

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Application of San Diego Gas & Electric Company  
(U-902-E) for Adoption of an Advanced Metering  
Infrastructure Deployment Scenario and Associated Cost  
Recovery and Rate Design.

Application 05-03-015  
(Filed March 15, 2005)

**RESPONSE OF SAN DIEGO GAS & ELECTRIC COMPANY  
TO THE RULING OF ADMINISTRATIVE LAW JUDGE GAMSON**

Vicki L. Thompson  
Senior Counsel for:  
San Diego Gas & Electric Company  
101 Ash Street  
Post Office Box 1831  
San Diego, CA 92112  
Phone: (619) 699-5130  
Fax: (619) 699-5027  
E-Mail: [vthompson@sempra.com](mailto:vthompson@sempra.com)

January 4, 2007

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Application of San Diego Gas & Electric Company (U-902-E) for Adoption of an Advanced Metering Infrastructure Deployment Scenario and Associated Cost Recovery and Rate Design.

Application 05-03-015  
(Filed March 15, 2005)

**RESPONSE OF SAN DIEGO GAS & ELECTRIC COMPANY  
TO THE RULING OF ADMINISTRATIVE LAW JUDGE GAMSON**

**I. Introduction**

Pursuant to the December 15, 2006 Assigned Administrative Law Judge ruling (the Ruling),<sup>1</sup> San Diego Gas & Electric Company (SDG&E) provides the following analysis of a partial advanced metering infrastructure (AMI) deployment scenario in which only SDG&E's C&I customers and residential customers in climate Zone 3 would receive new AMI equipment. The analysis utilizes the demand response assumptions and analysis time frame the Ruling mandates. The Ruling also provides SDG&E with the opportunity to present a targeted roll-out option that the company believes would be cost effective. SDG&E provides this alternative option in Sections II and IV below.

SDG&E appreciates the opportunity to augment the existing record by providing a clear analysis of partial AMI deployment. We trust that this additional evidence will allow the Commission to render a final decision on SDG&E's AMI application that 1) achieves a

---

<sup>1</sup> Administrative Law Judge's Ruling Reopening the Record and Requesting Further Information Regarding San Diego Gas & Electric Company's Advanced Metering Infrastructure Proposal, dated December 15, 2006.

positive outcome for SDG&E customers, and, 2) increases the customers' ability to respond to market conditions and deliver much needed demand response capacity and energy savings.

SDG&E submits the following herein:

Section II – Table 1 – Comparative Business Case Analysis

Table 2 – Comparative Rate Impact Analysis

Graph 1 – Electric System Average Rate Impacts

Graph 2 - Gas System Average Rate Impacts

Section III – ALJ Ruling Partial Deployment Scenario Analysis

Section IV – SDG&E's Alternative Deployment Analysis

Section V – Rate Impact Analysis of Full and Partial Deployment Scenarios

Section VI - Cost and Benefit Scaling Assumptions

Table 3 – Summary of Fixed Costs & Benefits by Category in Partial Deployment Scenario

Table 4 - AMI Information Technology System Components Scalability in Partial Deployment Scenario

Attachments

A: Scaling factors for all costs and benefits

B: Demand response assumptions

C: Climate Zone Map

SDG&E has provided the Energy Division, via overnight Federal Express mail, an electronic copy of the confidential models that support the above analyses, under the terms of Public Utilities Code 583 and General Order 66-C.

## II. Comparative Business Case Cost Benefit Analysis

**TABLE 1**

<b>A.05-03-015 / SDG&amp;E's Comparative AMI Business Case Results</b> <i>Partial deployment scenarios and assumptions as ordered in the December 1, 2006 ALJ Ruling</i> Revenue Requirement – Present Value Loaded, Escalated and Discounted \$2006 (\$millions)								
<b>Assumptions:</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Notes</b>	<b>6</b>	<b>7</b>
Deployment Scenario	<b>Full /As Filed</b>	<b>Partial / Per ALJ Ruling</b>	<b>Full / Per ALJ Ruling</b>	<b>Partial / Per ALJ Ruling</b>	<b>Full / Per ALJ Ruling</b>		<b>Full</b>	<b>Full</b>
Avoided Capacity Value (kW Yr)	\$85	\$52	\$52	\$60	\$60		\$52	\$85
Analysis Period	2007-2038 34 Years	2007-2026/ 17 Years					2007-2029 / 20 Years	
Deployment Residential Zones	2, 3, & 4	3	2, 3, & 4	3	2, 3, & 4		2, 3, & 4	
Other							Includes T-24 PCT impacts and PTR thru 2013, then default CPP	
Terminal Value	Rem Net Book Val	Trailing Benefits	Trailing Benefits	Trailing Benefits	Trailing Benefits		None	None
<b>Costs:</b>								
<b>Capital</b>								
Electric Meters	\$210	\$96	\$171	\$96	\$171		\$175	\$175
Gas Meters	\$2	\$1	\$2	\$1	\$2		\$2	\$2
Gas Modules	\$86	\$37	\$69	\$37	\$69		\$71	\$71
MDMS	\$13	\$10	\$12	\$10	\$12	A	\$12	\$12
Other IT System Costs (ex. Head End Software)	\$5	\$5	\$5	\$5	\$5	B	\$5	\$5
AMI Communication System	\$25	\$21	\$21	\$21	\$21		\$23	\$23
Capitalized Labor	\$122	\$69	\$100	\$69	\$100		\$100	\$100
Capital Contingency	\$44	\$17	\$21	\$17	\$21		\$26	\$26
All Other	\$22	\$15	\$19	\$15	\$19		\$21	\$21
<b>Total Capital Costs</b>	<b>\$530</b>	<b>\$271</b>	<b>\$419</b>	<b>\$271</b>	<b>\$419</b>		<b>\$434</b>	<b>\$434</b>
<b>O&amp;M</b>								
O&M Contingency	\$9	\$4	\$9	\$4	\$9	C	\$5	\$5
All other O&M Costs	\$203	\$131	\$155	\$131	\$155		\$169	\$169
<b>Total O&amp;M Costs</b>	<b>\$212</b>	<b>\$135</b>	<b>\$164</b>	<b>\$135</b>	<b>\$164</b>		<b>\$174</b>	<b>\$174</b>
<b>Total Costs</b>	<b>\$741</b>	<b>\$406</b>	<b>\$583</b>	<b>\$406</b>	<b>\$583</b>		<b>\$608</b>	<b>\$608</b>
<b>Benefits:</b>								
<b>Operational</b>								
O&M Operational Benefits	\$304	\$105	\$211	\$105	\$211		\$240	\$240
Capital Operational Benefits	\$57	\$31	\$46	\$31	\$46		\$52	\$52
Theft, OBR, Meter Calibration	\$69	\$24	\$49	\$24	\$49		\$55	\$55
Transmission Deferral	\$11	\$8	\$13	\$8	\$13		\$12	\$12
<b>Demand Response</b>								
Information Feedback	\$0	\$19	\$19	\$19	\$19	D	\$19	\$19
Avoided Capacity & Energy								
Residential	\$123	\$26	\$40	\$29	\$45		\$80	\$126
Title 24 PCTs -residential	\$0	\$0	\$0	\$0	\$0	L	\$16	\$25
C&I, < 20kW	\$14	\$7	\$7	\$8	\$8	F,K	\$7	\$11
C&I, 20-200kW	\$63	\$30	\$30	\$35	\$35	G,K	\$30	\$49
C&I, > 200kW	\$62	\$31	\$31	\$36	\$36	H,K	\$36	\$58
<b>Other</b>								
Avoided DRP	\$98	\$40	\$40	\$40	\$40	I	\$81	\$81
Residual Book Value	\$10					J		
Terminal value, net O&M benefits		\$8	\$16	\$8	\$16		\$0	\$0
Terminal value, DR benefits		\$7	\$6	\$8	\$7		\$0	\$0
<b>Total Benefits</b>	<b>\$801</b>	<b>\$336</b>	<b>\$508</b>	<b>\$351</b>	<b>\$524</b>		<b>\$626</b>	<b>\$725</b>
<b>Net benefits (costs)</b>	<b>\$60</b>	<b>(\$70)</b>	<b>(\$75)</b>	<b>(\$55)</b>	<b>(\$59)</b>		<b>\$18</b>	<b>\$117</b>
<b>Notes and Comments:</b>								
	A Full implementation costs							

<b>B</b>	All IT system costs are listed in Table 4 below and an estimate of the appropriate scaleable factor. The IT infrastructure is not scalable, except for the data storage system which can be scaled by the number of meters deployed.
<b>C</b>	Assumed \$583.5 million for total costs, before adjusting for the limited residential roll-out (equaling DRA's 17-year cost estimate of \$607 million minus a \$23.5 million adjustment for risk-sharing).
<b>D</b>	DRA testimony of Ted Geilen, page 10-1
<b>E</b>	PTR Rate - Assumes residential demand response benefits as proposed by DRA, at a 50% participation level.
<b>F</b>	Assumes a participation rate of 33% per SDG&E's proposal.
<b>G</b>	Assumes a participation rate of 100% per SDG&E's proposal.
<b>H</b>	Assumes a participation rate of 100% per SDG&E's proposal.
<b>I</b>	Reduced per DRA's Table 5-2
<b>J</b>	All costs are shown net of book value. As a result, residual book value benefits are shown for informational purposes only; they are not included in total benefits (only applicable to scenario 1).
<b>K</b>	DR benefits for SDG&E Dec. '06 Scenarios are preliminary and subject to check. DR benefits for \$52/kW-yr. case extrapolated from \$60/kW-yr. results.
<b>L</b>	Assumes expected adoption of Title 24 standards that would require PCTs in all new residential construction and remodels beginning in 2008.

//

//

//

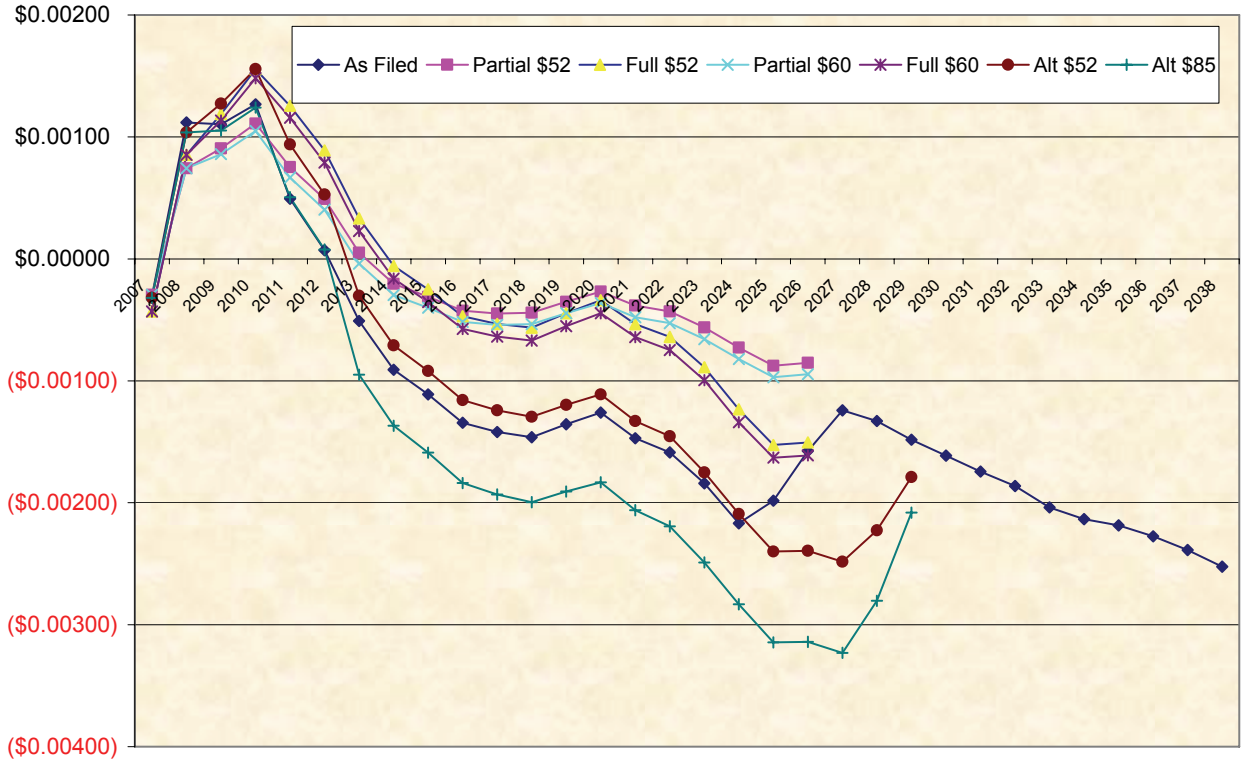
TABLE 2

**Comparative Rate Impact Analysis**

	1	2	3	4	5	6	7
	Full /As Filed	Partial / Per ALJ Ruling	Full / Per ALJ Ruling	Partial / Per ALJ Ruling	Full / Per ALJ Ruling	Full	Full
Year	\$85kW-Year	\$52kW-Year	\$52kW-Year	\$60kW-Year	\$60kW-Year	\$52kW-Year	\$85kW-Year
<b>ELECTRIC -- SAR Impact, RR Plus Other Benefits (\$ per kWh)</b>							
2007	(\$0.00030)	(\$0.00029)	(\$0.00043)	(\$0.00029)	(\$0.00043)	(\$0.00032)	(\$0.00032)
2008	\$0.00112	\$0.00074	\$0.00085	\$0.00074	\$0.00085	\$0.00104	\$0.00104
2009	\$0.00110	\$0.00082	\$0.00110	\$0.00077	\$0.00104	\$0.00119	\$0.00097
2010	\$0.00127	\$0.00103	\$0.00147	\$0.00097	\$0.00140	\$0.00148	\$0.00116
2011	\$0.00049	\$0.00068	\$0.00118	\$0.00059	\$0.00108	\$0.00087	\$0.00044
2012	\$0.00007	\$0.00042	\$0.00082	\$0.00034	\$0.00072	\$0.00047	\$0.00001
2013	(\$0.00051)	(\$0.00001)	\$0.00027	(\$0.00010)	\$0.00017	(\$0.00036)	(\$0.00101)
2014	(\$0.00091)	(\$0.00026)	(\$0.00011)	(\$0.00035)	(\$0.00022)	(\$0.00076)	(\$0.00142)
2015	(\$0.00111)	(\$0.00036)	(\$0.00030)	(\$0.00045)	(\$0.00040)	(\$0.00097)	(\$0.00164)
2016	(\$0.00134)	(\$0.00047)	(\$0.00052)	(\$0.00056)	(\$0.00062)	(\$0.00120)	(\$0.00188)
2017	(\$0.00142)	(\$0.00049)	(\$0.00057)	(\$0.00058)	(\$0.00068)	(\$0.00128)	(\$0.00197)
2018	(\$0.00146)	(\$0.00048)	(\$0.00060)	(\$0.00057)	(\$0.00071)	(\$0.00133)	(\$0.00203)
2019	(\$0.00136)	(\$0.00039)	(\$0.00048)	(\$0.00048)	(\$0.00059)	(\$0.00123)	(\$0.00194)
2020	(\$0.00126)	(\$0.00030)	(\$0.00037)	(\$0.00039)	(\$0.00048)	(\$0.00114)	(\$0.00186)
2021	(\$0.00147)	(\$0.00041)	(\$0.00056)	(\$0.00051)	(\$0.00067)	(\$0.00136)	(\$0.00209)
2022	(\$0.00159)	(\$0.00046)	(\$0.00067)	(\$0.00055)	(\$0.00077)	(\$0.00148)	(\$0.00222)
2023	(\$0.00184)	(\$0.00058)	(\$0.00091)	(\$0.00068)	(\$0.00102)	(\$0.00177)	(\$0.00251)
2024	(\$0.00217)	(\$0.00074)	(\$0.00125)	(\$0.00084)	(\$0.00136)	(\$0.00211)	(\$0.00285)
2025	(\$0.00198)	(\$0.00089)	(\$0.00154)	(\$0.00099)	(\$0.00165)	(\$0.00242)	(\$0.00316)
2026	(\$0.00158)	(\$0.00086)	(\$0.00152)	(\$0.00096)	(\$0.00163)	(\$0.00241)	(\$0.00316)
2027	(\$0.00124)					(\$0.00250)	(\$0.00325)
2028	(\$0.00133)					(\$0.00224)	(\$0.00282)
2029	(\$0.00148)					(\$0.00180)	(\$0.00209)
2030	(\$0.00161)						
2031	(\$0.00174)						
2032	(\$0.00186)						
2033	(\$0.00204)						
2034	(\$0.00213)						
2035	(\$0.00219)						
2036	(\$0.00228)						
2037	(\$0.00239)						
2038	(\$0.00252)						
<b>GAS -- SAR Impact, RR Plus Other Benefits (\$ per Therm)</b>							
2007	(\$0.00055)	(\$0.00066)	(\$0.00135)	(\$0.00066)	(\$0.00135)	(\$0.00075)	(\$0.00075)
2008	\$0.01017	\$0.00696	\$0.00840	\$0.00696	\$0.00840	\$0.00944	\$0.00944
2009	\$0.01741	\$0.01231	\$0.01497	\$0.01231	\$0.01497	\$0.01633	\$0.01633
2010	\$0.02002	\$0.01420	\$0.01744	\$0.01420	\$0.01744	\$0.01873	\$0.01873
2011	\$0.01667	\$0.01316	\$0.01596	\$0.01316	\$0.01596	\$0.01573	\$0.01573
2012	\$0.01419	\$0.01130	\$0.01364	\$0.01130	\$0.01364	\$0.01342	\$0.01342
2013	\$0.01066	\$0.00863	\$0.01013	\$0.00863	\$0.01013	\$0.01007	\$0.01007
2014	\$0.00919	\$0.00750	\$0.00867	\$0.00750	\$0.00867	\$0.00863	\$0.00863
2015	\$0.00785	\$0.00672	\$0.00736	\$0.00672	\$0.00736	\$0.00734	\$0.00734
2016	\$0.00713	\$0.00644	\$0.00666	\$0.00644	\$0.00666	\$0.00666	\$0.00666
2017	\$0.00643	\$0.00622	\$0.00598	\$0.00622	\$0.00598	\$0.00599	\$0.00599
2018	\$0.00581	\$0.00610	\$0.00538	\$0.00610	\$0.00538	\$0.00541	\$0.00541
2019	\$0.00531	\$0.00609	\$0.00490	\$0.00609	\$0.00490	\$0.00493	\$0.00493
2020	\$0.00493	\$0.00612	\$0.00453	\$0.00612	\$0.00453	\$0.00458	\$0.00458
2021	\$0.00326	\$0.00498	\$0.00288	\$0.00498	\$0.00288	\$0.00294	\$0.00294
2022	\$0.00253	\$0.00472	\$0.00217	\$0.00472	\$0.00217	\$0.00224	\$0.00224
2023	\$0.00081	\$0.00389	\$0.00052	\$0.00389	\$0.00052	\$0.00014	\$0.00014
2024	(\$0.00141)	\$0.00270	(\$0.00196)	\$0.00270	(\$0.00196)	(\$0.00220)	(\$0.00220)
2025	\$0.00036	\$0.00163	(\$0.00417)	\$0.00163	(\$0.00417)	(\$0.00444)	(\$0.00444)
2026	\$0.00367	\$0.00192	(\$0.00406)	\$0.00192	(\$0.00406)	(\$0.00420)	(\$0.00420)
2027	\$0.00572					(\$0.00491)	(\$0.00491)
2028	\$0.00458					(\$0.00529)	(\$0.00529)
2029	\$0.00283					(\$0.00585)	(\$0.00585)
2030	\$0.00166						
2031	\$0.00061						
2032	(\$0.00024)						
2033	(\$0.00174)						
2034	(\$0.00251)						
2035	(\$0.00268)						
2036	(\$0.00326)						
2037	(\$0.00422)						
2038	(\$0.00585)						

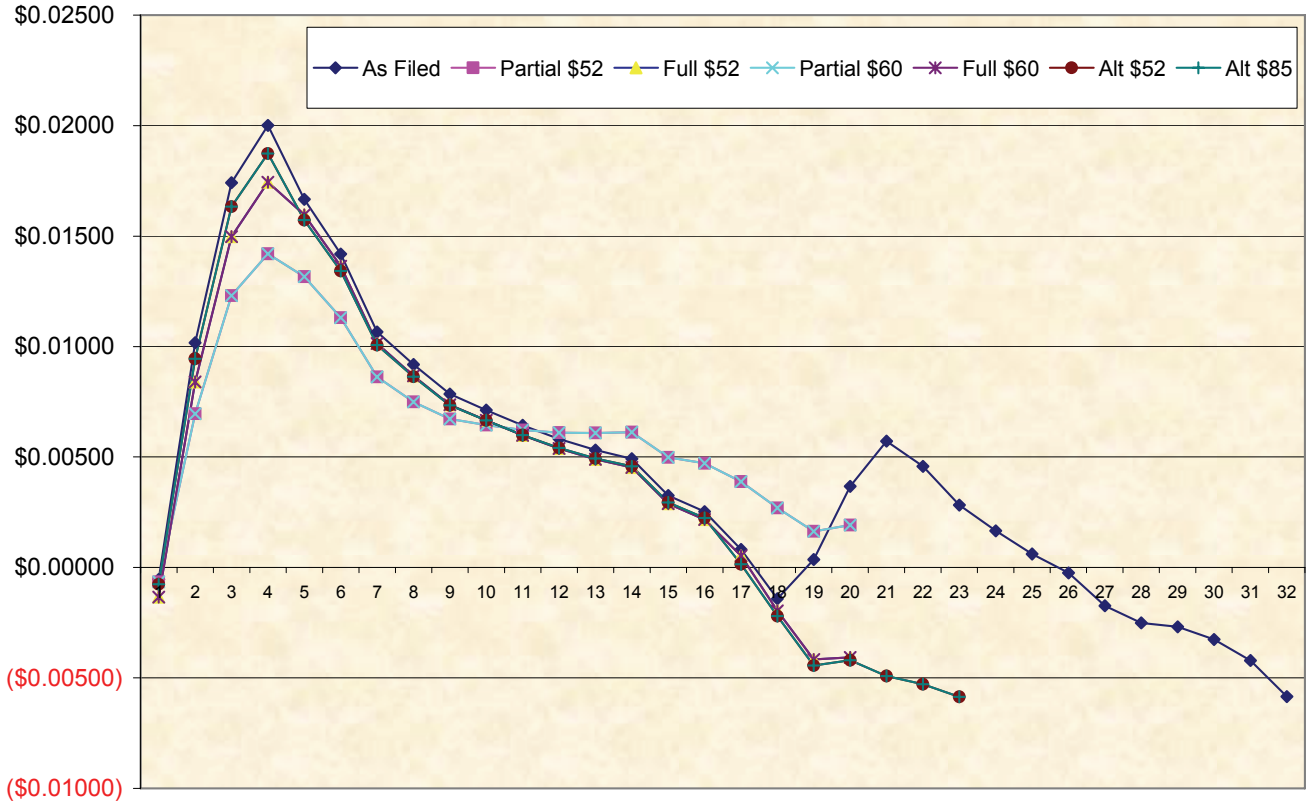
# GRAPH 1

## SDG&E Electric System Average Rate Impacts (\$ per kWh)



# GRAPH 2

## SDG&E Gas System Average Rate Impacts (\$ per Therm)



### **III. ALJ Ruling Partial Deployment Scenario Analysis**

SDG&E completed a set of alternative AMI deployment scenarios utilizing the Ruling's demand response assumptions and term of analysis. Specifically, the Ruling directed SDG&E to complete an AMI case analysis using the following assumptions:

- Assume a 17 year analytical period as proposed by the Division of Ratepayer Advocates (DRA) without replacement expenses for the business case with the analysis ending in 2026
- Assume \$583.5 million for total costs, before adjusting for limited roll-out.
- Assume residential demand response benefits as proposed by DRA, including a participation rate of 50% for residential customers in SDG&E's proposed PTR rate<sup>2</sup>
- Reduce operational benefits by \$14.5 million for Utility Consumer Action Network-identified out-of-scope benefits.
- Assume DRA's numbers on benefits of avoided demand response program costs.
- Include \$19 million for information systems benefits as proposed by DRA.<sup>3</sup>
- Net avoided capacity benefits (value of demand response) of \$60 and \$52 per kW year on nominal fixed levelized basis
- Reduction of capital and O&M expenses to scalable cost components versus fixed cost components.
- Partial deployment scenarios with AMI meters and demand response rates for all Inland climate zone 3 residential customers.
- All commercial and industrial customers (regardless of size) will have AMI meters and demand response rates.

Table 1 compares the various scenario assumptions and results as directed by the Ruling. The scalability factors used in the cost and benefit analysis are included in Attachment A.

Specifically,

- Column 1 shows assumptions and results per SDG&E's filed base case of July 14, 2006 and is identical to the SDG&E column showed in Exhibit 301.

---

<sup>2</sup> The Ruling specifically references the participation rate for residential demand response. SDG&E assumes that the ALJ is using the term "participation" synonymously with SDG&E's assumption for the "awareness" rate. The definitional difference between customer participation, awareness and action were well articulated by Witness Dr. George during cross examination. (TR. Pps 369-370)

<sup>3</sup> Exhibit 101, Chapter 10E, pp. 10E-1.

- Column 2 shows assumptions and results per ALJ Ruling partial deployment scenario with the value of demand response set at \$52 per kW year.
- Column 3 shows assumptions and results per ALJ Ruling a full deployment scenario with the value of demand response set at \$52 per kW year.
- Column 4 shows assumptions and results per ALJ Ruling partial deployment scenario with the value of demand response set at \$60 per kW year.
- Column 5 shows assumptions and results per ALJ Ruling full deployment scenario with the value of demand response set at \$60 per kW year.

### **Partial Deployment Scenario Results**

The results of the analysis demonstrate that SDG&E's AMI business cases are not cost effective under either partial or full AMI deployment if one applies the Ruling's assumptions for the value of demand response (\$60 or \$52 per kW year), the lower residential participation rate of 50% and SDG&E's scalable cost components. The AMI partial deployment business cases are not viable because "scalability" does not reduce costs sufficiently to compensate for the lower value of demand response, the lower participation rate, and the shorter analysis period that does not fully capture the demand response benefit that continues beyond the analysis period. Both the partial and full deployment scenarios have continuing, increasing costs from customer growth with new AMI meters added each year and new meters replacing meter failures during the analysis period. In other words, by the end of 2026, the Ruling's analysis period, approximately 56% of meters will have remaining life, but will show no operational or demand response benefits for their remaining life. Partial scenarios 2 & 4 show net present value of revenue requirements of negative \$75 million and negative \$62 million, respectively. Full deployment scenarios 3 & 5 show net present value of revenue requirements of negative \$83 million and \$68 million, respectively.

#### **IV. SDG&E's Alternative Scenario Assumptions**

Pursuant to the Ruling, SDG&E completed two alternative scenarios in columns 6 and 7 that incorporate the following assumptions:

- Full deployment with the value of demand response ranging from a low of \$52 and high of \$85 per kW year on nominal fixed levelized basis.
- Transition to a default CPP rate (or equivalent demand response rate) for residential customers after the end of AB1X rate cap constraints in 2013 (as presented in the June 16, 2006 Supplemental Testimony submitted SDG&E in response to the ALJ Ruling of May 19, 2006).
- 20 year business case analysis period for meters installed in the initial 2008-2010 deployment period.
- Declining pro-rata benefits per for 20 year analysis period beginning in 2027 through the end 2029 (similar to the methodology accepted in PG&E's AMI case). No additional benefits or costs continue after 2029 even though 24% of the meters have remaining life.
- Implementation of proposed Title 24 provisions requiring all new construction and remodels to have programmable communicating thermostats (PCTs) central air conditioned buildings.<sup>4</sup>
- Implementation of the peak time rebate (PTR) rate for residential customers prior to the end of AB1X with awareness rates during any single PTR event of 50%.

#### **Positive Business Case for SDG&E's Alternative Scenarios**

Using a similar analysis term and "end of life" methodology as adopted in Pacific Gas and Electric Company's (PG&E's) AMI business case, full deployment scenarios show a positive business case ( see Table 1, Columns 6 & 7 showing a positive \$18million and \$117 million), when analyzed using a \$52 to \$85 per kW year range for the value of demand response, a 20 year analysis period (ending in 2029), and incorporating additional demand

---

<sup>4</sup> Need specific cite and language from proposed Title 24 section regarding PCTs.

response benefits that appear to be more certain in light of recent Commission statements. In other words, utilizing the assumptions shown above, results in a positive business case with significant headroom.

### **Hard to Quantify Benefits**

Another area of overlooked value that further supports either deployment scenario is the “hard to quantify and intangible benefits” not included in any of the analyses presented here. ALJ Gamson questioned the existence and “quantifiability” of these benefits during hearings.<sup>5</sup> SDG&E provided a listing of these benefits in its Opening Brief<sup>6</sup> and subsequently has determined a cumulative value range of \$90 - \$387 million for these benefits.

## **V. Rate Impact Analysis of Full and Partial Deployment Scenarios**

Table 2 shows the estimated average system impacts for electric (\$ per kWh) and gas (\$ per therm) rates. Rate impacts from Scenarios 2-5 reflect the 17 year analysis (final year being 2026) for partial and full deployment alternatives with a \$52 per kW year and \$60 per kW year assumption for the value of avoided capacity. Graph 1 indicates the small differences in terms of rate impacts up through 2021. Beginning in 2022, the rate impacts begin to diverge between the full and partial deployment alternatives for Scenarios 2-5. Specifically, Scenarios 2-5 show that customers begin to accrue much greater benefits (decrease in rates) under a full deployment versus partial deployment given the Ruling’s assumptions, beginning in 2022. Scenario 1 shows SDG&E’s July 14, 2006 filed case and Scenarios 6 and 7 show SDG&E’s alternative full deployment cases (20 year analysis) that

---

<sup>5</sup> Transcript p.59, lines 8-24.

<sup>6</sup> Opening Brief, pages 51-53: 1) Implementation of time differentiated rates (TDR) rates. 2) Improved Public Safety. 3) Improved Customer Service and Satisfaction. 4) Environmental benefits. 5) Optimize deployment sequence. 6) Information Feedback. 7) Enabling Technologies Advancements/Developments. 8) Smart Grid benefits. 9) Reading Water meters.

brackets the value of demand response between the low of \$52 per kW year and a high of \$85 per kW year. Scenarios 6 and 7 show significantly greater rate impact benefits which accrue much quicker than the scenarios directed by the ALJ's Ruling. Although SDG&E did not complete a \$60 per kW 20 year analysis scenario, SDG&E's low and high cases of \$52 and \$85 per kW year rate impact results would show a similar curve that would fall between Scenarios 6 and 7.

## **VI. Cost and Benefit Scaling Assumptions**

The ALJ ruling asked for information regarding the scalability of cost and benefits relating to the requested partial deployment scenario described in detail above. SDG&E has analyzed its July 14<sup>th</sup> amended application and identified each "cost and benefits" item as fixed (not scaleable) or variable (scaleable). In its analysis, SDG&E used the scaling assumptions specified in the ALJ ruling.<sup>7</sup> However, certain cost and benefits could not be scaled proportional to the number of meters being deployed in the requested partial deployment scenario. In addition to the MDMS costs and benefits that are scaled at 100% of the July 14<sup>th</sup> costs, several other broad categories of costs and benefits were not scaled by the percent of electric meters deployed.

A considerable portion of AMI cost and benefits are fixed, i.e. not scaleable by number of meters deployed. Table 3 summarizes the portion of costs and benefits that are fixed. This table is based on total direct dollars from 2007 to 2029 (excluding overhead loading, cost escalation and before revenue requirements) associated with the Ruling's requested Partial Deployment scenario. A large portion of the IT, Communication, and

---

<sup>7</sup> The ruling requested that SDG&E "Reduce total AMI system costs by 50%, unless certain components are not scaleable at 50% level."

Capitalized Labor is not scaleable in the Ruling’s partial scenario. The explanation for many of these fixed costs are included in Table 4 below. A detailed list of each “costs and benefits” item and the scaling factor applied is included in Attachment A.

**TABLE 3**  
**Summary of Fixed Costs & Benefits by Category**

<b>A.05-03-015 / SDG&amp;E’s Comparative AMI Business Case Results</b>	
<i>Non Scaleable Costs and Benefits of Partial Deployment*</i>	
<b>Costs:</b>	<b>% Fixed (Not Scaleable)</b>
<b>Capital</b>	
Electric Meters	24%
Gas Meters	0%
Gas Modules	26%
MDMS	20%
Other IT System Costs (including Head End Software)	100%
AMI Communication System	76%
Capitalized Labor	53%
Capital Contingency**	100%
All Other	6%
<b>O&amp;M</b>	
O&M Contingency**	100%
All other O&M Costs	49%
<b>Benefits:</b>	
O&M Operational Benefits	27%
Capital Operational Benefits	22%
Theft, OBR, Meter Calibration	0%
Transmission Deferral	0%
*Based on ALJ Requested Partial Deployment: Total Direct Dollars from 2007 to 2029 (excluding overhead loading, cost escalation and before revenue requirements).	
**Risk contingency is scalable as a factor of total costs rather than the number of meters.	

//

//

//

**TABLE 4**

<b>AMI Information Technology System Components Scalability in Partial Deployment Scenario</b>		
<b>IT Component Name</b>	<b>%</b>	<b>Explanation</b>
<b>COSTS</b>		
IT Infrastructure Costs	75	On average the infrastructure impact with a partial deployment will not be significant. Infrastructure necessary to support AMI, but not directly related to the number of meters deployed, will have a small reduction in infrastructure cost (i.e. security, enterprise messaging framework, etc). Infrastructure directly correlated to the number of meters deployed, such as storage, will see a more significant reduction. A partial deployment will not see a 50% reduction in infrastructure cost; a baseline of infrastructure is still necessary to satisfy business requirements (i.e. redundant hardware for disaster recovery).
Enhance legacy systems and integrate with MDMS	100	Systems integration costs will not be affected. The same business processes and integrations will still be required regardless of the number of meters deployed.
Base MDMS Installation without Customization	100	MDMS base installation costs will not be affected. The product deployed in either a partial or full deployment scenario is the same and the base installation of the product does not change.
License and O&M Software Fees	80	Infrastructure software license and O&M fees will be reduced but not to 50%. See explanation above for IT infrastructure cost reduction.
Server Replacements	75	Server replacement cost is directly correlated to the initial infrastructure implementation. Same percentage reduction.
Implement new MDMS	100	MDMS implementation costs will not be affected. MDMS will still need to be configured and customized to support the same business functionality.
License Fees for MDMS	60	MDMS software license is based on the number of AMI meters deployed. The price may not be reduced to 50% as a result of less volume. There may also be less attractive discounting provided by the vendor.
License and O&M Software Fees	60	MDMS maintenance fee is directly correlated to the MDMS software license costs. Same percentage reduction.
Incremental IT Infrastructure O&M FTEs	80	IT Infrastructure O&M FTE counts will decrease with the decrease in infrastructure implemented. Fewer infrastructure equipment to maintain and monitor. See explanation above for IT infrastructure cost reduction.
IT Infrastructure training and other expenses	80	IT Infrastructure training and expense costs will be reduced

		to account for fewer FTE's on the project. See explanation above for IT infrastructure cost reduction.
Incremental Non-IT Infrastructure O&M FTEs	100	Non-IT Infrastructure O&M FTE counts will not be affected. Same functionality being implemented and will require the same number of resources to maintain.
Non-IT Infrastructure training and other expenses	100	Non-IT Infrastructure training and other expenses to remain the same as the system implementation and integration will not be affected. Hence, same number of resources will be required to be trained for those systems.
<b>BENEFITS</b>		
MV90 dollars moved from teeter (05-06)	100	MV90 benefits will not be affected because the plan is to still retire the MV90 system and convert those meters to AMI meters supported through MDMS.
Route Stringing Software Capital	0	
Route Stringing Software Capital - Hardware	0	

## **VI Conclusion**

The Commission must decide whether SDG&E's assumptions cited herein are reasonable, justified by the evidentiary record, and support the public policy direction dictated by the State. Consider the following:

- The Energy Action Plan and Energy Action Plan II are clear. The EAP's "loading order" clearly puts a high value on demand response, and therefore, dynamic rates (time differentiated rates) for all customer segments is the goal of the State.
- The accepted methodology for determining the value of demand response has yet to be developed, but the values cannot be so absurdly low as to reduce the value demand response and, therefore, all but effectively eliminate demand response as one of the first tools to balance energy demand and supply resources.
- The reasonable time frame for ending the AB1X residential rate cap.
- The Statewide Pricing Pilot (SPP) has established demand elasticities for residential customers and can distinguish the elasticities for customers with and without PCTs.
- The "participation" rate has also been vetted and researched during the SPP program, including extensive documentation and analysis by Momentum Intelligence.

- The Commission’s decision on PG&E’s AMI proposal has established a broad context for the business case analysis, including a reasonable term or length for the analysis period, end of life calculation, participation rates for a residential voluntary CPP program, and scalability of specific costs components.

As the analysis above clearly demonstrates, partial deployment of AMI would be bad for SDG&E and worse for its customers. The same is true for a “staggered” deployment scenario whereby SDG&E would install meters for certain customers’ first and complete system-wide deployment if and when the Commission grants further authorization. In the event the Commission decided against full deployment, SDG&E would be forced to manage a permanent disparity in customer service and the attendant customer backlash.

SDG&E is ready, willing and eager to begin full AMI deployment. However, the foregoing analysis demonstrates why SDG&E has no interest in deploying AMI to a subset of its residential customers. As can be seen in the tables above, partial residential deployment is neither cost effective nor equitable to customers and would frustrate SDG&E’s desire to move towards a smarter electric system.

Respectfully submitted,

/s/VICKI L. THOMPSON

---

Vicki L. Thompson  
101 Ash Street  
San Diego CA 92101  
(619) 699-5130  
(619) 699-5027 facsimile  
vthompson@Sempra.com

Senior Counsel for:  
SAN DIEGO GAS & ELECTRIC  
COMPANY

January 4, 2007

Attachment A

Line	Area	Scaleable	Scale	Scaler	Cost Item	Fuel Type	Expense Type	Cost	Benefit	Comments	Area
1	Other	Yes	48%	G	SB-2	Gas	O&M	Benefit	Benefit	gas avoided labor cost.	Labor and Contract Support
2	Other	Yes	48%	G	SB-2	Gas	O&M	Benefit	Benefit	gas avoided vehicle cost.	Gas Materials
3	Other	Yes	50%	E	SB-2	Gas	O&M	Benefit	Benefit	gas avoided equip breakage cost	Gas Materials
4	Other	Yes	48%	G	SB-2	Gas	Capital	Benefit	Benefit	gas avoided MDT replacement	Gas Materials
5	Other	Yes	48%	G	SB-2	Gas	Capital	Benefit	Benefit	gas avoided modem replacement	Gas Materials
6	Other	Yes	50%	E	SB-2	Electric	O&M	Benefit	Benefit	electric avoided labor cost.	Labor and Contract Support
7	Other	Yes	50%	E	SB-2	Electric	O&M	Benefit	Benefit	electric avoided vehicle cost.	Electric Material
8	Other	Yes	50%	E	SB-2	Electric	O&M	Benefit	Benefit	elec avoided equip breakage cost	Electric Material
9	Other	Yes	50%	E	SB-2	Electric	Capital	Benefit	Benefit	elec avoided MDT replacement	Electric Material
10	Other	Yes	50%	E	SB-2	Electric	Capital	Benefit	Benefit	elec avoided modem replacement	Electric Material
11	Other	No	100%	100	M-7	Both G&E	O&M	Cost	Cost	Internal PMO Costs, Labor	
12	Cap Labor	No	100%	100	M-7	Both G&E	Capital	Cost	Cost	Internal PMO Costs, Labor	
13	Cap Labor	No	100%	100	M-7	Both G&E	Capital	Cost	Cost	Internal PMO Costs, Labor	
14	Cap Labor	No	100%	100	M-7	Both G&E	Capital	Cost	Cost	Internal PMO Costs, Labor	
15	Cap Labor	Yes	75%	0.75	I-2	Both G&E	Capital	Cost	Cost	IT Infrastructure Costs	IT Infrastructure & Installation
16	Cap Labor	Yes	75%	0.75	I-2	Both G&E	Capital	Cost	Cost	IT Infrastructure Costs	IT Infrastructure & Installation
17	MDMS	Yes	75%	0.75	I-2	Both G&E	Capital	Cost	Cost	IT Infrastructure Costs	IT Infrastructure & Installation
18	Cap Labor	Yes	75%	0.75	I-2	Both G&E	Capital	Cost	Cost	IT Infrastructure Costs	IT Infrastructure & Installation
19	Cap Labor	Yes	75%	0.75	I-2	Both G&E	Capital	Cost	Cost	IT Infrastructure Costs	IT Infrastructure & Installation
20	MDMS	Yes	75%	0.75	I-2	Both G&E	Capital	Cost	Cost	IT Infrastructure Costs	IT Infrastructure & Installation
21	Cap Labor	Yes	75%	0.75	I-2	Both G&E	Capital	Cost	Cost	IT Infrastructure Costs	IT Infrastructure & Installation
22	Cap Labor	Yes	75%	0.75	I-2	Both G&E	Capital	Cost	Cost	IT Infrastructure Costs	IT Infrastructure & Installation
23	MDMS	Yes	75%	0.75	I-2	Both G&E	Capital	Cost	Cost	IT Infrastructure Costs	IT Infrastructure & Installation
24	Cap Labor	No	100%	100	I-7	Both G&E	Capital	Cost	Cost	Enhance legacy systems and integrate with MDMS	Enhance legacy systems and integrate with MDMS
25	Cap Labor	No	100%	100	I-7	Both G&E	Capital	Cost	Cost	Enhance legacy systems and integrate with MDMS	Enhance legacy systems and integrate with MDMS
26	MDMS	No	100%	100	I-7	Both G&E	Capital	Cost	Cost	Enhance legacy systems and integrate with MDMS	Enhance legacy systems and integrate with MDMS
27	Cap Labor	No	100%	100	I-7	Both G&E	Capital	Cost	Cost	Enhance legacy systems and integrate with MDMS	Enhance legacy systems and integrate with MDMS
28	Cap Labor	No	100%	100	I-7	Both G&E	Capital	Cost	Cost	Enhance legacy systems and integrate with MDMS	Enhance legacy systems and integrate with MDMS
29	MDMS	No	100%	100	I-7	Both G&E	Capital	Cost	Cost	Enhance legacy systems and integrate with MDMS	Enhance legacy systems and integrate with MDMS
30	Cap Labor	No	100%	100	I-7	Both G&E	Capital	Cost	Cost	Enhance legacy systems and integrate with MDMS	Enhance legacy systems and integrate with MDMS
31	Cap Labor	No	100%	100	I-7	Both G&E	Capital	Cost	Cost	Enhance legacy systems and integrate with MDMS	Enhance legacy systems and integrate with MDMS
32	MDMS	No	100%	100	I-7	Both G&E	Capital	Cost	Cost	Enhance legacy systems and integrate with MDMS	Enhance legacy systems and integrate with MDMS
33	Cap Labor	No	100%	100	I-5.1	Both G&E	Capital	Cost	Cost	Base MDMS Installation without Customization	Implement new MDMS
34	Cap Labor	No	100%	100	I-5.1	Both G&E	Capital	Cost	Cost	Base MDMS Installation without Customization	Implement new MDMS
35	Cap Labor	No	100%	100	I-5.1	Both G&E	Capital	Cost	Cost	Base MDMS Installation without Customization	Implement new MDMS
36	MDMS	Yes	80%	0.8	I-12	Both G&E	Capital	Cost	Cost	License and O&M Software Fees	License and Software Fees
37	MDMS	Yes	80%	0.8	I-12	Both G&E	Capital	Cost	Cost	License and O&M Software Fees	License and Software Fees
38	MDMS	Yes	80%	0.8	I-12	Both G&E	Capital	Cost	Cost	License and O&M Software Fees	License and Software Fees

Attachment A

Line	Area	Scaleable	Scale	Scaler	Cost Item	Fuel Type	Expense Type	Cost	Benefit	Comments	Area
39	Other	Yes	80%	0.8	I-12	Both G&E	O&M	Cost	Cost	License and O&M Software Fees	Non-Labor
40	Other	Yes	80%	0.8	I-13	Both G&E	O&M	Cost	Cost	Incremental IT Infrastructure O&M FTEs	Labor
41	Other	Yes	80%	0.8	I-13	Both G&E	O&M	Cost	Cost	IT Infrastructure training and other expenses	Non-Labor
42	Other	Yes	80%	0.8	I-14	Both G&E	O&M	Cost	Cost	Incremental Non-IT Infrastructure O&M FTEs	Labor
43	Other	Yes	80%	0.8	I-14	Both G&E	O&M	Cost	Cost	Non-IT Infrastructure training and other expenses	Non-Labor
44	Cap Labor	Yes	75%	0.75	I-16	Both G&E	Capital	Cost	Cost	Server Replacements	Server Replacement
45	Other Capital	Yes	75%	0.75	I-16	Both G&E	Capital	Cost	Cost	Server Replacements	Server Replacement
46	Other	No	100%	100	MB-15	Both G&E	Capital	Benefit	Benefit	MV90 dollars moved from teeter (05-06)	Labor
47	Other	No	100%	100	MB-15	Both G&E	Capital	Benefit	Benefit	MV90 dollars moved from teeter (05-06)	Non-Labor
48	Other	No	100%	100	MB-15	Both G&E	Capital	Benefit	Benefit	MV90 dollars moved from teeter (05-06) - Hardware	Non-Labor
49	Other	Yes	0%	0	MB-15	Both G&E	Capital	Benefit	Benefit	Route Stringing Software Capital	Labor
50	Other	Yes	0%	0	MB-15	Both G&E	Capital	Benefit	Benefit	Route Stringing Software Capital	Non-Labor
51	Other	Yes	50%	E	MS-8	Electric	O&M	Cost	Cost		0
52	Other	Yes	50%	E	SB-1	Electric	O&M	Benefit	Benefit	Rebills benefit	0
53	Other	Yes	50%	E	CB-4	Electric	O&M	Benefit	Benefit	Salaries and incr complex	
54	Other	No	100%	100	I-18	Electric	O&M	Cost	Cost	Rebills benefit	
55	Other	Yes	50%	E	SB-3	Electric	O&M	Benefit	Benefit	Theft+MeterErr+OBR	
56	Other	Yes	50%	E	SB-7	Electric	O&M	Benefit	Benefit	Late read cash ben	
57	Other	Yes	50%	E	CU-1	Electric	O&M	Cost	Cost	Change meters	
58	Other	Yes	50%	E	M-5	Electric	O&M	Cost	Cost	Startup costs	
59	Other	Yes	50%	E	M-16	Electric	O&M	Cost	Cost	MRP Labor	
60	Other	Yes	48%	G	CB-1	Gas	O&M	Benefit	Benefit	Reduction in Access related issues	
61	Other	Yes	50%	E	CB-1	Electric	O&M	Benefit	Benefit	Reduction in Access related issues	
62	Other	Yes	48%	G	MB-1	Gas	O&M	Benefit	Benefit	Fleet Vehicles	
63	Other	Yes	50%	E	MB-1	Electric	O&M	Benefit	Benefit	Fleet Vehicles	
64	Other	No	100%	100	MB-1	Both G&E	Capital	Benefit	Benefit	Handheld data coll dev-excludes MV90 \$\$	
65	Other	Yes	48%	G	MB-1	Gas	O&M	Benefit	Benefit	Services (Forms, Leased veh, Itron HHH)	
66	Other	Yes	50%	E	MB-1	Electric	O&M	Benefit	Benefit	Services (Forms, Leased veh, Itron HHH)	
67	Other	Yes	48%	G	MB-2	Gas	O&M	Benefit	Benefit	Reduced misc. expenses (materials)	
68	Other	Yes	50%	E	MB-2	Electric	O&M	Benefit	Benefit	Reduced misc. expenses (materials)	
69	Other	Yes	50%	E	MB-12	Both G&E	O&M	Benefit	Benefit	Safety benefits	
70	Other	No	100%	100	MS-1	Gas	O&M	Cost	Cost	Meter route admin-keep workloads balanced	
71	Other	No	100%	100	MS-1	Electric	O&M	Cost	Cost	Meter route admin-keep workloads balanced	
72	Other	Yes	48%	G	SB-1	Gas	O&M	Benefit	Benefit	Reduction in Meter Readers - non-Union	
73	Other	Yes	50%	E	SB-1	Electric	O&M	Benefit	Benefit	Reduction in Meter Readers - non-Union	
74	Other	Yes	48%	G	SB-1	Gas	O&M	Benefit	Benefit	Reduction in Meter Readers - Union	
75	Other	Yes	50%	E	SB-1	Electric	O&M	Benefit	Benefit	Reduction in Meter Readers - Union	
76	Other	Yes	48%	G	CB-4	Gas	O&M	Benefit	Benefit	Late reads	

Attachment A

<u>Line</u>	<u>Area</u>	<u>Scaleable</u>	<u>Scale</u>	<u>Scaler</u>	<u>Cost Item</u>	<u>Fuel Type</u>	<u>Expense Type</u>	<u>Cost</u>	<u>Benefit</u>	<u>Comments</u>	<u>Area</u>
77	Other	Yes	48%	G	CB-4	Gas	O&M	Benefit	Cost	Rebills	
78	Other	Yes	48%	G	CU-1	Gas	O&M	Cost	Cost	Change meters	
79	Other	Yes	48%	G	SB-3	Gas	O&M	Benefit	Benefit	Theft+MeterErr+OBR	
80	Gas Modules	No	100%	100	GS-1	Gas	Capital	Cost	Cost	new business module costs in 2011-2022.	Gas Deployment Materials
81	Gas Modules	Yes	48%	G	GS-1	Gas	Capital	Cost	Cost	Deployment Modules	Gas Deployment Materials
82	Cap Labor	Yes	48%	G	GS-1	Gas	Capital	Cost	Cost	QA sample testing of modules during deployment.	Deployment Labor and Contract Support
83	Gas Meters	Yes	48%	G	GS-2	Gas	Capital	Cost	Cost	Replaced meters.	Gas Deployment Materials
84	Other	Yes	48%	G	MB-4	Gas	Capital	Benefit	Benefit	Avoided gas meter replacement cost in absence of AI Gas Materials	AI Gas Materials
85	Other	Yes	0%	x	GS-8	Gas	O&M	Cost	Cost	Contracted battery maintenance.	Labor and Contract Support
86	Other	Yes	0%	x	GS-8	Gas	O&M	Cost	Cost	Internal battery maintenance.	Labor and Contract Support
87	Other	Yes	48%	G	GS-8	Gas	O&M	Cost	Cost	Internal corrective maint.	Labor and Contract Support
88	Gas Modules	Yes	48%	G	GS-8	Gas	Capital	Cost	Cost	New modules for corrective maint.	Gas Maintenance Materials
89	Other	Yes	0%	x	GS-8	Gas	O&M	Cost	Cost	Refurbished modules with new batteries. Large \$ 9 yr	Gas Materials
90	Other	Yes	0%	x	GS-8	Gas	O&M	Cost	Cost	QA sample testing of refurbished modules with new b	Labor and Contract Support
91	Other	Yes	48%	G	GS-8	Gas	O&M	Cost	Cost	Vehicle cost for corrective maint.	Gas Materials
92	Other	Yes	48%	G	GS-8	Gas	O&M	Cost	Cost	Vehicle cost for internal battery maint.	Gas Materials
93	Other	Yes	0%	x	M-15	Gas	O&M	Cost	Cost	-	Gas Materials
94	Other	Yes	0%	x	MS-2	Gas	O&M	Cost	Cost	administration labor.	Labor and Contract Support
95	Other	Yes	0%	x	MS-2	Gas	O&M	Cost	Cost	administration vehicles.	Gas Materials
96	Cap Labor	Yes	0%	x	MS-5	Gas	Capital	Cost	Cost	contract installation labor. - VENDOR COST for Marc	Deployment Labor and Contract Support
97	Other	Yes	0%	x	MS-5	Gas	O&M	Cost	Cost	contract installation labor. - VENDOR COST for Marc	Labor and Contract Support
98	Other	Yes	48%	G	MB-13	Gas	Capital	Benefit	Benefit	avoided labor cost to replace gas meters in absence	( Gas Labor
99	Other	Yes	48%	G	MB-13	Gas	O&M	Benefit	Benefit	avoided labor cost to replace gas meters in absence	( Labor and Contract Support
100	Other	No	100%	100	MS-11	Gas	O&M	Cost	Cost	installation and maintenance training.	Labor and Contract Support
101	Gas Modules	No	100%	100	GS-8	Gas	Capital	Cost	Cost	Pulser material corrective maintenance costs	Gas Maintenance Materials
102	Other	No	100%	100	GS-8	Gas	O&M	Cost	Cost	Pulser labor corrective maintenance costs	Labor and Contract Support
103	Other	No	100%	100	GS-8	Gas	O&M	Cost	Cost	Vehicle cost for pulser corrective maint.	Gas Materials
104	Other	No	100%	100	CU-2	Electric	O&M	Cost	Cost	Increased customer phone call activity (large customers)	
105	Other	No	100%	100	CU-2	Electric	O&M	Cost	Cost	materials	
106	Other	No	100%	100	CU-5	Electric	O&M	Cost	Cost	Additional rate analysis (large customers)	
107	Other	No	100%	100	CU-5	Electric	O&M	Cost	Cost	materials	
108	Other	No	100%	100	CU-9	Electric	O&M	Cost	Cost	Customer support for internet data access, analysis and usage	
109	Other	No	100%	100	CU-9	Electric	O&M	Cost	Cost	materials	
110	Other	No	100%	100	MS-2	Electric	O&M	Cost	Cost	Coordination with installer workforce (large customers, military)	
111	Other	No	100%	100	MS-2	Electric	O&M	Cost	Cost	materials	
112	Other	No	100%	100	M-5	Electric	O&M	Cost	Cost	Training	
113	Other Capital	Yes	0%	x	MS-10	Electric	Capital	Cost	Cost	Warehousing for deployment	
114	Other	Yes	0%	x	MS-10	Electric	O&M	Cost	Cost	Facilities	

Attachment A

<u>Line</u>	<u>Area</u>	<u>Scaleable</u>	<u>Scale</u>	<u>Scaler</u>	<u>Cost Item</u>	<u>Fuel Type</u>	<u>Expense Type</u>	<u>Cost</u>	<u>Benefit</u>	<u>Comments</u>	<u>Area</u>
115	Other Capital	Yes	0%	x	MS-10	Gas	Capital	Cost		Facilities	
116	Other	Yes	0%	x	MS-10	Gas	O&M	Cost		Facilities	
117	Other	No	100%	100	MS-11	Electric	O&M	Cost		Training (meter installers, handlers, shippers)	Labor and Contract Support
118	Other	No	100%	100	SB-5	Electric	O&M	Benefit		Possible reprogram rather than meter change	Labor and Contract Support
119	Other	No	100%	100	M-5	Electric	O&M	Cost		Employee training for deployment and O&M of new s)	Labor and Contract Support
120	Other	No	100%	100	M-5	Electric	O&M	Cost		Employee training for deployment and O&M of new s)	Labor and Contract Support
121	Other	No	100%	100	MS-11	Electric	O&M	Cost		Training (meter installers, handlers, shippers)	Labor and Contract Support
122	Other	No	100%	100	SB-5	Electric	O&M	Benefit		Possible reprogram rather than meter change	Labor and Contract Support
123	Cap Labor	Yes	50%	E	MS-7	Electric	Capital	Cost		Panel reconfiguration/replacement costs (A base, oth	Deployment Labor and Contract Support
124	Elec Mtrs / Elec	Yes	50%	E	MS-7	Electric	Capital	Cost		Panel reconfiguration/replacement costs (A base, oth	Electric Deployment Materials
125	Elec Mtrs / Elec	Yes	50%	E	MS-4	Electric	Capital	Cost		Installation and testing equipment costs (tools, equipr	Electric Deployment Materials
126	Other	Yes	50%	E	MS-2	Electric	O&M	Cost		Administration of contracts/supervision of installer wo	Labor and Contract Support
127	Other	Yes	50%	E	MS-5	Electric	O&M	Cost		Installation labor (incl workers comp, P&B, payroll tax	Labor and Contract Support
128	Cap Labor	Yes	50%	E	MS-5.5	Electric	Capital	Cost		Installation labor (incl workers comp, P&B, payroll tax	Deployment Labor and Contract Support
129	Other	Yes	0%	0	CB-10	Electric	Capital	Benefit		Load Research sample - tariff sample	
130	Other	Yes	0%	0	CB-10	Electric	Capital	Benefit		DLP Sample	
131	Other	Yes	0%	0	CB-10	Electric	Capital	Benefit		Title 20 requirement samples	
132	Other	Yes	0%	0	CB-10	Electric	Capital	Benefit		Special Projects M&E (i.e. CPP smart tstats)	
133	Other	Yes	0%	0	CB-10	Electric	Capital	Benefit		Future M&E (i.e. AC cycling other DRP)	
134	Other	Yes	0%	X	CB-10	Electric	O&M	Benefit		Avoided annual communications cost.	
135	Other	No	100%	100	CU-5	Electric	O&M	Cost		Load Research labor to validate, process and analyze AMI	interval data
136	Other	No	100%	100	C-15.5	Electric	O&M	Cost		POWER CONSUMPTION FROM GROWTH AMI METERS	
137	Other	Yes	50%	E	C-15.5	Electric	O&M	Cost		POWER CONSUMPTION FROM NEW AMI METERS	
138	Other Capital	No	100%	100	M-15	Electric	Capital	Cost		TECHNOLOGY RISK OF GROWTH AMI METERS	
139	Other Capital	No	100%	100	M-15	Electric	Capital	Cost		TECHNOLOGY RISK OF NEW AMI METERS	
140	Other	No	100%	100	MB-3	Electric	Capital	Benefit		NEW METER GROWTH ELIMINATED NEED FOR ELECTROMECHANICAL METER & CLOCK METER HAI	
141	Other	No	100%	100	MS-12.5	Electric	O&M	Cost		BATTERY REPLACEMENT IN GROWTH COMMERCIAL METERS	
142	Other	No	100%	100	MS-12.5	Electric	O&M	Cost		FTE (Engineer)	
143	Other	No	100%	100	MS-12.5	Electric	O&M	Cost		BATTERY REPLACEMENT IN AMI COMMERCIAL METERS	
144	Elec Mtrs / Elec	No	100%	100	MS-14	Electric	Capital	Cost		REPLACEMENT METERS FOR ANNUAL FAILURE RATES OF GROWTH AMI POPULATION	
145	Elec Mtrs / Elec	Yes	50%	E	MS-14	Electric	Capital	Cost		REPLACEMENT METERS FOR ANNUAL FAILURE RATES OF NEW AMI POPULATION	
146	Elec Mtrs / Elec	No	100%	100	MS-3	Electric	Capital	Cost		NEW METER GROWTH ADDED COSTS FOR AMI + METER	
147	Elec Mtrs / Elec	Yes	50%	E	MS-3	Electric	Capital	Cost		EXISTING METER REPLACEMENT WITH AMI FUNCTIONAL METER	
148	Other	Yes	0%	x	SB-7	Electric	O&M	Benefit			
149	Other	No	100%	100	M-8	Electric	O&M	Cost		AD2 Recruiter - incremental labor in HR org to support hiring	
150	Other	No	100%	100	M-8	Electric	O&M	Cost		All incremental non-labor (costs assoc w/recruiter, relocation exp, advertising)	
151	Other	No	100%	100	M-7	Both G&E	O&M	Cost		Incremental facilities O&M costs (office Space)	
152	Other Capital	No	100%	100	M-7	Both G&E	Capital	Cost		Incremental facilities Capital costs (office Space)	

Attachment A

Line	Area	Scaleable	Scale	Scaler	Cost Item	Fuel Type	Expense Type	Cost	Benefit	Comments	Area
153	Other	No	100%	100	CU-2	Electric	O&M	Cost		Customer Surveys/Investigations	
154	Other	Yes	0%	x	CU-2	Electric	O&M	Cost			
155	Other	No	100%	100	CU-9	Electric	O&M	Cost		Web Technologist	
156	Other	Yes	50%	E	CU-8	Electric	O&M	Cost		Community Outreach	
157	Other	Yes	50%	E	CU-8	Electric	O&M	Cost		Bill Inserts	
158	Other	No	100%	100	CU-8	Electric	O&M	Cost		Focus groups/fact sheets	
159	Other	No	100%	100	CU-10	Electric	O&M	Cost		Mass media advertising	
160	Other	Yes	0%	x	M-5	Electric	O&M	Cost			
161	Other	Yes	50%	E	M-14	Electric	O&M	Cost		DR Program Marketing	
162	Other Capital	Yes	59%	MW	S-14.1	Electric	Capital	Cost		a) Transmission Line Projects Deferred by AMI	02/27/06
163	Other Capital	Yes	59%	MW	S-9.1	Electric	Capital	Cost		b) Load Forecasting Data Accuracy Benefits	
164	Other	Yes	59%	MW	SB-10.1	Electric	Capital	Benefit		a) Improvements in Capital Addition Efficiency,	CAPEX, Xfmr Sizing, Cap Banks Locating
165	Other	Yes	50%	E	SB-10.2	Electric	O&M	Benefit		d) Eliminate Other Load Reads - Xfmr Loading	
166	Other	Yes	59%	MW	SB-14.1	Electric	Capital	Benefit		a) Transmission Line Projects Deferred by AMI	02/27/06
167	Other	Yes	59%	MW	SB-14.2	Electric	Capital	Benefit		a) Distribution Capacity Project Reductions	02/27/06
168	Other	Yes	50%	E	SB-6.1	Electric	O&M	Benefit		a) Customer Outage Calls	
169	Other	Yes	50%	E	SB-6.2	Electric	O&M	Benefit		b) Automated Outage Analysis, c) Crew Deployment Improvements, d) Emergency and Planned Switching Su	
170	Other	Yes	59%	MW	SB-9.1	Electric	Capital	Benefit		b) Load Forecasting Data Accuracy Benefits	
171	Other	Yes	50%	E	SB-9.2	Electric	O&M	Benefit		c) Eliminate Drag Hand Reads	
172	Cap Labor	No	100%	100	C-2	Both G&E	Capital	Cost		Perform and review site surveys to determine placement of network equipment	
173	Cap Labor	No	100%	100	C-3	Both G&E	Capital	Cost		Mapping of network equipment on company facilities (asset facility mapping)	
174	Cap Labor	No	100%	100	C-6.1	Both G&E	Capital	Cost		Administration of contracts/supervision of installer workforce	
175	AMI Comm Co	No	100%	100	C-6.3	Both G&E	Capital	Cost		Auxiliary equipment (tools equip vehicle).	
176	Cap Labor	No	100%	100	C-6.5	Both G&E	Capital	Cost		Auxiliary equipment (labor external contractors ).	
177	Cap Labor	No	100%	100	C-7	Both G&E	Capital	Cost		Costs of Pole replacement - to "fit" concentrators	
178	Cap Labor	No	100%	100	C-9	Both G&E	Capital	Cost		Install costs of Cross arms (e.g. streetlight arms for pole top installations) and other mounting	
179	AMI Comm Co	No	100%	100	C-10	Both G&E	Capital	Cost		Purchase network communications equipment and hardware	
180	Cap Labor	No	100%	100	C-11	Both G&E	Capital	Cost		Training for installation of WAN/LAN equipment (including install labor for wireless circuits)	
181	Other	No	100%	100	C-12.5	Both G&E	O&M	Cost		Cost of attaching comm. concentrators (e.g., rent or lease charges by cities or other 3rd parties-not owned by	
182	Other	No	100%	100	C-14	Both G&E	O&M	Cost		Dispatching and O&M of field LAN/WAN and infrastructure equipment	
183	Other	No	100%	100	C-14.5	Both G&E	O&M	Cost		Dispatching and O&M of field LAN/WAN and infrastructure equipment	
184	Other	No	100%	100	C-15	Both G&E	O&M	Cost		Electric power consumed by LAN/WAN equipment and/or meter modules	
185	Cap Labor	No	100%	100	I-1	Both G&E	Capital	Cost		Network planning and engineering - coverage studies, technology selection, field testing & engineering	
186	Other Capital	No	100%	100	M-15	Both G&E	Capital	Cost		Risk contingencies (e.g., technology obsolescence/reliability)	
187	Other	No	100%	100	MS-12.5	Both G&E	O&M	Cost		Additional costs to O&M/more complex metering & comm infrastructure (labor, tools, equip, vehicles)	
188	Other	Yes	48%	G	CU-2	Gas	O&M	Cost		Gas Meter Change Only	
189	Other	No	100%	100	CU-2	Electric	O&M	Cost		Electric Meter Change, Rate Change & Reliability Signal	
190	Other	Yes	48%	G	SB-4	Gas	O&M	Benefit		Full Gas Benefit	

Attachment A

Line	Area	Scaleable	Scale	Scaler	Cost Item	Fuel Type	Expense Type	Cost	Benefit	Comments	Area
191	Other	Yes	50%	E	SB-4	Electric	O&M	Benefit	Benefit	Full Electric Benefit	
192	Other	No	100%	100	MS-12	Electric	O&M	Cost	Cost	PCT Two-way communicating thermostat	PCT
193	Other	No	100%	100	MS-12	Electric	O&M	Cost	Cost	PCT Cost to install PCTs at premise	PCT
194	Other	Yes	0%	x	MB-2	Electric	Capital	Benefit	Benefit	DRP Cost Reductions--Capital	
195	Other	No	100%	DRA	MB-2	Electric	O&M	Benefit	Benefit	DRP Cost Reductions--Labor	
196	Other	No	100%	DRA	MB-2	Electric	O&M	Benefit	Benefit	DRP Cost Reductions--Non Labor (Program Admin, Incentives, Etc.)	
197	Other	Yes	50%	E	C-5	Electric	O&M	Cost	Cost	MDO Analyst (MRR SA4)	Labor
198	Other	Yes	50%	E	I-11	Electric	O&M	Cost	Cost	MDO Analyst (MRR SA4)	Labor
199	Other	Yes	50%	E	I-15	Electric	O&M	Cost	Cost	MDO Specialist (MRR TS4)	Labor
200	Other	Yes	50%	E	CU-4	Electric	O&M	Cost	Cost	MDO Specialist (MRR TS4)	Labor
201	Other	Yes	50%	E	I-15	Both G&E	O&M	Cost	Cost	MDO Team Lead (MRR ST3)	Labor
202	Other	Yes	0%	0	MB-15	Both G&E	Capital	Benefit	Benefit	Route Stringing Software Capital - Hardware	Non-Labor
203	Gas Meters	Yes	48%	G	GS-2	Gas	Capital	Cost	Cost	Material Costs Spent Earlier than without AMI	Gas Deployment Materials
204	Cap Labor	Yes	48%	G	MS-5	Gas	Capital	Cost	Cost	Labor Costs Spent Earlier than without AMI	Deployment Labor and Contract Support
205	Other	Yes	48%	G	MB-13	Gas	Capital	Benefit	Benefit	Labor Costs Saved in out years due to changing Reg: Gas Materials	
206	Other	Yes	48%	G	MB-13	Gas	Capital	Benefit	Benefit	Material Costs Saved in out years due to changing Re Gas Labor	
207	Other	Yes	0%	0	MB-15	Both G&E	O&M	Benefit	Benefit	Route Stringing Software O&M	Non-Labor
208	Other	Yes	0%	0	MB-15	Both G&E	O&M	Benefit	Benefit	Route Stringing Software O&M	Labor
209	Other	No	100%	100	SB-1.1	Both G&E	O&M	Benefit	Benefit	Avoided Communications Cost due to reduced MV-9( Non-Labor	
210	Other	No	100%	100	SB-5	Electric	Capital	Benefit	Benefit	Possible reprogram rather than meter change	Electric Labor
211	Cap Labor	No	100%	100	M-7	Both G&E	Capital	Cost	Cost	Internal PMO Costs, Labor	
212	Other	No	100%	100	M-7	Both G&E	O&M	Cost	Cost	Internal PMO Costs, Non-Labor	
213	Other Capital	No	100%	100	M-7	Both G&E	Capital	Cost	Cost	Internal PMO Costs, Non-Labor	
214	Other Capital	No	100%	100	M-7	Both G&E	Capital	Cost	Cost	Internal PMO Costs, Non-Labor	
215	Other	No	100%	100	CU-5	Electric	O&M	Cost	Cost	Non-labor expenses associated with the above LR FTEs	
216	Cap Labor	No	100%	100	I-5	Both G&E	Capital	Cost	Cost	Implement new MDMS	Implement new MDMS
217	Cap Labor	No	100%	100	I-5	Both G&E	Capital	Cost	Cost	Implement new MDMS	Implement new MDMS
218	MDMS	No	100%	100	I-5	Both G&E	Capital	Cost	Cost	Implement new MDMS	Implement new MDMS
219	Cap Labor	No	100%	100	I-5	Both G&E	Capital	Cost	Cost	Implement new MDMS	Implement new MDMS
220	Cap Labor	No	100%	100	I-5	Both G&E	Capital	Cost	Cost	Implement new MDMS	Implement new MDMS
221	MDMS	No	100%	100	I-5	Both G&E	Capital	Cost	Cost	Implement new MDMS	Implement new MDMS
222	Cap Labor	No	100%	100	I-5	Both G&E	Capital	Cost	Cost	Implement new MDMS	Implement new MDMS
223	Cap Labor	No	100%	100	I-5	Both G&E	Capital	Cost	Cost	Implement new MDMS	Implement new MDMS
224	MDMS	No	100%	100	I-5	Both G&E	Capital	Cost	Cost	Implement new MDMS	Implement new MDMS
225	MDMS	No	100%	100	I-5.2	Both G&E	Capital	Cost	Cost	License Fees for MDMS	Implement new MDMS
226	Other	No	100%	100	SB-5	Electric	Capital	Benefit	Benefit	Possible reprogram rather than meter change	Electric Labor
227	Other Capital	No	100%	100	M-7	Both G&E	Capital	Cost	Cost	Internal PMO Costs, Non-Labor	
228	Other Capital	No	100%	100	M-7	Both G&E	Capital	Cost	Cost	Internal PMO Costs, Non-Labor	

Attachment A

<u>Line</u>	<u>Area</u>	<u>Scaleable</u>	<u>Scale</u>	<u>Scaler</u>	<u>Cost Item</u>	<u>Fuel Type</u>	<u>Expense Type</u>	<u>Cost</u>	<u>Benefit</u>	<u>Comments</u>	<u>Area</u>
229	Other	No	100%	100	E-3	Both G&E	O&M	Cost	Cost	External PMO Costs, Labor	
230	Cap Labor	No	100%	100	E-3	Both G&E	Capital	Cost	Cost	External PMO Costs, Labor	
231	Cap Labor	No	100%	100	E-3	Both G&E	Capital	Cost	Cost	External PMO Costs, Labor	
232	Cap Labor	No	100%	100	E-3	Both G&E	Capital	Cost	Cost	External PMO Costs, Labor	
233	Cap Labor	No	100%	100	E-3	Both G&E	Capital	Cost	Cost	External PMO Costs, Labor	
234	Other	No	100%	100	E-3	Both G&E	O&M	Cost	Cost	External PMO Costs, Non-Labor	
235	Other Capital	No	100%	100	E-3	Both G&E	Capital	Cost	Cost	External PMO Costs, Non-Labor	
236	Other Capital	No	100%	100	E-3	Both G&E	Capital	Cost	Cost	External PMO Costs, Non-Labor	
237	Other Capital	No	100%	100	E-3	Both G&E	Capital	Cost	Cost	External PMO Costs, Non-Labor	
238	Other Capital	No	100%	100	E-3	Both G&E	Capital	Cost	Cost	External PMO Costs, Non-Labor	
239	Contingency	No	100%	calc	MS-15	Both G&E	Capital	Cost	Cost	Risk Contingency - 5-year Labor Direct	AMI Proj Mgmt Contingency
240	Contingency	No	100%	calc	MS-15	Both G&E	Capital	Cost	Cost	Risk Contingency - 5-year Non-Labor Direct	AMI Proj Mgmt Contingency
241	Contingency	No	100%	calc	MS-15	Both G&E	Capital	Cost	Cost	Risk Contingency - 9-year Labor Direct	AMI Proj Mgmt Contingency
242	Contingency	No	100%	calc	MS-15	Both G&E	Capital	Cost	Cost	Risk Contingency - 9-year Non-Labor Direct	AMI Proj Mgmt Contingency
243	Contingency	No	100%	calc	MS-15	Both G&E	Capital	Cost	Cost	Risk Contingency - 15-year Labor Direct	AMI Proj Mgmt Contingency
244	Contingency	No	100%	calc	MS-15	Both G&E	Capital	Cost	Cost	Risk Contingency - 15-year Non-Labor Direct	AMI Proj Mgmt Contingency
245	Contingency	No	100%	calc	MS-15	Both G&E	Capital	Cost	Cost	Risk Contingency - 34-year Labor Direct	AMI Proj Mgmt Contingency
246	Contingency	No	100%	calc	MS-15	Both G&E	Capital	Cost	Cost	Risk Contingency - 34-year Non-Labor Direct	AMI Proj Mgmt Contingency
247	Other	No	100%	100	MS-12	Electric	O&M	Cost	Cost	PCT Labor cost to troubleshoot over the phone	PCT
248	Other	No	100%	100	MS-12	Electric	O&M	Cost	Cost	PCT Communications	PCT
249	Other	No	100%	100	MS-12	Electric	O&M	Cost	Cost	PCT Marketing Fixed Labor Costs	PCT
250	AMI Comm Co	No	100%	100	C-6	Electric	Capital	Cost	Cost	Fix-Ups Equipment	Comm System
251	AMI Comm Co	No	100%	100	C-6.5	Electric	Capital	Cost	Cost	Fix-Ups Labor	Comm System
252	Other Capital	Yes	0%	x	E-1	Both G&E	Capital	Cost	Cost	Project Deployment Support	
253	Head End	No	100%	100	I-12	Both G&E	Capital	Cost	Cost	Headend SW License Fee	Comm System
254	Other	No	100%	100	I-12	Both G&E	O&M	Cost	Cost	Headend SW Maintenance Fee	Comm System
255	Head End	No	100%	100	I-12	Both G&E	Capital	Cost	Cost	Headend Integration Support	Comm System
256	Head End	No	100%	100	I-12	Both G&E	Capital	Cost	Cost	Headend Hardware Costs	Comm System
257	Other	No	100%	100	I-12	Both G&E	O&M	Cost	Cost	Headend HW Maintenance	Comm System
258	Other Capital	No	100%	100	C-2	Both G&E	Capital	Cost	Cost	Vendor Survey Costs	
259	Other Capital	No	100%	100	C-3	Both G&E	Capital	Cost	Cost	Vendor Network Mapping	
260	AMI Comm Co	No	100%	100	I-1	Both G&E	Capital	Cost	Cost	Vendor Network Design	
261	AMI Comm Co	No	100%	100	C-6.1	Both G&E	Capital	Cost	Cost	Vendor Installation PM	
262	Other Capital	Yes	0%	x	E-1	Both G&E	Capital	Cost	Cost	Vendor Vehicle Costs	
263	AMI Comm Co	No	100%	100	MS-12.5	Both G&E	Capital	Cost	Cost	Vendor Maintenance Tools	
264	AMI Comm Co	No	100%	100	C-6.9	Both G&E	Capital	Cost	Cost	Vendor Installation Labor	
265	AMI Comm Co	No	100%	100	C-11	Both G&E	Capital	Cost	Cost	Vendor Training	
266	Other	Yes	0%	x	E-1	Both G&E	O&M	Cost	Cost	Vendor Post Roll-Out Labor (MS12.5)	

Attachment A

<u>Line</u>	<u>Area</u>	<u>Scaleable</u>	<u>Scale</u>	<u>Scaler</u>	<u>Cost Item</u>	<u>Fuel Type</u>	<u>Expense Type</u>	<u>Cost Benefit</u>	<u>Comments</u>	<u>Area</u>
267	Other	No	100%	100	C-14	Both G&E	O&M	Cost	Ongoing Monitoring/O&M/Data Collection Support	Labor and Contract Support
268	Other	Yes	48%	G	MS-5	Gas	O&M	Cost	Relights of Gas Meters - Deployment	PCT
269	Other	No	100%	100	MS-12	Electric	O&M	Cost	PCT Marketing Fixed Non-Labor Costs	PCT
270	Other	No	100%	100	MS-12	Electric	O&M	Cost	PCT New Participant Acquisition Costs	PCT
271	Other	No	100%	100	MS-12	Electric	O&M	Cost	PCT Existing Participant Maintenance Costs	PCT
272	Other	No	100%	100	MS-12	Electric	O&M	Cost	PCT Customer Incentives	PCT
273	Contingency	No	100%	calc	MS-15	Both G&E	O&M	Cost	Risk Contingency - O&M Labor Direct	AMI Proj Mgmt Contingency
274	Contingency	No	100%	calc	MS-15	Both G&E	O&M	Cost	Risk Contingency - O&M Non-Labor Direct	AMI Proj Mgmt Contingency
275	Other	Yes	50%	E	E-2	Electric	O&M	Cost	Meter/Module Deployment	Labor and Contract Support
276	Cap Labor	Yes	50%	E	E-2	Electric	Capital	Cost	Meter/Module Deployment	Deployment Labor and Contract Support
277	Other	Yes	48%	G	E-2	Gas	O&M	Cost	Meter/Module Deployment	Labor and Contract Support
278	Cap Labor	Yes	48%	G	E-2	Gas	Capital	Cost	Meter/Module Deployment	Deployment Labor and Contract Support
279	Cap Labor	Yes	0%	x	E-2	Gas	Capital	Cost	Deploymentnet Adders	Deployment Labor and Contract Support
280	AMI Comm Co	Yes	50%	E	E-2	Both G&E	Capital	Cost	Vendor Support Services	Deployment Labor and Contract Support
281	Other	Yes	0%							
282	Cap Labor	Yes	0%	x	E-2	Electric	Capital	Cost	Vendor Facilities	Deployment Labor and Contract Support
283	Cap Labor	Yes	0%	x	E-2	Electric	Capital	Cost	Vendor Training	Deployment Labor and Contract Support
284	Other	Yes	48%	G	E-2	Gas	O&M	Cost	Vendor Revisits - Gas	Labor and Contract Support
285	Other	Yes	50%	E	E-2	Electric	O&M	Cost	Vendor Revisits - Electric	Labor and Contract Support

Attachment B  
Demand Response Assumptions

Residential Demand Response Assumptions					
	Avoided Capacity	Analysis Period	PTR price	CPP price	Participation rate
Scenario1	85	2006-2038	0.65	N/A	70%
Scenario2	52	2006-2026	0.50	N/A	50%
Scenario3	52	2006-2026	0.50	N/A	50%
Scenario4	60	2006-2026	0.50	N/A	50%
Scenario5	60	2006-2026	0.50	N/A	50%
Scenario6	52	2006-2029	0.50	0.80	PTR-50% CPP-80%
Scenario 6 (PCT's)	52	2006-2029	0.50	0.80	56% of new customers
Scenario7	85	2006-2029	0.50	0.80	PTR-50% CPP-80%
Scenario 7 (PCT's)	85	2006-2029	0.50	0.80	56% of new customers

Commercial Demand Response Assumptions				
	Avoided Capacity	Analysis Period	PTR/ CPP price	Participation rate
Scenario1	85	2006-2038	PTR- .65 CPP - .90	Small C&I -33% Med and Large C&I 100%
Scenario2	52	2006-2026	PTR- .65 CPP - .90	same as above
Scenario3	52	2006-2026	PTR- .65 CPP - .90	same as above
Scenario4	60	2006-2026	PTR- .65 CPP - .90	same as above
Scenario5	60	2006-2026	PTR- .65 CPP - .90	same as above
Scenario6	52	2006-2029	PTR- .65 CPP - .90	same as above
Scenario7	85	2006-2029	PTR- .65 CPP - .90	same as above



## CERTIFICATE OF SERVICE

I hereby certify that pursuant to Commission's Rules of Practice and Procedure, I have this day served a true and correct copy of **RESPONSE OF SAN DIEGO GAS & ELECTRIC COMPANY TO THE RULING OF ADMINISTRATIVE LAW JUDGE GAMSON** to each party of record on the service list in A.05-03-015 via electronic mail. Those parties without an email address were served by placing copies in properly addressed and sealed envelopes and depositing such envelopes in the United States Mail with first-class postage prepaid.

Executed this 4th day of January, 2007 at San Diego, California

/S/ LISA FUCCI-ORTIZ

---

Lisa Fucci-Ortiz