginal Investment: 2013 \$/Cust.	\$115.71	\$103.49	\$444.25	\$3,637.81	\$119.46	\$315.55	\$470.65	\$837.79	\$2,061.36	\$7,184.05	\$525.75	\$1,783.87	\$3,624.54	\$4,043.18	\$18,220.04	\$33,719.58	\$19,052.77
O&M: \$/Customer																	
Customer Services O&M Cost 2010's \$000/year	\$65,389.33	\$29,885.09	\$2,217.11	\$0.99	\$97,492.51	\$2,376.28	\$3,141.54	\$7,592.74	\$969.28	\$176.50	\$14,256.34	\$0.98	\$20.57	\$147.95	\$0.00	\$0.00	\$300.23
2010 Number of Customers	3,572,881	1,632,925	121,143	54	5,327,003	82,618	71,471	49,166	2,440	333	206,028	12	395	708	590	34	624
Customer Services O&M \$/Customer 2010\$	\$18.30	\$18.30	\$18.30	\$18.30	\$18.30	\$28.76	\$43.96	\$154.43	\$397.25	\$530.02	\$69.20	\$82.05	\$52.08	\$208.97	\$0.00	\$0.00	\$481.14
escalator 2010's to 2013's	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817
Customer Services O&M \$/Customer 2013\$	\$19.80	\$19.80	\$19.80	\$19.80	\$19.80	\$31.11	\$47.55	\$167.06	\$429.72	\$573.35	\$74.85	\$88.76	\$56.34	\$226.06	\$520.47	\$520.47	\$520.47
Customer Accounts O&M 2010's \$000/yr	\$113,660.32	\$51,946.53	\$3,853.80	\$1.72	\$169,462.37	\$3,858.63	\$2,512.35	\$2,780.42	\$739.86	\$287.71	\$10,178.97	\$15.77	\$176.76	\$250.16	\$0.00	\$0.00	\$1,986.20
2010 Number of Customers	3,572,881	1,632,925	121,143	54	5,327,003	82,618	71,471	49,166	2,440	333	206,028	12	395	708	590	34	624
Customer Services O&M \$/Customer 2010\$	\$31.81	\$31.81	\$31.81	\$31.81	\$31.81	\$46.70	\$35.15	\$56.55	\$303.22	\$864.00	\$49.41	\$1,314.01	\$447.48	\$353.33	\$0.00	\$0.00	\$3,183.01
escalator 2010's to 2013's	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817
Customer Accounts O&M \$/Customer 2013\$	\$34.41	\$34.41	\$34.41	\$34.41	\$34.41	\$50.52	\$38.03	\$61.17	\$328.01	\$934.63	\$53.44	\$1,421.43	\$484.06	\$382.22	\$3,443.22	\$3,443.22	\$3,443.22
Meter & House Reg O&M Total Cost	\$5,238.01	\$1,340.06	\$994.50	\$4.43	\$7,577.00	\$161.73	\$307.25	\$510.67	\$66.19	\$39.16	\$1,085.00	\$0.00	\$0.00	\$0.00			\$2,596.00
2010 Number of Customers	3,572,881	1,632,925	121,143	54	5,327,003	82,618	71,471	49,166	2,440	333	206,028	12	395	708	590	34	624
Customer Services O&M \$/Customer 2013\$	\$1.47	\$0.82	\$8.21	\$81.96	\$1.42	\$1.96	\$4.30	\$10.39	\$27.13	\$117.60	\$5.27	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,160.26
escalator 2010's to 2013's	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817
Meter & House Reg O&M \$/Customer 2013\$	\$1.59	\$0.89	\$8.88	\$88.66	\$1.54	\$2.12	\$4.65	\$11.24	\$29.34	\$127.22	\$5.70	\$0.00	\$0.00	\$0.00	\$4,500.35	\$4,500.35	\$4,500.35
Total Service Line Footage	217,059,076	65,285,323	7,361,939	13,784	289,720,122	6,654,786	5,550,044	4,996,672	538,601	93,996	17,834,099	1,219	43,230	639,557	233,268	14,416	247,684
Percent of Total Footage	70.36%	21.16%	2.39%	0.00%	93.91%	2.16%	1.80%	1.62%	0.17%	0.03%	5.78%	0.00%	0.01%	0.21%	0.08%	0.00%	0.08%
Allocated SL O&M Costs \$000	\$28,992	\$8,720	\$983	\$2	\$38,697	\$889	\$741	\$667	\$72	\$13	\$2,382	\$0	\$6	\$85	\$31	\$2	\$33
escalator 2010's to 2013's	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817
Allocated SL O&M Costs 2013's	\$31,362	\$9,433	\$1,064	\$2	\$41,860	\$962	\$802	\$722	\$78	\$14	\$2,577	\$0	\$6	\$92	\$34	\$2	\$36
2010 Number of Customers	3,572,881	1,632,925	121,143	54	5,327,003	82,618	71,471	49,166	2,440	333	206,028	12	395	708	590	34	624
Service Lines O&M \$/Customer 2013\$	\$0.01	\$0.01	\$0.01	\$0.04	\$0.01	\$0.01	\$0.01	\$0.01	\$0.03	\$0.04	\$0.01	\$0.01	\$0.02	\$0.13	\$0.06	\$0.06	\$0.06
Total Direct O&M \$/customer/yr	\$55.80	\$55.10	\$63.10	\$142.91	\$55.76	\$83.77	\$90.24	\$239.48	\$787.11	\$1,635.23	\$134.01	\$1,510.21	\$540.42	\$608.40	\$8,464.10	\$8,464.10	\$8,464.10
O&M Loaders: \$/Customer																	
Administrative & General as % of O&M	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%
Administrative & General \$/customer/yr 2013's	\$27.17	\$26.83	\$30.72	\$69.59	\$27.15	\$40.79	\$43.94	\$116.61	\$383.26	\$796.23	\$65.25	\$735.36	\$263.14	\$296.25	\$4,121.37	\$4,121.37	\$4,121.37
General Plant as % of O&M	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%
General Plant \$/customer/yr 2013's	\$13.65	\$13.48	\$15.44	\$34.96	\$13.64	\$20.49	\$22.07	\$58.58	\$192.54	\$400.01	\$32.78	\$369.43	\$132.20	\$148.83	\$2,070.50	\$2,070.50	\$2,070.50
Materials & Supplies Loader:																	
Per Customer Direct+A&G+GP O&M \$/customer/yr	\$96.63	\$95.41	\$109.26	\$247.45	\$96.55	\$145.04	\$156.25	\$414.67	\$1,362.91	\$2,831.48	\$232.04	\$2,614.99	\$935.75	\$1,053.48	\$14,655.96	\$14,655.97	\$14,655.97
2010 Number of Customers	3,572,881	1,632,925	121,143	54	5,327,003	82,618	71,471	49,166	2,440	333	206,028	12	395	708	590	34	624
Total Direct+A&G+GP O&M \$000/yr	\$345,243	\$155,805	\$13,236	\$13	\$514,297	\$11,983	\$11,167	\$20,388	\$3,325	\$943	\$47,806	\$31	\$370	\$746	\$8,647	\$498	\$9,145
Percent of Total	59.98%	27.07%	2.30%	0.00%	89.36%	2.08%	1.94%	3.54%	0.58%	0.16%	8.31%	0.01%	0.06%	0.13%	1.50%	0.09%	1.59%
Allocated M&S Costs (2013\$)	\$685,202	\$309,225	\$26,269	\$27	\$1,020,724	\$23,783	\$22,163	\$40,463	\$6,600	\$1,871	\$94,881	\$62	\$734	\$1,480	\$17,162	\$989	\$18,151
2010 Number of Customers	3,572,881	1,632,925	121,143	54	5,327,003	82,618	71,471	49,166	2,440	333	206,028	12	395	708	590	34	624
M&S Loader \$/customer/yr 2013's	\$0.19	\$0.19	\$0.22	\$0.49	\$0.19	\$0.29	\$0.31	\$0.82	\$2.70	\$5.62	\$0.46	\$5.19	\$1.86	\$2.09	\$29.09	\$29.09	\$29.09
Total O&M Loaders \$/customer/yr	\$41.02	\$40.50	\$46.38	\$105.04	\$40.98	\$61.57	\$66.32	\$176.01	\$578.51	\$1,201.86	\$98.49	\$1,109.97	\$397.20	\$447.16	\$6,220.95	\$6,220.96	\$6,220.95
LRMC Rental Customer Cost \$/customer/year	\$212.53	\$199.09	\$553.73	\$3,885.76	\$216.19	\$460.89	\$627.21	\$1,253.28	\$3,426.97	\$10,021.14	\$758.25	\$4,404.06	\$4,562.15	\$5,098.75	\$32,905.09	\$48,404.64	\$33,737.82

SCG 2013 TCAP
LRMC Customer Cost/Rental Method
Marginal Unit Costs
2/22/2013 Update Filing

	Noncore Wholesale								Total O&M Cost for All Customers	
	Small EG	Large EG	EOR	Wholesale				International		
	< 3million	> 3million	G-40	LB	SDG&E	SWG	Vernon	DGN		
2010 Number of Customers	152	42	28	1	1	1	1	1	5,534,997	cust 2
Marginal Investment: 2013 \$/Customer										
Meter & House Reg	\$153,250.66	\$633,745.67	\$324,460.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		cust 5
Service Lines	\$48,349.31	\$55,365.76	\$46,499.30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		cust 5
Exclusive Use Facilities	\$0.00	\$398,660.62	\$23,919.64	\$5,599,024.93	\$13,198,289.20	\$4,110,851.76	\$2,784,119.95	\$669,749.44		cust 6, cust 7
Total	\$201,599.97	\$1,087,772.05	\$394,879.66	\$5,599,024.93	\$13,198,289.20	\$4,110,851.76	\$2,784,119.95	\$669,749.44		
Weighted RECC factors used to annualize SRM capital costs										
Meter & House Reg	9.67%	9.67%	9.68%	0	0	0	0	0		cust 10
Service Lines	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%		cust 10
Exclusive Use	9.82%	9.82%	9.82%	8.82%	9.82%	9.82%	9.82%	9.82%		cust 10
Annualized Marginal Investment: \$/Cust.										
Meter & House Reg	\$14,826.24	\$61,311.76	\$31,393.39	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Service Lines	\$4,323.64	\$4,951.09	\$4,158.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Exclusive Use Facilities	\$0.00	\$39,153.54	\$2,349.21	\$549,895.42	\$1,296,239.77	\$403,737.90	\$273,435.97	\$65,777.91		
Total Annualized Marginal Investment: 2013 \$/Cust.	\$19,149.88	\$105,416.39	\$37,900.80	\$549,895.42	\$1,296,239.77	\$403,737.90	\$273,435.97	\$65,777.91		
O&M: \$/Customer										
Customer Services O&M Cost 2010's \$000/year	\$17.56	\$29.40	\$0.19	\$3.43	\$0.00	\$0.00	\$0.00	\$0.00	\$112,269.18	cust 8
2010 Number of Customers	152	42	28	1	1	1	1	1	5,534,997	cust 2
Customer Services O&M \$/Customer 2010\$ escalator 2010's to 2013's	\$115.51	\$699.99	\$6.91	\$3,432.14	\$0.00	\$0.00	\$0.00	\$0.00	\$20.28	
Customer Services O&M \$/Customer 2013\$	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	Loader Model
Customer Accounts O&M 2010's \$000/yr	\$124.96	\$757.21	\$7.47	\$3,712.72	\$0.00	\$0.00	\$0.00	\$0.00	\$21.94	
2010 Number of Customers	152	42	28	1	1	1	1	1	5,534,997	cust 2
Customer Services O&M \$/Customer 2010\$ escalator 2010's to 2013's	\$494.57	\$136.66	\$91.78	\$12.01	\$9.00	\$20.61	\$0.00	\$4.64	\$182,839.49	cust 8
Customer Accounts O&M \$/Customer 2013\$	\$3,253.77	\$3,253.77	\$3,277.98	\$12,009.73	\$8,998.26	\$20,608.39	\$0.00	\$4,644.46	\$33.03	
Customer Accounts O&M \$/Customer 2013\$	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	Loader Model
Meter & House Reg O&M Total Cost	\$3,519.76	\$3,519.76	\$3,545.95	\$12,991.51	\$9,733.85	\$22,293.10	\$0.00	\$5,024.13	\$35.73	
2010 Number of Customers	152	42	28	1	1	1	1	1	5,534,997	cust 2
Customer Services O&M \$/Customer 2013\$ escalator 2010's to 2013's	\$580.00	\$126.00	\$84.00	\$18.00	\$18.00	\$36.00	\$3.00	\$3.00	\$12,126.00	cust 8
Meter & House Reg O&M \$/Customer 2013\$	\$3,815.79	\$3,000.00	\$3,000.00	\$18,000.00	\$18,000.00	\$36,000.00	\$3,000.00	\$3,000.00	\$2.19	
Meter & House Reg O&M \$/Customer 2013\$	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	Loader Model
Total Service Line Footage	\$4,127.73	\$3,245.25	\$3,245.25	\$19,471.48	\$19,471.48	\$38,942.95	\$3,245.25	\$3,245.25	\$2.37	
Percent of Total Footage	48,853	11,893	7,294	0	0	0	0	0	308,505,098	cust 8
Allocated SL O&M Costs \$000 escalator 2010's to 2013's	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
Allocated SL O&M Costs 2013's	\$7	\$2	\$1	\$0	\$0	\$0	\$0	\$0	\$41,206	cust 8
2010 Number of Customers	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	1.0817	Loader Model
Service Lines O&M \$/Customer 2013\$	\$7	\$2	\$1	\$0	\$0	\$0	\$0	\$0	\$44,575	
Total Direct O&M \$/customer/yr	152	42	28	1	1	1	1	1	5,534,997	cust 2
Service Lines O&M \$/Customer 2013\$	\$0.05	\$0.04	\$0.04	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.01	
Total Direct O&M \$/customer/yr	\$7,772.48	\$7,522.25	\$6,798.71	\$36,175.71	\$29,205.33	\$61,236.05	\$3,245.25	\$8,269.38	\$60.05	
O&M Loaders: \$/Customer										
Administrative & General as % of O&M	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%	48.69%	cust 4, a&g
Administrative & General \$/customer/yr 2013's	\$3,784.60	\$3,662.76	\$3,310.45	\$17,614.79	\$14,220.76	\$29,817.26	\$1,580.19	\$4,026.55	\$29.24	
General Plant as % of O&M	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%	24.46%	cust 4, gen plant
General Plant \$/customer/yr 2013's	\$1,901.31	\$1,840.10	\$1,663.11	\$8,849.34	\$7,144.24	\$14,979.63	\$793.86	\$2,022.86	\$14.69	
Materials & Supplies Loader:										
Per Customer Direct+A&G+GP O&M \$/customer/yr	\$13,458.40	\$13,025.12	\$11,772.26	\$62,639.84	\$50,570.32	\$106,032.94	\$5,619.29	\$14,318.80		
2010 Number of Customers	152	42	28	1	1	1	1	1	5,534,997	cust 2
Total Direct+A&G+GP O&M \$000/yr	\$2,046	\$547	\$330	\$63	\$51	\$106	\$6	\$14	\$575,557.17	
Percent of Total	0.36%	0.10%	0.06%	0.01%	0.01%	0.02%	0.00%	0.00%	100.00%	
Allocated M&S Costs (2013\$)	\$1,142,306.72	\$4,060	\$1,086	\$654	\$124	\$100	\$210	\$11	\$28	Loader Model
2010 Number of Customers	152	42	28	1	1	1	1	1	5,534,997	cust 2
M&S Loader \$/customer/yr 2013's	\$26.71	\$25.85	\$23.36	\$124.32	\$100.37	\$210.44	\$11.15	\$28.42	\$0.21	
Total O&M Loaders \$/customer/yr	\$5,712.63	\$5,528.71	\$4,996.92	\$26,588.45	\$21,465.36	\$45,007.33	\$2,385.19	\$6,077.84	\$44.14	
LRMC Rental Customer Cost \$/customer/yr	\$32,635.00	\$118,467.35	\$49,696.43	\$612,659.58	\$1,346,910.45	\$509,981.28	\$279,066.41	\$80,125.13	\$104.19	

SCG 2013 TCAP
LRMC Customer Cost/Rental Method
Marginal Unit Costs
2/22/2013 Update Filing

	Core										Core			Noncore Retail				
	Residential					Non-Residential					Non-Residential			G-30 - Noncore C&I				
	Single Family (Detached homes)	Multi Family	Master Meter (up to 100,000 therms/year and 100,001 therms per year and		Residential Total or Avg.	Commercial/Industrial	Very Small - up to 300 therms/year	Small - 301 to 3,000 therms/year	3,001 to 50,000 therms/year	50,001 to 250,000 therms/year	Very Large - Over 250,000 therms/year	Average	Air Conditioning	Natural Gas Vehicle	Gas Engine	Distribution	Transmission	Total
NCO Method:																		
2010 Number of Customers	3,572,881	1,632,925	121,143	54	5,327,003	82,618	71,471	49,166	2,440	333	206,028	12	395	708	590	34	624	
New Hookups Rate	0.35%	0.70%	0.20%	0.00%	0.45%	1.73%	1.21%	1.15%	0.35%	0.00%	1.39%	0.00%	1.01%	0.56%	0.00%	0.00%	0.00%	
No of New Customer Hookups /year	12,402	11,505	245	0	24,152	1,426	864	564	9	0	2,873	0	4	4	0	0	0	
Marginal Investment: \$/Customer																		
Meter & House Reg	\$488.49	\$273.44	\$2,735.36	\$27,310.05	\$473.94	\$1,026.41	\$2,254.03	\$5,445.91	\$14,223.41	\$61,662.10	\$2,761.23	\$14,329.43	\$31,668.80	\$9,524.76	\$131,713.51	\$274,611.44	\$139,499.61	
Service Lines	\$777.43	\$869.60	\$2,057.98	\$11,437.79	\$834.91	\$2,438.68	\$2,863.25	\$3,574.96	\$7,941.06	\$13,924.70	\$2,940.85	\$4,741.55	\$6,345.04	\$35,084.26	\$55,671.61	\$68,677.97	\$56,380.29	
Exclusive Use Facilities	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,136.93	\$10,710.05	\$5,440.59	
Total Marginal Investment \$/customer	\$1,265.92	\$1,143.04	\$4,793.33	\$38,747.84	\$1,308.85	\$3,465.10	\$5,117.28	\$9,020.87	\$22,164.48	\$75,586.80	\$5,702.08	\$19,070.98	\$38,013.84	\$44,609.02	\$192,522.05	\$353,999.46	\$0.00	
Weighted PVRR for Meter & House Reg	124.05%	124.07%	124.02%	124.00%	124.05%	124.03%	124.02%	124.02%	124.03%	123.97%	124.02%	124.03%	123.96%	124.03%	123.95%	123.96%	123.96%	
PVCC for Service Lines	124.26%	124.26%	124.26%	124.26%	124.26%	124.26%	124.26%	124.26%	124.26%	124.26%	124.26%	124.26%	124.26%	124.26%	124.26%	124.26%	124.26%	
PVRR:																		
Meter & House Reg \$/customer	\$605.97	\$339.27	\$3,392.50	\$33,863.37	\$587.93	\$1,273.08	\$2,795.46	\$6,754.23	\$17,641.30	\$76,442.91	\$3,424.55	\$17,773.44	\$39,256.84	\$11,813.14	\$163,262.84	\$340,402.48	\$172,920.01	
Service Lines \$/customer	\$966.04	\$1,080.58	\$2,557.27	\$14,212.75	\$1,037.47	\$3,030.34	\$3,557.91	\$4,442.29	\$9,867.67	\$17,303.02	\$3,654.34	\$5,891.91	\$7,884.43	\$43,596.16	\$69,178.27	\$85,340.14	\$70,058.89	
PVRR of Hookup Cost \$/customer	\$1,572.01	\$1,419.84	\$5,949.77	\$48,076.12	\$1,625.40	\$4,303.42	\$6,353.37	\$11,196.53	\$27,508.97	\$93,745.93	\$7,078.89	\$23,665.36	\$47,141.27	\$55,409.31	\$232,441.12	\$425,742.62	\$242,978.90	
Total PVRR of Hookup Cost for Class \$'s	\$19,496,115	\$16,335,281	\$1,457,694	\$0	\$39,256,692	\$6,135,573	\$5,488,040	\$6,310,834	\$236,994	\$0	\$20,336,362	\$0	\$188,565	\$221,637	\$0	\$0	\$0	
PVRR of Hookup Cost \$/customer	\$5.46	\$10.00	\$12.03	\$0.00	\$7.37	\$74.26	\$76.79	\$128.36	\$97.13	\$0.00	\$98.71	\$0.00	\$477.38	\$313.05	\$0.00	\$0.00	\$0.00	
O&M Cost w/Loaders \$/Cust.																		
Total Direct O&M	\$55.80	\$55.10	\$63.10	\$142.91	\$55.76	\$83.77	\$90.24	\$239.48	\$787.11	\$1,635.23	\$134.01	\$1,510.21	\$540.42	\$608.40	\$8,464.10	\$8,464.10	\$8,464.10	
Total O&M Loaders \$/customer/yr	\$41.02	\$40.50	\$46.38	\$105.04	\$40.98	\$61.57	\$66.32	\$176.01	\$578.51	\$1,201.86	\$98.49	\$1,109.97	\$397.20	\$447.16	\$6,220.95	\$6,220.96	\$6,220.95	
LRMC NCO Customer Cost \$/customer/year	\$102.28	\$105.61	\$121.51	\$247.95	\$104.11	\$219.60	\$233.34	\$543.85	\$1,462.74	\$2,837.10	\$331.21	\$2,620.18	\$1,414.99	\$1,368.61	\$14,685.05	\$14,685.06	\$14,685.05	
NCO w/ Replacement Cost Adder																		
Marginal Investment: Meter & House Reg \$/Customer	\$488.49	\$273.44	\$2,735.36	\$27,310.05	\$473.94	\$1,026.41	\$2,254.03	\$5,445.91	\$14,223.41	\$61,662.10	\$2,761.23	\$14,329.43	\$31,668.80	\$9,524.76	\$131,713.51	\$274,611.44	\$139,499.61	
Service Lines Replacement Cost	\$2,951.52	\$2,377.11	\$5,113.38	\$21,278.02	\$2,824.79	\$7,392.03	\$7,849.11	\$9,004.41	\$18,746.49	\$31,194.73	\$8,108.31	\$9,485.69	\$15,369.06	\$85,787.96	\$97,872.50	\$117,560.99	\$98,945.27	
Exclusive Use Facilities	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,136.93	\$10,710.05	\$5,440.59	
Total	\$1,265.92	\$1,143.04	\$4,793.33	\$38,747.84	\$1,308.85	\$3,465.10	\$5,117.28	\$9,020.87	\$22,164.48	\$75,586.80	\$5,702.08	\$19,070.98	\$38,013.84	\$44,609.02	\$192,522.05	\$353,999.46	\$0.00	
Weighted PVRR for Meter & House Reg	124.05%	124.07%	124.02%	124.00%	124.05%	124.03%	124.02%	124.02%	124.03%	123.97%	124.02%	124.03%	123.96%	124.03%	123.95%	123.96%	123.96%	
PVCC for Service Lines	124%	124%	124%	124%	124%	124%	124%	124%	124%	124%	124%	124%	124%	124%	124%	124%	124%	
PVCC for Exclusive Use Facilities (Meters)																		
Weighted Replacement Factor for Meter & House Reg	2.77%	2.71%	2.84%	2.92%	2.77%	2.82%	2.85%	2.84%	2.83%	2.99%	2.85%	2.81%	3.02%	2.84%	3.02%	3.04%	3.03%	
Replacement Factor for Service Lines	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	
Replacement Factor for Exclusive Use Facilities															3.23%	3.23%	3.23%	
Meter & House Reg, Replacement	\$16.79	\$9.20	\$96.42	\$988.65	\$16.26	\$35.92	\$79.73	\$192.00	\$498.54	\$2,285.10	\$97.47	\$500.05	\$1,184.35	\$335.25	\$4,937.88	\$10,341.06	\$5,232.45	
Service Lines, Replacement	\$76.41	\$61.54	\$132.37	\$550.84	\$73.13	\$191.36	\$203.20	\$233.10	\$485.30	\$807.56	\$209.91	\$245.56	\$397.87	\$2,220.86	\$2,533.70	\$3,043.39	\$2,561.47	
Exclusive Use Facilities, Replace															\$205.29	\$428.00	\$217.42	
Replacement Adder \$/Customer	\$93.19	\$70.74	\$228.80	\$1,539.49	\$89.39	\$227.29	\$282.92	\$425.11	\$983.85	\$3,092.66	\$307.37	\$745.61	\$1,582.22	\$2,556.11	\$7,676.87	\$13,812.45	\$8,011.34	
NCO w/o Repl Cost \$/Cust/yr	\$102.28	\$105.61	\$121.51	\$247.95	\$104.11	\$219.60	\$233.34	\$543.85	\$1,462.74	\$2,837.10	\$331.21	\$2,620.18	\$1,414.99	\$1,368.61	\$14,685.05	\$14,685.06	\$14,685.05	
NCO w/ Repl Cost: \$/Cust/yr.	\$195.47	\$176.34	\$350.31	\$1,787.43	\$193.49	\$446.88	\$516.27	\$968.96	\$2,446.59	\$5,929.76	\$638.58	\$3,365.80	\$2,997.21	\$3,924.72	\$22,361.92	\$28,497.51	\$22,696.39	

SCG 2013 TCAP
LRMC Customer Cost/Rental Method
Marginal Unit Costs
2/22/2013 Update Filing

	Noncore Wholesale								Total O&M Cost for All Customers	
	Small EG	Large EG	EOR	Wholesale				International		
	< 3million	> 3million	G-40	LB	SDG&E	SWG	Vernon	DGN		
NCO Method:										
2010 Number of Customers	152	42	11	1	1	1	1	1	5,534,980	cust 2
New Hookups Rate	2.63%	2.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		Ken Parris
No of New Customer Hookups /year	4	1	0	0	0	0	0	0	27,038	
Marginal Investment: \$/Customer										
Meter & House Reg	\$153,250.66	\$633,745.67	\$324,460.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		cust 5
Service Lines	\$48,349.31	\$55,365.76	\$46,499.30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		cust 5
Exclusive Use Facilities	\$0.00	\$398,660.62	\$23,919.64	\$5,599,024.93	\$13,198,289.20	\$4,110,851.76	\$2,784,119.95	\$669,749.44		cust 6, cust 7
Total Marginal Investment \$/customer	\$201,599.97	\$1,087,772.05	\$394,879.66	\$5,599,024.93	\$13,198,289.20	\$4,110,851.76	\$2,784,119.95	\$669,749.44		
Weighted PVRR for Meter & House Reg	123.95%	123.95%	123.95%							cust 10
PVCC for Service Lines	124.26%	124.26%	124.26%	124.26%	124.26%	124.26%	124.26%	124.26%		2008 RECC
PVRR:										
Meter & House Reg \$/customer	\$189,955.87	\$785,534.69	\$402,171.07	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Service Lines \$/customer	\$60,079.48	\$68,798.21	\$57,780.64	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
PVRR of Hookup Cost \$/customer	\$250,035.36	\$854,332.91	\$459,951.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
Total PVRR of Hookup Cost for Class \$'s	\$1,000,141	\$854,333	\$0	\$0	\$0	\$0	\$0	\$0		
PVRR of Hookup Cost \$/customer	\$6,579.88	\$20,341.26	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
O&M Cost w/Loaders \$/Cust.										
Total Direct O&M	\$7,772.48	\$7,522.25	\$6,798.71	\$36,175.71	\$29,205.33	\$61,236.05	\$3,245.25	\$8,269.38		
Total O&M Loaders \$/customer/yr	\$5,712.63	\$5,528.71	\$4,996.92	\$26,588.45	\$21,465.36	\$45,007.33	\$2,385.19	\$6,077.84		
LRMC NCO Customer Cost \$/customer/year	\$20,064.99	\$33,392.23	\$11,795.62	\$62,764.16	\$50,670.69	\$106,243.38	\$5,630.44	\$14,347.22		
NCO w/ Replacement Cost Adder										
Marginal Investment: Meter & House Reg \$/Customer	\$153,250.66	\$633,745.67	\$324,460.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		cust 5
Service Lines Replacement Cost	\$82,183.91	\$90,929.61	\$77,781.65	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		cust 5
Exclusive Use Facilities	\$0.00	\$398,660.62	\$23,919.64	\$5,599,024.93	\$13,198,289.20	\$4,110,851.76	\$2,784,119.95	\$669,749.44		cust 6, cust 7
Total	\$201,599.97	\$1,087,772.05	\$394,879.66	\$5,599,024.93	\$13,198,289.20	\$4,110,851.76	\$2,784,119.95	\$669,749.44		
Weighted PVRR for Meter & House Reg	123.95%	123.95%	123.95%							cust 10
PVCC for Service Lines	124%	124%	124%							2008 RECC
PVCC for Exclusive Use Facilities (Meters)	124%	124%	124%	124%	124%	124%	124%	124%		
Weighted Replacement Factor for Meter & House Reg	3.04%	3.04%	3.04%							cust 10
Replacement Factor for Service Lines	2.1%	2.1%	2.1%							NCO Method, Ken Parris: In
Replacement Factor for Exclusive Use Facilities	3.23%	3.23%	3.23%	3.23%	3.23%	3.23%	3.23%	3.23%		cust 10
Meter & House Reg, Replacement	\$5,780.61	\$23,904.86	\$12,243.87							
Service Lines, Replacement	\$2,127.56	\$2,353.97	\$2,013.59							
Exclusive Use Facilities, Replace	\$0.00	\$15,931.60	\$955.90	\$223,752.80	\$527,440.79	\$164,281.21	\$111,261.27	\$26,765.07		
Replacement Adder \$/Customer	\$7,908.17	\$42,190.42	\$15,213.36	\$223,752.80	\$527,440.79	\$164,281.21	\$111,261.27	\$26,765.07		
NCO w/o Repl Cost \$/Cust/yr	\$20,064.99	\$33,392.23	\$11,795.62	\$62,764.16	\$50,670.69	\$106,243.38	\$5,630.44	\$14,347.22		
NCO w/ Repl Cost: \$/Cust/yr.	\$27,973.16	\$75,582.65	\$27,008.98	\$286,516.96	\$578,111.48	\$270,524.59	\$116,891.71	\$41,112.29		

SCG 2013 TCAP
 LRMC Customer Cost
 Number of Customers by Customer Class
 2/22/2013 Update Filing

		Core													
		Residential				Non-Residential									
		Single Family	Multi Family	Master Meter		Residential Total	G-10					Gas Air Conditioning	Natural Gas Vehicle	Gas Engine	
				Small	Large		Very Small	Small	Medium	Large	Very Large				Total
2010 Number of Customers		3,572,881	1,632,925	121,143	54	5,327,003	82,618	71,471	49,166	2,440	333	206,028	12	395	708

Source: Ken Parris

SCG 2013 TCAP
 LRMC Customer Cost
 Number of Customers by Custom
 2/22/2013 Update Filing

		Noncore										Total Over All Customers		
		Non-Residential												
		G-30			Small EG	Large EG	EOR G-40	Wholesale					International	
2010 Number of Customers		Distribution	Transmission	Total				LB	SDG&E	SWG	Vernon		DGN	Rosarito
		590	34	624	152	42	28	1	1	1	1	1	0	5,534,997

Source: Ken Parris

SCG 2013 TCAP
 LRMC Customer Cost
 Number of Customers by Customer Class
 2/22/2013 Update Filing

Residential Segmentation

Segmentation of Residential Total Customer Counts into Bands

	Residential				
	Single Family	Multi Family	Master Meter		Total
			Small	Large	
2010 Number of Customers	3,572,881	1,632,925	121,143	54	5,327,003
Percent of Total	67%	31%	2%	0%	100%

values from 'Number of Customers', cust 2 tab

Segmentation of Residential Meter, Regulator & MSA Investment Costs into Bands

	Residential				
	Single Family	Multi Family	Master Meter		Total
			Small	Large	
Per Cust. Meter, Reg. & MSA Investment	488.49	273.44	2,735.36	27,310.05	
2010 Number of Customers	3,572,881	1,632,925	121,143	54	5,327,003
Total Meter, Reg. & MSA Investment	1,745,320,751	446,512,902	331,369,412	1,474,743	2,524,677,808
Percent of Total Meter, Reg. & MSA Investment	69%	18%	13%	0%	100%

note: used to segment Meters, Regulators & MSAs O&M Costs

values from 'Investment Meters, REGs', cust 5 tab

Segmentation of Residential Service Lines Investment Costs into Bands

	Residential				
	Single Family	Multi Family	Master Meter		Total
			Small	Large	
Per Cust. Service Lines Investment	777.43	869.60	2,057.98	11,437.79	
2010 Number of Customers	3,572,881	1,632,925	121,143	54	5,327,003
Total Service Lines Investment	2,777,648,366	1,419,990,685	249,309,405	617,641	4,447,566,097
Percent of Total Service Lines Investment	62%	32%	6%	0%	100%

note: not used. Service Line O&M segmented by footage

values from 'Investment Service Lines', cust 5 tab

correct SRM investment data

**SCG 2013 TCAP
LRMC Customer Cost
Number of Customers by Customer Class
2/22/2013 Update Filing**

G10 Segmentation

Segmentation of G-10 Total Customer Counts into Bands

	G-10					
	Very Small	Small	Medium	Large	Very Large	Total
2010 Number of Customers	82,618	71,471	49,166	2,440	333	206,028
Percent of Total	40%	35%	24%	1%	0%	100%

values from 'Number of Customers', cust 2 tab

Segmentation of G-10 Meter, Regulator & MSA Investment Costs into Bands

	G-10					
	Very Small	Small	Medium	Large	Very Large	Total
Per Cust. Meter, Reg & MSA Investment	1,026.41	2,254.03	5,445.91	14,223.41	61,662.10	
2010 Number of Customers	82,618	71,471	49,166	2,440	333	206,028
Total Meter, Reg & MSA Investment	84,800,233	161,097,900	267,753,741	34,705,131	20,533,480	568,890,485
Percent of Total Meter, Reg & MSA Investment	15%	28%	47%	6%	4%	100%

note: used to segment Meters, Regulators & MSAs O&M Costs

values from 'Investment Meters, REGs', cust 5 tab

Segmentation of G-10 Service Lines Investment Costs into Bands

	G-10					
	Very Small	Small	Medium	Large	Very Large	Total
Per Cust. Service Lines Investment	2,438.68	2,863.25	3,574.96	7,941.06	13,924.70	
2010 Number of Customers	82,618	71,471	49,166	2,440	333	206,028
Total Service Lines Investment	201,479,143	204,639,338	175,766,589	19,376,193	4,636,926	605,898,189
Percent of Total Service Lines Investment	33%	34%	29%	3%	1%	100%

note: not used. Service Line O&M segmented by footage

values from 'Investment Service Lines', cust 5 tab

SCG 2013 TCAP
 LRMC Customer Cost
 Number of Customers by Customer Class
 2/22/2013 Update Filing

G 30 Segmentation

Segmentation of G-30 total customer counts by Service Level

	G-30		
	Distribution	Transmission	Total
2010 Number of Customers	590	34	624
Percent of Total	95%	5%	100%

values from 'cust 2' tab

Allocation of G-30 Total Big GEMS Costs by Service Level

		G-30		
		Distribution	Transmission	Total
Meter/Reg Investment Cost Per Customer	2013 \$s	131,713.51	274,611.44	
2010 Number of Customers		590	34	624
Total Cost	2013 \$s	77,710,970	9,336,789	87,047,759
Percent of Total Cost		89%	11%	100%

note: used to segment Meters, Regulators & MSAs O&M Costs

values from 'Investment Meters, REGs', cust 5 tab

SCG 2013 TCAP
 LRMC Customer Cost
 Average Per Customer Investment in Meters & Regulators by Customer Class
 2/22/2013 Update Filing

Investment Per Customer:	Core												
	Residential					Non-Residential							
	Single Family	Multi Family	Master Meter		Residential Average	G-10						Gas Air Conditioning	Natrual Gas Vehicle
Small			Large	Very Small		Small	Medium	Large	Very Large	Average			
Meter, Reg. 2010 \$s	450.63	252.25	2523.35	25193.35	437.21	946.86	2079.33	5023.82	13121.01	56882.9	2,547.22	13218.81	29214.27
Meter, Reg. 2013 \$s	488.49	273.44	2,735.36	27,310.05	473.94	1,026.41	2,254.03	5,445.91	14,223.41	61,662.10	2,761.23	14,329.43	31,668.80
Total	488.49	273.44	2,735.36	27,310.05	473.94	1,026.41	2,254.03	5,445.91	14,223.41	61,662.10	2,761.23	14,329.43	31,668.80

Source of data for this sheet is Michelle Cullen and Ken Parris. Average customer segment meter costs are derived in SAS using unit cost information

For Res and Non-Residential G10 customers we multiply Ken's 5 yr average meter size and pressure type combination for new customers per class times unit cost for each associated combinati
 For other classes we multiply Ken's 5 yr average meter size and pressure type combination for new customers per class times unit cost for each associated combination.

Average Per Customer Investment in Service Lines by Customer Class

Investment Per Customer:	Core												
	Residential					Non-Residential							
	Single Family	Multi Family	Master Meter		Residential Average	G-10						Gas Air Conditioning	Natrual Gas Vehicle
Small			Large	Very Small		Small	Medium	Large	Very Large	Average			
Service Lines 2010 \$s	717.17	802.2	1898.47	10551.29	770.20	2249.67	2641.33	3297.88	7325.58	12845.45	2,712.92	4374.05	5853.26
Service Lines 2013 \$s	777.43	869.60	2,057.98	11,437.79	834.91	2,438.68	2,863.25	3,574.96	7,941.06	13,924.70	2,940.85	4,741.55	6,345.04
Total	777.43	869.60	2,057.98	11,437.79	834.91	2,438.68	2,863.25	3,574.96	7,941.06	13,924.70	2,940.85	4,741.55	6,345.04

formerly tabs: 'Investment Meter, Reg' and 'Investment Service Lines'

For residential and non-residential G10 customers we multiply Ken's 5 yr average footage, pipe type, pipe size configuration per class times Michelle's cost per foot each associated configurator

Service Lines Replacement Costs

Investment Per Customer:	Core												
	Residential					Non-Residential							
	Single Family	Multi Family	Master Meter		Residential Average	G-10						Gas Air Conditioning	Natrual Gas Vehicle
Small			Large	Very Small		Small	Medium	Large	Very Large	Average			
Service Lines Repla 2010 \$s	2,722.76	2,192.87	4,717.06	19,628.84	2,605.85	6,819.10	7,240.75	8,306.51	17,293.52	28,776.94	7,479.86	8,750.49	14,177.86
Service Lines 2013 \$s	2,951.52	2,377.11	5,113.38	21,278.02	2,824.79	7,392.03	7,849.11	9,004.41	18,746.49	31,194.73	8,108.31	9,485.69	15,369.06
Total	2,951.52	2,377.11	5,113.38	21,278.02	2,824.79	7,392.03	7,849.11	9,004.41	18,746.49	31,194.73	8,108.31	9,485.69	15,369.06

For residential and non-residential G10 customers we multiply Ken's 5 yr average footage, pipe type, pipe size configuration per class times Michelle's cost per foot each associated configurator

SCG 2013 TCAP
LRMC Customer Cost
Average Per Customer Investment in
2/22/2013 Update Filing

		Noncore												
		Non-Residential												
Investment Per Customer:	Gas Engine	G-30			SM. COGEN G-50	EG G-50	EOR G-40	Wholesale				International		
		Distribution	Transmission	Average				LB	SDG&E	SWG	Vernon	DGN	Rosarito	
Meter, Reg.	2010 \$s	8786.53	121504.88	253327.32	128,687.51	141,372.77	584,626.38	299312.97	0.00	0.00	0.00	0.00	0.00	-
Meter, Reg.	2013 \$s	9,524.76	131,713.51	274,611.44	139,499.61	153,250.66	633,745.67	324,460.73	0.00	0.00	0.00	0.00	0.00	0.00
Total		9,524.76	131,713.51	274,611.44	139,499.61	153,250.66	633,745.67	324,460.73	0.00	0.00	0.00	0.00	0.00	0.00

Source of data for this sheet is

For Res and Non-Residential Gion.
For other classes we multiply K

Average Per Customer Invest
Service Lines by Customer CI

		Noncore												
		Non-Residential												
Investment Per Customer:	Gas Engine	G-30			SM. COGEN G-50	EG G-50	EOR G-40	Wholesale				International		
		Distribution	Transmission	Average				LB	SDG&E	SWG	Vernon	DGN	Rosarito	
Service Lines	2010 \$s	32365.01	51356.71	63354.99	52,010.46	44,601.93	51,074.56	42895.31	0.00	0.00	0.00	0.00	0.00	0.00
Service Lines	2013 \$s	35,084.26	55,671.61	68,677.97	56,380.29	48,349.31	55,365.76	46,499.30	0.00	0.00	0.00	0.00	0.00	0.00
Total		35,084.26	55,671.61	68,677.97	56,380.29	48,349.31	55,365.76	46,499.30	0.00	0.00	0.00	0.00	0.00	0.00

formerly tabs: 'Investment Mete
For residential and non-resident.

Service Lines Replacement C

		Noncore												
		Non-Residential												
Investment Per Customer:	Gas Engine	G-30			SM. COGEN G-50	EG G-50	EOR G-40	Wholesale				International		
		Distribution	Transmission	Average				LB	SDG&E	SWG	Vernon	DGN	Rosarito	
Service Lines Repla	2010 \$s	79,138.85	90,286.76	108,449.27	91,276.38	75,814.14	83,881.99	71,753.08	0.00	0.00	0.00	0.00	0.00	0.00
Service Lines	2013 \$s	85,787.96	97,872.50	117,560.99	98,945.27	82,183.91	90,929.61	77,781.65	0.00	0.00	0.00	0.00	0.00	0.00
Total		85,787.96	97,872.50	117,560.99	98,945.27	82,183.91	90,929.61	77,781.65	0.00	0.00	0.00	0.00	0.00	0.00

For residential and non-resident.

SCG 2013 TCAP
 LRMC Customer Cost
 Average Per Customer Investment in
 2/22/2013 Update Filing

	Total Over All Customers
Investment Per Customer:	
Meter, Reg. 2010 \$s	
Meter, Reg. 2013 \$s	
Total	

Source of data for this sheet is |

For Res and Non-Residential G
 For other classes we multiply K

**Average Per Customer Invest
 Service Lines by Customer CI**

	Total Over All Customers
Investment Per Customer:	
Service Lines 2010 \$s	
Service Lines 2013 \$s	
Total	

formerly tabs: 'Investment Mete
 For residential and non-resident

Service Lines Replacement C

	Total Over All Customers
Investment Per Customer:	
Service Lines Repla 2010 \$s	
Service Lines 2013 \$s	
Total	

For residential and non-resident

SCG 2013 TCAP
 LRMC Customer Cost
 Big GEMS Investment by Customer Class for Retail Noncore
 2/22/2013 Update Filing

		Retail Noncore					
		G-30			EG	EOR	
		Distribution	Transmission	Total	G-50	G-40	Source
Investment:							
No. of Big GEMS				8	25	1	
Total Cost of GEMS	2010 \$s	2,795,881.46	335,918.54	3,131,800.00	15,446,000.00	617,840.00	
Total Cost of GEMS	2013 \$s	3,030,786.57	364,141.83	3,394,928.40	16,743,746.12	669,749.84	
2010 Number of Customers		590	34	624	42	28	Tab 'cust 2"
Cost Per Customer	2013 \$s	5,136.93	10,710.05	5,440.59	398,660.62	23,919.64	

Note : This is part of Exclusive Use Facilities Costs

Cost per Gems (2010 \$)					
	Meter	LTL GEMS	TOTAL	Regs	TOTAL
ROTARY 11M & LARGER: (*)	\$9,963	\$1,934	\$11,897	\$2,303	\$14,200
TURBINE MSA'S (*)	\$607,342	\$8,195	\$615,537	\$2,303	\$617,840
ORIFICE METERS (ultra sonic)	\$1,264,286	\$19,881	\$1,284,167	\$0	\$1,284,167

(*) Includes Labor & Fittings.

Michelle Cullen file Tab "XXX MSA UC"
 Michelle Cullen file Tab "XXX MSA UC"
 Michelle Cullen file Tab "XXX MSA UC"

Inventory Detail				
	G-30	G-50	G-40	Total
ROTARY 11M & LARGER: (*)	3	0	0	3
TURBINE MSA'S (*)	5	25	1	31
ORIFICE METERS (ultra sonic)	0	0	0	0
Total	8	25	1	34

Ken Parris
 Ken Parris
 Ken Parris

Source: Ken Parris & Michelle Cullen

SCG 2013 TCAP
 LRMC Customer Cost
 Investment Per Customer in Exclusive Use Facilities for Wholesale
 2/22/2013 Update Filing

	Nonocre					Total Over All Customers
	Wholesale				International	
Replacement Cost	LB	SDG&E	SWG	Vernon	DGN	
GEMS, meter, regs 2010 \$s	5,165,065	12,175,338	3,792,235	2,568,333	617,840	
GEMS, meter, regs 2013 \$s	5,599,025	13,198,289	4,110,852	2,784,120	669,749	26,362,035
2010 Number of Customers	1	1	1	1	1	5
Cost Per Customer:						
GEMS, meter, regs	5,599,025	13,198,289	4,110,852	2,784,120	669,749	
Total	5,599,025	13,198,289	4,110,852	2,784,120	669,749	

SCG 2013 TCAP
 LRMC Customer Cost
 Estimated Average Replacement Cost of GEMS Meters and Allocated Replacement Cost for Wholesale Customers
 2/22/2013 Update Filing

TURBINE METERS (2010\$)		ROTARY METERS (2010\$)		ULTRASONIC METERS (2010\$)	
ELEMENT	(4" - 12")	ELEMENT	(4" - 6")	ELEMENT	(4" - 16")
Avg. Meter Cost	\$17,118	Avg. Meter Cost	\$2,320	Avg. Meter Cost	\$119,284
Avg. Labor Cost	\$121,021	Avg. Labor Cost	\$7,420	Avg. Labor Cost	\$204,372
Avg. Contract Cost	\$242,000	Avg. Contract Cost	\$0	Avg. Contract Cost	\$379,500
Materials	\$227,203	Materials	\$223	Materials	\$561,130
Regulator Cost	\$2,303	Regulator Cost	\$2,303	Regulator Cost	\$0
GEMS Device Cost	\$8,195	GEMS Device Cost	\$1,934	GEMS Device Cost	\$19,881
TOTAL	\$617,840	TOTAL	\$14,200	TOTAL	\$1,284,167

Source of Average GEMS Cost from Michelle Cullen as part of TCAP data. Michelle received data from Steve Gautschi, under Mike Bermel, Manager of Measurement, Regulation & Control Group.
 Based on Replacement Costs at 12-31-2010

	(a) Number of Meters **	(b) Average Est Cost for each GEMS	(c) Total Cost of All GEMS (a x c)	
Long Beach:				
Rotary Meters	2	\$14,199.50	\$28,399.00	
Turbine Meters	0	\$617,839.63	\$0.00	
Ultrasonic Meters	4	\$1,284,166.53	\$5,136,666.12	
Totals Long Beach	6		\$5,165,065.12	6 GEMS
SDG&E				
Rotary Meters	0	\$14,199.50	\$0.00	
Turbine Meters	1	\$617,839.63	\$617,839.63	
Ultrasonic Meters	9	\$1,284,166.53	\$11,557,498.77	
Totals SDG&E	10		\$12,175,338.39	10 GEMS
SWG				
Rotary Meters	6	\$14,199.50	\$85,197.00	
Turbine Meters	6	\$617,839.63	\$3,707,037.77	
Ultrasonic Meters	0	\$1,284,166.53	\$0.00	
Totals SWG	12		\$3,792,234.77	12 GEMS
Vernon				
Rotary Meters	0	\$14,199.50	\$0.00	
Turbine Meters	0	\$617,839.63	\$0.00	
Ultrasonic Meters	2	\$1,284,166.53	\$2,568,333.06	
Totals Vernon	2		\$2,568,333.06	2 GEMS
DGN (ECO Gas)				
Rotary Meters	0	\$14,199.50	\$0.00	
Turbine Meters	1	\$617,839.63	\$617,839.63	
Ultrasonic Meters	0	\$1,284,166.53	\$0.00	
Totals DGN	1		\$617,839.63	1 GEMS
Grand Totals			\$24,318,810.97	

** Number of GEMS Meters at Wholesalers provided by: Dennis Juhasz, Measurement Supervisor under Neena Master, Manager of Contracts & Compliance.

SCG 2013 TCAP
LRMC Customer Cost
Allocation of Customer-Related Distribution O&M
2/22/2013 Update Filing

		Core														
		Residential				Non-Residential										
		Single Family	Multi Family	Master Meter		Residential Total	G-10					Gas Air Conditioning	Natural Gas Vehicle	Gas Engine		
				Small	Large		Very Small	Small	Medium	Large	Very Large				Total	
1	2010 Number of Customers	3,572,881	1,632,925	121,143	54	5,327,003	82,618	71,471	49,166	2,440	333	206,028	12	395	708	
Customer Services O&M Costs																
2	Total Cost	2010 M\$	\$65,389	\$29,885	\$2,217	\$1	\$97,493	\$2,376	\$3,142	\$7,593	\$969	\$176	\$14,256	\$1	\$21	\$148
3	Cost Per Customer:	2010 \$	18.30	18.30	18.30	18.30	18.30	28.76	43.96	154.43	397.25	530.02	69.20	82.05	52.08	208.97
4		2013 \$	19.80	19.80	19.80	19.80	19.80	31.11	47.55	167.06	429.72	573.35	74.85	88.76	56.34	226.06

Source: David Vorse

Customer Accounts O&M Costs																
5	Total Cost:	2010 M\$	\$113,660	\$51,947	\$3,854	\$2	\$169,462	\$3,859	\$2,512	\$2,780	\$740	\$288	\$10,179	\$16	\$177	\$250
6	Cost Per Customer:	2010 \$	31.81	31.81	31.81	31.81	31.81	46.70	35.15	56.55	303.22	864.00	49.41	1,314.01	447.48	353.33
7		2013 \$	34.41	34.41	34.41	34.41	34.41	50.52	38.03	61.17	328.01	934.63	53.44	1,421.43	484.06	382.22
8	segmentation		67.07%	30.65%	2.27%	0.001%										

Source: Carlos Lozoya

Meters, Reg & MSAs O&M Costs																
10	Total Cost	2010 M\$	\$5,238	\$1,340	\$994	\$4	\$7,577	\$162	\$307	\$511	\$66	\$39	\$1,085	\$0	\$0	\$0
11	Cost Per Customer:	2010 \$	1.47	0.82	8.21	81.96	1.42	1.96	4.30	10.39	27.13	117.60	5.27	127.22	127.22	127.22
12		2013 \$	1.59	0.89	8.88	88.66	1.54	2.12	4.65	11.24	29.34	127.22	5.70	127.22	127.22	127.22

Source: Kathy Lewis (Claudia Kenny's group)

Service Lines O&M Costs																
13	Total Costs	2010 \$	\$41,206													
14		2013 \$	\$44,575													
15	Total Service Line Footage		217,059,076	65,285,323	7,361,939	13,784	289,720,122	6,654,786	5,550,044	4,996,672	538,601	93,996	17,834,099	1,219	43,230	639,557
16	Percent of Total Footage		70.36%	21.16%	2.39%	0.00%	93.91%	2.16%	1.80%	1.62%	0.17%	0.03%	5.78%	0.00%	0.01%	0.21%
17	Allocated SL O&M Costs	2013 \$	\$31,362	\$9,433	\$1,064	\$2	\$41,860	\$962	\$802	\$722	\$78	\$14	\$2,577	\$0	\$6	\$92
18	Cost Per Customer	2013 \$	\$0.01	\$0.01	\$0.01	\$0.04	\$0.01	\$0.01	\$0.01	\$0.01	\$0.03	\$0.04	\$0.01	\$0.01	\$0.02	\$0.13

note: Based on Total Service Line Footage

updated to 2010 FERC Form 2 data
formerly tabs: 'O&M Customer Services', 'O&M Customer Accounts', 'O&M Meters, Regulators, MSAs', 'O&M Service Lines'

SCG 2013 TCAP
 LRM Customer Cost
 Allocation of Customer-Related Distribution O&M
 2/22/2013 Update Filing

Noncore													Total Over All Customers
Non-Residential													
G-30			Small EG	EG G-50	EOR G-40	Wholesale				Intl			
Distribution	Transmission	Total				LB	SDG&E	SWG	Vernon	DGN			
1	2010 Number of Customers												5,534,997
	590	34	624	152	42	28	1	1	1	1	1		

Customer Services O&M Costs

2	Total Cost	2010 M\$			\$300	\$18	\$29	\$0	\$3	\$0	\$0	\$0	\$0	\$112,269
3	Cost Per Customer:	2010 \$			481.14	115.51	699.99	6.91	3,432.14	0.00	0.00	0.00	0.00	
4		2013 \$			520.47	124.96	757.21	7.47	3,712.72	0.00	0.00	0.00	0.00	

Source: David Vorse

Customer Accounts O&M Costs

5	Total Cost:	2010 M\$			\$1,986	\$495	\$137	\$92	\$12	\$9	\$21	\$0	\$5	\$182,839
6	Cost Per Customer:	2010 \$			3,183.01	3,253.77	3,253.77	3,277.98	12,009.73	8,998.26	20,608.39	0.00	4,644.46	
7		2013 \$			3,443.22	3,519.76	3,519.76	3,545.95	12,991.51	9,733.85	22,293.10	0.00	5,024.13	

segmentation
 EG O&M cost 631.23
 78% 22% note: split EG costs by # of customers

Source: Carlos Lozoya

Meters, Reg & MSAs O&M Costs

10	Total Cost	2010 M\$			\$2,596	\$580	\$126	\$84	\$18	\$18	\$36	\$3	\$3	\$12,126
11	Cost Per Customer:	2010 \$			4,160.26	3,815.79	3,000.00	3,000.00	18,000.00	18,000.00	36,000.00	3,000.00	3,000.00	
12		2013 \$	4,500.35	4,500.35	4,500.35	4,127.73	3,245.25	3,245.25	19,471.48	19,471.48	38,942.95	3,245.25	3,245.25	

Source: Kathy Lewis (Claudia Kenny's grc

Service Lines O&M Costs

13	Total Costs	2010 \$												
14		2013 \$												
15	Total Service Line Footage		233,268	14,416	247,684	48,853	11,893	7,294	0	0	0	0	0	308,505,098
16	Percent of Total Footage		0.08%	0.00%	0.08%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
17	Allocated SL O&M Costs	2013 \$	\$34	\$2	\$36	\$7	\$2	\$1	\$0	\$0	\$0	\$0	\$0	\$44,575
18	Cost Per Customer	2013 \$	\$0.06	\$0.06	\$0.06	\$0.05	\$0.04	\$0.04	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.01

note: Based on Total Service Line Footage
 split by number of customers

updated to 2010 FERC Form 2 data
 formerly tabs: 'O&M Customer Services',

Weighted Average Meter and House Regulator RECC and Replacement Factors

<u>Line</u>		<u>RATE</u>	<u>AVERAGE LABOR COST</u>	<u>AVERAGE METER COST</u>	<u>AVERAGE REGULATOR COST</u>	<u>AVERAGE TOTAL COST</u>	<u>WEIGHTED REPLACEMENT</u>	<u>WEIGHTED RECC</u>	<u>WEIGHTED PVRR</u>
					Dollars		Percent	Percent	
1.									
2.	<u>CUSTOMER CLASS</u>								
3.	SINGLE FAMILY	GR	228.15	204.35	18.13	450.63	2.77%	9.46%	124.05%
4.	MULTIPLE FAMILY	GR	201.41	134.51	16.33	352.25	2.71%	9.41%	124.07%
5.	MASTER METERED BAND 1	GM,GS	1075.23	1356.75	91.37	2523.35	2.84%	9.51%	124.02%
6.	MASTER METERED BAND 2	GM,GS	8571.68 #	15278.58	1343.09	25193.35	2.92%	9.58%	124.00%
7.	RESIDENTIAL WEIGHTED AVERAGE		239.30	209.30	19.26	467.86	2.77%	9.45%	124.05%
8.	SMALL CORE BAND 1	G-10	424.99	483.72	38.16	946.87	2.82%	9.50%	124.03%
9.	SMALL CORE BAND 2	G-10	863.3	1144.07	71.96	2079.33	2.85%	9.52%	124.02%
10.	SMALL CORE BAND 3	G-10	2563.47	3250.94	209.41	6023.82	2.84%	9.51%	124.02%
11.	SMALL CORE BAND 4	G-10	5827.31	6360.21 #	933.49	13121.01	2.83%	9.50%	124.03%
12.	SMALL CORE BAND 5	G-10	14944.71	40071.82	1866.37	56882.90	2.99%	9.63%	123.97%
13.	G10 AVERAGE		1,174.81	1,506.74	104.31	2,785.86	2.85%	9.52%	124.02%
14.	GAS COOLING	GAC	6054.8	6077.17	1086.84	13218.81	2.81%	9.49%	124.03%
15.	Natural Gas Vehicles	NGV	6778.54	22000.85	434.88	29214.27	3.02%	9.65%	123.96%
16.	GAS ENGINES	GENG	3785.87	4674.8	325.86	8786.53	2.84%	9.51%	124.03%
17.	NONCORE COMM/IND TRANSMISSION	G-30	52880.02	198538.74	1908.57	253327.33	3.04%	9.67%	123.95%
18.	NONCORE COMM/IND DISTRIBUTION	G-30	27171.02	92497.51	1836.65	121505.18	3.02%	9.66%	123.96%
19.	NONCORE COMM/IND TOTAL	G-30	28,571.83	98,275.40	1,840.57	128687.80	3.03%	9.66%	123.96%
20.	COGENERATION	G-50	48098.71	187398.07	1535.32	237032.10	3.04%	9.67%	123.95%
21.	EOR	G-40	60300.91	237366.39	1645.67	299312.97	3.04%	9.68%	123.95%
22.	SYSTEM AVERAGE		278.92	273.41	22.72	575.05	2.79%	9.47%	124.04%
22.	INVERSE OF BOOK LIFE		2.33%	3.23%	3.23%				
23.	RECC		9.10%	9.82%	9.82%				
23.	PVRR		124.21%	123.88%	123.88%				

Weighted Average RECC and Replacement Factor for Exclusive Use Facilities

<u>Line</u>			GEMs	AVERAGE	WEIGHTED	WEIGHTED
1.				TOTAL COST	REPLACEMENT	RECC
2.	<u>CUSTOMER CLASS</u>	<u>RATE</u>	Dollars	Dollars	Percent	
3.	NONCORE COMM/IND TRANSMISSION	G-30	364,142	364,142	3.23%	9.82%
4.	NONCORE COMM/IND DISTRIBUTION	G-30	3,030,787	3,030,787	3.23%	9.82%
5.	NONCORE COMM/IND TOTAL	G-30	3,394,928	3,394,928	3.23%	9.82%
6.	COGENERATION	G-50	16,743,746	16,743,746	3.23%	9.82%
7.	EOR	G-40	669,750	669,750	3.23%	9.82%
8.	LONG BEACH		5,599,025	5,599,025	3.23%	9.82%
9.	SAN DIEGO GAS & ELECTRIC		13,198,289	13,198,289	3.23%	9.82%
10.	SOUTHWEST GAS		4,110,852	4,110,852	3.23%	9.82%
11.	VERNON		2,784,120	2,784,120	3.23%	9.82%
12.	DGN		669,749	669,749	3.23%	9.82%
13.	SYSTEM TOTAL		50,565,388	50,565,388	3.23%	9.82%
14.	INVERSE OF BOOK LIFE		3.23%			
15.	RECC factors		9.82%			

SOUTHERN CALIFORNIA GAS

2010 Economic Assumptions Update LEVELIZED ANNUAL CAPITAL COST AND RECC FACTORS

utility **social**

Auth ROR ==> 8.68%

Fed Tax Rate ==> 35.00%

State Tax Rate ==> 8.84%

alorum Rate ==> 1.224%

FERC Account	Account Name
--------------	--------------

Book Life	Fed Tax Life	State Tax Life	Percent Salvage	Normlzd Federal Taxes ?	Normlzd State Taxes ?	Depreciation Method				LACC Components (in percent)					RECC Factors	PVCC Factors
						Federal Tax	State Tax	Book Depr	Return on Capital	Income Taxes	Property Taxes	Total LACC				

GAS UNDERGROUND STORAGE

G-352	Wells	26	15	22	-60%	TRUE	FALSE	db/sl	150%	db/sl	200%	6.15	4.06	1.48	0.53	12.22	10.50	124.66
G-353	Lines	40	15	22	-55%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.88	4.65	1.87	0.70	11.09	9.15	123.25
G-354	Compressor Station Equipment	40	15	22	-5%	TRUE	FALSE	db/sl	150%	db/sl	200%	2.63	5.40	2.17	0.87	11.06	9.13	122.93
G-356	Purification Equipment	38	15	22	-25%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.29	5.05	2.03	0.79	11.15	9.24	123.08

GAS TRANSMISSION PLANT

G-365.1	Land	0	0	0	0%	FALSE	FALSE	none	0	none	0	0.00	8.68	3.82	1.22	13.72	n/a	158.15
G-365.2	Land Rights	40	40	40	0%	FALSE	FALSE	sl	0	sl	0	2.50	6.39	2.82	0.89	12.59	10.39	139.93
G-366	Structures & Improvements	47	39	45	-20%	TRUE	FALSE	sl	0%	db/sl	0%	2.55	6.23	2.75	0.86	12.40	10.11	140.01
G-367	Mains	55	15	22	-20%	TRUE	FALSE	db/sl	150%	db/sl	200%	2.18	5.51	2.19	0.90	10.79	8.71	123.06
G-368	Compressor Station Equipment	41	15	22	-15%	TRUE	FALSE	db/sl	150%	db/sl	200%	2.80	5.27	2.12	0.84	11.04	9.09	123.00
G-369	Measuring & Regulating Equipment	39	15	22	-20%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.08	5.15	2.07	0.81	11.11	9.19	123.03
G-371	Other Equipment	20	15	22	-5%	TRUE	FALSE	db/sl	150%	db/sl	200%	5.25	5.03	2.13	0.72	13.13	11.57	122.65

GAS DISTRIBUTION PLANT

G-374.1	Land	0	0	0	0%	FALSE	FALSE	none	0	db/sl	0	0.00	8.68	3.82	1.22	13.72	n/a	158.15
G-374.2	Land Rights	0	40	40	0%	FALSE	FALSE	none	0	db/sl	0	0.00	8.68	2.15	1.22	12.05	n/a	138.86
G-375	Structures & Improvements	29	39	45	5%	TRUE	FALSE	sl	0%	db/sl	150%	3.28	6.27	2.84	0.84	13.21	11.23	138.66
G-376	Mains	53	15	35	-60%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.02	4.99	2.12	0.79	10.91	8.83	124.19
G-378	Measuring & Regulating Equipment	31	15	35	-100%	TRUE	FALSE	db/sl	150%	db/sl	200%	6.45	3.55	1.39	0.44	11.82	9.98	125.94
G-380	Services	48	15	35	-85%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.85	4.51	1.94	0.68	10.98	8.94	124.26
G-381	Meters	31	15	35	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.23	5.29	2.29	0.83	11.63	9.82	123.88
G-382	Meter Installations	43	15	35	-20%	TRUE	FALSE	db/sl	150%	db/sl	200%	2.79	5.25	2.21	0.84	11.09	9.10	124.21
G-383	House Regulators	31	15	35	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.23	5.29	2.29	0.83	11.63	9.82	123.88
G-387	Other Equipment	11	15	35	5%	TRUE	FALSE	db/sl	150%	db/sl	200%	8.64	5.37	2.68	0.68	17.37	16.10	120.01

GAS GENERAL PLANT

G-390	Structures & Improvements	20	39	45	-20%	TRUE	FALSE	sl	0%	db/sl	0%	6.00	5.59	2.47	0.65	14.71	12.96	137.44
G-391.1	Office Furniture & equipment	14	7	10	0%	TRUE	FALSE	db/sl	200%	db/sl	200%	7.14	4.31	1.74	0.68	13.88	12.63	110.07
G-391.2	Computer Equipment	5	5	6	0%	TRUE	FALSE	db/sl	200%	db/sl	200%	20.00	4.47	1.97	0.53	26.97	26.10	105.80
G-393	Stores Equipment	20	20	35	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	5.00	5.42	2.44	0.74	13.61	11.99	127.15
G-394.1	Shop & Garage Equipment	29	20	35	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.45	5.51	2.40	0.82	12.17	10.34	127.72
G-394.3	Large Portable Tools	24	20	35	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	4.17	5.44	2.41	0.78	12.80	11.08	127.48
G-395	Laboratory Equipment	25	20	35	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	4.00	5.45	2.41	0.79	12.65	10.90	127.54
G-397	Communications Equipment	15	7	10	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	6.67	4.45	1.79	0.69	13.59	12.30	111.70
G-398	Miscellaneous Equipment	20	20	35	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	5.00	5.42	2.44	0.74	13.61	11.99	127.15

**SoCalGas
2013 TCAP**

2/22/2013 Update Filing

**Section 2
Long Run Marginal Distribution Cost Model**

**Workpapers to the Prepared Written Testimony of
Gary Lenart**

General Information about the Distributon Model

This model estimates Demand-related Long Run Marginal Costs (LRMC) for SoCalGas' Distribution systems, separately for High Pressure and Medium Pressure Distribution Systems.

Demand-related Distribution LRMC consists of the following components:

- 1) Annualized Investment costs,
- 2) Operations and Maintenance costs (O&M),
- 3) Administrative and General costs (A&G),
- 4) General Plant costs (GP), and
- 5) Material and Supplies costs (M&S).

This workbook contains multiples sheets. These sheets are categorized into:

- a) **General Model Description Sheet,**
- b) **Input Sheets,**
- c) **Intermediate Output/Calculation Sheets, and**
- d) **Final LRMC Output Sheet.**

Below is a description of each of these sheets.

General Model Description Sheet:

MODEL_INFO: This particular sheet contains a brief description of the model, and identifies all the input and output sheets of the Model.

Input Sheets:

IN_General: It contains Misc. parameters, including Starting & Ending Periods for Historical and Forecast data.

IN_Customers: It is used to estimate # of New Customers. It contains 2 Tables:

- 1: Number of Customers by Class of Service: Historical Data, and
- 2: Number of Customers by Class of Service: Forecast Data.

IN_Peak_Month_Demand: Cost Driver for High Pressure Distribution Mains. It contains 3 Tables:

- 1: Level of Usage of Medium Pressure Distribution Services by Customer Class,
- 2: Peak Month Demand by Customer Class: Historical Data, and
- 3: Peak Month Demand by Customer Class: Forecast Data.

IN_Peak_Day_Demand: Cost Driver for Medium Pressure Distribution Mains. It contains 3 Tables:

- 1: Level of Usage of High Pressure Distribution Services by Customer Class,
- 2: Peak Day Demand by Customer Class: Historical Data, and
- 3: Peak Day Demand by Customer Class: Forecast Data.

IN_Investment_History: It contains Historical inputs needed to estimate Annualized Investment-related LRMC. It includes 10 Tables:

- 1: High Pressure (HP) Distribution Mains Footage Investment: New Business & Replacement Combined,
- 2: Total Plastic Distribution Mains Footage Investment: New Business & Replacement Combined,
(Note: no HP Plastic Distribution Mains)
- 3: Total Steel Distribution Mains (including HP) Footage Investment: New Business & Replacement Combined,
(Medium Pressure (MP) Steel Distribution Mains Footage is calculated as the residual)
- 4: Plastic New Business Vs. Replacement Distribution Mains Footage: Based on a Sample Survey,
- 5: Steel New Business Vs. Replacement Distribution Mains Footage: Based on a Sample Survey,
- 6: Plastic Mains Pressure Betterment Investment as a Fraction of Total Plastic Mains Investment,
- 7: Steel Mains Pressure Betterment Investment as a Fraction of Total Steel Mains Investment,
- 8: Contribution in Aid of Construction as a Fraction of Total Distribution Mains Cost,
- 9: Account 378 (Meters & Regulator Stations) Investment Info.
- 10: Distribution Main Unit costs for New Business vs. Replacement Investments.

IN_Investment_Forecast: It contains Forecasted inputs needed to estimate Annualized Investment-related LRMC. It includes 1 Table:

- 1: **Forecasted Distribution-related Investment Costs:**

IN_O&M_Etc: It contains parameters for O&M, A&G, GP and M&S cost categories

Intermediate Output/Calculation Sheets:

OUT_Customers: It contains 2 Tables:

- 1: Number of Customers by Customer Class for the Analysis Period, and
- 2: Number of Additional Customers Served by Customer Class.

OUT_Peak_Month_Demand: It calculates 4 Tables:

- 1: Peak Month Demand by Customer Class for the Analysis Period,
- 2: Peak Month Demand per Customer,
- 3: Peak Month Demand for Additional Customers Served, and
- 4: Distribution-Service-Usage-Weighted Peak Month Demand for Additional Customers Served.

OUT_Peak_Day_Demand: It calculates 4 Tables:

- 1: Peak Day Demand by Customer Class for the Analysis Period,
- 2: Peak Day Demand per Customer,
- 3: Peak Day Demand for Additional Customers Served, and
- 4: Distribution-Service-Usage-Weighted Peak Day Demand for Additional Customers Served.

OUT_Investment_History: It contains 6 Tables:

- 1: Plastic Distribution Mains: New Business, Pressure Betterment & Contribution in Aid of New Construction.
- 2: Steel Distribution Mains: New Business, Pressure Betterment & Contribution in Aid of New Construction.
- 3: High Pressure Distribution Mains: New Business, Pressure Betterment & Contribution in Aid of New Construction.
- 4: Load-Growth-related HP & MP Distribution Investments by Components & Total,
- 5: Plastic Distribution Mains: New Business vs. Replacement Footage,
- 6: Steel Distribution Mains: New Business vs. Replacement Footage.

OUT_Investment_Forecast: It contains 1 Table:

- 1: Load-Growth-Related Total, High & Medium Pressure Distribution Mains Forecasted Investments

OUT_MP_Regression: Using LINEST array function (no MACRO needed), it estimates Regression Coefficients for MP Investement

OUT_HP_Regression: Using LINEST array function (no MACRO needed), it estimates Regression Coefficients for HP Investement

OUT_O&M_Etc: It calculates Distribution-related LRMCS for O&M, A&G, GP and M&S cost categories

Final LRMC Output Sheet:

OUT_MP_LRMC: It contains 2 Tables:

- 1: It contains Inputs & Outputs of MP Distribution Investment Regression,
- 2: It contains MP Distribution LRMCS.

OUT_HP_LRMC: It contains 2 Tables:

- 1: It contains Inputs & Outputs of HP Distribution Investment Regression,
- 2: It contains HP Distribution LRMCS.

Miscellaneous Parameters

	2013 TCAP	Source
Starting Year of Historical Data:	2001	Ken Parris 5/2011
Ending Year of Historical Data:	2010	Ken Parris 5/2011
Starting Year of Forecast Data:	2011	Ken Parris 5/2011
Ending Year of Forecast Data:	2015	Ken Parris 5/2011
Compounded Growth Rate:	n/a	
Rate of Return:	8.68%	2010 RECC%
Estimated Life of Main:	53	2010 RECC%
2010\$'s to 2013 \$s Conversion Factor for Capital:	1.0840	OUTPUT
2010\$'s to 2013 \$s Conversion Factor for O&M:	1.0817	OUTPUT
RECC Factors:		
Distribution Mains:	8.83%	2010 RECC%
Meter & Regulator Stations:	9.98%	2010 RECC%

Table 1: Number of Customers by Class of Service: Historical Data

<u>Year</u>	<u>Residential</u>	<u>G-10</u>	<u>Gas AC</u>	<u>NGV</u>	<u>Gas Eng</u>	<u>Total Core</u>	<u>G-30</u>	<u>G-40</u>	<u>G-50</u>	<u>Total Noncore</u>	<u>G-70</u>	<u>G-80</u>	<u>Total Wholesale</u>	<u>Total System</u>
2000	4,800,642	205,543	21	90	910	5,007,206	1,110	57	227	1,394			0	5,008,600
2001	4,860,181	207,286	21	99	974	5,068,561	913	57	196	1,166			0	5,069,727
2002	4,925,855	208,424	21	147	1,007	5,135,454	892	57	206	1,155			0	5,136,609
2003	4,987,210	208,860	22	164	982	5,197,238	839	55	222	1,116			0	5,198,354
2004	5,054,210	210,063	21	169	957	5,265,420	766	51	187	1,004			0	5,266,424
2005	5,115,570	210,956	19	177	924	5,327,646	739	49	192	980			0	5,328,626
2006	5,179,346	210,784	17	216	878	5,391,241	731	42	242	1,015			0	5,392,256
2007	5,248,551	211,449	15	293	843	5,461,151	674	41	222	937			0	5,462,088
2008	5,257,766	209,301	15	341	819	5,468,242	649	40	213	902			0	5,469,144
2009	5,282,743	207,368	12	397	734	5,491,254	637	34	205	876			0	5,492,130
2010	5,327,003	206,028	12	395	624	5,534,062	624	28	194	846			0	5,534,908

Ken Parris 5/2011

Table 2: Number of Customers by Class of Service: Forecast Data

<u>Year</u>	<u>Residential</u>	<u>G-10</u>	<u>Gas AC</u>	<u>NGV</u>	<u>Gas Eng</u>	<u>Total Core</u>	<u>G-30</u>	<u>G-40</u>	<u>G-50</u>	<u>Total Noncore</u>	<u>G-70</u>	<u>G-80</u>	<u>Total Wholesale</u>	<u>Total System</u>
2011	5,374,102	208,267	11	263	688	5,583,331	680	32	207	919			0	5,584,250
2012	5,432,678	208,457	10	274	685	5,642,105	680	32	209	921			0	5,643,026
2013	5,498,893	209,087	9	285	681	5,708,955	681	32	209	922			0	5,709,877
2014	5,572,931	209,797	9	296	678	5,783,711	682	32	209	923			0	5,784,634
2015	5,653,819	210,714	8	307	674	5,865,522	682	32	209	923			0	5,866,445

Source: UPDATE 2013 Demand Forecast from 4/5/2012

Table 1: Level of Usage of High Pressure Distribution Service by Customer Class

BTU Fac	Residential	G-10	Gas AC	NGV	Gas Eng	Total Core	G-30	G-40	G-50	Total Noncore	G-70	G-80	Total Wholesale	Total System
1.0235	100.00%	99.14%	100.00%	76.58%	95.99%		92.23%	30.87%	11.92%					

Source: 2013 Demand Forecast from 9/2/2011

NOTE: BTU Factor is current BTU rate from Demand Forecast from recorded data for 2011 (

Table 2: Coincident Peak Month Demand by Customer Class (MCF): Historical Period

Year	Residential	G-10	Gas AC	NGV	Gas Eng	Total Core	G-30	G-40	G-50	Total Noncore	G-70	G-80	Total Wholesale	Total System
2001	38,755,427	11,030,481	10,695	391,458	92,713	50,280,774	12,835,228	3,130,722	23,259,016	39,224,966			0	89,505,739
2002	40,106,719	11,510,141	11,220	468,178	65,611	52,161,869	12,405,692	3,156,400	17,063,210	32,625,303			0	84,787,171
2003	40,888,672	11,611,617	9,921	299,693	89,276	52,899,179	12,500,672	2,097,230	16,451,563	31,049,465			0	83,948,645
2004	41,533,962	12,025,639	9,472	69,317	103,406	53,741,797	13,143,164	2,047,444	20,948,579	36,139,188			0	89,880,985
2005	40,719,919	12,494,171	8,444	583,156	76,352	53,882,042	11,980,210	2,078,548	17,278,102	31,336,860			0	85,218,902
2006	41,174,026	12,539,072	8,515	639,125	90,669	54,451,407	11,575,421	3,016,162	18,231,651	32,823,233			0	87,274,640
2007	38,942,127	13,105,690	5,570	693,775	93,888	52,841,050	12,491,875	2,927,457	21,156,118	36,575,450			0	89,416,500
2008	39,447,753	12,116,407	6,027	712,390	68,184	52,350,761	11,578,320	2,678,949	28,081,864	42,339,133			0	94,689,894
2009	40,157,229	11,936,507	5,564	770,923	80,495	52,950,718	10,909,986	1,261,164	19,759,387	31,930,537			0	84,881,255
2010	39,706,003	11,772,075	4,798	824,524	61,021	52,368,421	12,418,096	1,263,312	22,281,972	35,963,380			0	88,331,801

Source: Demand Forecast email 10-5-2011 "SCG Historical Distribution Demand Measures4JM_(05Oct2011).xls"

Table 3: Coincident Peak Month Demand by Customer Class (MCF): Forecast Period

<u>Year</u>	<u>Residential</u>	<u>G-10</u>	<u>Gas AC</u>	<u>NGV</u>	<u>Gas Eng</u>	<u>Total Core</u>	<u>G-30</u>	<u>G-40</u>	<u>G-50</u>	<u>Total Noncore</u>	<u>G-70</u>	<u>G-80</u>	<u>Total Wholesale</u>	<u>Total System</u>
2011	41,337,567	11,881,290	4,494	1,175,672	62,433	54,461,456	12,582,120	1,226,185	20,065,071	33,873,376			0	88,334,831
2012	41,027,357	11,851,197	4,104	1,219,443	62,140	54,164,240	12,344,113	1,242,794	20,545,090	34,131,998			0	88,296,238
2013	40,383,293	11,814,656	3,615	1,263,410	87,152	53,552,125	12,213,581	1,242,794	22,547,631	36,004,006			0	89,556,131
2014	40,244,651	11,798,632	3,615	1,307,572	61,553	53,416,023	12,098,486	1,242,794	22,838,691	36,179,971			0	89,595,994
2015	40,126,624	11,687,250	3,224	1,351,539	61,163	53,229,800	11,919,590	1,242,794	22,630,581	35,792,965			0	89,022,765

Source: 2013 Demand Forecast updated 4/5/2012

Table 1: Level of Usage of Medium Pressure Distribution Service by Customer Class

BTU Fac	Residential	G-10	Gas AC	NGV	Gas Eng	Total Core	G-30	G-40	G-50	Total Noncore	G-70	G-80	Total Wholesale	Total System
1.0235	99.60%	94.68%	60.95%	35.67%	78.43%		70.63%	0.00%	7.43%					

Source: 2013 Demand Forecast from 9/2/2011

Table 2: Peak Day Demand by Customer Class (MCF): Historical Period

Year	Residential	G-10	Gas AC	NGV	Gas Eng	Total Core	G-30	G-40	G-50	G-60	Total Noncore	G-70	G-80	Total Wholesale	Total System
2001	2,293,007	561,628	345	12,628	2,991	2,870,598	435,343	100,991	920,718		1,457,052			0	4,327,650
2002	2,352,205	574,535	362	15,103	2,116	2,944,321	420,774	101,819	675,455		1,198,048			0	4,142,369
2003	2,398,397	583,435	320	9,668	2,880	2,994,699	423,995	67,653	651,242		1,142,890			0	4,137,589
2004	2,413,015	596,919	306	2,236	3,336	3,015,811	445,787	66,047	829,259		1,341,092			0	4,356,904
2005	2,402,059	606,572	272	18,811	2,463	3,030,178	406,342	67,050	683,961		1,157,353			0	4,187,531
2006	2,425,555	608,069	275	20,617	2,925	3,057,441	392,613	97,296	721,708		1,211,616			0	4,269,057
2007	2,372,476	630,724	180	22,380	3,029	3,028,788	423,697	94,434	837,474		1,355,605			0	4,384,393
2008	2,392,085	594,520	194	22,980	2,199	3,011,980	392,711	86,418	1,111,633		1,590,762			0	4,602,741
2009	2,426,063	590,808	179	24,868	2,597	3,044,516	370,043	40,683	782,184		1,192,909			0	4,237,425
2010	2,400,204	586,463	155	26,598	1,968	3,015,389	417,759	40,752	874,533		1,333,044			0	4,348,432

Source: Bruce Wetzel email 10-5-2011 "SCG Historical Distribution Demand Measures4JM_(05Oct2011).xls"

Table 3: Peak Day Demand by Customer Class (MCF) : Forecast Period

Year	Residential	G-10	Gas AC	NGV	Gas Eng	Total Core	G-30	G-40	G-50	G-60	Total Noncore	G-70	G-80	Total Wholesale	Total System
2011	2,498,876	593,161	98	37,909	2,052	3,132,096	423,058	39,570	779,189		1,241,817			0	4,373,913
2012	2,480,117	592,868	98	39,375	2,052	3,114,509	415,340	40,059	817,294		1,272,692			0	4,387,201
2013	2,441,133	592,281	98	40,743	2,833	3,077,088	411,138	40,059	853,346		1,304,543			0	4,381,632
2014	2,432,731	592,868	98	42,208	1,954	3,069,858	407,426	40,059	887,836		1,335,320			0	4,405,178
2015	2,425,598	588,862	98	43,576	1,954	3,060,088	401,661	40,059	921,837		1,363,556			0	4,423,644

Source: 2013 Demand Forecast updated 4/5/2012

Table 1: High Pressure Distribution Mains Footage Investment: New Business & Replacement Combined

Col. 1 Year	2 1/2"	3 3/4"	4 1"	5 1 1/4"	6 2"	7 3"	8 4"	9 6"	10 8"	11 10"	12 12"	13 16"	14 20"	15 24"	16 26"	17 30"	Total
2001	0	56	538	0	3,103	5,023	36,362	57,855	41,390	900	12,953	45,751	2,929	0	0	15	206,875
2002	0	30	77	0	3,518	5,179	8,244	43,866	105,173	1,910	23,244	80	15	0	0	0	191,336
2003	0	0	57	0	6,223	2,596	4,032	25,999	56,223	16,439	9,464	6	0	0	0	0	121,039
2004	0	3	24	0	6,935	1,161	17,916	35,977	68,553	13,775	2,205	0	0	0	0	0	146,549
2005	0	0	0	0	5,258	330	17,752	15,989	25,904	29,614	1,763	0	0	0	0	0	96,610
2006	0	13	246	0	8,442	605	3,454	2,891	103,361	107	14,204	47	0	0	0	0	133,370
2007	0	0	3	0	2,370	101	2,591	22,884	34,680	5,056	11,962	0	0	1,848	0	0	81,495
2008	0	0	1	0	2,620	85	2,350	35,124	55,730	5,724	513	0	0	0	0	0	102,147
2009	0	0	4	0	353	1,194	7,848	30,932	26,534	95	61	422	0	0	0	0	67,443
2010	0	0	0	0	2,507	676	4,995	5,655	6,721	10,583	2,781	0	0	0	0	0	33,918

SOURCE: Ken Parris 5/2011

Table 2: Total Plastic Distribution Mains Footage Investment: New Business & Replacement Combined

Col. 1 Year	Southern California Gas Company									Southern Counties Gas Company								SoCos Total	Combined Total
	2 1/2"	3 1"	4 2"	5 3"	6 4"	7 6"	8 8"	SoCal Total	10 1/2"	11 1"	12 2"	13 3"	14 4"	15 6"	16 8"				
2001	5,228	13,142	2,073,529	126,319	314,301	119,084	36,054	2,687,657	0	0	0	0	0	0	0	0	0	2,687,657	
2002	63	20,012	2,433,181	227,099	377,987	139,128	70,981	3,268,451	0	0	0	0	0	0	0	0	0	3,268,451	
2003	106	17,587	2,915,228	199,961	442,220	185,627	72,998	3,833,727	0	0	0	0	0	0	0	0	0	3,833,727	
2004	489	12,482	2,999,028	176,138	420,528	179,673	64,088	3,852,426	0	0	0	0	0	0	0	0	0	3,852,426	
2005	0	13,684	3,496,903	147,423	431,732	231,395	270,515	4,591,652	0	0	0	0	0	0	0	0	0	4,591,652	
2006	128	9,161	3,433,117	123,327	529,345	222,375	104,925	4,422,378	0	0	0	0	0	0	0	0	0	4,422,378	
2007	0	8,877	2,673,915	157,539	532,221	158,092	113,116	3,643,760	0	0	0	0	0	0	0	0	0	3,643,760	
2008	0	4,723	1,002,332	85,915	256,664	97,567	39,213	1,486,414	0	0	0	0	0	0	0	0	0	1,486,414	
2009	0	2,956	553,274	43,539	131,875	48,693	58,183	838,520	0	0	0	0	0	0	0	0	0	838,520	
2010	0	2,348	451,121	38,869	118,911	53,496	31,821	696,566	0	0	0	0	0	0	0	0	0	696,566	

SOURCE: Ken Parris 5/2011

Table 3: Total Steel Distribution Mains (including HP) Footage Investment: New Business & Replacement Combined

Col. 1 Year	Southern California Gas Company																SoCal Total
	2 1/2"	3 3/4"	4 1"	5 1 1/4"	6 2"	7 3"	8 4"	9 6"	10 8"	11 10"	12 12"	13 16"	14 20"	15 24"	16 26"	17 30"	
2001	0	0	404	0	8,873	0	32,236	71,353	28,164	699	9,562	3,298	2,929	0	0	15	157,533
2002	0	30	79	0	16,323	6,585	12,046	46,890	110,276	3,225	23,244	80	0	0	0	0	218,778
2003	0	105	73	0	13,939	12,358	15,251	29,983	72,921	17,914	12,875	6	0	0	0	0	175,425
2004	0	3	31	13	16,188	4,854	25,536	38,201	70,423	14,015	2,273	1	0	0	0	0	171,538
2005	0	0	15	2	11,404	4,122	23,396	21,233	26,487	29,614	2,392	0	0	0	0	0	118,665
2006	0	13	977	0	12,105	2,655	8,420	5,111	104,281	1,104	14,351	47	0	0	0	0	149,064
2007	0	0	0	0	4,752	3,149	6,430	25,172	42,315	6,175	12,540	42	0	0	0	0	100,575
2008	0	20	0	0	6,486	4,708	6,318	33,877	55,426	5,729	410	0	0	0	0	0	112,974
2009	0	0	0	0	9,184	2,412	12,817	34,678	34,501	2,028	967	2,203	1,768	0	0	0	100,558
2010	0	0	0	0	5,234	791	6,985	9,992	9,340	11,962	2,376	0	0	0	0	0	46,680

SOURCE: Ken Parris 5/2011

Table 3: (Cont.) Total Steel Distribution Mains (including HP) Footage Investment: New Business & Replacement Combined

Southern Counties Gas Company																SoCos Total	Combined Total	
19 <u>1/2"</u>	20 <u>3/4"</u>	21 <u>1"</u>	22 <u>1 1/4"</u>	23 <u>2"</u>	24 <u>3"</u>	25 <u>4"</u>	26 <u>6"</u>	27 <u>8"</u>	28 <u>10"</u>	29 <u>12"</u>	30 <u>16"</u>	31 <u>20"</u>	32 <u>24"</u>	33 <u>26"</u>	34 <u>30"</u>			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	157,533
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	218,778
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	175,425
0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	171,544
0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	118,671
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149,064
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100,575
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	112,974
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100,558
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46,680

SOURCE: Ken Parris 5/2011

Table 4: Plastic New Business Vs. Replacement Distribution Mains Footage: Based on a Sample Survey

Year	Unique Row Identifier	Investment Type	1/2"	1"	2"	3"	4"	6"	8"	Total
2001	2001.1	New Business	153	15,950	2,132,227	124,854	273,859	117,254	44024	2,708,321
	2001.2	Replacement	0	0	264,976	23,193	91,334	12,026	3459	394,988
	2001.3	New Business %	100.00%	100.00%	88.95%	84.33%	74.99%	90.70%	92.72%	87.27%
2002	2002.1	New Business	0	14,984	2,132,825	169,376	298,652	120,131	66723	2,802,691
	2002.2	Replacement	63	5,028	300,356	57,723	79,335	18,997	4258	465,760
	2002.3	New Business %	0.00%	74.88%	87.66%	74.58%	79.01%	86.35%	94.00%	85.75%
2003	2003.1	New Business	36	13,243	2,533,236	151,906	348,137	113,283	52078	3,211,919
	2003.2	Replacement	70	4,344	381,992	48,055	94,083	72,344	20920	621,808
	2003.3	New Business %	33.96%	75.30%	86.90%	75.97%	78.72%	61.03%	71.34%	83.78%
2004	2004.1	New Business	352	9,986	2,750,360	137,941	351,748	115,295	41501	3,407,183
	2004.2	Replacement	137	2,496	248,668	38,197	68,780	67,656	19309	445,243
	2004.3	New Business %	71.98%	80.00%	91.71%	78.31%	83.64%	63.02%	68.25%	88.44%
2005	2005.1	New Business	0	10,539	3,228,164	102,822	386,760	173,390	72234	3,973,909
	2005.2	Replacement	0	3,145	268,739	44,541	44,972	52,388	19646	433,431
	2005.3	New Business %	0.00%	77.02%	92.31%	69.77%	89.58%	76.80%	78.62%	90.17%
2006	2006.1	New Business	0	7,599	3,227,106	91,227	476,786	202,137	98434	4,103,289
	2006.2	Replacement	0	1,690	206,011	32,100	52,559	20,238	6491	319,089
	2006.3	New Business %	0.00%	81.81%	94.00%	73.97%	90.07%	90.90%	93.81%	92.78%
2007	2007.1	New Business	0	5,567	2,410,968	92,756	430,855	113,127	91433	3,144,706
	2007.2	Replacement	0	3,310	262,947	64,783	101,366	44,965	21683	499,054
	2007.3	New Business %	0.00%	62.71%	90.17%	58.88%	80.95%	71.56%	80.83%	86.30%
2008	2008.1	New Business	0	3,308	739,710	38,466	144,960	29,107	8467	964,018
	2008.2	Replacement	0	1,413	262,622	47,449	111,704	66,322	30746	520,256
	2008.3	New Business %	0.00%	70.07%	73.80%	44.77%	56.48%	30.50%	21.59%	64.95%
2009	2009.1	New Business	0	600	313,948	9,304	77,995	9,030	29731	440,608
	2009.2	Replacement	0	2,356	239,324	34,235	53,880	39,663	28452	397,910
	2009.3	New Business %	0.00%	20.30%	56.74%	21.37%	59.14%	18.54%	51.10%	52.55%
2010	2010.1	New Business	0	810	242,438	14,007	42,301	13,723	8,560	321,839
	2010.2	Replacement	0	1,538	208,683	24,862	76,610	39,773	23,261	374,727
	2010.3	New Business %	0.00%	34.50%	53.74%	36.04%	35.57%	25.65%	26.90%	46.20%

SOURCE: Ken Parris 5/2011

Table 5: Steel New Business Vs. Replacement Distribution Mains Footage: Based on a Sample Survey

Year	Unique Row Identifier	Investment Type	Col. 1 1/2"	Col. 2 3/4"	Col. 3 1"	Col. 4 1 1/4"	Col. 5 2"	Col. 6 3"	Col. 7 4"	Col. 8 6"	Col. 9 8"	Col. 10 10"	Col. 11 12"	Col. 12 16"	Col. 13 20"	Col. 14 24"	Col. 15 26"	Col. 16 30"	Col. 17 Total
2001	2001.1	New Business	0	0	184	0	444	2,121	23,634	18,547	16,071	0	7,591	18,555	0	0	0	0	87,147
	2001.2	Replacement	0	731	432	230	8,482	6,184	21,731	44,339	27,662	929	5,362	8,641	2,929	0	0	15	127,667
	2001.3	New Business %	0.00%	0.00%	29.87%	0.00%	4.97%	25.54%	52.10%	29.49%	36.75%	0.00%	58.60%	68.23%	0.00%	0.00%	0.00%	0.00%	40.57%
2002	2002.1	New Business	0	0	0	0	1,794	5,054	4,271	36,593	56,832	0	488	0	0	0	0	0	105,032
	2002.2	Replacement	0	30	79	0	14,529	1,531	7,775	10,297	53,444	3,225	22,756	80	0	0	0	0	113,746
	2002.3	New Business %	0.00%	0.00%	0.00%	0.00%	10.99%	76.75%	35.46%	78.04%	51.54%	0.00%	2.10%	0.00%	0.00%	0.00%	0.00%	0.00%	48.01%
2003	2003.1	New Business	0	0	0	0	5,592	2,955	6,568	20,301	45,226	33	216	6	0	0	0	0	80,897
	2003.2	Replacement	0	0	0	178	8,347	9,403	8,683	9,682	27,695	17,881	12,659	0	0	0	0	0	94,528
	2003.3	New Business %	0.00%	0.00%	0.00%	0.00%	40.12%	23.91%	43.07%	67.71%	62.02%	0.18%	1.68%	100.00%	0.00%	0.00%	0.00%	0.00%	46.11%
2004	2004.1	New Business	0	0	0	13	6,286	868	3,946	25,186	40,665	0	0	0	0	0	0	0	76,964
	2004.2	Replacement	0	3	0	31	9,902	3,986	21,590	130,15	29,758	14,015	2,273	1	0	0	0	0	94,574
	2004.3	New Business %	0.00%	0.00%	0.00%	29.55%	38.83%	17.88%	15.45%	65.93%	57.74%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	44.87%
2005	2005.1	New Business	0	0	0	0	4,685	943	14,273	15,775	5,199	0	19	0	0	0	0	0	40,894
	2005.2	Replacement	0	0	15	2	6,719	3,175	8,950	5,458	21,288	29,614	2,373	0	0	0	0	0	77,594
	2005.3	New Business %	0.00%	0.00%	0.00%	0.00%	41.08%	22.90%	61.46%	74.29%	19.63%	0.00%	0.79%	0.00%	0.00%	0.00%	0.00%	0.00%	34.51%
2006	2006.1	New Business	0	0	246	0	7,362	1	3,588	2,019	35,856	0	0	0	0	0	0	0	49,072
	2006.2	Replacement	0	13	731	0	4,185	1,952	2,247	2,780	2,471	1,074	9,001	47	0	0	0	0	24,501
	2006.3	New Business %	0.00%	0.00%	25.18%	0.00%	63.76%	0.05%	61.49%	42.07%	93.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	66.70%
2007	2007.1	New Business	0	0	0	0	244	0	262	131	0	5,052	0	0	0	0	0	0	5,689
	2007.2	Replacement	0	0	0	0	4,508	3,147	6,168	25,041	42,311	1,123	12,540	42	0	1,848	0	0	96,728
	2007.3	New Business %	0.00%	0.00%	0.00%	0.00%	5.13%	0.00%	4.07%	0.52%	0.00%	81.81%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.55%
2008	2008.1	New Business	0	0	0	0	1,888	0	1,491	2,727	0	0	0	0	0	0	0	0	6,106
	2008.2	Replacement	0	20	0	0	4,596	4,710	4,827	33,288	55,426	5,729	410	0	0	0	0	0	109,006
	2008.3	New Business %	0.00%	0.00%	0.00%	0.00%	29.12%	0.00%	23.60%	7.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.30%
2009	2009.1	New Business	0	0	0	0	1,433	1,154	9,534	4	30	0	0	0	0	0	0	0	12,155
	2009.2	Replacement	0	0	0	0	7,751	1,258	3,283	34,674	34,471	2,028	967	2,203	1,768	0	0	0	88,403
	2009.3	New Business %	0.00%	0.00%	0.00%	0.00%	15.60%	47.84%	74.39%	0.01%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.09%
2010	2010.1	New Business	0	0	0	0	743	0	37	5	0	0	0	0	0	0	0	0	785
	2010.2	Replacement	0	0	0	0	4,491	791	6,948	9,987	9,340	11,962	2,376	0	0	0	0	0	45,895
	2010.3	New Business %	0.00%	0.00%	0.00%	0.00%	14.20%	0.00%	0.53%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.68%

SOURCE: Ken Parris 5/2011

**Table 6: Plastic Mains Pressure Betterment Investment as a Fraction of
Total Plastic Mains Investment**

Col. 1	2	3	4	5	6	7	8
<u>Year</u>	<u>1/2"</u>	<u>1"</u>	<u>2"</u>	<u>3"</u>	<u>4"</u>	<u>6"</u>	<u>8"</u>
2001	0.0000	0.0000	0.0088	0.0705	0.0655	0.1465	0.0153
2002	0.0000	0.0000	0.0019	0.0022	0.0087	0.0142	0.0067
2003	0.0000	0.0050	0.0043	0.0341	0.1046	0.1778	0.4655
2004	0.0000	0.0048	0.0047	0.0379	0.0576	0.1423	0.0352
2005	0.0000	0.0000	0.0051	0.0301	0.0926	0.1890	0.1627
2006	<i>0.0000</i>	<i>0.0000</i>	<i>0.0029</i>	<i>0.0316</i>	<i>0.1286</i>	<i>0.1828</i>	<i>0.1533</i>
2007	0.0000	0.0000	0.0044	0.0261	0.0759	0.1249	0.0631
2008	0.0000	0.0000	0.0087	0.0183	0.1731	0.2858	0.5753
2009	0.0000	0.0000	0.0041	0.0134	0.0781	0.4198	0.3594
2010	<i>0.0000</i>	<i>0.0000</i>	<i>0.0047</i>	<i>0.0177</i>	<i>0.2192</i>	<i>0.5388</i>	<i>0.5579</i>

SOURCE: Ken Parris 5/2011

Table 7: Steel Mains Pressure Betterment Investment as a Fraction of Total Steel Mains Investment

Col. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Year	<u>1/2"</u>	<u>3/4"</u>	<u>1"</u>	<u>1 1/4"</u>	<u>2"</u>	<u>3"</u>	<u>4"</u>	<u>6"</u>	<u>8"</u>	<u>10"</u>	<u>12"</u>	<u>16"</u>	<u>20"</u>	<u>24"</u>	<u>26"</u>	<u>30"</u>
2001	0.0000	0.0000	0.0000	0.0000	0.0352	0.0000	0.4616	0.0962	0.5705	0.0000	0.2144	0.0000	0.0000	0.0000	0.0000	0.0000
2002	0.0000	0.0000	0.0000	0.0000	0.0001	0.0041	0.0033	0.0088	0.2193	0.0000	0.0022	0.0000	0.0000	0.0000	0.0000	0.0000
2003	0.0000	0.0000	0.0000	0.0000	0.0345	0.2391	0.2353	0.6676	0.6048	0.0018	0.0168	0.0000	0.0000	0.0000	0.0000	0.0000
2004	0.0000	0.0000	0.0000	1.0000	0.0270	0.0105	0.1544	0.6433	0.3665	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2005	0.0000	0.0000	0.0000	0.0000	0.0975	0.0010	0.6133	0.7359	0.1962	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2006	0.0000	0.0000	0.0000	0.0000	0.0013	0.0005	0.4459	0.0183	0.7715	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2007	0.0000	0.0000	0.0000	0.0000	0.0093	0.0013	0.4054	0.4276	0.8082	0.0000	0.8459	0.0000	0.0000	0.0000	0.0000	0.0000
2008	0.0000	0.0000	0.0000	0.0000	0.0293	0.0008	0.1839	0.2522	0.2611	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2009	0.0000	0.0000	0.0000	0.0000	0.0531	0.2384	0.0289	0.9024	0.5802	0.9467	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2010	0.0000	0.0000	0.0000	0.0000	0.3422	0.6839	0.6251	0.5794	0.4908	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

SOURCE: Ken Parris 5/2011

Table 8: Contribution in Aid of Construction as a Fraction of Total Distribution Mains Cos

<u>Year</u>	<u>Plastic Mains</u>		<u>Steel Mains</u>	
	<u>SoCal</u>	<u>SoCos</u>	<u>SoCal</u>	<u>SoCos</u>
2001	0.00000	0.00000	0.00000	0.00000
2002	0.00000	0.00000	0.00000	0.00000
2003	0.01818	0.01818	0.18630	0.18630
2004	0.07784	0.07784	0.35714	0.35714
2005	0.01512	0.01512	0.09840	0.09840
2006	0.1121	0.1121	0.0418	0.0418
2007	0.00101	0.00101	0.00376	0.00376
2008	0.00267	0.00267	0.01730	0.01730
2009	0.00302	0.00302	0.01679	0.01679
2010	0.0063	0.0063	0.0895	0.0895

SOURCE: Ken Parris 5/2011

Table 9: Account 378 (Meters & Regulator Stations) Investment Info.

<u>Year</u>	<u>Total Book Investment in Account 378 in Nominal \$'s</u>	<u>High Pressure Book Investment in Act 378 as a Fraction of Total</u>	<u>Handy-Whittman Index</u>
2001	4,504,443	0.1237	3.685
2002	2,998,596	0.1275	3.728
2003	3,474,964	0.1285	3.770
2004	3,861,068	0.1283	3.855
2005	2,441,366	0.1291	3.885
2006	5,984,627	0.1286	3.970
2007	3,833,337	0.1284	3.770
2008	4,483,701	0.1293	3.855
2009	3,126,805	0.1282	3.885
2010	4,152,942	0.1296	3.970
			3.939

SOURCE: Ken Parris 5/2011

Table 10: Distribution Main Unit costs for New Business vs. Replacement Investments: 2010 \$s

	Main size															
Plastic	<u>1/2"</u>	<u>1"</u>	<u>2"</u>	<u>3"</u>	<u>4"</u>	<u>6"</u>	<u>8"</u>									
New Business	23.13	20.36	14.32	23.00	20.91	33.72	50.08									
Replacement	76.56	81.39	149.14	163.76	178.38	196.39	283.92									
Steel	<u>1/2"</u>	<u>3/4"</u>	<u>1"</u>	<u>1 1/4"</u>	<u>2"</u>	<u>3"</u>	<u>4"</u>	<u>6"</u>	<u>8"</u>	<u>10"</u>	<u>12"</u>	<u>16"</u>	<u>20"</u>	<u>24"</u>	<u>26"</u>	<u>30"</u>
New Business	0	54.19	53.43	58.95	64.46	75.14	85.83	98.91	122.67	146.43	201.17	255.91	310.66	365.40	420.14	474.89
Replacement	0	114.10	113.35	146.47	179.61	193.33	207.05	211.04	215.01	242.39	269.78	345.26	420.76	496.24	571.74	647.23

SOURCE: Ken Parris 5/2011

Table 1: Forecasted Distribution-related Investment Costs: 2010 \$s

<u>Year</u>	<u>New Business</u>	<u>Pressure Betterment</u>	<u>Contribution in Aid of New Constr.</u>	<u>Acct 378 (Meter & Reg. Stns.)</u>	<u>Total</u>
2011	\$16,488,463	\$18,131,580	(\$37,263)	\$4,094,108	\$38,676,889
2012	\$16,983,117	\$18,460,024	(\$37,263)	\$4,131,913	\$39,537,791
2013	\$17,492,610	\$18,788,468	(\$37,263)	\$4,169,717	\$40,413,533
2014	\$18,017,389	\$19,116,912	(\$37,263)	\$4,207,521	\$41,304,560
2015	\$18,557,910	\$19,445,356	(\$37,263)	\$4,245,326	\$42,211,330

SOURCE: Ken Parris 5/2011

This sheet contains inputs that are required to calculate long run marginal costs (LRMCs) for High and Medium Pressure Distribution Mains for the following cost components:

- a) Operation and Maintenance costs (O&M),
- b) Administrative and General costs (A&G),
- c) General Plant costs (GP), and
- d) Materials and Supplies costs (M&S).

INPUTS:	2013TCAP	Source
Total Medium Pressure Peak Day Demand: BCAP Forecast (Mcf)	4,373,913	In_Peak_d
Total High Pressure Peak Month Demand: BCAP Forecast (Mcf)	88,334,831	In_Peak_M
Total Demand-related Distribution O&M costs, in 2010 M\$	\$34,306	Ken Parris
A&G Factor (as percent of O&M costs)	48.69%	OUTPUT
GP Factor (as percent of O&M costs)	24.46%	OUTPUT
Total Demand-related Distribution M&S costs, in 2013 M\$	1,332	OUTPUT

Table 1: Number of Customers by Class of Service for the Analysis Period

<u>Year</u>	<u>Residential</u>	<u>G-10</u>	<u>Gas AC</u>	<u>NGV</u>	<u>Gas Eng</u>	<u>Total Core</u>	<u>G-30</u>	<u>G-40</u>	<u>G-50</u>	<u>Total Noncore</u>	<u>G-70</u>	<u>G-80</u>	<u>Total Wholesale</u>	<u>Total System</u>
2000	4,800,642	205,543	21	90	910	5,007,206	1,110	57	227	1,394	0	0	0	5,008,600
2001	4,860,181	207,286	21	99	974	5,068,561	913	57	196	1,166	0	0	0	5,069,727
2002	4,925,855	208,424	21	147	1007	5,135,454	892	57	206	1,155	0	0	0	5,136,609
2003	4,987,210	208,860	22	164	982	5,197,238	839	55	222	1,116	0	0	0	5,198,354
2004	5,054,210	210,063	21	169	957	5,265,420	766	51	187	1,004	0	0	0	5,266,424
2005	5,115,570	210,956	19	177	924	5,327,646	739	49	192	980	0	0	0	5,328,626
2006	5,179,346	210,784	17	216	878	5,391,241	731	42	242	1,015	0	0	0	5,392,256
2007	5,248,551	211,449	15	293	843	5,461,151	674	41	222	937	0	0	0	5,462,088
2008	5,257,766	209,301	15	341	819	5,468,242	649	40	213	902	0	0	0	5,469,144
2009	5,282,743	207,368	12	397	734	5,491,254	637	34	205	876	0	0	0	5,492,130
2010	5,327,003	206,028	12	395	624	5,534,062	624	28	194	846	0	0	0	5,534,908
2011	5,374,102	208,267	11	263	688	5,583,331	680	32	207	919	0	0	0	5,584,250
2012	5,432,678	208,457	10	274	685	5,642,105	680	32	209	921	0	0	0	5,643,026
2013	5,498,893	209,087	9	285	681	5,708,955	681	32	209	922	0	0	0	5,709,877
2014	5,572,931	209,797	9	296	678	5,783,711	682	32	209	923	0	0	0	5,784,634
2015	5,653,819	210,714	8	307	674	5,865,522	682	32	209	923	0	0	0	5,866,445

Table 2: Number of Additional Customers Served by Customer Class

<u>Year</u>	<u>Residential</u>	<u>G-10</u>	<u>Gas AC</u>	<u>NGV</u>	<u>Gas Eng</u>	<u>Total Core</u>	<u>G-30</u>	<u>G-40</u>	<u>G-50</u>	<u>Total Noncore</u>	<u>G-70</u>	<u>G-80</u>	<u>Total Wholesale</u>	<u>Total System</u>
2000														
2001	59,539	1,743	0	9	64	61,355	0	0	0	0	0	0	0	61,355
2002	65,674	1,138	0	48	33	66,893	0	0	10	10	0	0	0	66,903
2003	61,356	436	1	17	0	61,809	0	0	16	16	0	0	0	61,825
2004	67,000	1,203	0	5	0	68,208	0	0	0	0	0	0	0	68,208
2005	61,360	893	0	8	0	62,261	0	0	5	5	0	0	0	62,266
2006	63,776	0	0	39	0	63,815	0	0	50	50	0	0	0	63,865
2007	69,205	665	0	77	0	69,947	0	0	0	0	0	0	0	69,947
2008	9,215	0	0	48	0	9,263	0	0	0	0	0	0	0	9,263
2009	24,977	0	0	56	0	25,033	0	0	0	0	0	0	0	25,033
2010	44,260	0	0	0	0	44,260	0	0	0	0	0	0	0	44,260
2011	47,099	2,239	0	0	64	49,402	56	4	13	73	0	0	0	49,475
2012	58,576	190	0	11	0	58,778	0	0	2	2	0	0	0	58,780
2013	66,215	630	0	11	0	66,856	1	0	0	1	0	0	0	66,857
2014	74,038	710	0	11	0	74,758	1	0	0	1	0	0	0	74,759
2015	80,888	918	0	11	0	81,816	0	0	0	0	0	0	0	81,816

TABLE 6**Number of Customers Utilized for Development of HPD and MPD Marginal Costs****SOUTHERN CALIFORNIA GAS COMPANY
2013 BCAP Application**

Historical Number of Customers :	<u>Residential</u>	<u>Core C&I G-10</u>	<u>Gas AC G-AC</u>	<u>Gas Vehicle G-NG</u>	<u>Gas Engine G-GE</u>	<u>Noncore C&I G-30</u>	<u>EOR G-40</u>	<u>EG G-50</u>	<u>Source</u>
2000	4,800,642	205,543	21	90	910	1,110	57	227	Out_Custo
2001	4,860,181	207,286	21	99	974	913	57	196	Out_Custo
2002	4,925,855	208,424	21	147	1,007	892	57	206	Out_Custo
2003	4,987,210	208,860	22	164	982	839	55	222	Out_Custo
2004	5,054,210	210,063	21	169	957	766	51	187	Out_Custo
2005	5,115,570	210,956	19	177	924	739	49	192	Out_Custo
2006	5,179,346	210,784	17	216	878	731	42	242	Out_Custo
2007	5,248,551	211,449	15	293	843	674	41	222	Out_Custo
2008	5,257,766	209,301	15	341	819	649	40	213	Out_Custo
2009	5,282,743	207,368	12	397	734	637	34	205	Out_Custo
2010	5,327,003	206,028	12	395	624	624	28	194	Out_Custo
Forecast Number of Customers :									
	<u>Residential</u>	<u>Core C&I G-10</u>	<u>Gas AC G-AC</u>	<u>Gas Vehicle G-NG</u>	<u>Gas Engine G-GE</u>	<u>Noncore C&I G-30</u>	<u>EOR G-40</u>	<u>EG G-50</u>	
2011	5,374,102	208,267	11	263	688	680	32	207	Out_Custo
2012	5,432,678	208,457	10	274	685	680	32	209	Out_Custo
2013	5,498,893	209,087	9	285	681	681	32	209	Out_Custo
2014	5,572,931	209,797	9	296	678	682	32	209	Out_Custo
2015	5,653,819	210,714	8	307	674	682	32	209	Out_Custo

Table 1: Coincident Peak Month Demand by Customer Class (Mcf): Analysis Period

<u>Year</u>	<u>Residential</u>	<u>G-10</u>	<u>Gas AC</u>	<u>NGV</u>	<u>Gas Eng</u>	<u>Total Core</u>	<u>G-30</u>	<u>G-40</u>	<u>G-50</u>	<u>Total Noncore</u>	<u>G-70</u>	<u>G-80</u>	<u>Total Wholesale</u>	<u>Total System</u>
2001	38,755,427	11,030,481	10,695	391,458	92,713	50,280,774	12,835,228	3,130,722	23,259,016	39,224,966	0	0	0	89,505,739
2002	40,106,719	11,510,141	11,220	468,178	65,611	52,161,869	12,405,692	3,156,400	17,063,210	32,625,303	0	0	0	84,787,171
2003	40,888,672	11,611,617	9,921	299,693	89,276	52,899,179	12,500,672	2,097,230	16,451,563	31,049,465	0	0	0	83,948,645
2004	41,533,962	12,025,639	9,472	69,317	103,406	53,741,797	13,143,164	2,047,444	20,948,579	36,139,188	0	0	0	89,880,985
2005	40,719,919	12,494,171	8,444	583,156	76,352	53,882,042	11,980,210	2,078,548	17,278,102	31,336,860	0	0	0	85,218,902
2006	41,174,026	12,539,072	8,515	639,125	90,669	54,451,407	11,575,421	3,016,162	18,231,651	32,823,233	0	0	0	87,274,640
2007	38,942,127	13,105,690	5,570	693,775	93,888	52,841,050	12,491,875	2,927,457	21,156,118	36,575,450	0	0	0	89,416,500
2008	39,447,753	12,116,407	6,027	712,390	68,184	52,350,761	11,578,320	2,678,949	28,081,864	42,339,133	0	0	0	94,689,894
2009	40,157,229	11,936,507	5,564	770,923	80,495	52,950,718	10,909,986	1,261,164	19,759,387	31,930,537	0	0	0	84,881,255
2010	39,706,003	11,772,075	4,798	824,524	61,021	52,368,421	12,418,096	1,263,312	22,281,972	35,963,380	0	0	0	88,331,801
2011	41,337,567	11,881,290	4,494	1,175,672	62,433	54,461,456	12,582,120	1,226,185	20,065,071	33,873,376	0	0	0	88,334,831
2012	41,027,357	11,851,197	4,104	1,219,443	62,140	54,164,240	12,344,113	1,242,794	20,545,090	34,131,998	0	0	0	88,296,238
2013	40,383,293	11,814,656	3,615	1,263,410	87,152	53,552,125	12,213,581	1,242,794	22,547,631	36,004,006	0	0	0	89,556,131
2014	40,244,651	11,798,632	3,615	1,307,572	61,553	53,416,023	12,098,486	1,242,794	22,838,691	36,179,971	0	0	0	89,595,994
2015	40,126,624	11,687,250	3,224	1,351,539	61,163	53,229,800	11,919,590	1,242,794	22,630,581	35,792,965	0	0	0	89,022,765

Table 2: Average Coincident Peak Month Demand Per Customer (Mcf)

<u>Year</u>	<u>Residential</u>	<u>G-10</u>	<u>Gas AC</u>	<u>NGV</u>	<u>Gas Eng</u>	<u>Total Core</u>	<u>G-30</u>	<u>G-40</u>	<u>G-50</u>	<u>Total Noncore</u>	<u>G-70</u>	<u>G-80</u>	<u>Total Wholesale</u>	<u>Total System</u>
2001	8.0	53.2	509.3	3954.1	95.2	9.9	14058.3	54924.9	118668.4	33640.6	0.0	0.0	0.0	17.7
2002	8.1	55.2	534.3	3184.9	65.2	10.2	13907.7	55375.4	82831.1	28247.0	0.0	0.0	0.0	16.5
2003	8.2	55.6	450.9	1827.4	90.9	10.2	14899.5	38131.5	74106.1	27822.1	0.0	0.0	0.0	16.1
2004	8.2	57.2	451.1	410.2	108.1	10.2	17158.2	40146.0	112024.5	35995.2	0.0	0.0	0.0	17.1
2005	8.0	59.2	444.4	3294.7	82.6	10.1	16211.4	42419.4	89990.1	31976.4	0.0	0.0	0.0	16.0
2006	7.9	59.5	500.9	2958.9	103.3	10.1	15835.0	71813.4	75337.4	32338.2	0.0	0.0	0.0	16.2
2007	7.4	62.0	371.3	2367.8	111.4	9.7	18533.9	71401.4	95297.8	39034.6	0.0	0.0	0.0	16.4
2008	7.5	57.9	401.8	2089.1	83.3	9.6	17840.2	66973.7	131839.7	46939.2	0.0	0.0	0.0	17.3
2009	7.6	57.6	463.7	1941.9	109.7	9.6	17127.1	37093.1	96387.3	36450.4	0.0	0.0	0.0	15.5
2010	7.5	57.1	399.9	2087.4	97.8	9.5	19900.8	45118.3	114855.5	42509.9	0.0	0.0	0.0	16.0
2011	7.7	57.0	408.6	4470.2	90.7	9.8	18503.1	38318.3	96932.7	36859.0	0.0	0.0	0.0	15.8
2012	7.6	56.9	410.4	4450.5	90.7	9.6	18153.1	38837.3	98301.9	37059.7	0.0	0.0	0.0	15.6
2013	7.3	56.5	401.7	4433.0	128.0	9.4	17934.8	38837.3	107883.4	39049.9	0.0	0.0	0.0	15.7
2014	7.2	56.2	401.7	4417.5	90.8	9.2	17739.7	38837.3	109276.0	39198.2	0.0	0.0	0.0	15.5
2015	7.1	55.5	403.0	4402.4	90.7	9.1	17477.4	38837.3	108280.3	38778.9	0.0	0.0	0.0	15.2

Table 3: Coincident Peak Month Demand For Additional Customers Served (Mcf)

<u>Year</u>	<u>Residential</u>	<u>G-10</u>	<u>Gas AC</u>	<u>NGV</u>	<u>Gas Eng</u>	<u>Total Core</u>	<u>G-30</u>	<u>G-40</u>	<u>G-50</u>	<u>Total Noncore</u>	<u>G-70</u>	<u>G-80</u>	<u>Total Wholesale</u>	<u>Total System</u>
2001	474,768	92,752	0	35,587	6,092	609,199	0	0	0	0	0	0	0	609,199
2002	534,719	62,864	0	152,874	2,150	752,607	0	0	828,311	828,311	0	0	0	1,580,919
2003	503,036	24,221	451	31,066	0	558,773	0	0	1,185,698	1,185,698	0	0	0	1,744,472
2004	550,586	68,869	0	2,051	0	621,506	0	0	0	0	0	0	0	621,506
2005	488,425	52,889	0	26,357	0	567,672	0	0	449,951	449,951	0	0	0	1,017,622
2006	506,997	0	0	115,398	0	622,395	0	0	3,766,870	3,766,870	0	0	0	4,389,265
2007	513,473	41,227	0	182,323	0	737,023	0	0	0	0	0	0	0	737,023
2008	69,138	0	0	100,278	0	169,416	0	0	0	0	0	0	0	169,416
2009	189,865	0	0	108,745	0	298,610	0	0	0	0	0	0	0	298,610
2010	329,902	0	0	0	0	329,902	0	0	0	0	0	0	0	329,902
2011	362,284	127,736	0	0	5,808	495,828	1,036,175	153,273	1,260,125	2,449,573	0	0	0	2,945,401
2012	442,366	10,823	0	48,956	0	502,145	0	0	196,604	196,604	0	0	0	698,748
2013	486,275	35,582	0	48,763	0	570,621	17,935	0	0	17,935	0	0	0	588,556
2014	534,661	39,904	0	48,592	0	623,157	17,740	0	0	17,740	0	0	0	640,897
2015	574,080	50,902	0	48,426	0	673,408	0	0	0	0	0	0	0	673,408

Table 4: High Pressure Distribution-Service-Usage-Weighted Coincident Peak Month Demand For Additional Customers Served (Mcf)

<u>Year</u>	<u>Residential</u>	<u>G-10</u>	<u>Gas AC</u>	<u>NGV</u>	<u>Gas Eng</u>	<u>Total Core</u>	<u>G-30</u>	<u>G-40</u>	<u>G-50</u>	<u>Total Noncore</u>	<u>G-70</u>	<u>G-80</u>	<u>Total Wholesale</u>	<u>Total System</u>	<u>Cumulative Total System</u>
2001	474,748	91,958	0	27,253	5,848	572,554	0	0	0	0	0	0	0	572,554	572,554
2002	534,696	62,326	0	117,073	2,064	599,086	0	0	98,776	98,776	0	0	0	697,862	1,270,416
2003	503,014	24,014	451	23,791	0	527,479	0	0	141,394	141,394	0	0	0	668,873	1,939,288
2004	550,562	68,280	0	1,571	0	618,842	0	0	0	0	0	0	0	618,842	2,558,130
2005	488,404	52,437	0	20,185	0	540,841	0	0	53,656	53,656	0	0	0	594,497	3,152,628
2006	506,975	0	0	88,373	0	506,975	0	0	449,197	449,197	0	0	0	956,173	4,108,800
2007	513,451	40,875	0	139,626	0	554,326	0	0	0	0	0	0	0	554,326	4,663,126
2008	69,135	0	0	76,794	0	69,135	0	0	0	0	0	0	0	69,135	4,732,261
2009	189,857	0	0	83,278	0	189,857	0	0	0	0	0	0	0	189,857	4,922,118
2010	329,888	0	0	0	0	329,888	0	0	0	0	0	0	0	329,888	5,252,005
2011	362,269	126,643	0	0	5,575	494,487	955,655	47,315	150,269	1,153,239	0	0	0	1,647,726	6,899,731
2012	442,347	10,730	0	37,491	0	453,077	0	0	23,445	23,445	0	0	0	476,522	7,376,253
2013	486,254	35,278	0	37,344	0	521,532	16,541	0	0	16,541	0	0	0	538,073	7,914,326
2014	534,638	39,562	0	37,213	0	574,200	16,361	0	0	16,361	0	0	0	590,562	8,504,888
2015	574,055	50,467	0	37,086	0	624,522	0	0	0	0	0	0	0	624,522	9,129,410

Table 1: Peak Day Demand by Customer Class (Mcf): Analysis Period

Year	Residential	G-10	Gas AC	NGV	Gas Eng	Total Core	G-30	G-40	G-50	G-60	Total Noncore	G-70	G-80	Total Wholesale	Total System
2001	2,293,007	561,628	345	12,628	2,991	2,870,598	435,343	100,991	920,718	0	1,457,052	0	0	0	4,327,650
2002	2,352,205	574,535	362	15,103	2,116	2,944,321	420,774	101,819	675,455	0	1,198,048	0	0	0	4,142,369
2003	2,398,397	583,435	320	9,668	2,880	2,994,699	423,995	67,653	651,242	0	1,142,890	0	0	0	4,137,589
2004	2,413,015	596,919	306	2,236	3,336	3,015,811	445,787	66,047	829,259	0	1,341,092	0	0	0	4,356,904
2005	2,402,059	606,572	272	18,811	2,463	3,030,178	406,342	67,050	683,961	0	1,157,353	0	0	0	4,187,531
2006	2,425,555	608,069	275	20,617	2,925	3,057,441	392,613	97,296	721,708	0	1,211,616	0	0	0	4,269,057
2007	2,372,476	630,724	180	22,380	3,029	3,028,788	423,697	94,434	837,474	0	1,355,605	0	0	0	4,384,393
2008	2,392,085	594,520	194	22,980	2,199	3,011,980	392,711	86,418	#####	0	1,590,762	0	0	0	4,602,741
2009	2,426,063	590,808	179	24,868	2,597	3,044,516	370,043	40,683	782,184	0	1,192,909	0	0	0	4,237,425
2010	2,400,204	586,463	155	26,598	1,968	3,015,389	417,759	40,752	874,533	0	1,333,044	0	0	0	4,348,432
2011	2,498,876	593,161	98	37,909	2,052	3,132,096	423,058	39,570	779,189	0	1,241,817	0	0	0	4,373,913
2012	2,480,117	592,868	98	39,375	2,052	3,114,509	415,340	40,059	817,294	0	1,272,692	0	0	0	4,387,201
2013	2,441,133	592,281	98	40,743	2,833	3,077,088	411,138	40,059	853,346	0	1,304,543	0	0	0	4,381,632
2014	2,432,731	592,868	98	42,208	1,954	3,069,858	407,426	40,059	887,836	0	1,335,320	0	0	0	4,405,178
2015	2,425,598	588,862	98	43,576	1,954	3,060,088	401,661	40,059	921,837	0	1,363,556	0	0	0	4,423,644

Table 2: Average Peak Day Demand Per Customer (Mcf)

Year	Residential	G-10	Gas AC	NGV	Gas Eng	Total Core	G-30	G-40	G-50	Total Noncore	G-70	G-80	Total Wholesale	Total System
2001	0.47	2.71	16.43	127.55	3.07	0.57	476.83	1771.77	4697.54	1249.62	0.00	0.00	0.00	0.85
2002	0.48	2.76	17.24	102.74	2.10	0.57	471.72	1786.30	3278.91	1037.27	0.00	0.00	0.00	0.81
2003	0.48	2.79	14.55	58.95	2.93	0.58	505.36	1230.05	2933.52	1024.10	0.00	0.00	0.00	0.80
2004	0.48	2.84	14.55	13.23	3.49	0.57	581.97	1295.03	4434.54	1335.75	0.00	0.00	0.00	0.83
2005	0.47	2.88	14.34	106.28	2.67	0.57	549.85	1368.37	3562.30	1180.97	0.00	0.00	0.00	0.79
2006	0.47	2.88	16.16	95.45	3.33	0.57	537.09	2316.56	2982.26	1193.71	0.00	0.00	0.00	0.79
2007	0.45	2.98	11.98	76.38	3.59	0.55	628.63	2303.27	3772.41	1446.75	0.00	0.00	0.00	0.80
2008	0.45	2.84	12.96	67.39	2.69	0.55	605.10	2160.44	5218.93	1763.59	0.00	0.00	0.00	0.84
2009	0.46	2.85	14.96	62.64	3.54	0.55	580.91	1196.55	3815.53	1361.77	0.00	0.00	0.00	0.77
2010	0.45	2.85	12.90	67.34	3.15	0.54	669.48	1455.43	4507.90	1575.70	0.00	0.00	0.00	0.79
2011	0.46	2.85	8.88	144.14	2.98	0.56	622.14	1236.57	3764.20	1351.27	0.00	0.00	0.00	0.78
2012	0.46	2.84	9.77	143.70	3.00	0.55	610.79	1251.83	3910.50	1381.86	0.00	0.00	0.00	0.78
2013	0.44	2.83	10.86	142.96	4.16	0.54	603.73	1251.83	4083.00	1414.91	0.00	0.00	0.00	0.77
2014	0.44	2.83	10.86	142.59	2.88	0.53	597.40	1251.83	4248.02	1446.72	0.00	0.00	0.00	0.76
2015	0.43	2.79	12.21	141.94	2.90	0.52	588.95	1251.83	4410.70	1477.31	0.00	0.00	0.00	0.75

Table 3: Peak Day Demand For Additional Customers Served (Mcf)

Year	Residential	G-10	Gas AC	NGV	Gas Eng	Total Core	G-30	G-40	G-50	Total Noncore	G-70	G-80	Total Wholesale	Total System
2001	28,090	4,723	0	1,148	197	34,157	0	0	0	0	0	0	0	34,157
2002	31,361	3,138	0	4,931	69	39,499	0	0	32,789	32,789	0	0	0	72,288
2003	29,506	1,217	15	1,002	0	31,740	0	0	46,936	46,936	0	0	0	78,676
2004	31,988	3,418	0	66	0	35,472	0	0	0	0	0	0	0	35,472
2005	28,812	2,568	0	850	0	32,230	0	0	17,811	17,811	0	0	0	50,042
2006	29,867	0	0	3,723	0	33,590	0	0	149,113	149,113	0	0	0	182,703
2007	31,282	1,984	0	5,881	0	39,148	0	0	0	0	0	0	0	39,148
2008	4,192	0	0	3,235	0	7,427	0	0	0	0	0	0	0	7,427
2009	11,471	0	0	3,508	0	14,978	0	0	0	0	0	0	0	14,978
2010	19,942	0	0	0	0	19,942	0	0	0	0	0	0	0	19,942
2011	21,900	6,377	0	0	191	28,468	34,840	4,946	48,935	88,721	0	0	0	117,189
2012	26,741	541	0	1,581	0	28,863	0	0	7,821	7,821	0	0	0	36,684
2013	29,395	1,784	0	1,573	0	32,751	604	0	0	604	0	0	0	33,355
2014	32,319	2,005	0	1,569	0	35,893	597	0	0	597	0	0	0	36,491
2015	34,702	2,565	0	1,561	0	38,828	0	0	0	0	0	0	0	38,828

Table 4: Medium Pressure Distribution-Service-Usage-Weighted Peak Day Demand For Additional Customers Served (Mcf)

Year	Residential	G-10	Gas AC	NGV	Gas Eng	Total Core	G-30	G-40	G-50	Total Noncore	G-70	G-80	Total Wholesale	Total System	Cumulative Total System
2001	27,978	4,472	0	409	154	33,013	0	0	0	0	0	0	0	33,013	33,013
2002	31,235	2,971	0	1,759	54	36,020	0	0	2,437	2,437	0	0	0	38,457	71,470
2003	29,389	1,152	9	357	0	30,907	0	0	3,489	3,489	0	0	0	34,396	105,866
2004	31,860	3,237	0	24	0	35,120	0	0	0	0	0	0	0	35,120	140,987
2005	28,697	2,431	0	303	0	31,432	0	0	1,324	1,324	0	0	0	32,755	173,742
2006	29,748	0	0	1,328	0	31,076	0	0	11,084	11,084	0	0	0	42,159	215,901
2007	31,157	1,879	0	2,098	0	35,134	0	0	0	0	0	0	0	35,134	251,035
2008	4,176	0	0	1,154	0	5,330	0	0	0	0	0	0	0	5,330	256,365
2009	11,425	0	0	1,251	0	12,676	0	0	0	0	0	0	0	12,676	269,041
2010	19,863	0	0	0	0	19,863	0	0	0	0	0	0	0	19,863	288,904
2011	21,813	6,038	0	0	150	28,001	24,607	0	3,637	28,244	0	0	0	56,245	345,149
2012	26,634	513	0	564	0	27,711	0	0	581	581	0	0	0	28,292	373,441
2013	29,278	1,689	0	561	0	31,527	426	0	0	426	0	0	0	31,954	405,395
2014	32,190	1,899	0	560	0	34,648	422	0	0	422	0	0	0	35,070	440,465
2015	34,564	2,428	0	557	0	37,549	0	0	0	0	0	0	0	37,549	478,014

Table 1: Plastic Distribution Mains: New Business (NB), Pressure Betterment (PB) & Contribution in Aid of New Construction (CANC)

2013 \$s

Year	Unique Row Identifier	Investment Type	1/2"	1"	2"	3"	4"	6"	8"	Total
2001	2001.1	NB	131,070	290,002	28,626,363	2,656,531	5,341,621	3,947,751	1,814,852	42,808,190
	2001.2	PB	0	0	2,936,781	1,581,867	3,980,021	3,714,777	169,279	12,382,726
	2001.3	CANC	0	0	0	0	0	0	0	0
2002	2002.1	NB	0	330,649	33,104,167	4,223,721	6,768,434	4,390,915	3,622,529	52,440,415
	2002.2	PB	0	5	752,227	89,967	632,712	419,191	146,795	2,040,896
	2002.3	CANC	0	0	0	0	0	0	0	0
2003	2003.1	NB	903	292,231	39,319,056	3,788,072	7,889,926	4,140,614	2,827,422	58,258,224
	2003.2	PB	0	7,764	2,038,852	1,209,966	8,943,300	7,027,399	#####	29,684,700
	2003.3	CANC	(48)	(7,055)	(822,535)	(90,645)	(182,186)	(123,338)	(72,045)	(1,297,851)
2004	2004.1	NB	8,825	220,359	42,689,098	3,439,828	7,971,763	4,138,648	2,374,633	60,843,155
	2004.2	PB	0	5,294	2,263,092	1,184,048	4,680,000	5,444,749	694,658	14,271,842
	2004.3	CANC	(954)	(21,440)	(3,623,387)	(341,903)	(741,864)	(511,198)	(270,844)	(5,511,591)
2005	2005.1	NB	0	232,562	50,105,226	2,565,111	8,765,250	6,495,258	#####	79,709,853
	2005.2	PB	0	0	2,855,137	786,762	7,730,711	9,312,810	#####	34,233,588
	2005.3	CANC	0	(4,564)	(820,397)	(55,568)	(147,894)	(127,840)	(221,994)	(1,378,256)
2006	2006.1	NB	0	165,375	50,088,804	2,274,923	10,805,534	7,388,322	5,344,184	76,067,143
	2006.2	PB	0	0	1,588,187	691,284	13,158,131	8,654,558	4,949,090	29,041,250
	2006.3	CANC	(360)	(22,654)	(5,971,375)	(344,635)	(1,344,373)	(910,845)	(638,372)	(9,232,614)
2007	2007.1	NB	0	122,846	37,421,301	2,313,052	9,764,587	4,134,912	4,964,086	58,720,784
	2007.2	PB	0	0	1,913,556	730,311	7,812,504	4,203,581	2,198,160	16,858,112
	2007.3	CANC	0	(197)	(41,723)	(3,949)	(12,126)	(5,809)	(6,174)	(69,978)
2008	2008.1	NB	0	73,028	11,481,243	959,225	3,285,269	1,087,727	459,691	17,346,183
	2008.2	PB	0	0	1,417,545	279,592	8,589,056	5,935,891	6,943,810	23,165,893
	2008.3	CANC	0	(279)	(41,611)	(5,730)	(15,558)	(9,538)	(5,694)	(78,410)
2009	2009.1	NB	0	13,240	4,872,891	232,013	1,767,622	330,056	1,614,157	8,829,981
	2009.2	PB	0	0	367,482	103,316	1,990,300	4,351,542	6,435,974	13,248,613
	2009.3	CANC	0	(197)	(25,919)	(3,277)	(9,020)	(5,372)	(9,534)	(53,318)
2010	2010.1	NB	0	17,874	3,762,947	349,292	958,679	501,590	464,740	6,055,123
	2010.2	PB	0	0	339,351	121,955	5,040,238	6,136,866	5,464,007	17,102,417
	2010.3	CANC	0	(326)	(44,112)	(6,106)	(16,978)	(12,318)	(10,884)	(90,724)

Table 2: Steel Distribution Mains: New Business (NB), Pressure Betterment (PB) & Contribution in Aid of New Construction (CANC)
2013 \$s

Year	Unique Row Identifier	Investment Type	1/2"	3/4"	1"	1 1/4"	2"	3"	4"	6"	8"	10"	12"	16"	20"	24"	26"	30"	Total
2001	2001.1	NB	0	0	6,990	0	30,840	0	1,562,465	2,256,317	1,376,249	0	1,222,025	624,219	0	0	0	0	7,079,105
	2001.2	PB	0	0	0	0	60,747	0	3,339,538	1,570,728	3,744,880	0	599,506	0	0	0	0	0	9,315,398
	2001.3	CANC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2002	2002.1	NB	0	0	0	0	125,355	411,676	397,358	3,923,433	7,557,217	0	106,420	0	0	0	0	0	12,521,459
	2002.2	PB	0	0	0	0	291	5,709	8,910	94,189	5,635,847	0	15,162	0	0	0	0	0	5,760,108
	2002.3	CANC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2003	2003.1	NB	0	0	0	0	390,738	240,701	611,063	2,176,635	6,013,913	5,238	47,104	1,664	0	0	0	0	9,487,057
	2003.2	PB	0	0	0	0	93,652	619,292	805,538	4,579,497	10,279,248	8,671	63,167	0	0	0	0	0	16,449,066
	2003.3	CANC	0	(1,149)	(788)	0	(181,455)	(187,537)	(264,344)	(598,911)	(1,806,511)	(529,754)	(523,081)	(310)	0	0	0	0	(4,093,841)
2004	2004.1	NB	0	0	0	245	439,231	70,703	367,121	2,700,396	5,407,416	0	0	0	0	0	0	0	8,985,113
	2004.2	PB	0	0	0	2,064	85,085	10,688	885,217	5,621,768	6,015,535	0	0	0	0	0	0	0	12,620,357
	2004.3	CANC	0	(63)	(641)	(297)	(403,973)	(141,208)	(848,488)	(1,462,794)	(3,344,442)	(794,503)	(177,028)	(99)	(722)	0	0	0	(7,174,258)
2005	2005.1	NB	0	0	0	0	327,362	76,887	1,337,800	1,691,366	691,335	0	4,143	0	0	0	0	0	4,128,894
	2005.2	PB	0	0	0	0	216,509	838	3,220,582	3,574,744	1,211,544	0	0	0	0	0	0	0	8,224,217
	2005.3	CANC	0	0	(85)	(13)	(78,408)	(33,038)	(214,179)	(224,008)	(346,565)	(462,533)	(51,327)	0	(199)	0	0	0	(1,410,356)
2006	2006.1	NB	0	0	14,249	0	539,275	111	481,700	230,547	12,972,724	0	0	0	0	0	0	0	14,238,605
	2006.2	PB	0	0	0	0	3,062	285	842,735	21,440	18,752,944	0	0	0	0	0	0	0	19,620,466
	2006.3	CANC	0	(32)	(2,368)	0	(35,396)	(9,050)	(32,782)	(22,932)	(580,295)	(7,333)	(130,966)	(546)	0	0	0	0	(821,702)
2007	2007.1	NB	0	0	0	0	17,049	0	24,376	14,046	0	801,910	0	0	0	0	0	0	857,381
	2007.2	PB	0	0	0	0	8,567	838	585,132	2,462,469	7,970,601	0	3,102,223	0	0	0	0	0	14,129,831
	2007.3	CANC	0	0	0	0	(1,250)	(965)	(2,252)	(10,158)	(21,177)	(3,689)	(10,292)	(44)	0	0	0	0	(49,827)
2008	2008.1	NB	0	0	0	0	131,964	0	138,717	275,027	0	0	0	0	0	0	0	0	545,708
	2008.2	PB	0	0	0	0	37,005	838	260,807	1,954,770	3,372,653	0	0	0	0	0	0	0	5,626,072
	2008.3	CANC	0	(20)	0	0	(7,841)	(6,635)	(10,169)	(62,840)	(127,511)	(15,733)	(1,547)	0	0	0	0	0	(232,297)
2009	2009.1	NB	0	0	0	0	100,130	94,000	887,009	429	3,989	0	0	0	0	0	0	0	1,085,557
	2009.2	PB	0	0	0	0	95,015	120,505	83,045	7,159,324	4,665,775	504,500	0	0	0	0	0	0	12,628,164
	2009.3	CANC	0	0	0	0	(10,778)	(3,300)	(20,027)	(62,445)	(77,050)	(5,406)	(3,542)	(10,264)	(9,999)	0	0	0	(202,811)
2010	2010.1	NB	0	0	0	0	51,917	0	3,442	536	0	0	0	0	0	0	0	0	55,895
	2010.2	PB	0	0	0	0	348,712	113,380	979,933	1,324,343	1,068,434	0	0	0	0	0	0	0	3,834,802
	2010.3	CANC	0	0	0	0	(32,726)	(5,766)	(58,152)	(95,866)	(111,137)	(169,907)	(46,365)	0	0	0	0	0	(519,919)

Table 3: High Pressure Distribution Mains: New Business (NB), Pressure Betterment (PB) & Contribution in Aid of New Construction (CANC)
2013 \$\$

Year	Unique Row Identifier	Investment Type	1/2"	3/4"	1"	1 1/4"	2"	3"	4"	6"	8"	10"	12"	16"	20"	24"	26"	30"	Total
2001	2001.1	NB	0	0	9,308	0	10,785	104,492	1,762,450	1,829,485	2,022,544	0	1,655,395	8,659,389	0	0	0	0	16,053,849
	2001.2	PB	0	0	0	0	21,244	0	3,766,977	1,273,590	5,503,500	0	812,110	0	0	0	0	0	11,377,421
	2001.3	CANC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2002	2002.1	NB	0	0	0	0	27,017	323,777	271,943	3,670,405	7,207,509	0	106,420	0	0	0	0	0	11,607,070
	2002.2	PB	0	0	0	0	63	4,490	6,098	88,115	5,375,049	0	15,162	0	0	0	0	0	5,488,977
	2002.3	CANC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2003	2003.1	NB	0	0	0	0	174,443	50,563	161,550	1,887,414	4,636,802	4,807	34,625	1,664	0	0	0	0	6,951,869
	2003.2	PB	0	0	0	0	41,810	130,092	212,965	3,970,995	7,925,429	7,957	46,432	0	0	0	0	0	12,335,681
	2003.3	CANC	0	0	(615)	0	(81,010)	(39,395)	(69,886)	(519,331)	(1,392,843)	(486,135)	(384,500)	(310)	0	0	0	0	(2,974,025)
2004	2004.1	NB	0	0	0	0	188,168	16,911	257,572	2,543,183	5,263,828	0	0	0	0	0	0	0	8,269,662
	2004.2	PB	0	0	0	0	36,451	2,556	621,066	5,294,478	5,855,799	0	0	0	0	0	0	0	11,810,351
	2004.3	CANC	0	(63)	(496)	0	(173,064)	(33,775)	(595,297)	(1,377,632)	(3,255,634)	(780,898)	(171,732)	0	0	0	0	0	(6,388,592)
2005	2005.1	NB	0	0	0	0	150,936	6,155	1,015,072	1,273,642	676,119	0	3,054	0	0	0	0	0	3,124,978
	2005.2	PB	0	0	0	0	99,825	67	2,443,655	2,691,875	1,184,877	0	0	0	0	0	0	0	6,420,300
	2005.3	CANC	0	0	0	0	(36,151)	(2,645)	(162,511)	(168,684)	(338,937)	(462,533)	(37,830)	0	0	0	0	0	(1,209,292)
2006	2006.1	NB	0	0	3,588	0	376,089	25	197,600	130,407	12,858,274	0	0	0	0	0	0	0	13,565,984
	2006.2	PB	0	0	0	0	2,135	65	345,702	12,128	18,587,499	0	0	0	0	0	0	0	18,947,529
	2006.3	CANC	0	(32)	(596)	0	(24,685)	(2,062)	(13,448)	(12,972)	(575,176)	(711)	(129,625)	(546)	0	0	0	0	(759,852)
2007	2007.1	NB	0	0	0	0	8,503	0	9,822	12,769	0	656,592	0	0	0	0	0	0	687,687
	2007.2	PB	0	0	0	0	4,273	27	235,782	2,238,644	6,532,446	0	2,959,234	0	0	0	0	0	11,970,405
	2007.3	CANC	0	0	0	0	(623)	(31)	(907)	(9,234)	(17,356)	(3,021)	(9,818)	0	0	0	0	0	(40,991)
2008	2008.1	NB	0	0	0	0	53,306	0	51,596	285,150	0	0	0	0	0	0	0	0	390,053
	2008.2	PB	0	0	0	0	14,948	15	97,008	2,026,725	3,391,151	0	0	0	0	0	0	0	5,529,847
	2008.3	CANC	0	0	0	0	(3,167)	(120)	(3,783)	(65,154)	(128,211)	(15,719)	(1,935)	0	0	0	0	0	(218,089)
2009	2009.1	NB	0	0	0	0	3,849	46,532	543,126	383	3,068	0	0	0	0	0	0	0	596,957
	2009.2	PB	0	0	0	0	3,652	59,653	50,850	6,385,957	3,588,350	23,633	0	0	0	0	0	0	10,112,095
	2009.3	CANC	0	0	0	0	(414)	(1,633)	(12,263)	(55,699)	(59,258)	(253)	(223)	(1,966)	0	0	0	0	(131,710)
2010	2010.1	NB	0	0	0	0	24,867	0	2,462	303	0	0	0	0	0	0	0	0	27,632
	2010.2	PB	0	0	0	0	167,027	96,896	700,754	749,516	768,838	0	0	0	0	0	0	0	2,483,031
	2010.3	CANC	0	0	0	0	(15,675)	(4,927)	(41,585)	(54,256)	(79,974)	(150,320)	(54,268)	0	0	0	0	0	(401,005)

**Table 4: Load-Growth-Related Total, High & Medium Pressure Distribution Mains Historical Investments
2013 \$s**

Year	Total Distribution Mains						High Pressure Distribution Mains						Medium Pressure Distribution Mains					
	New Business	Pressure Betterment	Contrib. New Constr.	ACT 378 Mtr. Reg Stn	Annual Total	Cumulative Total	New Business	Pressure Betterment	Contrib. New Constr.	ACT 378 Mtr. Reg Stn	Annual Total	Cumulative Total	New Business	Pressure Betterment	Contrib. New Constr.	ACT 378 Mtr. Reg Stn	Annual Total	Cumulative Total
2001	49,887,294	21,698,124	0	4,852,820	76,438,238	76,438,238	16,053,849	11,377,421	0	600,299	28,031,569	28,031,569	33,833,445	10,320,703	0	4,252,520	48,406,668	48,406,668
2002	64,961,874	7,801,005	0	3,193,676	75,956,554	152,394,792	11,607,070	5,488,977	0	407,268	17,503,315	45,534,885	53,354,804	2,312,028	0	2,786,407	58,453,239	106,859,907
2003	67,745,281	46,133,766	(5,391,692)	3,659,313	112,146,667	264,541,459	6,951,869	12,335,681	(2,974,025)	470,070	16,783,594	62,318,479	60,793,412	33,798,085	(2,417,667)	3,189,243	95,363,073	202,222,980
2004	69,828,268	26,892,199	(12,685,850)	3,976,249	88,010,866	352,552,325	8,269,662	11,810,351	(6,388,592)	510,130	14,201,551	76,520,030	61,558,606	15,081,848	(6,297,258)	3,466,119	73,809,315	276,032,295
2005	83,838,747	42,457,805	(2,788,612)	2,494,780	126,002,720	478,555,045	3,124,978	6,420,300	(1,209,292)	322,108	8,658,093	85,178,124	80,713,769	36,037,505	(1,579,320)	2,172,673	117,344,626	393,376,921
2006	90,305,749	48,661,716	(10,054,316)	5,984,627	134,897,776	613,452,821	13,565,984	18,947,529	(759,852)	769,324	32,522,984	117,701,108	76,739,765	29,714,187	(9,294,464)	5,215,303	102,374,791	495,751,713
2007	59,578,164	30,987,943	(119,805)	4,036,697	94,482,999	707,935,819	687,687	11,970,405	(40,991)	518,401	13,135,502	130,836,610	58,890,478	19,017,538	(78,814)	3,518,296	81,347,497	577,099,209
2008	17,891,891	28,791,965	(310,707)	4,617,456	50,990,605	758,926,425	390,053	5,529,847	(218,089)	596,846	6,298,656	137,135,267	17,501,838	23,262,119	(92,618)	4,020,610	44,691,949	621,791,158
2009	9,915,537	25,876,777	(256,129)	3,195,217	38,731,402	797,657,827	596,957	10,112,095	(131,710)	409,643	10,986,985	148,122,251	9,318,580	15,764,683	(124,419)	2,785,574	27,744,417	649,535,575
2010	6,111,018	20,937,219	(610,643)	4,152,942	30,590,535	828,248,362	27,632	2,483,031	(401,005)	538,033	2,647,691	150,769,943	6,083,386	18,454,188	(209,639)	3,614,909	27,942,844	677,478,419

Table 5: Plastic Distribution Mains Investment: New Business vs. Replacement Footage

Year	Investment Type	1/2"	1"	2"	3"	4"	6"	8"	Total
2001	New Bus.	5,228	13,142	1,844,330	106,530	235,695	108,006	33,428	
	Replacement	0	0	229,199	19,789	78,606	11,078	2,626	
2002	New Bus.	0	14,984	2,132,825	169,376	298,652	120,131	66,723	
	Replacement	63	5,028	300,356	57,723	79,335	18,997	4,258	
2003	New Bus.	36	13,243	2,533,236	151,906	348,137	113,283	52,078	
	Replacement	70	4,344	381,992	48,055	94,083	72,344	20,920	
2004	New Bus.	352	9,986	2,750,360	137,941	351,748	113,229	43,738	
	Replacement	137	2,496	248,668	38,197	68,780	66,444	20,350	
2005	New Bus.	0	10,539	3,228,164	102,864	386,760	177,704	212,673	
	Replacement	0	3,145	268,739	44,559	44,972	53,691	57,842	
2006	New Bus.	0	7,494	3,227,106	91,227	476,786	202,137	98,434	
	Replacement	128	1,667	206,011	32,100	52,559	20,238	6,491	
2007	New Bus.	0	5,567	2,410,968	92,756	430,855	113,127	91,433	
	Replacement	0	3,310	262,947	64,783	101,366	44,965	21,683	
2008	New Bus.	0	3,309	739,710	38,466	144,960	29,759	8,467	
	Replacement	0	1,414	262,622	47,449	111,704	67,808	30,746	
2009	New Bus.	0	600	313,949	9,304	77,995	9,030	29,731	
	Replacement	0	2,356	239,325	34,235	53,880	39,663	28,452	
2010	New Bus.	0	810	242,438	14,007	42,301	13,723	8,560	
	Replacement	0	1,538	208,683	24,862	76,610	39,773	23,261	
Total - Ft	NewBus	5,616	79,675	19,423,087	914,377	2,793,889	1,000,129	645,265	24,862,037
Total - Ft	Replacement	398	25,297	2,608,541	411,752	761,895	435,001	216,629	4,459,514
Total - \$	NewBus	140,797	1,758,168	301,471,097	22,801,769	63,318,687	36,555,793	35,032,739	461,079,050
Total - \$	Replacement	33,031	2,231,975	421,729,485	73,093,637	147,323,420	92,608,756	66,674,071	803,694,375

Table 6: Steel Distribution Mains Investment: New Business vs. Replacement Footage

Year	Investment Type	1/2"	3/4"	1"	1 1/4"	2"	3"	4"	6"	8"	10"	12"	16"	20"	24"	26"	30"	Total
2001	New Bus.	0	0	121	0	441	0	16,794	21,044	10,350	0	5,604	2,250	0	0	0	0	0
	Replacement	0	0	283	0	8,432	0	15,442	50,309	17,814	699	3,958	1,048	2,929	0	0	15	0
2002	New Bus.	0	0	0	0	1,794	5,054	4,271	36,593	56,832	0	488	0	0	0	0	0	0
	Replacement	0	30	79	0	14,529	1,531	7,775	10,297	53,444	3,225	22,756	80	0	0	0	0	0
2003	New Bus.	0	0	0	0	5,592	2,955	6,568	20,301	45,226	33	216	6	0	0	0	0	0
	Replacement	0	105	73	0	8,347	9,403	8,683	9,682	27,695	17,881	12,659	0	0	0	0	0	0
2004	New Bus.	0	0	0	4	6,286	868	3,946	25,186	40,665	0	0	0	0	0	0	0	0
	Replacement	0	3	31	9	9,902	3,986	21,590	13,015	29,758	14,015	2,273	1	6	0	0	0	0
2005	New Bus.	0	0	0	0	4,685	944	14,379	15,775	5,199	0	19	0	0	0	0	0	0
	Replacement	0	0	15	2	6,719	3,178	9,017	5,458	21,288	29,614	2,373	0	6	0	0	0	0
2006	New Bus.	0	0	246	0	7,718	1	5,178	2,150	97,558	0	0	0	0	0	0	0	0
	Replacement	0	13	731	0	4,387	2,654	3,242	2,961	6,723	1,104	14,351	47	0	0	0	0	0
2007	New Bus.	0	0	0	0	244	0	262	131	0	5,052	0	0	0	0	0	0	0
	Replacement	0	0	0	0	4,508	3,149	6,168	25,041	42,315	1,123	12,540	42	0	0	0	0	0
2008	New Bus.	0	0	0	0	1,889	0	1,491	2,565	0	0	0	0	0	0	0	0	0
	Replacement	0	20	0	0	4,597	4,708	4,827	31,312	55,426	5,729	410	0	0	0	0	0	0
2009	New Bus.	0	0	0	0	1,433	1,154	9,534	4	30	0	0	0	0	0	0	0	0
	Replacement	0	0	0	0	7,751	1,258	3,283	34,674	34,471	2,028	967	2,203	1,768	0	0	0	0
2010	New Bus.	0	0	0	0	743	0	37	5	0	0	0	0	0	0	0	0	0
	Replacement	0	0	0	0	4,491	791	6,948	9,987	9,340	11,962	2,376	0	0	0	0	0	0
Total - Ft	NewBus	0	0	367	4	30,825	10,976	62,460	123,755	255,860	5,085	6,327	2,256	0	0	0	0	497,913
Total - Ft	Replacement	0	171	1,212	11	73,663	30,658	86,975	192,735	298,274	87,380	74,663	3,421	4,709	0	0	15	853,889
Total - \$	NewBus	0	0	21,239	245	2,153,862	894,077	5,811,051	13,268,731	34,022,843	807,148	1,379,692	625,884	0	0	0	0	58,984,773
Total - \$	Replacement	0	21,151	148,962	1,772	14,342,413	6,425,073	19,521,227	44,091,886	69,521,499	22,960,005	21,834,665	1,280,329	2,147,820	0	0	10,524	202,307,326

Table 1: Load-Growth-Related Total, High & Medium Pressure Distribution Mains Forecasted Investments
2013 \$s

Year	Total Distribution Mains						High Pressure Distribution Mains						Medium Pressure Distribution Mains					
	New Business	Pressure Betterment	Contrib. New Constr	ACT 378 Mtr. Reg Stn	Annual Total	Cumulative Total	New Business	Pressure Betterment	Contrib. New Constr	ACT 378 Mtr. Reg Stn	Annual Total	Cumulative Total	New Business	Pressure Betterment	Contrib. New Constr	ACT 378 Mtr. Reg Stn	Annual Total	Cumulative Total
2011	17,873,795	19,654,964	(40,393)	4,438,088	41,926,454	870,174,816	2,105,953	6,315,729	(15,200)	568,203	8,974,686	159,744,628	15,767,842	13,339,235	(25,193)	3,869,885	32,951,769	710,430,188
2012	18,410,009	20,011,004	(40,393)	4,479,069	42,859,688	913,034,504	2,169,132	6,430,135	(15,200)	573,450	9,157,517	168,902,145	16,240,877	13,580,868	(25,193)	3,905,619	33,702,171	744,132,359
2013	18,962,309	20,367,043	(40,393)	4,520,049	43,809,008	956,843,512	2,234,206	6,544,541	(15,200)	578,697	9,342,244	178,244,389	16,728,103	13,822,502	(25,193)	3,941,353	34,466,764	778,599,123
2014	19,531,178	20,723,082	(40,393)	4,561,030	44,774,897	1,001,618,410	2,301,232	6,658,947	(15,200)	583,943	9,528,923	187,773,312	17,229,947	14,064,135	(25,193)	3,977,086	35,245,975	813,845,098
2015	20,117,114	21,079,122	(40,393)	4,602,010	45,757,852	1,047,376,262	2,370,269	6,773,354	(15,200)	589,190	9,717,613	197,490,924	17,746,845	14,305,768	(25,193)	4,012,820	36,040,240	849,885,338

Using **LINEST** array function (no **MACRO** needed), it estimates **Regression Coefficients for MP Investement**.
Note: LINEST function returns an output array. To get all statistics, for a bivariate regression with an Intercept term, we need to highlight a 5 by 2 area. Over this highlighted area, we need to enter the **LINEST** array funtion and then press **CTRL+Shift+Return** keys simultaneously.

Medium Pressure Regression Output Using LINEST Funtion:

	<u>B</u>	<u>C</u>
8	1,888.28	45,190.58
9	131.56	37,889.41
10	0.94	66,639.72
11	206.00	13.00
12	9.15E+11	5.77E+10

where,

- B8 contains the X-coefficient,
- C8 contains the coefficient of the intercept term,
- B9 contains the estimated standard error of the X-coefficient,
- C9 contains the estimated standard error of the Intercept term,
- B10 contains the R-Squared value,
- C10 contains the standard error for the Y estimate,
- B11 contains the F-statistic,
- C11 contains the degrees of freedom,
- B12 contains the regression sum of squares, and
- C12 contains the residual sum of squares.

Using **LINEST** array function (no **MACRO** needed), it estimates Regression Coefficients for MP Investement.

Note: **LINEST** function returns an output array. To get all statistics, for a bivariate regression with an Intercept term, we need to highlight a 5 by 2 area. Over this highlighted area, we need to enter the **LINEST** array function and then press **CTRL+Shift+Return** keys simultaneously.

Do not put brackets around the array formula

High Pressure Regression Output Using LINEST Funtion:

	B	C
8	19.58	29,676.70
9	1.18	6,483.43
10	0.96	11,774.51
11	276.82	13.00
12	38,378,610,686	1,802,308,811

where,

- B8 contains the X-coefficient,
- C8 contains the coefficient of the intercept term,
- B9 contains the estimated standard error of the X-coefficient,
- C9 contains the estimated standard error of the Intercept term,
- B10 contains the R-Squared value,
- C10 contains the standard error for the Y estimate,
- B11 contains the F-statistic,
- C11 contains the degrees of freedom,
- B12 contains the regression sum of squares, and
- C12 contains the residual sum of squares.

This sheet calculates O&M costs for medium (MP) and high pressure (HP) distribution mains for the following cost components:

- a) Operation and Maintenance costs (O&M),
- b) Administrative and General costs (A&G),
- c) General Plant costs (GP), and
- d) Materials and Supplies costs (M&S).

	<u>2013 \$s</u>	<u>Split Factor</u>
Total Medium Pressure System Inventory Investment	677,478,419	81.797%
Total High Pressure System Inventory Investment	150,769,943	18.203%

		<u>Total</u>	<u>Medium Pressure</u>	<u>High Pressure</u>
O&M Costs	2013 \$000's	37,110.47		
	Split Factor		81.80%	18.20%
	Cost Driver		4,373.91 Peak Day MMcfd	88,334.83 Peak Month MMcf
	O&M LRM C		6.9400 \$/Mcf d	0.0765 \$/Mcf
A&G Costs	A&G Factor		48.69% of O&M	48.69% of O&M
	A&G LRM C		3.3793 \$/Mcf d	0.0372 \$/Mcf
GP Costs	GP Factor		24.46% of O&M	24.46% of O&M
	GP LRM C		1.6977 \$/Mcf d	0.0187 \$/Mcf
M&S Costs	2013 \$000's	1,332.16		
	Split Factor		81.80%	18.20%
	Demand Driver		4,373.91 Peak Day MMcfd	88,334.83 Peak Month MMcf
	M&S LRM C		0.2491 \$/Mcf d	0.0027 \$/Mcf

TABLE 7
Regression of Medium Pressure (MP) Distribution

SOUTHERN CALIFORNIA GAS COMPANY
2013 TCAP Application

Cumulative Investment on Peak Day Cumulative Demand

Regression Inputs:

<u>Year</u>	Dependent Variable: MP Distribution Cumulative Investment <u>(2013 M\$)</u> (1)	Independent Variable: Peak Day Cumulative Demand <u>(MMcfd)</u> (2)
2001	48,407	33
2002	106,860	71
2003	202,223	106
2004	276,032	141
2005	393,377	174
2006	495,752	216
2007	577,099	251
2008	621,791	256
2009	649,536	269
2010	677,478	289
2011	710,430	345
2012	744,132	373
2013	778,599	405
2014	813,845	440
2015	849,885	478

Regression Outputs

Number of Observations:	15
Degrees of Freedom:	13
R-Squared:	0.9406
F-Statistic:	206.00

<u>Regressor</u>	<u>Estimated Coefficient</u>	<u>Estimated Standard Error of Coefficient</u>	<u>t-Statistic</u>
Intercept	45,190.58	37,889.41	1.19
MP Distribution Cum. Investment	1,888.28	131.56	14.35

TABLE 8

Medium Pressure Distribution Long Run Marginal Cost Estimate (2013\$s)

SOUTHERN CALIFORNIA GAS COMPANY 2013 TCAP Application

(1) Capital-related LRM:			
(2)	Estimated Medium Pressure Regression Coefficient =	1888.2790	
(3)	RECC Factor Applied to Annualize Capital-related LRM	8.88%	
(4)	Annualized Capital-related LRMC (\$/Mcf) =		167.7205
(5) O&M-related LRM:			
(6)	Total Distribution O&M costs (2013 \$000's) =	37,110.47	
(7)	Medium Pressure Distribution's Share =	81.80%	
(8)	Medium Pressure Peak Day Demand (MMcfd) =	4,373.91	
(9)	O&M-related LRMC (\$/Mcf) =		6.9400
(10) A&G-related LRM:			
(11)	A&G Factor, as a Percent of O&M-related LRM =	48.69%	
(12)	A&G-related LRMC (\$/Mcf) =		3.3793
(13) General Plant (GP)-related LRM:			
(14)	GP Factor, as a Percent of O&M-related LRM =	24.46%	
(15)	GP-related LRMC (\$/Mcf) =		1.6977
(16) Material & Supply (M&S)-related LRM:			
(17)	Total Distribution M&S costs (2013 \$000's) =	1,332.16	
(18)	Medium Pressure Distribution's Share =	81.80%	
(19)	Medium Pressure Peak Day Demand (MMcfd) =	4,373.91	
(20)	M&S-related LRMC (\$/Mcf) =		0.2491
(21)	Medium Pressure Distribution LRMC (\$/Mcf) =		179.9866

TABLE 9
Regression of High Pressure (HP) Distribution
SOUTHERN CALIFORNIA GAS COMPANY
2013 TCAP Application

Cumulative Investment on Coincident Peak Month Cumulative Demand

Regression Inputs:

<u>Year</u>	Dependent Variable: HP Distribution Cumulative Investment <u>(2013 M\$)</u> (1)	Independent Variable: Coincident Peak Month Cumulative Demand <u>(MMcf)</u> (2)
2001	28,032	573
2002	45,535	1,270
2003	62,318	1,939
2004	76,520	2,558
2005	85,178	3,153
2006	117,701	4,109
2007	130,837	4,663
2008	137,135	4,732
2009	148,122	4,922
2010	150,770	5,252
2011	159,745	6,900
2012	168,902	7,376
2013	178,244	7,914
2014	187,773	8,505
2015	197,491	9,129

Regression Outputs

Number of Observations:	15
Degrees of Freedom:	13
R-Squared:	0.9551
F-Statistic:	276.82

<u>Regressor</u>	<u>Estimated Coefficient</u>	<u>Estimated Standard Error of Coefficient</u>	<u>t-Statistic</u>
Intercept	29,676.70	6,483.43	4.58
HP Distribution Cum. Investment	19.58	1.18	16.64

TABLE 10

High Pressure Distribution Long Run Marginal Cost Estimate (2013 \$s)

SOUTHERN CALIFORNIA GAS COMPANY 2013 TCAP Application

(1)	Capital-related LRM:		
(2)	Estimated High Pressure Regression Coefficient =	19.5785	
(3)	RECC Factor Applied to Annualize Capital-related LRM	8.87%	
(4)	Annualized Capital-related LRM (\$/Mcf) =		1.7358
(5)	O&M-related LRM:		
(6)	Total Distribution O&M costs (2013 \$000's) =	37,110.47	
(7)	High Pressure Distribution's Share =	18.20%	
(8)	High Pressure Coincident Peak Month Demand (MMcf)	88,334.83	
(9)	O&M-related LRM (\$/Mcf) =		0.0765
(10)	A&G-related LRM:		
(11)	A&G Factor, as a Percent of O&M-related LRM =	48.69%	
(12)	A&G-related LRM (\$/Mcf) =		0.0372
(13)	General Plant (GP)-related LRM:		
(14)	GP Factor, as a Percent of O&M-related LRM =	24.46%	
(15)	GP-related LRM (\$/Mcf) =		0.0187
(16)	Material & Supply (M&S)-related LRM:		
(17)	Total Distribution M&S costs (2013 \$000's) =	1,332.16	
(18)	High Pressure Distribution's Share =	18.20%	
(19)	High Pressure Coincident Peak Month Demand (MMcf)	88,334.83	
(20)	M&S-related LRM (\$/Mcf) =		0.0027
(21)	High Pressure Distribution LRM (\$/Mcf) =		1.8709

2013TCAP SCG COST ALLOCATION

2/22/2013 Update Filing

		Sources
Output from SCG LRMC Distribution Model		
MPD Marginal Cost \$/mmcf	\$179.99	MPD MC
HPD Marginal Cost \$/mmcf/month	\$1.87	HPD MC
Input from O&M Loader Model:		
Marginal A&G/Payroll Taxes Loading Factor as a % of O&M expenses	48.69%	SCG LRMC O&M Loaders
General Plant Loading Factor as a % of O&M expenses	24.46%	SCG LRMC O&M Loaders
Demand Related Distribution M&S Costs \$000/yr	\$1,332,157	SCG LRMC O&M Loaders
2010-13 Factor: Capital	1.0840	SCG LRMC O&M Loaders
2010-13 Factor: O&M	1.0817	SCG LRMC O&M Loaders

**SoCalGas
2013 TCAP**

2/22/2013 Update Filing

**Section 3
O&M Loaders Model for LRMC Studies**

**Workpapers to the Prepared Written Testimony of
Gary Lenart**

SCG 2013BCAP
LRMC O&M Loader Model
[2/22/2013 Update Filing](#)

Output

	<u>Output</u>	<u>Source</u>
Marginal A&G/Payroll Taxes Loading Factor as a % of O&M expenses	48.69%	A&G
General Plant Loading Factor as a % of O&M expenses	24.46%	Gen Plant
Customer Related Distribution M&S Costs 2013 \$000/yr	\$1,142,307	M&S
Demand Related Distribution M&S Costs 2013 \$000/yr	\$1,332,157	M&S
2010-13 Factor: Capital	1.0840	Escalation Factors
2010-13 Factor: O&M	1.0817	Escalation Factors

Input from EC Model:

Transmission A&G	\$13.430	EC Study of Ms. Fung
Storage A&G	\$8.365	EC Study of Ms. Fung
Total A&G	\$379.915	EC Study of Ms. Fung
Transmission General Plant Return	\$0.555	EC Study of Ms. Fung
Transmission Gen Plant Dep	\$2.639	EC Study of Ms. Fung
Transmission Gen Plant Taxes	\$0.235	EC Study of Ms. Fung
Storage General Plant Return	\$0.346	EC Study of Ms. Fung
Storage Gen Plant Dep	\$1.644	EC Study of Ms. Fung
Storage Gen Plant Taxes	\$0.147	EC Study of Ms. Fung
Total Gen Plant Return	\$15.704	EC Study of Ms. Fung
Total Gen Plant Dep	\$74.661	EC Study of Ms. Fung
Total Gen Plant Taxes	\$6.659	EC Study of Ms. Fung

Input from EC Model:

PBR Exclusion Items

814 UndStr Op-Supervision & Engineering	\$6.710	EC Study of Ms. Fung
854&855 Tran Op-Gas From Comp Sta Fuel (PBR Excluded)	\$6.077	EC Study of Ms. Fung
859 Tran Op-Other Expenses (PBR excl Haz Waste)	\$0.000	EC Study of Ms. Fung
880 Dist Op-Other Expenses (PBR Ex Haz Waste)	\$10.685	EC Study of Ms. Fung
901 Cus Acct-Supervision (PBR Ex CARE) + Payroll Taxes	\$5.793	EC Study of Ms. Fung
903 Cus Acct-Customer Records & Collections Exp	\$0.000	EC Study of Ms. Fung
904 Cus Acct-Uncollectible Accounts	\$8.974	EC Study of Ms. Fung
908 Cus Svc-Cust Assist Exp (PBR Ex DAP, DSM &Self-Gen)	\$131.242	EC Study of Ms. Fung
910 Cus Svc-Misc CSI Exp (PBR Ex DSM & NGV)	\$0.278	EC Study of Ms. Fung
927 AdmGen Op-Franchise Requirements	\$48.741	EC Study of Ms. Fung
	\$218.500	

2013 TCAP A&G LOADER ANALYSIS
O&M Costs Used in A&G Loader
2/22/2013 Update Filing

	2010 Recorded Costs (\$)	source:
1. Total O&M	2,933,869,659	ck FERC Form 2 line no 271, page 325
2. Total Production Expenses (incl Purchased Gas cost)	1,703,704,066	ck FERC Form 2 line no 97, page 320
3. Total Transmission Expenses	1/ 77,025,285	FERC Form 2 line no 201, page 323
4. Total Storage Expenses	1/ 54,441,568	ck FERC Form 2 line no 125, page 321
5. Total A&G Expenses	425,895,493	ck FERC Form 2 line no 270, page 325
6. Exclusions	2/ \$ 155,316,394	ck Herb Emmrich's Embedded Cost study
7. Gas Used for Transmission Compressor Stations	5,677,557	ck FERC Form 2 Acct 854, line no 184, page 323
8. Subtotal of Costs removed from O&M	2,422,060,363	
9. Net O&M		511,809,296

Notes:

- 1/ Transmission and Storage expenses removed from A&G loader, because SoCalGas proposes to separately scale transmission and storage costs to embedded transmission and storage cost.
- 2/ Exclusions EE, LIEE, CARE admin, Self Generation, Hazardous Substance, & Uncollectible costs that are not part of authorized base margin.

Rows (1) through (7) contain data from FERC Form 2 for 2010, pages 320-325
 Row (8) = Sum [Row (2) : Row (7)]
 Row (9) = Row (1) - Row (8)

Updated: 6/6/11 to reflect 2010 FERC Form 2 data.

TABLE 2
A&G and Payroll Taxes Loading Factor
with Comparison to 1999 BCAP

SOUTHERN CALIFORNIA GAS COMPANY
2013 TCAP Application

2/22/2013 Update Filing

DESCRIPTION	1999 BCAP (\$)	2009 BCAP (\$)	2013 BCAP (\$)	source	
1. Total Marginal A&G Costs	\$117,673,007	\$132,472,837	\$209,854,196	A&G 1 tab	
2. Total Payroll Taxes	25,756,057	36,938,785	39,357,690	FERC Form 2, p. 263a (SS + Fed&CA Unempl taxes)	
3. Marginal A&G and Payroll Taxes	143,429,064	169,411,622	249,211,886	Row 1 + Row 2	change from 99BCAP 74%
4. Net O&M Costs	419,589,764	555,858,327	511,809,296	O&M Costs tab	22%
5. Marginal A&G/Payroll Taxes Loading Factor	34.18%	30.48%	48.69%	Row 3 / Row 4	42%
6. Transmission and Storage adjustment			5.74%	EC study	filed 2/08 23.56%

Notes:

Data Source: FERC Form 2

- The Total Marginal A&G Costs and Total Payroll Taxes shown on Lines 1 & 2 have been reduced by 5.74% to reflect the allocation of common A&G costs to the transmission and storage functions.
- The Net Marginal O&M Costs shown on Line 4 do not include O&M costs associated with the transmission and storage functions.

2013 TCAP A&G LOADER ANALYSIS
 Marginal vs Non-marginal Summary
 2/22/2013 Update Filing

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Account Title	PUC Account	Marginal Cost	Marginal Portion of Total	Non-Marginal Cost	Non-Marginal Portion of Total	Total Cost	2010 Recorded Total Cost Per FERC Form 2
		(\$)	(%)	(\$)	(%)	(\$)	(\$)
1. A&G Salaries	920	\$1,306	0.00%	\$21,616,320	5.73%	\$21,617,627	\$21,617,627
2. Office Supplies and Exp	921	892,693	0.24%	7,315,403	1.94%	8,208,097	\$8,208,097
3. Admin Expenses Transferred	922	0	0.00%	(4,882,107)	-1.29%	(4,882,107)	-\$4,882,107
4. Outside Services Employed	923	0	0.00%	90,940,969	24.11%	90,940,969	\$90,940,969
5. Property Insurance	924	2,983,798	0.79%	0	0.00%	2,983,798	\$2,983,798
6. Injuries and Damages	925	39,726,039	10.53%	0	0.00%	39,726,039	\$39,726,039
7. Employee Pensions & Benefits	926	149,635,350	39.67%	0	0.00%	149,635,350	\$149,635,350
8. Regulatory Commission Expenses	928	0	0.00%	5,924,176	1.57%	5,924,176	\$5,924,176
9. Misc General Expenses	930	124,556	0.03%	12,121,772	3.21%	12,246,328	\$12,246,328
10. Rents	931	2,380,597	0.63%	21,491,882	5.70%	23,872,479	\$23,872,479
11. Maintenance of Gen Plant	935	26,881,413	7.13%	0	0.00%	26,881,413	\$26,881,413
12. Total		<u>222,625,753</u>	59.03%	<u>154,528,415</u>	40.97%	<u>377,154,168</u>	<u>377,154,169</u>
Franchise Requirements	927						48,741,324

Updated: Reflects 2010 FERC Form 2 data.

Total Administrative and General Expense (should be the same as value on O&M Costs tab)
 Check (should equal zero)

425,895,493
 0

Color Key: **Input Data**, **Source Data from other tab**, calculation
 Col (1) & Col (2) account description
 Col (3) contains data from 'Marginal - Nonmarginal' tab
 Col (4) = Col (3) / Col (7)
 Col (5) contains data from 'Marginal - Nonmarginal' tab
 Col (6) = Col (5) / Col (7)
 Col (7) = Col (3) + Col (5)
 Col (8) data from FERC Form 2 for 2010

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
FERC Cost Center Description	PUC Account Number	FERC Account No.	Marginal Y/N	2010 Recorded Costs Direct (\$)	Reassigned (\$)	Total (\$)	Marginal (\$)	Non-Marginal (\$)
1. BLDG OPER OTH THAN CLEANING SV	920	920.601	Y	\$ 482	\$ 90	\$ 572	\$ 572	\$ -
2. PROCUREMENT & LOGISTICS CONSULT	920	920.630	Y	-	-	-	-	-
3. REAL ESTATE	920	920.604	Y	-	-	-	-	-
4. BUILDING CLEANING SERVICES	920	920.600	Y	-	734	734	734	-
5. RETURN TO WORK EXAMINATIONS	920	920.212	Y	-	-	-	-	-
6. SUPPLIER MANAGEMENT	920	920.632	Y	-	-	-	-	-
ACCOUNT 920 MARGINAL TOTAL				482	825	1,306	1,306	-
7. ADMINISTRATIVE & GENERAL SALARIES	920	920.000	N	13,882,692	218,332	14,101,024	-	14,101,024
8. HUMAN RESOURCES OPER SALARIES	920	920.200	N	3,569,573	700,184	4,269,757	-	4,269,757
9. REGIONAL AFFAIRS	920	920.570	N	2,362,675	578,576	2,941,251	-	2,941,251
10. END USER SUPPORT COMM	920	920.372	N	-	-	-	-	-
11. COMPUTER END USER SUPPORT	920	920.371	N	-	-	-	-	-
12. REGION MANAGER SALARIES	920	920.047	N	-	-	-	-	-
13. PUBLIC AFFAIRS ADMINISTRATION	920	920.570	N	89,952	19,960	109,912	-	109,912
14. OPERATE MAINFRAME COMPUTERS GEN	920	920.360	N	-	-	-	-	-
15. STANDARD & CODES	920	920.561	N	141,965	51,753	193,718	-	193,718
16. INFORMATION SYS GENL SUPERVISION	920	920.301	N	(0)	660	660	-	660
17. INFORMATION SYS ADMIN SUPPORT	920	920.302	N	-	-	-	-	-
18. INFORMATION SYSTEMS	920	920.300	N	-	-	-	-	-
19. GOVERNMENTAL AFFAIRS SALARIES	920	920.560	N	-	-	-	-	-
20. Reassignment Only	920	920.010	N	-	-	-	-	-
ACCOUNT 920 NON-MARGINAL TOTAL				20,046,856	1,569,464	21,616,320	-	21,616,320
21. BLDG OPER OTH THAN CLEANING SV	921	921.601	Y	865,282	(54,432)	810,849	810,849	-
22. BUILDING CLEANING SERVICES	921	921.600	Y	39,031	2,491	41,522	41,522	-
23. PROCUREMENT & LOGISTICS CONSULT	921	921.630	Y	38,156	(1,102)	37,054	37,054	-
24. REAL ESTATE	921	921.604	Y	2,839	429	3,268	3,268	-
ACCOUNT 921 MARGINAL TOTAL				945,308	(52,614)	892,693	892,693	-
27. ADMINISTRATIVE & GENERAL SALARIES	921	921.000	N	6,797,716	(374,004)	6,423,712	-	6,423,712
28. HUMAN RESOURCES OPER SALARIES	921	921.200	N	16,722	(2,552)	14,170	-	14,170
29. COMPUTER END USER SUPPORT	921	921.371	N	5,042	(137)	4,905	-	4,905
30. REGIONAL AFFAIRS	921	921.571	N	642,692	(25,537)	617,156	-	617,156
31. PUBLIC AFFAIRS ADMINISTRATION	921	921.563	N	21,947	(1,870)	20,077	-	20,077
32. REGION MANAGER SALARIES	921	921.047	N	51	(2)	48	-	48
33. STANDARD & CODES	921	921.561	N	20,499	(824)	19,675	-	19,675
34. INFORMATION SYS GENL SUPERVISION	921	921.301	N	91,480	106,967	198,447	-	198,447
35. FERC B/S ERRORS	921	921.999	N	-	17,214	17,214	-	17,214
ACCOUNT 921 NON-MARGINAL TOTAL				7,596,149	(280,745)	7,315,403	-	7,315,403
36. ADMINISTRATIVE EXPENSES TRANSFERRED-CRED	922	922.000	N	-	(4,882,107)	(4,882,107)	-	(4,882,107)
ACCOUNT 922 NON-MARGINAL TOTAL				-	(4,882,107)	(4,882,107)	-	(4,882,107)
37. OUTSIDE SERVICES EMPLOYED	923	923.010	N	-	-	-	-	-
ACCOUNT 923 NON-MARGINAL TOTAL	923	923.000	N	473,967	90,467,002	90,940,969	-	90,940,969
38. INSURANCE EXPENSE	924	924.000	Y	1,095,124	1,888,674	2,983,798	2,983,798	-
ACCOUNT 924 MARGINAL TOTAL				1,095,124	1,888,674	2,983,798	2,983,798	-
39. INJURIES AND DAMAGES	925	925.000	Y	41,299,893	(1,573,854)	39,726,039	39,726,039	-
ACCOUNT 925 MARGINAL TOTAL				41,299,893	(1,573,854)	39,726,039	39,726,039	-

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
FERC Cost Center Description	PUC Account Number	FERC Account No.	Marginal Y/N	2010 Recorded Costs Direct	Reassigned	Total (5) + (6)	Marginal	Non-Marginal
40. EMPLOYEE PENSIONS AND BENEFITS	926	926.000	Y	(7,687,277)	(529,182)	(8,216,459)	(8,216,459)	-
41. TRANSPORTATION PROGRAM	926	926.239	Y	266,864	(266,864)	-	-	-
42. EMPLOYEE RECOGNITION PROGRAM	926	926.200	Y	6,112,387	(6,112,387)	-	-	-
43.	926	926.207	Y	3,711	(3,711)	-	-	-
44. DISABILITY BENEFIT EXPENSE	926	926.300	Y	177,830,088	(19,978,279)	157,851,809	157,851,809	-
ACCOUNT 926 MARGINAL TOTAL				176,525,773	(26,890,423)	149,635,350	149,635,350	-
45. BLDG SUPPORT CANTEEN GASCO TWR	926	926.202	N	-	-	-	-	-
ACCOUNT 926 NON-MARGINAL TOTAL				-	-	-	-	-
46. INTERVENOR COMPENSATION	928	928.500	N	182,122	-	182,122	-	182,122
47. REGULATORY COMMISSION EXPENSES	928	928.000	N	2,349,896	3,392,157	5,742,054	-	5,742,054
ACCOUNT 928 NON-MARGINAL TOTAL				2,532,019	3,392,157	5,924,176	-	5,924,176
48. DIVISION STATIONERY EXPENSE	930	930.625	Y	24,069	467	24,537	24,537	-
49. DUPLICATING EQUIP DIST & TRANS	930	930.600	Y	98,474	1,545	100,020	100,020	-
ACCOUNT 930 MARGINAL TOTAL				122,544	2,012	124,556	124,556	-
50. MISCELLANEOUS GENERAL EXPENSES	930	930.200	N	9,752,951	2,367,518	12,120,469	-	12,120,469
51. MISC DIV OFFICE EXPENSES	930	930.046	N	1,284	19	1,303	-	1,303
ACCOUNT 930 NON-MARGINAL TOTAL				9,754,234	2,367,537	12,121,772	-	12,121,772
52. RENTS DISTRIB AND TRANSM REGIONS	931	931.602	Y	2,484,023	(103,425)	2,380,597	2,380,597	-
ACCOUNT 931 MARGINAL TOTAL				2,484,023	(103,425)	2,380,597	2,380,597	-
53. GAS COMPANY TOWER RENTS	931	931.600	N	25,407,197	(4,280,301)	21,126,896	-	21,126,896
54. RENTS GENERAL	931	931.000	N	-	364,986	364,986	-	364,986
ACCOUNT 931 NON-MARGINAL TOTAL				25,407,197	(3,915,315)	21,491,882	-	21,491,882
55. BLDG YARD & EQUIP MAINTENANCE	935	935.600	Y	15,693,093	745,240	16,438,333	16,438,333	-
56. MAINTENANCE FURN OFFICE EQUIP	935	935.601	Y	156,195	(6,529)	149,666	149,666	-
57. MEAS SHOP EQUIP	935	935.675	Y	442,843	(2,222)	440,621	440,621	-
58. GARAGE/FUEL ISLAND MAINTENANCE	935	935.606	Y	585,849	234,452	820,301	820,301	-
59. COMPR MTC CNG VEHICLES	935	935.605	Y	118,374	(138,872)	(20,498)	(20,498)	-
60. TESTRACK MAINTENANCE	935	935.680	Y	40,146	2,531	42,677	42,677	-
61. MAINTENANCE OF GENERAL PLANT	935	935.000	Y	1,235,884	7,774,429	9,010,313	9,010,313	-
ACCOUNT 935 MARGINAL TOTAL				18,272,384	8,609,030	26,881,413	26,881,413	-
TOTAL A&G				306,555,951	70,598,217	377,154,168	222,625,753	154,528,415

Updated: Reflects 2010 FERC Form 2 data.

2013 BCAP A&G LOADER ANALYSIS

2010 RECORDED COSTS

2/22/2013 Update Filing

FERC Account	LABOR	NON_LABOR	TOTAL DIRECT	REASSIGNMENTS	TOTAL COSTS
920.000 Total	\$13,882,692	\$0	\$13,882,692	\$ 218,332	\$14,101,024
920.010 Total	\$ 0	\$ 0	\$0	\$ 0	\$ 0
920.047 Total	\$0	\$0	\$0	\$ 0	\$0
920.200 Total	\$3,569,573	\$0	\$3,569,573	\$ 700,184	\$4,269,757
920.212 Total	\$0	\$0	\$0	\$ 0	\$ 0
920.300 Total	\$ 0	\$ 0	\$0	\$ 0	\$ 0
920.301 Total	\$0	\$0	\$0	\$ 660	\$ 660
920.302 Total	\$0	\$0	\$0	\$ 0	\$ 0
920.360 Total	\$0	\$0	\$0	\$ 0	\$0
920.371 Total	\$0	\$0	\$0	\$ 0	\$0
920.372 Total	\$0	\$0	\$0	\$ 0	\$ 0
920.560 Total	\$0	\$0	\$0	\$ 0	\$ 0
920.561 Total	\$141,965	\$0	\$141,965	\$ 51,753	\$193,718
920.563 Total	\$89,952	\$0	\$89,952	\$ 19,960	\$109,912
920.570 Total	\$2,362,675	\$0	\$2,362,675	\$ 578,576	\$2,941,251
920.600 Total	\$0	\$0	\$0	\$ 734	\$734
920.601 Total	\$482	\$0	\$482	\$ 90	\$572
920.604 Total	\$0	\$0	\$0	\$ 0	\$0
920.630 Total	\$0	\$0	\$0	\$ 0	\$0
920.632 Total	\$0	\$0	\$0	\$ 0	\$ 0
	\$ 20,047,338	\$ 0	\$ 20,047,338	\$ 1,570,289	\$ 21,617,627
921.000 Total	\$0	\$6,797,716	\$6,797,716	-\$ 374,004	\$6,423,712
921.047 Total	\$ 0	\$ 51	\$51	-\$ 2	\$ 48
921.200 Total	\$ 0	\$ 16,722	\$16,722	-\$ 2,552	\$ 14,170
921.301 Total	\$ 0	\$ 91,480	\$91,480	\$ 106,967	\$ 198,447
921.371 Total	\$ 0	\$ 5,042	\$5,042	-\$ 137	\$ 4,905
921.561 Total	\$ 0	\$ 20,499	\$20,499	-\$ 824	\$ 19,675
921.563 Total	\$ 0	\$ 21,947	\$21,947	-\$ 1,870	\$ 20,077
921.570 Total	\$ 0	\$ 642,692	\$642,692	-\$ 25,537	\$ 617,156
921.600 Total	\$ 0	\$ 39,031	\$39,031	\$ 2,491	\$ 41,522
921.601 Total	\$ 0	\$ 865,282	\$865,282	-\$ 54,432	\$ 810,849
921.604 Total	\$ 0	\$ 2,839	\$2,839	\$ 429	\$ 3,268
921.630 Total	0	38156.1	\$38,156	-\$ 1,102	\$ 37,054
921.999 Total	\$ 0	\$ 0	\$0	\$ 17,214	\$ 17,214
	\$ 0	\$ 8,541,456	\$ 8,541,456	-\$ 333,360	\$ 8,208,097
922.000 Total	\$0	\$0	\$0	-\$ 4,882,107	-\$4,882,107
923.000 Total	\$525,909	-\$51,942	\$473,967	\$ 90,467,002	\$90,940,969
923.010 Total	\$ 0	\$ 0	\$0	\$ 0	\$ 0
	\$ 525,909	-\$ 51,942	\$ 473,967	\$ 90,467,002	\$ 90,940,969
924.000 Total	\$0	\$1,095,124	\$1,095,124	\$ 1,888,674	\$2,983,798

2013 BCAP A&G LOADER ANALYSIS

2010 RECORDED COSTS

2/22/2013 Update Filing

FERC Account	LABOR	NON_LABOR	TOTAL DIRECT	REASSIGNMENTS	TOTAL COSTS
925.000 Total	\$2,361,464	\$38,938,429	\$41,299,893	-\$ 1,573,854	\$39,726,039
926.000 Total	\$472,218	-\$8,159,495	-\$7,687,277	-\$ 529,182	-\$8,216,459
926.200 Total	\$0	\$6,112,387	\$6,112,387	-\$ 6,112,387	\$0
926.202 Total	\$0	\$0	\$0	\$ 0	\$0
926.207 Total	\$1,883	\$1,827	\$3,711	-\$ 3,711	\$0
926.239 Total	\$0	\$266,864	\$266,864	-\$ 266,864	\$0
926.300 Total	\$15,597	\$177,814,491	\$177,830,088	-\$ 19,978,279	\$157,851,809
	\$ 489,698	\$ 176,036,075	\$ 176,525,773	-\$ 26,890,423	\$ 149,635,350
928.000 Total	\$2,187,515	\$162,381	\$2,349,896	\$ 3,392,157	\$5,742,054
928.500 Total	\$0	\$182,122	\$182,122	\$ 0	\$182,122
	\$ 2,187,515	\$ 344,504	\$ 2,532,019	\$ 3,392,157	\$ 5,924,176
930.046 Total	\$ 0	\$ 1,284	\$1,284	\$ 19	\$ 1,303
930.200 Total	\$ 1,466,015	\$ 8,286,936	\$9,752,951	\$ 2,367,518	\$ 12,120,469
930.600 Total		\$ 98,474	\$98,474	\$ 1,545	\$ 100,020
930.625 Total		\$24,069	\$24,069	\$ 467	\$24,537
	\$ 1,466,015	\$ 8,410,763	\$ 9,876,778	\$ 2,369,550	\$ 12,246,328
931.000 Total		\$0	\$0	\$ 364,986	\$364,986
931.600 Total	\$0	\$25,407,197	\$25,407,197	-\$ 4,280,301	\$21,126,896
931.602 Total		\$2,484,023	\$2,484,023	-\$ 103,425	\$2,380,597
	\$ 0	\$ 27,891,220	\$ 27,891,220	-\$ 4,018,741	\$ 23,872,479
935.000 Total	\$105,055	\$1,130,829	\$1,235,884	\$ 7,774,429	\$9,010,313
935.600 Total	\$3,927,554	\$11,765,539	\$15,693,093	\$ 745,240	\$16,438,333
935.601 Total		\$156,195	\$156,195	-\$ 6,529	\$149,666
935.605 Total	\$60,954	\$57,420	\$118,374	-\$ 138,872	-\$20,498
935.606 Total	\$299,541	\$286,308	\$585,849	\$ 234,452	\$820,301
935.675 Total	\$195,420	\$247,423	\$442,843	-\$ 2,222	\$440,621
935.680 Total	\$40,146	\$0	\$40,146	\$ 2,531	\$42,677
	\$ 4,628,670	\$ 13,643,714	\$ 18,272,384	\$ 8,609,030	\$ 26,881,413
				\$ 70,598,217	\$ 377,154,168

Updated: Reflects 2010 FERC Form 2 data.

Weighted Average RECC Calculation
2/22/2013 Update Filing

Account No.	General Plant Accounts	Gas Plant In Service Year End 2010 Balance (\$)	Percent	RECC	Weighted Average RECC
1. 390	Structures and Improvements	125,206,396	16.44%	12.965%	2.131%
2. 391	Office Furniture and Equipment		0.00%		0.000%
3. 391.1	Office Furniture and Equipment	15,826,533	2.08%	12.631%	0.262%
4. 391.2	Computer Equipment	113,919,609	14.96%	26.100%	3.904%
5. 391.3	Software Programs - 3yr ASL	12,880,325	1.69%	14.831%	0.251%
6. 391.4	Software Programs - 6yr ASL	105,280,390	13.82%	11.445%	1.582%
7. 391.5	Software Programs - 10yr ASL	117,219,185	15.39%	9.844%	1.515%
8. 391.55	Software Programs - 15yr ASL	74,366,810	9.76%	39.611%	3.867%
9. 391.6	Software Programs - 20yr ASL	65,396,512	8.59%	21.832%	1.874%
10. 392	Transportation Equipment	718,537	0.09%	11.994%	0.011%
11. 393	Stores Equipment	93,665	0.01%	11.994%	0.001%
12. 394	Tools, Shop, and Garage Equipment	39,949,199	5.24%	11.081%	0.581%
13. 394.2	Shop and Garage Equipment	11,279,449	1.48%	10.344%	0.153%
14. 395	Laboratory Equipment	6,259,443	0.82%	10.905%	0.090%
15. 396	Power Operated Equipment	36,226	0.00%	11.994%	0.001%
16. 397	Communication Equipment	69,526,006	9.13%	12.298%	1.123%
17. 398	Miscellaneous Equipment	3,716,886	0.49%	11.994%	0.059%
18.		<hr/> 761,675,171	100.00%		<hr/> 17.405%

Updated: 6/06/11. Reflects 2010 FERC Form 2 data. RECC factors updated.

Gas Plant updated to 2010 FERC Form 2 data, detailed acct data pulled from B/W

RECC factors updated to 2010 values (note: reflects updates to property taxes and salvage values)

General Plant Loading Factor
2/22/2013 Update Filing

	<u>2013 TCAP</u>		
1. Total General Plant	\$719,315,357	ck	FERC Form 2, page 209, line 121
2. Weighted Average RECC for General Plant	17.41%		RECC tab
3. Annualized General Plant Costs	\$125,199,323	1 x 2	
4. Net Recorded O&M Costs	\$511,809,296		O&M Expenses tab
5. General Plant Loading Factor	24.46%	3 / 4	
6. Transmission and Storage adjustment	5.74%	ck	EC study

Notes:

1/ Total General Plant on Line 1 reflects removal of GP allocated to Transmission and Storage functions in EC study.

Updated: 6/06/2011. Reflects 2010 FERC Form 2 data for total General Plant.

2010 FERC Form 2 data
M&S Annual Costs By Function
2/22/2013 Update Filing

I. Direct Plant Investment (To Allocate M&S Cost to Functions)

Line #	Function	Plant	Percent		
1	Storage	\$654,628,879	7.69%	ck	FERC form 2, p. 207, line 57
2	Transmission - Total	\$1,385,092,831	16.27%	ck	FERC form 2, p. 209, line 92
3	Distribution - Total	\$6,473,956,302	76.04%		from Allocation of Investment tab
4	Customer Related	\$2,985,252,950	35.06%		from Allocation of Investment tab
5	Load Related	\$3,488,703,352	40.98%		from Allocation of Investment tab
6	General Plant	\$0	0.00%		
7	Total	\$8,513,678,012	100.00%		(\$347,786,736) check

II. Total M&S To Be Functionalized

8	Total Material and Supplies	\$23,167,758		ck	2010 FERC Year end M&S value from Selected Financial D (from Net Plant Investment Page 1 of 2, Line 13)
---	-----------------------------	--------------	--	----	--

III. Functional Allocation of M&S

9	Storage	\$1,781,402	7.69%
10	Transmission - Total	\$3,769,170	16.27%
11	Distribution - Total	\$17,617,186	76.04%
12	Customer Related	\$8,123,589	35.06%
13	Load Related	\$9,493,598	40.98%
14	General Plant	\$0	0.00%
15	Total	\$23,167,758	100.00%

16	IV. M&S Annual Cost factor	12.97%	ck	from Annual Cost Factor tab
----	----------------------------	--------	----	-----------------------------

V. M&S Annual Costs

	2010 \$		2013 \$	
17	Storage	\$231,079	7.69%	\$250,494
18	Transmission - Total	\$488,927	16.27%	\$530,006
19	Distribution - Total	\$2,285,255	76.04%	\$2,477,259
20	Customer Related	\$1,053,771	35.06%	\$1,142,307
21	Load Related	\$1,231,485	40.98%	\$1,334,952
22	General Plant	\$0	0.00%	\$0
23	Total	\$3,005,261	100.00%	\$3,257,758

@ O&M Escalation 2010 to 2013

1.082 \$1,332,157

*escalated by capital factor: 2010\$ to 2013\$

1.084 ck from WP#1

Updated to FERC Form 2 data for 2010

2013 TCAP M&S Annual Costs By Function
 Allocation of 2010 Distribution Plant Investment
 2/22/2013 Update Filing

Customer Related

	\$	Percent	
1.	380 Services	2,041,427,828	ck
2.	381 Meters	422,894,870	ck
3.	382 Meter Installations	267,750,061	ck
4.	383 House Regulators	116,818,382	ck
5.	386 Other Property	0	
6.	Sub-Total	2,848,891,141	46.11%
	388 ARO - Customer Related	136,361,809	
	Customer Related Total	2,985,252,950	

Load Related

	\$	Percent	
7.	374 Land & Land Rights	30,901,116	ck
8.	375 Structures & Improvements	217,698,483	ck
9.	376 Mains	2,988,203,197	ck
10.	378 Measurement & Reg Stations	67,292,940	ck
11.	387 Other Equipment	25,248,959	ck
12.	Sub-Total	3,329,344,695	53.89%
	388 ARO - Load Related	159,358,657	
	Load Related Total	3,488,703,352	

13.	Total Distribution Plant	6,473,956,302	100.000%
-----	---------------------------------	----------------------	-----------------

source: 2010 FERC Form 2, p. 208-9

6,473,956,302 p. 209, line 109
 0 check

2013 BCAP M&S Annual Costs By Function
 Development of Material & Supplies Annual Cost Factor
 2/22/2013 Update Filing

	<u>Capital Structure</u>	<u>Cost</u>	<u>Weighted Cost</u>	<u>Tax Factor</u>	<u>After Tax Wt. Cost</u>
1. Long Term Debt	45.61%	6.96%	3.17%	1.0000	3.17%
2. Preferred Stock	6.39%	4.83%	0.31%	1.7806	0.55%
3. Common Equity	48.00%	10.82%	5.19%	1.7806	9.25%
4.			8.68%		12.97%

sources:

Capital Structure and Cost from MICAM filing, AL 3199-A on Nov 20, 2002.

Cost of Capital from Economic Assumptions model.

SOUTHERN CALIFORNIA GAS

2010 Economic Assumptions Update LEVELIZED ANNUAL CAPITAL COST AND RECC FACTORS

utility **social**

Auth ROR ==> 8.68%

Fed Tax Rate ==> 35.00%

State Tax Rate ==> 8.84% Valorum Rate ==>

1.224%

FERC Account	Account Name
--------------	--------------

Book Life	Fed Tax Life	State Tax Life	Percent Salvage	Normlzd Federal Taxes ?	Normlzd State Taxes ?	Depreciation Method		LACC Components (in percent)					RECC Factors	PVCC Factors
						Federal Tax	State Tax	Book Depr	Return on Capital	Income Taxes	Property Taxes	Total LACC		

GAS UNDERGROUND STORAGE

G-352	Wells	26	15	22	-60%	TRUE	FALSE	db/sl	150%	db/sl	200%	6.15	4.06	1.48	0.53	12.22	10.50	124.66
G-353	Lines	40	15	22	-55%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.88	4.65	1.87	0.70	11.09	9.15	123.25
G-354	Compressor Station Equipment	40	15	22	-5%	TRUE	FALSE	db/sl	150%	db/sl	200%	2.63	5.40	2.17	0.87	11.06	9.13	122.93
G-356	Purification Equipment	38	15	22	-25%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.29	5.05	2.03	0.79	11.15	9.24	123.08

GAS TRANSMISSION PLANT

G-365.1	Land	0	0	0	0%	FALSE	FALSE	none	0	none	0	0.00	8.68	3.82	1.22	13.72	n/a	158.15
G-365.2	Land Rights	40	40	40	0%	FALSE	FALSE	sl	0	sl	0	2.50	6.39	2.82	0.89	12.59	10.39	139.93
G-366	Structures & Improvements	47	39	45	-20%	TRUE	FALSE	sl	0%	db/sl	0%	2.55	6.23	2.75	0.86	12.40	10.11	140.01
G-367	Mains	55	15	22	-20%	TRUE	FALSE	db/sl	150%	db/sl	200%	2.18	5.51	2.19	0.90	10.79	8.71	123.06
G-368	Compressor Station Equipment	41	15	22	-15%	TRUE	FALSE	db/sl	150%	db/sl	200%	2.80	5.27	2.12	0.84	11.04	9.09	123.00
G-369	Measuring & Regulating Equipment	39	15	22	-20%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.08	5.15	2.07	0.81	11.11	9.19	123.03
G-371	Other Equipment	20	15	22	-5%	TRUE	FALSE	db/sl	150%	db/sl	200%	5.25	5.03	2.13	0.72	13.13	11.57	122.65

GAS DISTRIBUTION PLANT

G-374.1	Land	0	0	0	0%	FALSE	FALSE	none	0	db/sl	0	0.00	8.68	3.82	1.22	13.72	n/a	158.15
G-374.2	Land Rights	0	40	40	0%	FALSE	FALSE	none	0	db/sl	0	0.00	8.68	2.15	1.22	12.05	n/a	138.86
G-375	Structures & Improvements	29	39	45	5%	TRUE	FALSE	sl	0%	db/sl	150%	3.28	6.27	2.84	0.84	13.21	11.23	138.66
G-376	Mains	53	15	35	-60%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.02	4.99	2.12	0.79	10.91	8.83	124.19
G-378	Measuring & Regulating Equipment	31	15	35	-100%	TRUE	FALSE	db/sl	150%	db/sl	200%	6.45	3.55	1.39	0.44	11.82	9.98	125.94
G-380	Services	48	15	35	-85%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.85	4.51	1.94	0.68	10.98	8.94	124.26
G-381	Meters	31	15	35	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.23	5.29	2.29	0.83	11.63	9.82	123.88
G-382	Meter Installations	43	15	35	-20%	TRUE	FALSE	db/sl	150%	db/sl	200%	2.79	5.25	2.21	0.84	11.09	9.10	124.21
G-383	House Regulators	31	15	35	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.23	5.29	2.29	0.83	11.63	9.82	123.88
G-387	Other Equipment	11	15	35	5%	TRUE	FALSE	db/sl	150%	db/sl	200%	8.64	5.37	2.68	0.68	17.37	16.10	120.01

GAS GENERAL PLANT

G-390	Structures & Improvements	20	39	45	-20%	TRUE	FALSE	sl	0%	db/sl	0%	6.00	5.59	2.47	0.65	14.71	12.96	137.44
G-391.1	Office Furniture & equipment	14	7	10	0%	TRUE	FALSE	db/sl	200%	db/sl	200%	7.14	4.31	1.74	0.68	13.88	12.63	110.07
G-391.2	Computer Equipment	5	5	6	0%	TRUE	FALSE	db/sl	200%	db/sl	200%	20.00	4.47	1.97	0.53	26.97	26.10	105.80
G-393	Stores Equipment	20	20	35	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	5.00	5.42	2.44	0.74	13.61	11.99	127.15
G-394.1	Shop & Garage Equipment	29	20	35	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	3.45	5.51	2.40	0.82	12.17	10.34	127.72
G-394.3	Large Portable Tools	24	20	35	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	4.17	5.44	2.41	0.78	12.80	11.08	127.48
G-395	Laboratory Equipment	25	20	35	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	4.00	5.45	2.41	0.79	12.65	10.90	127.54
G-397	Communications Equipment	15	7	10	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	6.67	4.45	1.79	0.69	13.59	12.30	111.70
G-398	Miscellaneous Equipment	20	20	35	0%	TRUE	FALSE	db/sl	150%	db/sl	200%	5.00	5.42	2.44	0.74	13.61	11.99	127.15

Capital and O&M Escalators					
2010 \$s	to	2013 \$s	2010-13 Factor: Capital		1.0840
2009 \$s	to	2013 \$s	2009-13 Factor: Capital		
2010 \$s	to	2013 \$s	2010-13 Factor: O&M		1.0817
2009 \$s	to	2013 \$s	2009-13 Factor: O&M		1.1076

factor used to escalate most capital forecasts (e.g., dist capital)
 factor used to escalate M&S\$ (WP#4)
 factor used to escalate transmission and storage capital costs (V

factor used to escalate 2010 FERC Form 2 data to 2013\$

Split Factors	Labor	Nonlabor
2010	22.43%	77.57%

	\$millions	2010	Source:
Total Salaries & Wages		658	December 31, 2010 FERC Form 2, page 355, line 77
Total Gas O&M Exp.		2,934	December 31, 2010 FERC Form 2, page 325, line 271

Cost Escalators, for use in SoCalGas 2013 BCAP calculations (escalators are from 6-21-11 calculations based on Global Insight "1st Quarter 2010" utility cost forecast)

	O&M Non-labor Annual % change	O&M Non-labor Multiplier to convert to constant 2006 dollars	O&M Labor Annual % change	O&M Labor Multiplier to convert to constant 2006 dollars	Capital Annual % change	Capital Multiplier to convert to constant 2010 dollars
1997		1.4550		1.4585		1.8301
1998	1.77%	1.4297	4.30%	1.3984	1.25%	1.8074
1999	2.20%	1.3990	2.55%	1.3636	2.34%	1.7661
2000	3.57%	1.3508	3.29%	1.3202	3.63%	1.7043
2001	2.79%	1.3142	3.64%	1.2737	1.36%	1.6814
2002	1.97%	1.2889	1.60%	1.2537	2.05%	1.6476
2003	3.12%	1.2499	3.38%	1.2127	3.32%	1.5947
2004	3.75%	1.2048	3.40%	1.1728	15.17%	1.3846
2005	4.50%	1.1529	4.24%	1.1251	17.33%	1.1801
2006	3.82%	1.1104	2.64%	1.0962	4.09%	1.1337
2007	3.48%	1.0731	1.70%	1.0779	-1.90%	1.1557
2008	5.11%	1.0209	3.48%	1.0416	12.63%	1.0261
2009	-0.43%	1.0253	2.23%	1.0189	-1.09%	1.0374
2010	2.53%	1.0000	1.89%	1.0000	3.74%	1.0000
2011	3.01%	0.9707	1.82%	0.9821	3.93%	0.9622
2012	2.63%	0.9458	2.61%	0.9571	1.36%	0.9493
2013	2.68%	0.9212	2.27%	0.9359	2.90%	0.9225
2014	2.61%	0.8977	2.38%	0.9142	4.25%	0.8848
2015	2.92%	0.8722	2.55%	0.8914	2.91%	0.8598
2016	2.58%	0.8503	2.72%	0.8678	1.26%	0.8492
2017	2.41%	0.8303	2.64%	0.8455	1.37%	0.8377
2018	2.40%	0.8109	2.51%	0.8248	2.13%	0.8202
2019	2.35%	0.7923	2.44%	0.8052	2.51%	0.8001
2020	2.29%	0.7745	2.38%	0.7864	2.64%	0.7795
2021	2.33%	0.7568	2.41%	0.7680	2.40%	0.7613

Source: data in cells x35:z61 are from Global Insight
 inputs are from Global Insight's 1st Quarter 2011 utility cost forecast -- for use in 2013 TCAP work.

Capital=JUG@PCF; O&M Labor=SoCalGas O&M Labor index from GRC; O&M Non-Labor=SoCalGas O&M GOMPI modified to exclude labor component (in original GRC GOMPI, O&M labor is weighted 33.94%, O&M non-labor 66.06%)

Updated: Reflect more current GI data and 2010 FERC Form 2 data, per notes above.

Values from EC study
2/22/2013 Update Filing

<u>Transmission and Storage</u>			
EC study allocation of A&G and Gen Plant to transmission and storage function			
A&G	<u>Transmission</u>	<u>Storage</u>	<u>Total</u>
	13.4	8.4	379.9
	3.54%	2.20%	% A&G allocated to Tran/Storage
		4.34% Old	
Gen Plant	<u>Transmission</u>	<u>Storage</u>	<u>Total</u>
	0.555	0.346	15.704 Gen Plant Return
	2.639	1.644	74.661 Gen Plant Depreciation
	0.235	0.147	6.659 Gen Plant Taxes
	3.430	2.136	97.024
	3.54%	2.20%	% Gen Plant allocated to Tran/Storage
		4.66% Old	

<u>Exclusions/ Adjustments</u>	used in WP# 2 & 3	O&M excl in LRM study
	Exclusion Items	
Storage		
814 UndStr Op-Supervision & Engineering	6.710	\$ 6,710,170
Transmission:		
854&855 Tran Op-Gas From Comp Sta Fuel (PBR Excluded)	6.077	
859 Tran Op-Other Expenses (PBR excl Haz Waste)	0.000	\$ -
	6.077	
Distribution		
880 Dist Op-Other Expenses (PBR Ex Haz Waste)	10.685	\$ 10,684,910
Customer Accounts		
901 Cus Acct-Supervision (PBR Ex CARE) + Payroll Taxes	5.793	\$ 5,792,824
903 Cus Acct-Customer Records & Collections Exp	0.000	\$ -
904 Cus Acct-Uncollectible Accounts	8.974	
	14.767	
Customer Services & Information		
908 Cus Svc-Cust Assist Exp (PBR Ex DAP, DSM & Self-Gen)	131.242	\$ 131,241,643
910 Cus Svc-Misc CSI Exp (PBR Ex DSM & NGV)	0.278	\$ 277,513
	131.519	
A&G		
927 AdmGen Op-Franchise Requirements	48.741	
		\$ 147,996,890

**SoCalGas
2013 TCAP**

2/22/2013 Update Filing

**Section 4
Cost Allocation Model**

**Workpapers to the Prepared Written Testimony of
Gary Lenart**

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	Residential	CCI	G-AC	G-GEN	NGV	Total Core
1 <u>Customer Costs Rental Method</u>						
2 Per Unit LRM, \$/Cust/Year	\$216.19	\$758.25	\$4,404.06	\$5,098.75	\$4,562.15	\$236.82
3 Number of Customers	5,548,854	210,450	9	700	296	5,760,309
4 Customer Costs Rental Method \$000	\$1,404,076	\$1,199,620	\$38	\$3,567	\$1,350	\$1,364,150
5						
6 <u>Medium Pressure Distribution costs</u>						
7 Medium Pressure Distribution costs (MPD)						
8 Per Unit LRM, \$/mcf	\$179.99	\$179.99	\$179.99	\$179.99	\$179.99	\$179.99
9 MPD Peak Day Demand (mmcf)	2,423	560	0	2	15	3,000
10 Medium Pressure Distribution Costs \$000	\$558,247	\$436,191	\$100,777	\$12	\$319	\$540,007
11						
12 <u>High Pressure Distribution costs</u>						
13 High Pressure Distribution costs (HPD)						
14 Per Unit LRM, \$/mcf	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87
15 HPD Peak Month Demand (mmcf)	40,250	11,666	4	67	1,001	52,988
16 High Pressure Distribution Costs \$000	\$120,119	\$75,305	\$21,827	\$7	\$126	\$99,137
17						
18 <u>Customer Service & Information costs</u>						
19 Customer Service & Information Allocator	58.0%	29.5%	0.0%	0.0%	5.8%	93.4%
20 Customer Service & Information \$000	\$51,969	\$30,156	\$15,341	\$0	\$4	\$48,527
21						
22 Unscaled LRM Based Costs \$000	\$2,134,410	\$1,741,272	\$297,519	\$57	\$4,016	\$2,051,822
23						
24 <u>Calculation of Scalar:</u>						
Authorized Revenue Requirement in Rates Base Margin \$000	\$1,767,899					
Adjustment to Storage for Honor Rancho \$000	\$9,260					
25 Target Base Margin \$000	\$1,777,159					
26 Less items not allocated per LRM method:						
27 Transmission Cost per EC \$000	\$166,472					
28 Storage Costs per EC \$000	\$89,571					
29 Uncollectibles	\$4,230					
30 NGV Compression Adder Costs per EC \$000	\$1,150					
31 Target Scaled Costs \$000	\$1,515,736					
32 Unscaled LRM Based Costs \$000	\$2,134,410					
33 amount to scale \$000	(\$618,674)					
34 Scalar (as a % of unscaled)	71%	71%	71%	71%	71%	71%
35						
36 Scaled Customer Costs \$000 LRM/Rental Method	\$851,901	\$113,320	\$27	\$2,533	\$959	\$968,741
37 Scaled Medium Pressure Distribution Costs \$000 LRM	\$309,758	\$71,566	\$9	\$226	\$1,923	\$383,482
38 Scaled High Pressure Distribution Costs \$000 LRM	\$53,477	\$15,500	\$5	\$89	\$1,330	\$70,402
39 Scaled Customer Service & Information Costs \$000 LRM	\$21,415	\$10,894	\$0	\$3	\$2,149	\$34,461
40 Scaled LRM Based Costs \$000	\$1,515,736	\$1,236,552	\$211,281	\$41	\$2,852	\$1,457,086

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	NCCI	EG Tier 1	EG Tier 2	EOR	Total Retail NonCore	Long Beach	SDG&E	South West Gas
1 <u>Customer Costs Rental Method</u>								
2 Per Unit LRM, \$/Cust/Year	\$33,737.82	\$32,635.00	\$118,467.35	\$49,696.43	\$40,215.01	\$612,659.58	\$1,346,910.45	\$509,981.28
3 Number of Customers	682	142	66	32	922	1	1	1
4 Customer Costs Rental Method \$000	\$22,998	\$4,649	\$7,860	\$1,590	\$37,097	\$613	\$1,347	\$510
5								
6 <u>Medium Pressure Distribution costs</u>								
7 Medium Pressure Distribution costs (MPD)								
8 Per Unit LRM, \$/mcf	\$179.99	\$179.99	\$179.99	\$179.99	\$179.99	\$179.99	\$179.99	\$179.99
9 MPD Peak Day Demand (mmcf)	88	6	7	0	104	0	0	0
10 Medium Pressure Distribution Costs \$000	\$15,871	\$1,101	\$1,262	\$5	\$18,239	\$0	\$0	\$0
11								
12 <u>High Pressure Distribution costs</u>								
13 High Pressure Distribution costs (HPD)								
14 Per Unit LRM, \$/mcf	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87
15 HPD Peak Month Demand (mmcf)	6,700	302	3,544	668	11,478	0	0	0
16 High Pressure Distribution Costs \$000	\$12,536	\$565	\$6,631	\$1,250	\$20,981	\$0	\$0	\$0
17								
18 <u>Customer Service & Information costs</u>								
19 Customer Service & Information Allocator	0.6%	0.2%	2.4%	1.6%	4.7%	0.4%	0.4%	0.5%
20 Customer Service & Information \$000	\$299	\$85	\$1,264	\$820	\$2,467	\$227	\$215	\$249
21								
22 Unscaled LRM Based Costs \$000	\$51,703	\$6,400	\$17,016	\$3,665	\$78,785	\$840	\$1,562	\$759
23								
24 <u>Calculation of Scalar:</u>								
Authorized Revenue Requirement in Rates Base Margin \$0								
Adjustment to Storage for Honor Rancho \$000								
25 Target Base Margin \$000								
26 Less items not allocated per LRM method:								
27 Transmission Cost per EC \$000								
28 Storage Costs per EC \$000								
29 Uncollectibles								
30 NGV Compression Adder Costs per EC \$000								
31 Target Scaled Costs \$000								
32 Unscaled LRM Based Costs \$000								
33 amount to scale \$000								
34 Scalar (as a % of unscaled)	71%	71%	71%	71%	71%	71%	71%	71%
35								
36 Scaled Customer Costs \$000 LRM/Rental Method	\$16,332	\$3,302	\$5,582	\$1,129	\$26,344	\$435	\$956	\$362
37 Scaled Medium Pressure Distribution Costs \$000 LRM	\$11,271	\$782	\$896	\$4	\$12,952	\$0	\$0	\$0
38 Scaled High Pressure Distribution Costs \$000 LRM	\$8,902	\$401	\$4,709	\$887	\$14,900	\$0	\$0	\$0
39 Scaled Customer Service & Information Costs \$000 LRM	\$212	\$60	\$897	\$583	\$1,752	\$161	\$153	\$177
40 Scaled LRM Based Costs \$000	\$36,717	\$4,545	\$12,084	\$2,603	\$55,949	\$596	\$1,109	\$539

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	Vernon	Total Whole sale	DGN	UBS	Total Noncore	SYSTEM TOTAL	Sources
1 <u>Customer Costs Rental Method</u>							
2 Per Unit LRM, \$/Cust/Year	\$279,066.41	\$687,154.43	\$80,125.13	\$0.00	\$43,048.17	\$243.71	SCG LRM Customer Co
3 Number of Customers	1	4	1	0	927	5,761,236	New Allocation Factors
4 Customer Costs Rental Method \$000	\$279	\$2,749	\$80	\$0	\$39,926	\$1,404,076	
5							
6 <u>Medium Pressure Distribution costs</u>							
7 Medium Pressure Distribution costs (MPD)							
8 Per Unit LRM, \$/mcf	\$179.99	\$179.99	\$179.99	\$179.99	\$179.99	\$179.99	SCG LRM Distribution C
9 MPD Peak Day Demand (mmcf)	0	0	0	0	104	3,174	New Allocation Factors
10 Medium Pressure Distribution Costs \$000	\$0	\$0	\$0	\$0	\$18,239	\$558,247	
11							
12 <u>High Pressure Distribution costs</u>							
13 High Pressure Distribution costs (HPD)							
14 Per Unit LRM, \$/mcf	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	\$1.87	SCG LRM Distribution C
15 HPD Peak Month Demand (mmcf)	0	0	0	0	11,478	65,711	New Allocation Factors
16 High Pressure Distribution Costs \$000	\$0	\$0	\$0	\$0	\$20,981	\$120,119	
17							
18 <u>Customer Service & Information costs</u>							
19 Customer Service & Information Allocator	0.4%	1.7%	0.2%	0.0%	6.6%	100.0%	
20 Customer Service & Information \$000	\$184	\$874	\$100	\$0	\$3,442	\$51,969	
21							
22 Unscaled LRM Based Costs \$000	\$463	\$3,623	\$180	\$0	\$82,588	\$2,134,410	
23							
24 <u>Calculation of Scalar:</u>							
Authorized Revenue Requirement in Rates Base Margin \$0							
Adjustment to Storage for Honor Rancho \$000							
25 Target Base Margin \$000							
26 Less items not allocated per LRM method:							
27 Transmission Cost per EC \$000							
28 Storage Costs per EC \$000							
29 Uncollectibles							
30 NGV Compression Adder Costs per EC \$000							
31 Target Scaled Costs \$000							
32 Unscaled LRM Based Costs \$000							
33 amount to scale \$000							
34 Scalar (as a % of unscaled)	71%	71%	71%	71%	71%	71%	
35							
36 Scaled Customer Costs \$000 LRM/Rental Method	\$198	\$1,952	\$57	\$0	\$28,353	\$997,094	
37 Scaled Medium Pressure Distribution Costs \$000 LRM	\$0	\$0	\$0	\$0	\$12,952	\$396,435	
38 Scaled High Pressure Distribution Costs \$000 LRM	\$0	\$0	\$0	\$0	\$14,900	\$85,301	
39 Scaled Customer Service & Information Costs \$000 LRM	\$130	\$621	\$71	\$0	\$2,444	\$36,905	
40 Scaled LRM Based Costs \$000	\$329	\$2,573	\$128	\$0	\$58,649	\$1,515,736	

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	NCCI-Total	NCCI-D	NCCI-T	EOR-Total	EOR-D	EOR-T	Total EG
1 <u>Customer Costs Rental Method</u>							
2 Per Unit LRM, \$/Cust/Year	st						
3 Number of Customers	682	647	35	32	17	15	209
4 Customer Costs Rental Method \$000	\$22,998	\$21,816	\$1,181	\$1,590.29	\$844.84	\$745.45	12508.92828
5							
6 <u>Medium Pressure Distribution costs</u>							
7 Medium Pressure Distribution costs (MPD)							
8 Per Unit LRM, \$/mcf	ost						
9 MPD Peak Day Demand (mmcf)							
10 Medium Pressure Distribution Costs \$000	\$15,871	\$15,871	0	\$5	\$5	0	\$2,363
11							
12 <u>High Pressure Distribution costs</u>							
13 High Pressure Distribution costs (HPD)							
14 Per Unit LRM, \$/mcf	ost						
15 HPD Peak Month Demand (mmcf)							
16 High Pressure Distribution Costs \$000	\$12,536	\$12,536	0	\$1,250	\$1,250	0	\$7,196
17							
18 <u>Customer Service & Information costs</u>							
19 Customer Service & Information Allocator	1,510,295	870,957	639,338	149,770	80,514	69,256	3,072,923
20 Customer Service & Information \$000	\$298.60	\$172.20	\$126.40	\$820.44	\$441.05	\$379.38	\$1,348.30
21							
22 Unscaled LRM Based Costs \$000	\$51,703	\$50,395	\$1,308	\$3,665	\$2,541	\$1,125	\$23,416
23							
24 <u>Calculation of Scalar:</u>							
Authorized Revenue Requirement in Rates Base Margin \$0							
Adjustment to Storage for Honor Rancho \$000							
25 Target Base Margin \$000							
26 Less items not allocated per LRM method:							
27 Transmission Cost per EC \$000							
28 Storage Costs per EC \$000							
29 Uncollectibles							
30 NGV Compression Adder Costs per EC \$000							
31 Target Scaled Costs \$000							
32 Unscaled LRM Based Costs \$000							
33 amount to scale \$000							
34 Scalar (as a % of unscaled)	71%	71%	71%	71%	71%	71%	71%
35							
36 Scaled Customer Costs \$000 LRM/Rental Method	\$16,332	\$15,493	\$839	\$1,129	\$600	\$529	\$8,883
37 Scaled Medium Pressure Distribution Costs \$000 LRM	\$11,271	\$11,271	\$0	\$4	\$4	\$0	\$1,678
38 Scaled High Pressure Distribution Costs \$000 LRM	\$8,902	\$8,902	\$0	\$887	\$887	\$0	\$5,110
39 Scaled Customer Service & Information Costs \$000 LRM	\$212	\$122	\$90	\$583	\$313	\$269	\$957
40 Scaled LRM Based Costs \$000	\$36,717	\$35,788	\$929	\$2,603	\$1,804	\$799	\$16,629

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	EG Tier 1	EG Tier 1 Dist	EG Tier 1 Trans	EG Tier 2	EG Tier 2 Dist	EG Tier 2 Trans	
							D/T Split Allocator
1	<u>Customer Costs Rental Method</u>						
2	Per Unit LRM, \$/Cust/Year						
3	Number of Customers						
4	142.4588033	125	17	66	31	35	
5	Customer Costs Rental Method \$000						
6	4649.142479	\$4,085.56	\$563.58	7859.785805	\$3,681.55	\$4,178.24	# of customers
7	<u>Medium Pressure Distribution costs</u>						
8	Medium Pressure Distribution costs (MPD)						
9	Per Unit LRM, \$/mcf						
10	MPD Peak Day Demand (mmcf)						
11	Medium Pressure Distribution Costs \$000						
12	\$1,101	\$1,101	0	\$1,262	\$1,262	0	100% D
13	<u>High Pressure Distribution costs</u>						
14	High Pressure Distribution costs (HPD)						
15	Per Unit LRM, \$/mcf						
16	HPD Peak Month Demand (mmcf)						
17	High Pressure Distribution Costs \$000						
18	\$565	\$565	0	\$6,631	\$6,631	0	100% D
19	<u>Customer Service & Information costs</u>						
20	Customer Service & Information Allocator						
21	61,537	42,203	19,334	3,011,386	473,851	2,537,535	
22	Customer Service & Information \$000						
23	\$84.77	\$58.14	\$26.63	\$1,264	\$199	\$1,065	AYTP
24	<u>Unscaled LRM Based Costs \$000</u>						
25	\$6,400	\$5,810	\$590	\$17,016	\$11,773	\$5,243	
26	<u>Calculation of Scalar:</u>						
27	Authorized Revenue Requirement in Rates Base Margin \$C						
28	Adjustment to Storage for Honor Rancho \$000						
29	Target Base Margin \$000						
30	Less items not allocated per LRM method:						
31	Transmission Cost per EC \$000						
32	Storage Costs per EC \$000						
33	Uncollectibles						
34	NGV Compression Adder Costs per EC \$000						
35	Target Scaled Costs \$000						
36	Unscaled LRM Based Costs \$000						
37	amount to scale \$000						
38	Scalar (as a % of unscaled)						
39	71%	71%	71%	71%	71%	71%	
40	Scaled Customer Costs \$000 LRM/Rental Method						
41	\$3,302	\$2,901	\$400	\$5,582	\$2,614	\$2,967	
42	Scaled Medium Pressure Distribution Costs \$000 LRM						
43	\$782	\$782	\$0	\$896	\$896	\$0	
44	Scaled High Pressure Distribution Costs \$000 LRM						
45	\$401	\$401	\$0	\$4,709	\$4,709	\$0	
46	Scaled Customer Service & Information Costs \$000 LRM						
47	\$60	\$41	\$19	\$897	\$141	\$756	
48	Scaled LRM Based Costs \$000						
49	\$4,545	\$4,126	\$419	\$12,084	\$8,361	\$3,723	

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

		Residential	CCI	G-AC	G-GEN	NGV	Total Core
41							
42	<u>NGV Compression Costs:</u>						
43	Compression Adder Costs \$000					\$1,150	\$1,150
44							
45	<u>Uncollectibles:</u>						
46	Target Base Margin \$000	\$1,777,159					
47	System Average Uncollectible Rate	0.23800%					
48	Uncollectibles	\$4,230					
49							
50	<u>Allocation of Uncollectibles:</u>						
51	All Costs excl. NGV Adder, EOR, Int, WS, and UBS	\$1,704,028	\$1,324,939	\$240,190	\$49	\$3,105	\$8,972
52	% All Costs excl. NGV Adder, EOR, Int, WS, and UBS		77.8%	14.1%	0.0%	0.2%	0.5%
53	Uncollectibles	\$4,230	\$3,289	\$596	\$0	\$8	\$3,915
54							
55							
56							
57	<u>Transmission Costs per Embedded Cost Method:</u>						
58	Embedded Transmission Costs \$000	\$166,472					
59	Calculate BBT/Local-T Transmission Split:						
60	BBT \$	\$116,052					
61	LT \$	\$50,420					
62							
63	<u>Allocation of BBT Costs:</u>						
64	CYTP Mth	10,250,635	2,718,471	1,062,244	575	17,984	131,912
65	% CYTP		26.5%	10.4%	0.0%	0.2%	1.3%
66	BBT Costs per EC method	\$116,052	\$30,777	\$12,026	\$7	\$204	\$1,493
67							
68	<u>Allocation of LT Costs:</u>						
69	CYPM Mth	1,090,272	411,974	120,434	36	716	13,382
70	% CYPM		37.79%	11.05%	0.00%	0.07%	1.23%
71	LT Costs per EC method	\$50,420	\$19,052	\$5,569	\$2	\$33	\$619
72	Total Transmission Costs per EC method	\$166,472	\$49,829	\$17,596	\$8	\$237	\$2,112
73							

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	NCCI	EG Tier 1	EG Tier 2	EOR	Total Retail NonCore	Long Beach	SDG&E	South West Gas
41								
42	<u>NGV Compression Costs:</u>							
43	Compression Adder Costs \$000							
44								
45	<u>Uncollectibles:</u>							
46	Target Base Margin \$000							
47	System Average Uncollectible Rate							
48	Uncollectibles							
49								
50	<u>Allocation of Uncollectibles:</u>							
51	All Costs excl. NGV Adder, EOR, Int, WS, and UBS	\$61,241	\$5,502	\$60,029	\$0	\$126,772	\$0	\$0
52	% All Costs excl. NGV Adder, EOR, Int, WS, and UBS	3.6%	0.3%	3.5%	0.0%	7.4%	0.0%	0.0%
53	Uncollectibles	\$152	\$14	\$149	\$0	\$315	\$0	\$0
54								
55								
56								
57	<u>Transmission Costs per Embedded Cost Method:</u>							
58	Embedded Transmission Costs \$000							
59	Calculate BBT/Local-T Transmission Split:							
60								
61								
62								
63	<u>Allocation of BBT Costs:</u>							
64	CYTP Mth	1,514,446	61,537	3,011,386	149,770	4,737,139	88,619	1,274,770
65	% CYTP	14.8%	0.6%	29.4%	1.5%	46.2%	0.9%	12.4%
66	BBT Costs per EC method	\$17,146	\$697	\$34,093	\$1,696	\$53,631	\$1,003	\$14,432
67								
68	<u>Allocation of LT Costs:</u>							
69	CYPM Mth	123,610	4,174	227,877	12,720	368,381	10,286	139,459
70	% CYPM	11.34%	0.38%	20.90%	1.17%	33.79%	0.94%	12.79%
71	LT Costs per EC method	\$5,716	\$193	\$10,538	\$588	\$17,036	\$476	\$6,449
72	Total Transmission Costs per EC method	\$22,862	\$890	\$44,631	\$2,284	\$70,667	\$1,479	\$20,882
73								

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	Vernon	Total Whole sale	DGN	UBS	Total Noncore	SYSTEM TOTAL	Sources
41							
42	<u>NGV Compression Costs:</u>						
43	Compression Adder Costs \$000						\$1,150
44							
45	<u>Uncollectibles:</u>						
46	Target Base Margin \$000						
47	System Average Uncollectible Rate						
48	Uncollectibles						
49							
50	<u>Allocation of Uncollectibles:</u>						
51	All Costs excl. NGV Adder, EOR, Int, WS, and UBS	\$0	\$0	\$0	\$0	\$126,772	\$1,704,028
52	% All Costs excl. NGV Adder, EOR, Int, WS, and UBS	0.0%	0.0%	0.0%	0.0%	7.4%	100.0%
53	Uncollectibles	\$0	\$0	\$0	\$0	\$315	\$4,230
54							
55							
56							
57	<u>Transmission Costs per Embedded Cost Method:</u>						
58	Embedded Transmission Costs \$000						
59	Calculate BBT/Local-T Transmission Split:						
60							
61							
62							
63	<u>Allocation of BBT Costs:</u>						
64	CYTP Mth	80,602	1,515,931	66,380	0	6,319,449	10,250,635
65	% CYTP	0.8%	14.8%	0.6%	0.0%	61.6%	100.0%
66	BBT Costs per EC method	\$913	\$17,163	\$752	\$0	\$71,545	\$116,052
67							
68	<u>Allocation of LT Costs:</u>						
69	CYPM Mth	9,105	170,035	5,313	0	543,729	1,090,272
70	% CYPM	0.84%	15.60%	0.49%	0.00%	49.87%	100.00%
71	LT Costs per EC method	\$421	\$7,863	\$246	\$0	\$25,145	\$50,420
72	Total Transmission Costs per EC method	\$1,334	\$25,026	\$997	\$0	\$96,690	\$166,472
73							

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	NCCI-Total	NCCI-D	NCCI-T	EOR-Total	EOR-D	EOR-T	Total EG
41							
42	<u>NGV Compression Costs:</u>						
43	Compression Adder Costs \$000						
44							
45	<u>Uncollectibles:</u>						
46	Target Base Margin \$000						
47	System Average Uncollectible Rate						
48	Uncollectibles						
49							
50	<u>Allocation of Uncollectibles:</u>						
51	All Costs excl. NGV Adder, EOR, Int, WS, and UBS	\$61,241	\$49,821	\$11,420	\$0	\$0	\$65,532
52	% All Costs excl. NGV Adder, EOR, Int, WS, and UBS	3.6%	2.9%	0.7%	0.0%	0.0%	3.8%
53	Uncollectibles	\$152	\$124	\$28	\$0	\$0	\$163
54							
55							
56							
57	<u>Transmission Costs per Embedded Cost Method:</u>						
58	Embedded Transmission Costs \$000						
59	Calculate BBT/Local-T Transmission Split:						
60							
61							
62							
63	<u>Allocation of BBT Costs:</u>						
64	CYTP Mth	1,514,446	874,741	639,705	149,770	80,514	3,072,923
65	% CYTP	14.8%	8.5%	6.2%	1.5%	0.8%	30.0%
66	BBT Costs per EC method	\$17,146	\$9,903	\$7,242	\$1,696	\$912	\$34,790
67							
68	<u>Allocation of LT Costs:</u>						
69	CYPM Mth	123,610	68,576	55,034	12,720	6,836	232,051
70	% CYPM	11.34%	6.29%	5.05%	1.17%	0.63%	21.28%
71	LT Costs per EC method	\$5,716	\$3,171	\$2,545	\$588	\$316	\$10,731
72	Total Transmission Costs per EC method	\$22,862	\$13,075	\$9,787	\$2,284	\$1,228	\$45,521
73							

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	EG Tier 1	EG Tier 1 Dist	EG Tier 1 Trans	EG Tier 2	EG Tier 2 Dist	EG Tier 2 Trans
--	-----------	----------------	--------------------	-----------	----------------	--------------------

D/T Split Allocator

41							
42	<u>NGV Compression Costs:</u>						
43	Compression Adder Costs \$000						2013TCAP Compress

44							
45	<u>Uncollectibles:</u>						
46	Target Base Margin \$000						
47	System Average Uncollectible Rate						
48	Uncollectibles						
49							
50	<u>Allocation of Uncollectibles:</u>						
51	All Costs excl. NGV Adder, EOR, Int, WS, and UBS	\$5,502	\$4,793	\$709	\$60,029	\$15,924	\$44,105
52	% All Costs excl. NGV Adder, EOR, Int, WS, and UBS	0.3%	0.3%	0.0%	3.5%	0.9%	2.6%
53	Uncollectibles	\$14	\$12	\$2	\$149	\$40	\$109

54							
55							
56							
57	<u>Transmission Costs per Embedded Cost Method:</u>						
58	Embedded Transmission Costs \$000						
59	Calculate BBT/Local-T Transmission Split:						
60							2013TCAP Ms.Fung

61							
62							
63	<u>Allocation of BBT Costs:</u>						
64	CYTP Mth	61,537	42,203	19,334	3,011,386	473,851	2,537,535
65	% CYTP	0.6%	0.4%	0.2%	29.4%	4.6%	24.8%
66	BBT Costs per EC method	\$697	\$478	\$219	\$34,093	\$5,365	\$28,729 CYTP
67							
68	<u>Allocation of LT Costs:</u>						
69	CYPM Mth	4,174	3,092	1,082	227,877	36,275	191,602
70	% CYPM	0.38%	0.28%	0.10%	20.90%	3.33%	17.57%
71	LT Costs per EC method	\$193	\$143	\$50	\$10,538	\$1,678	\$8,861
72	Total Transmission Costs per EC method	\$890	\$621	\$269	\$44,631	\$7,042	\$37,589

73

	NCCI	EG Tier 1	EG Tier 2	EOR	Total Retail NonCore	Long Beach	SDG&E	South West Gas
74	<u>Storage Costs per EC Method</u>							
75	Embedded Storage Costs \$000							
76	Honor Rancho Revenue Requirement							
77								

78	Storage Expansion Schedule							
79	1-Apr-10							
80	1-Apr-11							
81	1-Apr-12							
82	1-Apr-13							
83	1-Apr-14							
84								
85								

	Vernon	Total Whole sale	DGN	UBS	Total Noncore	SYSTEM TOTAL	Sources
74	<u>Storage Costs per EC Method</u>						
75	Embedded Storage Costs \$000						
76	Honor Rancho Revenue Requirement						
77							

78	Storage Expansion Schedule	
79	1-Apr-10	
80	1-Apr-11	
81	1-Apr-12	
82	1-Apr-13	
83	1-Apr-14	
84		
85		

NCCI-Total NCCI-D NCCI-T EOR-Total EOR-D EOR-T Total EG

74 Storage Costs per EC Method
75 Embedded Storage Costs \$000
76 Honor Rancho Revenue Requirement
77

78 **Storage Expansion Schedule**

79	1-Apr-10
80	1-Apr-11
81	1-Apr-12
82	1-Apr-13
83	1-Apr-14
84	
85	

EG Tier 1	EG Tier 1 Dist	EG Tier 1 Trans	EG Tier 2	EG Tier 2 Dist	EG Tier 2 Trans
-----------	----------------	--------------------	-----------	----------------	--------------------

D/T Split Allocator

74 Storage Costs per EC Method
 75 Embedded Storage Costs \$000
 76 Honor Rancho Revenue Requirement
 77

78	Storage Expansion Schedule
79	1-Apr-10
80	1-Apr-11
81	1-Apr-12
82	1-Apr-13
83	1-Apr-14
84	
85	

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

		Residential	CCI	G-AC	G-GEN	NGV	Total Core		
86	<u>Allocation of Storage Costs to Inventory/Inject/Withdrawal and Calculation of Storage Rates:</u>								
			Honor Rancho		Capacity				
	% of Embedded Storage		Rev Req	Total Storage	MMcfd or	Rate \$/mcf or	Rate \$/dth or		
	Costs	\$000/yr	\$000/yr	Costs \$000/yr	MMCF	\$/mcf	mbtu/cf	\$/dth/d	
87									
88	Injection as % storage costs	33.333%	\$26,770	\$0	\$26,770	850	\$31.49	1.0235	\$30.77
89	Inventory as % storage costs	33.333%	\$26,770	\$9,260	\$36,030	136,100	\$0.26	1.0235	\$0.259
90	Withdrawal as % storage costs	33.333%	\$26,770	\$0	\$26,770	3,195	\$8.38	1.0235	\$8.19
91		100.0%	\$80,311	\$9,260	\$89,571				
92									
93	<u>Core Storage Capacities:</u>								
		<i>Allocation Method</i>							
94	Number of Injection Days		214	74.5%	13.7%	0.0%	0.0%	0.6%	88.8%
95	Injection MMcf	<i>Inv per Inj Day</i>	388	289	53	0	0	2	344
96									
97	% Excess Winter Demand			84.0%	15.4%	0.0%	0.0%	0.6%	100%
98	Inventory MMCF	<i>% Excess Winter Demand</i>	83,000	61,844	11,363	0	0	459	73,666
99									
100	MPD Peak Day (1-in-35 Core) Core Only MTh								
101	% Core MPD Peak Day			64.7%	34.2%	0.0%	0.0%	1.1%	100%
102	Withdrawal MMcf	<i>% Core MPD Peak Day</i>	2,225	1,288	680	0	0	22	1,990
103									
104	Injection \$000		\$12,220	\$9,105	\$1,673	\$0	\$0	\$68	\$10,846
105	Inventory \$000		\$21,973	\$16,372	\$3,008	\$0	\$0	\$122	\$19,502
106	Withdrawal \$000		\$18,643	\$10,789	\$5,697	\$0	\$0	\$187	\$16,674
107			\$52,836	\$36,267	\$10,379	\$0	\$0	\$376	\$47,021
108	<u>Load Balancing Storage Capacities:</u>								
109	Injection MMcf	<i>%AYTP (incl EOR)</i>	200	50	20	0	0	3	74
110	Inventory MMCF	<i>%AYTP Noncore only (incl EOR)</i>	4,200	0	0	0	0	0	0
111	Withdrawal MMcf	<i>%AYTP (incl EOR)</i>	340	85	35	0	1	5	125
112	Injection \$000		\$6,299	\$1,578	\$644	\$0	\$11	\$84	\$2,318
113	Inventory \$000		\$1,112	\$0	\$0	\$0	\$0	\$0	\$0
114	Withdrawal \$000		\$2,849	\$714	\$291	\$0	\$5	\$38	\$1,048
115			\$10,260	\$2,292	\$935	\$1	\$17	\$122	\$3,366
116	<u>Unbundled Storage Capacities:</u>								
117	Injection MMcf	<i>100% UBS</i>	262	0	0	0	0	0	0
118	Inventory MMCF	<i>100% UBS</i>	48,900	0	0	0	0	0	0
119	Withdrawal MMcf	<i>100% UBS</i>	630	0	0	0	0	0	0
120	Injection \$000		\$8,252	\$0	\$0	\$0	\$0	\$0	\$0
121	Inventory \$000		\$12,945	\$0	\$0	\$0	\$0	\$0	\$0
122	Withdrawal \$000		\$5,279	\$0	\$0	\$0	\$0	\$0	\$0
123			\$26,476	\$0	\$0	\$0	\$0	\$0	\$0
124	<u>Total Storage:</u>								
125	Injection MMcf		850	339	74	0	0	5	418
126	Inventory MMCF		136,100	61,844	11,363	0	0	459	73,666
127	Withdrawal MMcf		3,195	1,373	715	0	1	27	2,115
128	Injection \$000		\$26,770	\$10,683	\$2,317	\$0	\$11	\$151	\$13,163

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	NCCI	EG Tier 1	EG Tier 2	EOR	Total Retail NonCore	Long Beach	SDG&E	South West Gas
86	<u>Allocation of Storage Costs to Inventory/Inject/Withdrawal an</u>							
87	<u>Source</u>							
88	Injection as % storage costs 2013TCAP Ms.Fung							
89	Inventory as % storage costs 2013TCAP Ms.Fung							
90	Withdrawal as % storage costs 2013TCAP Ms.Fung							
91	<hr/>							
92	<hr/>							
93	<u>Core Storage Capacities:</u>							
94	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.2%	0.0%
95	0	0	0	0	0	0	44	0
96								
97	% Excess Winter Demand							
98	0	0	0	0	0	0	9,334	0
99								
100	MPD Peak Day (1-in-35 Core) Core Only MTh							
101	% Core MPD Peak Day							
102	0	0	0	0	0	0	235	0
103								
104	\$0	\$0	\$0	\$0	\$0	\$0	\$1,374	\$0
105	\$0	\$0	\$0	\$0	\$0	\$0	\$2,471	\$0
106	\$0	\$0	\$0	\$0	\$0	\$0	\$1,969	\$0
107	\$0	\$0	\$0	\$0	\$0	\$0	\$5,814	\$0
108	<u>Load Balancing Storage Capacities:</u>							
109	30	1	61	3	96	2	25	1
110	1,013	41	2,019	100	3,173	56	827	45
111	52	2	103	5	162	3	42	2
112	\$960	\$39	\$1,914	\$95	\$3,008	\$53	\$784	\$43
113	\$268	\$11	\$534	\$27	\$840	\$15	\$219	\$12
114	\$434	\$18	\$866	\$43	\$1,360	\$24	\$355	\$19
115	\$1,662	\$68	\$3,314	\$165	\$5,208	\$93	\$1,357	\$74
116	<u>Unbundled Storage Capacities:</u>							
117	0	0	0	0	0	0	0	0
118	0	0	0	0	0	0	0	0
119	0	0	0	0	0	0	0	0
120	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
121	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
122	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
123	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
124	<u>Total Storage:</u>							
125	30	1	61	3	96	2	69	1
126	1,013	41	2,019	100	3,173	56	10,161	45
127	52	2	103	5	162	3	277	2
128	\$960	\$39	\$1,914	\$95	\$3,008	\$53	\$2,158	\$43

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	Vernon	Total Whole sale	DGN	UBS	Total Noncore	SYSTEM TOTAL	Sources
86	<u>Allocation of Storage Costs to Inventory/Inject/Withdrawal an</u>						
87							
88	Injection as % storage costs						
89	Inventory as % storage costs						
90	Withdrawal as % storage costs						
91	<hr/> <hr/>						
92							
93	<u>Core Storage Capacities:</u>						
94	0.0%	11.2%	0.0%	0.0%	11.2%	100.0%	
95	0	44	0	0	44	388	
96							
97	% Excess Winter Demand						
98	0	9,334	0	0	9,334	83,000	Herb Emmerich Testimon
99	Inventory MMCF						
100	MPD Peak Day (1-in-35 Core) Core Only MTh						
101	% Core MPD Peak Day						
102	0	235	0	0	235	2,225	Herb Emmerich Testimon
103	Withdrawal MMcf						
104	\$0	\$1,374	\$0	\$0	\$1,374	\$12,220	
105	\$0	\$2,471	\$0	\$0	\$2,471	\$21,973	
106	\$0	\$1,969	\$0	\$0	\$1,969	\$18,643	
107	\$0	\$5,814	\$0	\$0	\$5,814	\$52,836	
108	<u>Load Balancing Storage Capacities:</u>						
109	2	30	1	0	126	200	2009 BCAP SA
110	54	982	45	0	4,200	4,200	2009 BCAP SA
111	3	50	2	0	215	340	2009 BCAP SA
112	\$51	\$931	\$42	\$0	\$3,981	\$6,299	
113	\$14	\$260	\$12	\$0	\$1,112	\$1,112	
114	\$23	\$421	\$19	\$0	\$1,801	\$2,849	
115	\$89	\$1,612	\$73	\$0	\$6,894	\$10,260	
116	<u>Unbundled Storage Capacities:</u>						
117	0	0	0	262	262	262	
118	0	0	0	48,900	48,900	48,900	
119	0	0	0	630	630	630	
120	\$0	\$0	\$0	\$8,252	\$8,252	\$8,252	
121	\$0	\$0	\$0	\$12,945	\$12,945	\$12,945	
122	\$0	\$0	\$0	\$5,279	\$5,279	\$5,279	
123	\$0	\$0	\$0	\$26,476	\$26,476	\$26,476	
124	<u>Total Storage:</u>						
125	2	73	1	262	432	850	
126	54	10,316	45	48,900	62,434	136,100	
127	3	285	2	630	1,080	3,195	
128	\$51	\$2,305	\$42	\$8,252	\$13,607	\$26,770	

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	NCCI-Total	NCCI-D	NCCI-T	EOR-Total	EOR-D	EOR-T	Total EG
86	<u>Allocation of Storage Costs to Inventory/Inject/Withdrawal an</u>						
87							
88	Injection as % storage costs						
89	Inventory as % storage costs						
90	Withdrawal as % storage costs						
91							
92							
93	<u>Core Storage Capacities:</u>						
94	Number of Injection Days						
95	Injection MMcf						
96							
97	% Excess Winter Demand	y					
98	Inventory MMCF	y					
99							
100	MPD Peak Day (1-in-35 Core) Core Only MTh						
101	% Core MPD Peak Day						
102	Withdrawal MMcf	y					
103							
104	Injection \$000						
105	Inventory \$000						
106	Withdrawal \$000						
107	\$0	\$0	\$0	\$0	\$0	\$0	\$0
108	<u>Load Balancing Storage Capacities:</u>						
109	Injection MMcf						
110	Inventory MMCF						
111	Withdrawal MMcf						
112	Injection \$000						
113	1,510,295	870,957	639,338	149,770	80,514	69,256	3,072,923
114	100.0%	57.7%	42.3%	100.0%	53.8%	46.2%	
115	\$1,661.99	\$958.44	\$703.56	\$164.81	\$88.60	\$76.21	\$3,381.58
116	<u>Unbundled Storage Capacities:</u>						
117	Injection MMcf						
118	Inventory MMCF						
119	Withdrawal MMcf						
120	Injection \$000						
121	Inventory \$000						
122	Withdrawal \$000						
123	\$0	\$0	\$0	\$0	\$0	\$0	\$0
124	<u>Total Storage:</u>						
125	Injection MMcf						
126	Inventory MMCF						
127	Withdrawal MMcf						
128	Injection \$000						

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

EG Tier 1	EG Tier 1 Dist	EG Tier 1 Trans	EG Tier 2	EG Tier 2 Dist	EG Tier 2 Trans
-----------	----------------	--------------------	-----------	----------------	--------------------

D/T Split Allocator

86 Allocation of Storage Costs to Inventory/Inject/Withdrawal ar

87
88 Injection as % storage costs
89 Inventory as % storage costs
90 Withdrawal as % storage costs
91

92

93 Core Storage Capacities:

94 Number of Injection Days
95 Injection MMcf
96
97 % Excess Winter Demand
98 Inventory MMCF
99
100 MPD Peak Day (1-in-35 Core) Core Only MTh
101 % Core MPD Peak Day
102 Withdrawal MMcf
103
104 Injection \$000
105 Inventory \$000
106 Withdrawal \$000

\$0	\$0	\$0	\$0	\$0	\$0
-----	-----	-----	-----	-----	-----

108 Load Balancing Storage Capacities:

109 Injection MMcf
110 Inventory MMCF
111 Withdrawal MMcf
112 Injection \$000
113 Inventory \$000
114 Withdrawal \$000
115

61,537	42,203	19,334	3,011,386	473,851	2,537,535	AYTP
100.0%	68.6%	31.4%	100.0%	15.7%	84.3%	AYTP per class
\$67.72	\$46.44	\$21.28	\$3,313.86	\$521.45	\$2,792.41	

116 Unbundled Storage Capacities:

117 Injection MMcf
118 Inventory MMCF
119 Withdrawal MMcf
120 Injection \$000
121 Inventory \$000
122 Withdrawal \$000

\$0	\$0	\$0	\$0	\$0	\$0
-----	-----	-----	-----	-----	-----

124 Total Storage:

125 Injection MMcf
126 Inventory MMCF
127 Withdrawal MMcf
128 Injection \$000

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

		Residential	CCI	G-AC	G-GEN	NGV	Total Core	
129	Inventory \$000	\$36,030	\$16,372	\$3,008	\$0	\$0	\$122	\$19,502
130	Withdrawal \$000	\$26,770	\$11,503	\$5,989	\$0	\$5	\$225	\$17,722
131	Total Storage Costs per EC Method	\$89,571	\$38,558	\$11,314	\$1	\$17	\$498	\$50,387
132								
133								
134	ALLOCATED BASE MARGIN (net of misc revenue & broker fee)	\$1,777,159	\$1,328,227	\$240,786	\$49	\$3,113	\$10,145	\$1,582,321

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	NCCI	EG Tier 1	EG Tier 2	EOR	Total Retail NonCore	Long Beach	SDG&E	South West Gas
129 Inventory \$000	\$268	\$11	\$534	\$27	\$840	\$15	\$2,690	\$12
130 Withdrawal \$000	\$434	\$18	\$866	\$43	\$1,360	\$24	\$2,324	\$19
131 Total Storage Costs per EC Method	\$1,662	\$68	\$3,314	\$165	\$5,208	\$93	\$7,171	\$74
132								
133								
134 ALLOCATED BASE MARGIN (net of misc revenue & brok	\$61,393	\$5,516	\$60,178	\$5,052	\$132,139	\$2,168	\$29,162	\$1,944

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	Vernon	Total Whole sale	DGN	UBS	Total Noncore	SYSTEM TOTAL	Sources
129 Inventory \$000	\$14	\$2,731	\$12	\$12,945	\$16,528	\$36,030	
130 Withdrawal \$000	\$23	\$2,390	\$19	\$5,279	\$9,048	\$26,770	
131 Total Storage Costs per EC Method	\$89	\$7,427	\$73	\$26,476	\$39,184	\$89,571	
132							
133							
134 ALLOCATED BASE MARGIN (net of misc revenue & brok	\$1,751	\$35,025	\$1,198	\$26,476	\$194,838	\$1,777,159	

2013TCAP SCG COST ALLOCATION
 2/22/2013 Update Filing

	NCCI-Total	NCCI-D	NCCI-T	EOR-Total	EOR-D	EOR-T	Total EG
129 Inventory \$000							
130 Withdrawal \$000							
131 Total Storage Costs per EC Method	\$1,662	\$958	\$704	\$165	\$89	\$76	\$3,382
132							
133							
134 ALLOCATED BASE MARGIN (net of misc revenue & brok	\$61,393	\$49,945	\$11,448	\$5,052	\$3,120	\$1,931	\$65,694

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	EG Tier 1	EG Tier 1 Dist	EG Tier 1 Trans	EG Tier 2	EG Tier 2 Dist	EG Tier 2 Trans
129 Inventory \$000						
130 Withdrawal \$000						
131 Total Storage Costs per EC Method	\$68	\$46	\$21	\$3,314	\$521	\$2,792
132						
133						
134 ALLOCATED BASE MARGIN (net of misc revenue & brok	\$5,516	\$4,805	\$711	\$60,178	\$15,964	\$44,214

D/T Split Allocator

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	Residential	CCI	G-AC	G-GEN	NGV	Total Core
135 Percentage	74.7%	13.5%	0.0%	0.2%	0.6%	89.0%
136 Average Year Throughput Mth	9,911,292	2,483,053	1,013,177	575	17,984	3,646,701
137 average rate \$/therm	\$0.179	\$0.535	\$0.238	\$0.086	\$0.173	\$0.434
138						
139 Calculation of Customer Service & Information Costs (CSI Costs):						
		2010 Costs	PBR Exclusion Items	Other Adjustments	2010 Costs in Transport Rates	
140 907 Cus Svc-Supervision + Payroll Taxes	NON-DSM CUST. INFO	\$649	\$0	\$0	\$649	
141 908 Cus Svc-Cust Assist Exp (PBR Ex DAP, DSM &Self-Gen)	NON-DSM CUST. INFO	\$156,687	(\$131,242)	\$0	\$25,445	
142 909 Cus Svc-Info & Instruction Exp	NON-DSM CUST. INFO	\$2,147	\$0	\$0	\$2,147	
143 910 Cus Svc-Misc CSI Exp (PBR Ex DSM & NGV)	NON-DSM CUST. INFO	\$2,049	(\$278)	\$0	\$1,772	
144		\$161,532	(\$131,519)	\$0	\$30,013	
145						
146 A&G loader				48.69%	\$14,614	
147 Gen Plant Loader				24.46%	\$7,342	
148 Total CS&I O&M, 2010 \$000's					\$51,969	
149						
150						
151 Calculation of CSI Cost Allocator:						
152 Energy Markets Costs:						
153 Major Markets Staff FTE by Class (mgmnt estimate)		0.4	0.0	0.0	0.0	0
154 Energy Markets		0.0%	2.8%	0.0%	0.0%	2.8%
155 Energy Markets	\$1,601	\$0	\$45	\$0	\$0	\$45
156 Large C&I:						
157 # Large C&I Customers		0	206,028	0	0	206,028
158 % Large C&I only		0.0%	99.7%	0.0%	0.0%	99.7%
159 Large C&I	\$6,410	\$0	\$6,391	\$0	\$0	\$6,391
160 NGV	\$1,385	\$0	\$0	\$0	\$1,385	\$1,385
161 Residential	\$11,964	\$11,964	\$0	\$0	\$0	\$11,964
162 Small Business						
163 # G10, G-AC, G-GE Customers only		0	206,028	12	708	206,748
164 Small Business		0.0%	99.7%	0.0%	0.3%	100.0%
165 Small Business	\$548	\$0	\$546	\$0	\$2	\$548
166 Econ Development						
167 # Large C&I Customers		0	206,028	0	0	206,028
168 % Large C&I only		0.0%	99.7%	0.0%	0.0%	99.7%
169 Econ Development	\$41	\$0	\$41	\$0	\$0	\$41
170 Other Residential	\$1,840	\$1,840	\$0	\$0	\$0	\$1,840
171 Total	\$23,788	\$13,803	\$7,022	\$0	\$2	\$1,385
172 Allocator %		58.0%	29.5%	0.0%	0.0%	5.8%
173						
174						
175						

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	NCCI	EG Tier 1	EG Tier 2	EOR	Total Retail NonCore	Long Beach	SDG&E	South West Gas
135 Percentage	3.5%	0.3%	3.4%	0.3%	7.4%	0.1%	1.6%	0.1%
136 Average Year Throughput Mth	1,510,295	61,537	3,011,386	149,770	4,732,988	84,077	1,233,373	67,171
137 average rate \$/therm	\$0.041	\$0.090	\$0.020	\$0.034	\$0.028	\$0.026	\$0.024	\$0.029
138								
139 Calculation of Customer Service & Information Costs (C&I)								
140 907 Cus Svc-Supervision + Payroll Taxes								
141 908 Cus Svc-Cust Assist Exp (PBR Ex DAP, DSM &Self-Gen)								
142 909 Cus Svc-Info & Instruction Exp								
143 910 Cus Svc-Misc CSI Exp (PBR Ex DSM & NGV)								
144								
145								
146 A&G loader								
147 Gen Plant Loader								
148 Total CS&I O&M, 2010 \$000's								
149								
150								
151 Calculation of CSI Cost Allocator:								
Energy Markets Costs:								
153 Major Markets Staff FTE by Class (mgmnt estimate)	1.1	0.4	5.2	3.4	10.1	0.9	0.9	1.0
154 Energy Markets	7.3%	2.4%	36.1%	23.5%	69.3%	6.5%	6.1%	7.1%
155 Energy Markets	\$117	\$39	\$578	\$376	\$1,110	\$104	\$98	\$114
Large C&I:								
157 # Large C&I Customers	624	0	0	0	624	0	0	0
158 % Large C&I only	0.3%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%
159 Large C&I	\$19	\$0	\$0	\$0	\$19	\$0	\$0	\$0
160 NGV	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
161 Residential	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Small Business								
163 # G10, G-AC, G-GE Customers only	0	0	0	0	0	0	0	0
164 Small Business	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
165 Small Business	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Econ Development								
167 # Large C&I Customers	624	0	0	0	624	0	0	0
168 % Large C&I only	0.3%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%
169 Econ Development	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
170 Other Residential	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
171 Total	\$137	\$39	\$578	\$376	\$1,129	\$104	\$98	\$114
172 Allocator %	0.6%	0.2%	2.4%	1.6%	4.7%	0.4%	0.4%	0.5%
173								
174								
175								

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	Vernon	Total Whole sale	DGN	UBS	Total Noncore	SYSTEM TOTAL	Sources
135 Percentage	0.1%	2.0%	0.1%	1.5%	11.0%	100.0%	
136 Average Year Throughput Mth	80,602	1,465,224	66,380	0	6,264,591	9,911,292	New Allocation Factors
137 average rate \$/therm	\$0.022	\$0.024	\$0.018		\$0.031	\$0.179	
138							

139 **Calculation of Customer Service & Information Costs (C**

140 907 Cus Svc-Supervision + Payroll Taxes							
141 908 Cus Svc-Cust Assist Exp (PBR Ex DAP, DSM &Self-Ger							
142 909 Cus Svc-Info & Instruction Exp							
143 910 Cus Svc-Misc CSI Exp (PBR Ex DSM & NGV)							
144							
145							
146 A&G loader							
147 Gen Plant Loader							
148 Total CS&I O&M, 2010 \$000's							
149							
150							

151 **Calculation of CSI Cost Allocator:**

152 Energy Markets Costs:							
153 Major Markets Staff FTE by Class (mgmnt estimate)	0.8	3.6	0.4	0.0	14.1	14.5	
154 Energy Markets	5.3%	25.0%	2.9%	0.0%	97.2%	100.0%	
155 Energy Markets	\$84	\$400	\$46	\$0	\$1,556	\$1,601	
156 Large C&I:							
157 # Large C&I Customers	0	0	0	0	624	206,652	2010 Customer Count fro
158 % Large C&I only	0.0%	0.0%	0.0%	0.0%	0.3%	100.0%	
159 Large C&I	\$0	\$0	\$0	\$0	\$19	\$6,410	
160 NGV	\$0	\$0	\$0	\$0	\$0	\$1,385	
161 Residential	\$0	\$0	\$0	\$0	\$0	\$11,964	
162 Small Business							
163 # G10, G-AC, G-GE Customers only	0	0	0	0	0	206,748	2010 Customer Count fro
164 Small Business	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
165 Small Business	\$0	\$0	\$0	\$0	\$0	\$548	
166 Econ Development							
167 # Large C&I Customers	0	0	0	0	624	206,652	2010 Customer Count fro
168 % Large C&I only	0.0%	0.0%	0.0%	0.0%	0.3%	100.0%	
169 Econ Development	\$0	\$0	\$0	\$0	\$0	\$41	
170 Other Residential	\$0	\$0	\$0	\$0	\$0	\$1,840	
171 Total	\$84	\$400	\$46	\$0	\$1,575	\$23,788	
172 Allocator %	0.4%	1.7%	0.2%	0.0%	6.6%	100.0%	

173

174

175

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	NCCI-Total	NCCI-D	NCCI-T	EOR-Total	EOR-D	EOR-T	Total EG
135 Percentage	3.5%	2.8%	0.6%	0.3%	0.2%	0.1%	3.7%
136 Average Year Throughput Mth							
137 average rate \$/therm							
138							
139 Calculation of Customer Service & Information Costs (C&I)							
140 907 Cus Svc-Supervision + Payroll Taxes							
141 908 Cus Svc-Cust Assist Exp (PBR Ex DAP, DSM &Self-Gen)							
142 909 Cus Svc-Info & Instruction Exp							
143 910 Cus Svc-Misc CSI Exp (PBR Ex DSM & NGV)							
144							
145							
146 A&G loader							
147 Gen Plant Loader							
148 Total CS&I O&M, 2010 \$000's							
149							
150							
151 Calculation of CSI Cost Allocator:							
152 Energy Markets Costs:							
153 Major Markets Staff FTE by Class (mgmnt estimate)							
154 Energy Markets							
155 Energy Markets							
156 Large C&I:							
157 # Large C&I Customers							n SCG Cust Cost model "cust 2"
158 % Large C&I only							
159 Large C&I							
160 NGV							
161 Residential							
162 Small Business							
163 # G10, G-AC, G-GE Customers only							n SCG Cust Cost model "cust 2"
164 Small Business							
165 Small Business							
166 Econ Development							
167 # Large C&I Customers							n SCG Cust Cost model "cust 2"
168 % Large C&I only							
169 Econ Development							
170 Other Residential							
171 Total							
172 Allocator %							
173							
174							
175							

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	EG Tier 1	EG Tier 1 Dist	EG Tier 1 Trans	EG Tier 2	EG Tier 2 Dist	EG Tier 2 Trans	
135 Percentage	0.3%	0.3%	0.0%	3.4%	0.9%	2.5%	<i>D/T Split Allocator</i>
136 Average Year Throughput Mth							
137 average rate \$/therm							
138							
139 Calculation of Customer Service & Information Costs (C:							
140 907 Cus Svc-Supervision + Payroll Taxes							
141 908 Cus Svc-Cust Assist Exp (PBR Ex DAP, DSM &Self-Gen							
142 909 Cus Svc-Info & Instruction Exp							
143 910 Cus Svc-Misc CSI Exp (PBR Ex DSM & NGV)							
144							
145							
146 A&G loader							
147 Gen Plant Loader							
148 Total CS&I O&M, 2010 \$000's							
149							
150							
151 Calculation of CSI Cost Allocator:							
152 Energy Markets Costs:							
153 Major Markets Staff FTE by Class (mgmnt estimate)							
154 Energy Markets							
155 Energy Markets							
156 Large C&I:							
157 # Large C&I Customers							
158 % Large C&I only							
159 Large C&I							
160 NGV							
161 Residential							
162 Small Business							
163 # G10, G-AC, G-GE Customers only							
164 Small Business							
165 Small Business							
166 Econ Development							
167 # Large C&I Customers							
168 % Large C&I only							
169 Econ Development							
170 Other Residential							
171 Total							
172 Allocator %							
173							
174							
175							

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	Residential	CCI	G-AC	G-GEN	NGV	Total Core
176						
177	Model Results RD Format for RD Models					
178	\$851,901	\$113,320	\$27	\$2,533	\$959	\$968,741
179	\$309,758	\$71,566	\$9	\$226	\$1,923	\$383,482
180	\$53,477	\$15,500	\$5	\$89	\$1,330	\$70,402
181	\$30,777	\$12,026	\$7	\$204	\$1,493	\$44,507
182	\$19,052	\$5,569	\$2	\$33	\$619	\$25,275
183	\$36,267	\$10,379	\$0	\$0	\$376	\$47,021
184	\$2,292	\$935	\$1	\$17	\$122	\$3,366
185	\$0	\$0	\$0	\$0	\$0	\$0
186	\$21,415	\$10,894	\$0	\$3	\$2,149	\$34,461
187	\$3,289	\$596	\$0	\$8	\$22	\$3,915
188	\$0	\$0	\$0	\$0	\$1,150	\$1,150
189	\$1,777,159	\$1,328,227	\$240,786	\$49	\$3,113	\$10,145
190	74.7%	13.5%	0.0%	0.2%	0.6%	89.0%

191

	Allocated Costs \$000/yr	Capacity MMcfd or MMCF	Rate \$/mcf or \$/mcf
192			
193	\$26,770	850	\$31
194	\$26,770	136,100	\$0
195	\$26,770	3,195	\$8

196

197

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	NCCI	EG Tier 1	EG Tier 2	EOR	Total Retail NonCore	Long Beach	SDG&E	South West Gas	
176									
177	Model Results RD Format for RD Models								
178	Customer Related Costs	\$16,332	\$3,302	\$5,582	\$1,129	\$26,344	\$435	\$956	\$362
179	Medium Pressure Distribution Costs	\$11,271	\$782	\$896	\$4	\$12,952	\$0	\$0	\$0
180	High Pressure Distribution Costs	\$8,902	\$401	\$4,709	\$887	\$14,900	\$0	\$0	\$0
181	Backbone Transmission Costs	\$17,146	\$697	\$34,093	\$1,696	\$53,631	\$1,003	\$14,432	\$814
182	Local Transmission Costs	\$5,716	\$193	\$10,538	\$588	\$17,036	\$476	\$6,449	\$517
183	Storage - Seasonal	\$0	\$0	\$0	\$0	\$0	\$0	\$5,814	\$0
184	Storage - Load Balancing	\$1,662	\$68	\$3,314	\$165	\$5,208	\$93	\$1,357	\$74
185	Storage - TBS	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
186	Non-DSM Related Marketing	\$212	\$60	\$897	\$583	\$1,752	\$161	\$153	\$177
187	Uncollectibles	\$152	\$14	\$149	\$0	\$315	\$0	\$0	\$0
188	NGV Compression Costs:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
189	Total Margin Allocation pre-SI & Unbundle FAR	\$61,393	\$5,516	\$60,178	\$5,052	\$132,139	\$2,168	\$29,162	\$1,944
190	% Allocation	3.5%	0.3%	3.4%	0.3%	7.4%	0.1%	1.6%	0.1%

191

192 Storage Rates
193 Injection
194 inventory
195 Withdrawal

196

197

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	Vernon	Total Whole sale	DGN	UBS	Total Noncore	SYSTEM TOTAL	Sources
176							
177	Model Results RD Format for RD Models						
178	Customer Related Costs	\$198	\$1,952	\$57	\$0	\$28,353	\$997,094
179	Medium Pressure Distribution Costs	\$0	\$0	\$0	\$0	\$12,952	\$396,435
180	High Pressure Distribution Costs	\$0	\$0	\$0	\$0	\$14,900	\$85,301
181	Backbone Transmission Costs	\$913	\$17,163	\$752	\$0	\$71,545	\$116,052
182	Local Transmission Costs	\$421	\$7,863	\$246	\$0	\$25,145	\$50,420
183	Storage - Seasonal	\$0	\$5,814	\$0	\$0	\$5,814	\$52,836
184	Storage - Load Balancing	\$89	\$1,612	\$73	\$0	\$6,894	\$10,260
185	Storage - TBS	\$0	\$0	\$0	\$26,476	\$26,476	\$26,476
186	Non-DSM Related Marketing	\$130	\$621	\$71	\$0	\$2,444	\$36,905
187	Uncollectibles	\$0	\$0	\$0	\$0	\$315	\$4,230
188	NGV Compression Costs:	\$0	\$0	\$0	\$0	\$0	\$1,150
189	Total Margin Allocation pre-SI & Unbundle FAR	\$1,751	\$35,025	\$1,198	\$26,476	\$194,838	\$1,777,159
190	% Allocation	0.1%	2.0%	0.1%	1.5%	11.0%	100.0%
191							

192 Storage Rates
193 Injection
194 inventory
195 Withdrawal

196
197

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	NCCI-Total	NCCI-D	NCCI-T	EOR-Total	EOR-D	EOR-T	Total EG	
176								
177	Model Results RD Format for RD Models							
178	Customer Related Costs	\$16,332	\$15,493	\$839	\$1,129	\$600	\$529	\$8,883
179	Medium Pressure Distribution Costs	\$11,271	\$11,271	\$0	\$4	\$4	\$0	\$1,678
180	High Pressure Distribution Costs	\$8,902	\$8,902	\$0	\$887	\$887	\$0	\$5,110
181	Backbone Transmission Costs	\$17,146	\$9,903	\$7,242	\$1,696	\$912	\$784	\$34,790
182	Local Transmission Costs	\$5,716	\$3,171	\$2,545	\$588	\$316	\$272	\$10,731
183	Storage - Seasonal	\$0	\$0	\$0	\$0	\$0	\$0	\$0
184	Storage - Load Balancing	\$1,662	\$958	\$704	\$165	\$89	\$76	\$3,382
185	Storage - TBS	\$0	\$0	\$0	\$0	\$0	\$0	\$0
186	Non-DSM Related Marketing	\$212	\$122	\$90	\$583	\$313	\$269	\$957
187	Uncollectibles	\$152	\$124	\$28	\$0	\$0	\$0	\$163
188	NGV Compression Costs:	\$0	\$0	\$0	\$0	\$0	\$0	\$0
189	Total Margin Allocation pre-SI & Unbundle FAR	\$61,393	\$49,945	\$11,448	\$5,052	\$3,120	\$1,931	\$65,694
190	% Allocation	3.5%	2.8%	0.6%	0.3%	0.2%	0.1%	3.7%

191

192 Storage Rates
193 Injection
194 inventory
195 Withdrawal

196

197

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	EG Tier 1	EG Tier 1 Dist	EG Tier 1 Trans	EG Tier 2	EG Tier 2 Dist	EG Tier 2 Trans
176						
177	<i>D/T Split Allocator</i>					
177	Model Results RD Format for RD Models					
178	Customer Related Costs	\$3,302	\$2,901	\$400	\$5,582	\$2,614
179	Medium Pressure Distribution Costs	\$782	\$782	\$0	\$896	\$896
180	High Pressure Distribution Costs	\$401	\$401	\$0	\$4,709	\$4,709
181	Backbone Transmission Costs	\$697	\$478	\$219	\$34,093	\$5,365
182	Local Transmission Costs	\$193	\$143	\$50	\$10,538	\$1,678
183	Storage - Seasonal	\$0	\$0	\$0	\$0	\$0
184	Storage - Load Balancing	\$68	\$46	\$21	\$3,314	\$521
185	Storage - TBS	\$0	\$0	\$0	\$0	\$0
186	Non-DSM Related Marketing	\$60	\$41	\$19	\$897	\$141
187	Uncollectibles	\$14	\$12	\$2	\$149	\$40
188	NGV Compression Costs:	\$0	\$0	\$0	\$0	\$0
189	Total Margin Allocation pre-SI & Unbundle FAR	\$5,516	\$4,805	\$711	\$60,178	\$15,964
190	% Allocation	0.3%	0.3%	0.0%	3.4%	0.9%
191						

192 Storage Rates
193 Injection
194 inventory
195 Withdrawal

196
197

	Residential	CCI	G-AC	G-GEN	NGV	Total Core
198						
199						
200						
201						
202						
203						
204						
205						
206						
207						
208						
209						
210						
211						
212						
213						
214						
215						
216						
217						
218						
219						
220						
221						
222						
223						
224						
225						
226						
227						
228						
229						
230						
231						
232						
233						
234						
235						
236						
237						
238						

	NCCI	EG Tier 1	EG Tier 2	EOR	Total Retail NonCore	Long Beach	SDG&E	South West Gas
198								
199								
200								
201								
202	639,338	19,334	2,537,535	69,256	3,265,463	84,077	1,233,373	67,171
203	639,705	19,334	2,537,535	69,256	3,265,831	88,619	1,274,770	71,940
204	55,034	1,082	191,602	5,884	253,602	10,286	139,459	11,186
205	1,791	37	7,640	190	9,658	623	5,925	594
206	35	17	35	15	103	1	1	1
207								
208	563,346	18,718	448,474	80,408	1,110,946	0	0	0
209	564,698	18,718	448,474	80,408	1,112,299	0	0	0
210	43,790	1,151	34,166	6,827	85,934	0	0	0
211	1,470	58	1,216	220	2,964	0	0	0
212	247	35	27	15	324	0	0	0
213								
214	307,611	23,485	25,377	106	356,578	0	0	0
215	310,043	23,485	25,377	106	359,010	0	0	0
216	24,786	1,941	2,110	9	28,845	0	0	0
217	903	63	72	0	1,037	0	0	0
218	399	90	4	2	495	0	0	0
219								
220								
221	1,510,295	61,537	3,011,386	149,770	4,732,988	84,077	1,233,373	67,171
222	1,514,446	61,537	3,011,386	149,770	4,737,139	88,619	1,274,770	71,940
223	123,610	4,174	227,877	12,720	368,381	10,286	139,459	11,186
224	4,163	158	8,928	410	13,659	623	5,925	594
225	682	142	66	32	922	1	1	1
226								
227	870,957	42,203	473,851	80,514	1,467,524	0	0	0
228	874,741	42,203	473,851	80,514	1,471,308	0	0	0
229	68,576	3,092	36,275	6,836	114,779	0	0	0
230	2,372	120	1,288	221	4,001	0	0	0
231	647	125	31	17	820	0	0	0
232								
233	307,611	23,485	25,377	106	356,578	0	0	0
234	310,043	23,485	25,377	106	359,010	0	0	0
235	24,786	1,941	2,110	9	28,845	0	0	0
236	903	63	72	0	1,037	0	0	0
237	399	90	4	2	495	0	0	0
238								

2013TCAP SCG COST ALLOCATION
2/22/2013 Update Filing

	Vernon	Total Whole sale	DGN	UBS	Total Noncore	SYSTEM TOTAL	Sources
198							
199							
200							
201							
202	80,602	1,465,224	66,380		4,797,067	4,837,453	
203	80,602	1,515,931	66,380		4,848,141	4,888,957	
204	9,105	170,035	5,313		428,950	433,161	
205	294	7,435	171		17,265	17,420	
206	1	4	1		108	242	
207							
208	0	0	0		1,110,946	1,223,288	
209	0	0	0		1,112,299	1,227,758	
210	0	0	0		85,934	98,547	
211	0	0	0		2,964	3,513	
212	0	0	0		324	10,461	
213							
214	0	0	0		356,578	3,850,551	
215	0	0	0		359,010	4,133,920	
216	0	0	0		28,845	558,564	
217	0	0	0		1,037	31,745	
218	0	0	0		495	5,750,533	
219							
220							
221	80,602	1,465,224	66,380		6,264,591	9,911,292	
222	80,602	1,515,931	66,380		6,319,449	10,250,635	
223	9,105	170,035	5,313		543,729	1,090,272	
224	294	7,435	171		21,266	52,678	
225	1	4	1		927	5,761,236	
226							
227	0	0	0		1,467,524	5,073,839	
228	0	0	0		1,471,308	5,361,678	
229	0	0	0		114,779	657,111	
230	0	0	0		4,001	35,258	
231	0	0	0		820	5,760,994	
232							
233	0	0	0		356,578	3,850,551	
234	0	0	0		359,010	4,133,920	
235	0	0	0		28,845	558,564	
236	0	0	0		1,037	31,745	
237	0	0	0		495	5,750,533	
238							

NCCI-Total NCCI-D NCCI-T EOR-Total EOR-D EOR-T Total EG

198							
199							
200							
201							
202							
203							
204							
205							
206							
207							
208							
209							
210							
211							
212							
213							
214							
215							
216							
217							
218							
219							
220							
221							
222							
223							
224							
225							
226							
227							
228							
229							
230							
231							
232							
233							
234							
235							
236							
237							
238							

<u>EG Tier 1</u>	<u>EG Tier 1 Dist</u>	<u>EG Tier 1 Trans</u>	<u>EG Tier 2</u>	<u>EG Tier 2 Dist</u>	<u>EG Tier 2 Trans</u>
------------------	-----------------------	----------------------------	------------------	-----------------------	----------------------------

D/T Split Allocator

198					
199					
200					
201					
202					
203					
204					
205					
206					
207					
208					
209					
210					
211					
212					
213					
214					
215					
216					
217					
218					
219					
220					
221					
222					
223					
224					
225					
226					
227					
228					
229					
230					
231					
232					
233					
234					
235					
236					
237					
238					