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

CHAPTER 17

Prepared Rebuttal Testimony

of

EDWARD FONG

SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

SEPTEMBER 7, 2006

TABLE OF CONTENTS

I. Introduction 1

II. Comparison Table of SDG&E and DRA Business Case Analysis Horizon and Discount Rate 1

III. Summary of SDG&E Rebuttal to UCAN Testimony 5

IV. Summary of SDG&E Rebuttal to DRA's Testimony 15

Chapter 17

Prepared Rebuttal Testimony
of
EDWARD FONG
SAN DIEGO GAS & ELECTRIC COMPANY

I. Introduction

The purpose of this testimony is to respond to several claims and assertions made by the Utility Consumers' Action Network (UCAN) and the Division of Ratepayer Advocates (DRA) witnesses in their prepared testimony submitted on August 14, 2006 in the matter of San Diego Gas & Electric's (SDG&E) advanced metering infrastructure (AMI) application, A.05-03-015. I will summarize SDG&E's response and identify SDG&E's supporting rebuttal testimony and witnesses included in this prepared rebuttal testimony submittal.

As a result of several clarifying discussions with DRA, SDG&E presents a summary table that compares the net present value societal and revenue requirements benefits on an apples-to-apples basis using common assumptions and parameters for SDG&E's AMI business case. SDG&E supports the business case results as presented in the July 14th, 2006 supplemental filing, but is presenting a series of comparisons that have standardized key assumptions so that the California Public Utilities Commission (CPUC or Commission) can assess the results and discern the exact facts that are in dispute.

II. Comparison Table of SDG&E and DRA Business Case Analysis Horizon and Discount Rate

Specifically, SDG&E completed 20 year analysis (17 year useful life of AMI electric meters and communications) running from 2007-2027, removed the terminal or trailing value benefits and assumed an after-tax discount rate of

7.17%.[1] Although SDG&E witness Mr. Kyle (Chapters 13 and 19) has provided the business finance principle for including a terminal value estimate and justification for using an extended life cycle analysis as a proxy for calculating the remaining asset value at the end of the business case analysis horizon, SDG&E is presenting the following tables as side by side comparison purposes. The following tables presents comparison's between using a before tax discount rate of 8.23% (as assumed in the July 14, 2006 filing) and an after tax discount rate. In summary, even under a 20 year analysis horizon, SDG&E's business case is essentially breakeven for SDG&E's ratepayers (positive net present value of societal benefits of a range of $41.2 to $76.3 million and of revenue requirements benefits of ($10.7) to $8.4 million. To provide an apples-to-apples comparison, SDG&E also presents Tables EF 17-1 and EF 17-2 that removes the terminal value and remaining asset value effects.

[1] The final decision for Pacific Gas & Electric's (PG&E), D.06-07-027, explicitly resolves the issue of the discount rate that should be applied to AMI's business case analysis. See D.06-07-027, pp. 50. The use of the proper discount rate for calculating the present value of before tax cash flows (societal benefits) or revenue requirements depends on whether one believes that long-term infrastructure investments are properly discounted. In PG&E's AMI filing and decision, PG&E had converted their cash flow costs and benefits to after tax dollars. SDG&E has explicitly included tax benefits and liabilities in the SDG&E revenue requirements modeling. However, the general economic literature and the often quoted Standard Practice Manual (SPM) recommend a societal discount rate to be used in calculating the value of energy efficiency programs or investments. The societal discount rate is lower or less than the private or market discount rate. In the case of SDG&E's AMI, the societal discount rate would be less than SDG&E's authorized rate of return of 8.23%. The Commission can use the 7.17% before tax discount rate as a proxy for the societal discount rate.

Table EF 17-1
Comparison of Discount Rates, Analysis Horizon
With Terminal Values[2]

	Present Value Revenue Requirements ($ millions)	
	Before Tax Discount Rate	After Tax Discount Rate
	8.23%	7.17%
2007-2027	($5.8)	$8.4
2007-2038 Adjusted*	$50.8	$86.2
2007-2038 (as filed)	$60.0	$96.0

	Present Value Discounted Cash Flow ($ millions)	
	Before Tax Discount Rate	After Tax Discount Rate
	8.23%	7.17%
2007-2027	$41.2	$76.3
2007-2038 Adjusted*	$115.4	$179.6
2007-2038 (as filed)	$109.8	$172.5

* SDG&E corrected some errors to in the July 14, 2006 filing.

[2] Terminal values of the remaining book value were used as a proxy. As stated in Witness Mr. Kyle's rebuttal testimony, Chapter 19, the present value of revenue requirements would be identical between the 2027 and the 2038 scenario if the terminal values were calculated as the present value of the remaining net benefits of the AMI assets for the period 2028-2038.

Table EF 17-2
Comparison of Discount Rates, Analysis Horizon
Without Terminal Values

	Present Value Revenue Requirements ($ millions)	
	Before Tax Discount Rate	After Tax Discount Rate
	8.23%	7.17%
2007-2027	($10.7)	$2.4
2007-2038 Adjusted*	$43.7	$76.3
2007-2038 (as filed)	$53.0	$86.3

	Present Value Discounted Cash Flow ($ millions)	
	Before Tax Discount Rate	After Tax Discount Rate
	8.23%	7.17%
2007-2027	$41.2	$76.3
2007-2038 Adjusted*	$115.4	$179.6
2007-2038 (as filed)	$109.8	$172.5

* SDG&E corrected some errors to in the July 14, 2006 filing.

III. Summary of SDG&E Rebuttal to UCAN Testimony

I will summarize key SDG&E's rebuttal arguments regarding several issues raised in UCAN's testimony and identify SDG&E's corresponding rebuttal testimony and witness:

1. **UCAN's assertion that SDG&E is presenting a "piecemeal and inappropriately limited" solution for AMI that does not include or leverage the recommendations from the San Diego Smart Grid study (EPIC, SAIC study) is utterly false and hypocritical.**[3] (UCAN, Summary of UCAN Testimony and Selected Issues Relating to Expenditures for San Diego Gas & Electric Company's 2006 Advanced Metering Initiative Application, pp. 4-18.) UCAN's own alternative proposals for demand response and deployment of communicating meters is a piecemeal approach and is a step back from the smart grid concept, and retards the deployment of smart grid technologies. (UCAN prepared testimony, pp. 22-25.) Specifically, UCAN proposes to install older, outdated time-of-use-meters on residential premises without communications and to install outdated communicating meters for commercial/industrial customers. This proposal could prove more costly, time consuming and offer little of the AMI benefits identified in SDG&E's AMI case. (Chapter 18, Witness Mr. Reguly, Chapter 25, Witness Mr. Lee, Chapter 26, Witness Mr. Pruschki.)

2. **UCAN has completely missed the point of the Commission's Advanced Metering, Demand Response and Dynamic Pricing OIR, R.02-06-001.** The Commission has explicitly requested the utilities to present an AMI proposal for all customers and to not arbitrarily segment customers in terms of "piecemeal" or targeted AMI implementation for demand response. Specifically, the Assigned Commissioner and Administrative Law Judge's Ruling on February 19, 2004 provides explicit direction in Section 4 to the utilities regarding developing of their AMI cases.

[3] UCAN introduces the "San Diego Smart Grid Study" in its overview of its testimony filing, p.5. Contrary to UCAN's position, the study is still under development and the Smart Grid Study explicitly identifies AMI as critical component of the smart grid.

"We clarify that the Commission anticipates that full scale implementation of AMI will provide all customers in all rate classes with the option to choose dynamic an static rate structures. We are not interested in an analysis of costs and benefits of AMI that is limited to residential or small commercial customers because system benefits inure to all customer classes that cannot be separated from the costs of AMI deployment. While we can compartmentalize the costs of AMI and load control systems to specific classes, it is not possible to isolate the benefits from demand response to one or more customer class since the system-wide benefits of demand response will flow to all classes. Thus the costs and benefits of deploying an AMI system to all customer classes must be quantified."

The Commission is clear in its direction provided to the utilities to include all benefits and costs associated with demand response resulting from AMI in the utilities' business case. UCAN's proposed alternatives to AMI and criticism of SDG&E's proposal is contrary to the Commission's direction as stated in the State's Energy Action Plan and to the direction explicitly provided to the utilities.

3. **UCAN proposes several alternative investments in energy efficiency technologies or programs that are not disputed, but are not within the scope of AMI and demand response. (UCAN, pp. 22-24.)** The State's Energy Action Plan (EAP and EAP II) clearly elevates energy efficiency and demand response to the top of the "loading" order.[4] More important, SDG&E is already aggressively pursuing and is funded for several of UCAN's energy efficiency proposals. UCAN's recommendations are not meaningful since SDG&E is already undertaking many of these energy efficiency activities. (Chapter 24, Witness Mr. Gaines.)

4. **UCAN is off the mark when asserts:**

"…the Commission has assembled the regulatory equivalent of an extensive and expensive energy smorgasbord and appears to be determined to consume every item on the smorgasbord table".[5]

The Commission has provided an integrated approach to energy efficiency, demand response, renewable energy resources, distributed energy resources

[4] "Energy Action Plan II, Implementation Roadmap for Energy Policies", October 2005, State of California Energy Commission and Public Utilities Commission, p.2
[5] UCAN, Chapter 1, Policy Overview- William B. Marcus, p. 17.

additional transmission and generation resources in the EAP loading order. The Commission and other state agencies are using the EAP as the guide to initiate and prioritize various on-going and simultaneous proceedings to provide meaningful progress in terms of the utilities' investment portfolio according to the loading order. To claim that the State and the Commission has not pursued an integrated and planned approach across several disciplines is simply UCAN attacking the EAP and the Commission's aggressive approach to energy efficiency, demand response and renewable resources.

5. **UCAN lists a litany of benefits for the Smart Grid in its Summary and Overview section (UCAN Summary, pp. 14-15), but does little to quantify these benefits and is at best a tautological argument.** AMI technology is clearly part and parcel to the Smart Grid because AMI provides end-point (customer premises) energy measurements. UCAN testimony suggests that SDG&E should not implement AMI because it has not identified all of the benefits of the Smart Grid. If UCAN believes that SDG&E's implementation of AMI will delay or prevent the implementation of Smart Grid technologies, then UCAN is incorrect. Rather, the contrary is true. Implementation of AMI is the first step to implementing evolving and emerging Smart Grid communications, sensors and integrated systems. AMI is the first step to realizing the benefits identified by UCAN (UCAN, pp. 15) and yet roundly criticized or not even mentioned by UCAN's own witnesses in prepared testimony. (Chapter 18, Witness Mr. Reguly, Chapter 25, Witness Mr. Lee and Chapter 26, Witness Mr. Prucshki)

6. **UCAN's assertion that the Commission should exclude benefits that SDG&E has identified is illogical and completely turns the Commission direction for the utilities to submit a business case for AMI on its head.** UCAN asserts that the SDG&E's benefits listed in UCAN Table 4, p. 53 are "inappropriate AMI benefits". SDG&E has listed each of these benefits under the benefit elements identified in Appendix A (pp. 5-7) of the July 21, 2004 Assigned Commissioner Ruling (ACR). Clearly, the Commission intended to

include these benefits in the AMI business case development. UCAN does not dispute that these items listed in UCAN Table 4 are benefits, but rather that the July 21, 2004 ACR did not explicitly classify these benefits as quantifiable. To exclude these benefits which are logically reasonable and classified under the various benefit elements (e.g., SB-3 for energy theft) would be irrational. These benefits have been quantified by SDG&E and estimated at a conservative level. No one is arguing whether energy theft, meter accuracy or other items listed are benefits, but rather whether SDG&E has properly estimated the level of benefits. An example of UCAN's level of absurdity in its attempt to exclude SDG&E benefits is their discussion regarding energy theft. (Chapter 29, Witness Mr. Teeter)

7. **UCAN is incorrect in citing an Assigned Commissioner Ruling (ACR) of July 21, 2004 that classifies energy theft benefits as non-quantifiable.**[6] First the July 21, 2004 ACR clearly identifies "identification and reduction of energy theft" in Appendix A, p. 5, SB-3 as a system benefit. UCAN's reference to the Staff Report of April 14, 2004, "Recommended Analysis Framework for the Business Case Analysis of Advanced Metering Infrastructure" (footnote 26, UCAN Chapter 2) only shows that for the draft report issued in R.02-06-001, by the Working Group 3 business case framework development sub-team could not, at that time, provide a quantitative methodology to calculate the benefits from energy theft. In no way does the ACR or the draft report deny or remove energy theft benefits (or meter accuracy benefits). Subsequent to the July 14, 2004 ACR (some 2 years later), SDG&E, has developed conservative estimates of the benefits from reducing energy theft and improving meter accuracy. The July 14, 2004 ACR is clear that the utility and customers do benefit from reductions in energy theft and increased meter accuracy as a result of AMI.

[6] UCAN, Chapter 2, SDG&E's Business Case Analysis and Operational Cost Effective Issues, Jeff Nahigian, pp. 41-42.

8. **UCAN is incorrect in asserting that the demand response benefits from customers larger than 200 kW be excluded. (UCAN, pp. 55-57)** First, SDG&E has included the cost of replacing all large customers' interval meters with communications with AMI meters. To put it another way, the existing installed interval meters and communications for customers 200 kW or larger does not have two-way AMI communications. Under SDG&E's AMI implementation plan, all of these older meters will be replaced with AMI meters and integrated into the AMI system. A large majority of the current large customer interval meters (AB 29X meters) were installed in 2001-02 and have dial-up modem communications. Specifically, these meters do not provide in-bound and out-bound interval meter reads to SDG&E. SDG&E must actually dial-up the meter's unique telephone number and then execute the transfer of data to SDG&E's computer servers.

Under the current offering of SDG&E's voluntary demand response programs, the ability of SDG&E to call-up these meters and extract the meter data to be placed on SDG&E's kWickview web data presentation tool for customer access is limited to a few hundred customers. The telephony method of communications prevents SDG&E from achieving the desired Commission/CEC goal of extracting interval data on a frequent enough manner so that customers are able to access energy usage information in a timely manner.

Under the current voluntary demand and interruptible programs, only a few hundred large customers are enrolled and SDG&E can easily interrogate the meters and transfer the data into the web presentation tool. However, if SDG&E's proposed default critical peak price (CPP) rate for large customers is implemented, then not all of the large customers would be able to view their energy usage data in a timely manner. SDG&E would literally need to install several thousand (2,500 large customer meters) dedicated telephone lines to have an "always open" communications channel to the meter for timely extraction of metered energy usage data and transfer to SDG&E's web presentment tool.

In other words, without AMI meters communications, SDG&E's current metering technology could not support the requirements for dynamic pricing and demand response in a manner that is important to the large C&I customer, i.e., the ability to monitor their usage during a CPP event. SDG&E spent an average of approximately $1,000 per meter to install the initial large customer meters. The AMI large customer meters are expected to cost only $500 per meter installed.

The AMI technology will mean that SDG&E can interrogate the meter at any time to receive on-demand reads, transmit 15 minute interval data back to SDG&E to be placed in the web presentation tool. SDG&E's AMI system is not constrained by the limitation of expensive telephone lines (or wireless telephone communications) and schedule such reads at every 15-30 minutes during a CPP event (or any demand response event).

Finally, as stated in Section III.2 above, SDG&E has been provided explicit direction from the Commission to include all customers in the benefits and costs analysis. The commercial customers that are at least 200 kW in demand constitute less than 2% of SDG&E's customer base (as measured by number of customer meters), but are allocated over 5% of the costs (Chapter 14, Witness Mr. Hansen, , p. RWH-9). Clearly to exclude the benefits from this class of customers, but to include and allocate costs to this class is illogical and unfair.

In summary, the scope of a default CPP rate and demand response programs for all large customers cannot be effectively implemented with the current metering and communications technology. To implement CPP rates to all large commercial and industrial customers at 200 kW (or greater) and to enable these customers to take full advantage of their demand response opportunities, requires the replacement of the existing interval meters with AMI technology. Both the costs of implementing AMI with these customers and their related demand response benefits are and should be included in SDG&E's AMI business case.

9. **UCAN's assertion that the R.02-06-001 Statewide Pricing Pilot (SPP) results are not a representative sample of SDG&E's customer base and therefore cannot be used in computing demand response impacts is false. (UCAN, pp. 90-97.)** UCAN has systematically ignored the data, analysis, facts and empirical evidence presented in the SPP studies and Working Group 3 meetings to directly refute UCAN's claim of that the SPP experimental design and results are not valid and cannot be used by SDG&E to estimate demand response impacts from SDG&E customers. (Chapter 23, Witness Dr. George)

10. **UCAN's assertion that SDG&E has not demonstrated that SDG&E's proposed peak time rebate (PTR) program demand response impacts (carrot approach) are not valid because the SPP experiment uses a "stick" approach with the critical peak pricing (CPP) rate and that the residential customer savings are too small to impact demand response is also false.[7] (UCAN, pp. 66-79.)** Specifically, Witness Dr. George's direct testimony, (Chapter 6, pp SG-17 to SG-22) demonstrated that Anaheim Public Utilities (APU) results were comparable to the SPP price elasticities. (Chapter 23, Witness Dr. George)

11. **UCAN's claim that demand response reductions will not be sustained over time is unsubstantiated and the evidence from the SPP program indicate just the opposite. (UCAN, p. 73.)** Dr. George's Table 1 in Chapter 23 shows that even minor changes in customer behavior regarding energy end-uses during PTR event days will provide bill savings without significant changes in the customer's lifestyle. SDG&E's proposed PTR provides the opportunity for all residential and small commercial customers to participate and contribute to demand. However, SDG&E's residential customer demand response benefits are not based on all customers contributing the average reduction amount.

[7] DRA makes similar assertions in DRA Witness Ms. Liang-Uejio prepared testimony, Chapter 5, pp. 5-12)

.Rather, given SDG&E's mix of residential customer, i.e., the distribution or dispersion of some customers reducing and others not, the overall reductions are correctly reflected in the SPP results. The SPP results are then correctly applied to SDG&E's residential customer population. (Chapter 23, Witness Dr. George)

12. **UCAN's assertion that PTR customer "reference level" or baseline usage level is undefined and therefore unworkable is misleading and is a red herring. SDG&E has not committed to or proposed a specific baseline (or reference level) methodology. (UCAN, pp. 83-90.)** The definition of a customer baseline level is fundamental for measurement and evaluation of demand response impacts for any demand response rate or program. Witness Mr. Gaines shows several viable options for setting the baseline to minimize the group of structural benefitors and yet provide enough incentive to induce demand response impacts. (Chapter 24, Witness Mr. Gaines)

13. **UCAN's claim that current or existing interruptible programs A/C Cycling or Comverge program is more cost effective than SDG&E's proposed demand response PTR program is incorrect. (UCAN, pp. 57-60.)** In fact, the total payments (price incentives or discounts) are less under PTR than under the Comverge program given various number of event days. (Chapter 24, Witness Mr. Gaines)

14. **UCAN's case for lower value for demand response impacts is misleading and UCAN's valuation for avoided generation capacity is in effect much closer to SDG&E's nominal $85 per kW year than the UCAN's real $52 per kW year recommendation. (UCAN, pp. 110-117.)** SDG&E and UCAN propose similar net gas combustion turbine (CT) values, once UCAN's market value of a CT is corrected to a real 2006 value and adjusted for Southern California market conditions. UCAN does not address or dispute the additional values proposed by SDG&E. UCAN identifies several Additional Unique Benefits of AMI, including the Smart Grid's Consumer Portal. Once these issues regarding the net value of a CT value and the additional value of AMI

enabled demand response and are considered, SDG&E's valuation is appropriate. (Chapter 22, Witness Mr. Martin)

15. UCAN's inference that a large part of the benefits from the avoided cost of demand response programs are customer incentive payments and therefore should not be included as benefits is incorrect. (UCAN, pp. 117-119.) SDG&E's current demand response program reflect technical incentive payments of $3 million per year for the 2006-08 period. Under UCAN's view SDG&E should not be including technical incentives to large commercial customers as an avoided demand response program benefit. However, UCAN does not object to SDG&E including the costs of programmable controllable thermostats (PCT) as a cost in the AMI case. These PCTs are provided free to the small and medium C&I customers (approximately 57,000, Chapter 11, Witnesss Mr. Pruschki, p. PP-4). The cost of PCTs in SDG&E's proposal total approximately $41 million[8]. Essentially this incentive is a 100% rebate or refund to the customer. If the Commission accepts UCAN's argument that avoided or elimination of C&I technical incentives should not be included as a benefit to SDG&E's AMI business case because such incentives are just "transfer" payments, then SDG&E's costs for the it proposed PCT program should also be excluded. UCAN has not proposed to exclude these costs from SDG&E's case. UCAN is being inconsistent and selective in its treatment of customer technology incentives.

Moreover, these incentive payments are essentially for the short period of 2006-08 for technology incentive for large C&I customers. After the 2008 period, most of these technology incentives (if no AMI were implemented) would have been replaced with other more extensive and expensive demand response programs in order for SDG&E to achieve and sustain the demand response impact goals. The remaining demand response program benefits are approximately $4.5 million per year of demand response program cost are for

[8] The $41 million figure represents the total cost (loaded and escalated) of equipment, installation and troubleshooting over the 2007 – 2038 period. See the workpapers of Mr. Pruschki and Mr. Gaines (chapters 11 and 5 respectively) for further details.

program administration, management, customer recruitment, customer education, customer technical assistance and measurement and evaluation. SDG&E would not incur these costs if the current array of voluntary demand response programs are eliminated because of the various AMI enabled demand response rates and programs that are proposed in Witness Mr. Gaines, Chapter 5. SDG&E is applying the present value analysis to the cash flow and revenue requirements when these program costs are removed of therefore need not be recovered from customers.

16. **The (Peak Time Rebate) PTR program is effectively a marginal rate (See Witness Dr. George's rebuttal testimony, Chapter 23) and therefore directly comparable to a lower tiered rate in a residential customer's electric bill.** UCAN proposes that SDG&E's PTR is just a "transfer" payment from one set of customers to another. (UCAN, pp. 119-120.) UCAN is incorrect regarding its interpretation. The PTR or "rebate" terminology is a little bit of a misnomer. SDG&E chose the term "rebate" for customer marketing purposes. Essentially, the PTR is a lower rate for consuming less during PTR event hours. The PTR rate is no different than the non-peak CPP rate during non-peak hours and non-CPP event days. In other words, for CPP we have higher prices for the on-peak CPP event day hours, but lower prices for all other hours.

In this case of CPP, the average customer is still revenue neutral and because the rates have been realigned to raise the relative on-peak price and lower the non-peak hour prices. Economists would not consider the rate during the non-CPP hours as a "rebate" incentive. Similarly, a discount for using less energy than the established baseline is just a change in the relative price. In other words, if SDG&E had proposed a pure 2-part real-time pricing (RTP), one would never consider the usage below the baseline as an incentive rebate payment because the additional (incremental) usage over the baseline is not consider a negative (or offset) incentive payment. The usage over and above the baseline is just a higher price for electricity when usage exceeds the baseline level. The price or rate changes are signals for customers to move along the demand curve. In contrast, the installation of equipment is to shift the demand curve. If UCAN is so enamored with the "transfer" payment argument, would UCAN consider the residential customer's "discounted" rate for usage that was less than the AB 1X 130% of baseline level just a transfer payment? More likely, the Commission and UCAN would consider the residential customer lowered rate for customer electric usage that was less than the 130% baseline level just that, a "lower rate".

17. Rate structural benefitors are not free riders and should not be treated as such. (UCAN, pp. 119-120.) Current rates have hidden structural benefitors and losers because the cost of service is not necessarily fully reflected in the actual price paid by customers. Time differentiated rates, such as CPP and PTR, will reduce the current level of hidden structural benefitors. Reducing inter-customer inequities is a benefit of AMI enabled demand response. In the case of PTR or CPP, electricity rates are better aligned with the relative cost of electricity. Under today's environment, many customers are not paying the full cost of electricity (and yet we do not call these customers free riders). With PTR and CPP, customers may receive a lower bill and yet did not reduce demand during the event hours (CPP or PTR event). These customers are not necessarily free riders because their current load profile is such that the new rates (CPP or PTR) reflect the benefits of having a flatter load profile (or less peaky profile). In other words, these so called "free riders" are paying too much today for all of the current subsidized "free riders".

IV. Summary of SDG&E Rebuttal to DRA's Testimony

1. DRA's testimony from Mr. Hadden, Chapter 8 misrepresents SDG&E's AMI technology request for proposal (RFP) functional requirements as cost ineffective and too "demanding". SDG&E presents a comparison table in Witness Mr. Reguly's rebuttal testimony, Chapter 18 that shows SDG&E's cost per installed AMI meter is in fact less than PG&E's cost per installed meter. Even more appealing is that for lesser cost per meter, SDG&E is purchasing solid state meters and AMI systems that will provide a high level of reliabile daily reads.[9] (Witness Mr. Reguly, Chapter 18)

2. **DRA's testimony from Mr. Geilen, Chapter 1 (pp. 1-8 to 1-9) proposing a one life-cycle (17 years) is not appropriate for this class of investment projects.** However, SDG&E has conducted an analysis incorporating Mr. Geilen's assumptions for comparison purposes. See above Tables EF 17-1 and EF 17-2. SDG&E's Witness Mr. Kyle addresses Mr. Geilen's testimony.

3. **DRA's proposal to use a $52 per kW year value for demand response avoided capacity is not appropriate for SDG&E. (DRA, Chapter 6.)** DRA has provided a faulty and flawed analysis of SDG&E proposed $85 per kW year value of demand response. DRA inflates SDG&E's net market energy benefits, based on faulty assessment of SDG&E's methodology and inappropriately escalates SDG&E's value using an unjustified price ratio. DRA discounts SDG&E's additional values based on faulty logic and without fully considering the potential benefits. DRA Witness Mr. Geilen's testimony (DRA, Chapter 10) on Information Feedback illustrates the existence of even more unique benefits of AMI. (Witness Mr. Martin, Chapter 22)

4. **SDG&E agrees with DRA that there are benefits associated with information feedback.** DRA Witness Geilen claims that the benefits of AMI in SDG&E's case are too low because there was no estimate of benefits associated with "day-late" or "real-time" information feedback that could be provided to consumers in conjunction with AMI

[9] Apples to apples PG&E and SDG&E comparison is shown on Table TMR-18-1 of Witness Mr. Reguly's Testimony, Chapter 18. Costs include meters, gas modules, communications network and systems development and integration.

deployment. DRA provides an estimate of the benefit of information feedback resulting from reduced air conditioning and heating energy use. SDG&E agrees with DRA that the provision of information feedback is a potentially valuable benefit that will be possible with full AMI deployment. In short, SDG&E is encouraged by DRA's interest in this area as a potentially fertile area for additional demand response. SDG&E is pursuing technology for in-home display or presentation of energy information.

5. DRA's premise that the Commission or the State cannot implement new time differentiated rate designs on a default basis misses the point of SDG&E's AMI and analysis of demand response impacts. (DRA, Chapter 5, pp. 5-13 to 5-14). Specifically, DRA states:

> "Therefore, it is unreasonable to assume that the Commission will impose a mandatory TOU rate on these customers without addressing these issues. DRA does not advocate mandatory CPP or TOU for small C&I customers." (DRA, p. 5-14, lines 1-3)

DRA further states on the same page:

> "Again, DRA disagrees with SDG&E's rate design assumption for C&I customers. There is no evidence indicating that the Commission will eliminate the current TOU rates and make CPP mandatory." (DRA, p.5-14, lines 17-19)

DRA argues that because default CPP rates cannot or will not be implemented by the Commission, SDG&E must then reduce the demand response impacts and benefits that result from default CPP rates for medium and large C&I customers (all C&I customers > 20 kW). DRA's argument is without merit. First, the Commission has been very clear in terms of its direction and directive to the various electric utilities. Pacific Gas & Electric (PG&E) has been directed in Commissioner Chong's Assigned Commissioner Ruling and Supplemental Scoping

Memo on A.06-03-005[10]. The direction provided to PG&E is clear and explicit.

> "This supplemental scoping memo addresses how Pacific Gas & Electric Company's (PG&E's) critical peak pricing, and other dynamic pricing tariffs will be addressed in this proceeding.
>
> Our primary objective will be to work with PG&E and other parties to create a year-by-year strategic work plan that will direct PG&E to develop and integrate well-designed dynamic pricing tariffs into PG&E's rate design for all customers by 2011." (at Commissioner Chong's ACR, p.1)

In addition, the Commission has issued a draft decision (DD) by Commissioners Brown and Grueneich, "Opinion Modifying Rate Case Plan for San Diego Gas & Electric Company to Serve Testimony on Cost Allocation and Rate Design Applicable to Its Test Year 2008 General Rate Case". This DD states"

> "It determines that rather than a delay, the public interest compels an earlier date of January 2, 2007 to ensure necessary rate changes, including supportive of critical peak pricing (CPP) and other dynamic pricing programs are able to be implemented prior to the summer of 2008. SDG&E is directed to make its revenue allocation and rate design filing in compliance with this decision." (at DD, p.1)

The Commission's direction to SDG&E is clear and explicit. The Commission's position on dynamic pricing does not support DRA's view and underlying assumptions that dynamic pricing (CPP) will not be implemented. The Commission has essentially reaffirmed its position and direction on moving towards dynamic pricing. Dynamic pricing and demand response has been, since R.02-06-001, and remains the fundamental basis on which SDG&E has proceeded with its AMI proposal.

This concludes my prepared rebuttal testimony.

---

[10] PG&E's General Rate Case, Phase II, Application of PG&E to Revise Its Electric Marginal Costs, Revenue Allocation, and Rate Design