Application of San Diego Gas & Electric Company (U-902-M) for Approval of Demand Response Programs and Budgets for the Years 2012 through 2014.

Application 11-03-002

CHAPTER III REBUTTAL TESTIMONY OF GEORGE KATSUFRAKIS

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

July 11, 2011

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CHAPTER III

REBUTTAL TESTIMONY

OF GEORGE KATSUFRAKIS

I. PEAK TIME REBATE

A. Rebuttal to DRA testimony

DRA recommends that SDG&E move the funding request for \$4.353M from the current Demand Response filing and ask for funding for this program in GRC Phase 1. SDG&E's last GRC Phase 1 was filed in 2010, and the next GRC cycle will not occur in time to support this effort. PTR is a critical step in the path for customer acceptance of dynamic pricing and it is therefore necessary that it roll out to all residential customers prior to the dynamic rate (PeakShift @ Home).

DRA states on page 1-12, line 12 that "utilities continue to receive funding to maintain and operate these programs in various proceedings." As stated in my original testimony, page GMK-30, line 6, "Funding for this project ends in 2011, and, therefore the costs required for administering the PTR program from the years 2012-2014 are included in this application."

On page 1-15, line 8, DRA states that SDG&E did not include the budget and actual expenditure for the PTR program in 2009 – 2011 as required by the ALJ Ruling from 8/27/2010. The ruling states that, "At a minimum, the Applications shall include the following information on each existing program that the utility proposes to continue during the 2012-2014 period, up to the most recent month for which data is available: 1. Budget and actual expenditures for 2009-2011 (annual and total for the three-year period)" It is important to note that PTR is not an "existing program." Per advice letter 2238-E, SDG&E is launching a pilot to test PTR for 3,000 customers in 2011. It will not be a program until full implementation in 2012.

B. Rebuttal to UCAN testimony

UCAN suggests that SDG&E use funding from the Dynamic Pricing application (10-07-009) to educate customers about PTR. The marketing, education and outreach plan for PTR is specific to how customers can and should respond to the new "Reduce Your Use" days in order to maximize their bill credits. The PTR marketing, education and outreach activities, and the associated funding, are separate and distinct from the Dynamic Pricing activities. SDG&E intends to implement these programs harmoniously, but accounting for the programs will remain separate.

UCAN asserts that the budget for PTR is excessive, that "education is limited to informing customers of the opportunity to accrue summer savings" and that information can be provided "through existing SDG&E education vehicles, bill inserts and the education funds that will be made available in the Dynamic Pricing application." First, it should be noted that bill inserts are not a reliable channel for educational messages because mailed SDG&E bills are restricted to a certain weight to remain within postage budgets, and inserts related to regulatory and other mandatory issues take priority often leaving no room for non-essential inserts.

We agree that PTR education will focus on informing customers of their opportunity to accrue savings. But this will not be the only approach. A true integrated strategy will have four approaches; education around the new reward, notification of reward eligibility, event day notification and post-event performance. It is unreasonable to assume that customers would take action based on a one-time informational piece about the opportunity, but communications ranging from pre-event education through post-event follow up will be the most effective way to encourage participation and achieve the greatest results. None of the costs associated around

implementation of these strategies were considered when developing budgets for the dynamic pricing application.

While customers "need not take any action to enroll," they must take action to receive notification alerts about event days. We want to ensure that customers are reached through multiple channels so that they will know when and how to participate in order to maximize their reward. During the summer of 2011, we will measure load reduction from customers who receive notifications against those who don't in order to verify that notification is necessary to maximize results.

SDG&E agrees with UCAN that reaching customer via e-mail and the web is more cost effective. It is primarily for this reason that the budget shows a dramatic decrease between the 2012 and 2013/2014 years. In 2012, our primary outreach will be via direct mail, as we will attempt to ensure an optimal customer experience by reaching out through a channel, like direct mail, where we are confident that our contact information is correct. In addition, we do not wish to leave out the percentage of the population with disabilities or for other reasons have little to no access to these communications channels. We do not have reliable e-mail contact information for 100% of our customer base. Customers who receive information via direct mail will be encouraged to provide alternative contact methods, such as e-mail or mobile phone, so that we may contact them via more cost-effective methods in the future.

UCAN attempts to break down the costs for PTR into broad categories that do not accurately reflect the true costs of administering the program. The "\$2 million dollars worth of education kits" may have been inaccurately described by us; the \$2.08M for 2012 is inclusive of mailed rate education materials (both direct mail and e-mail when available,) event notification through channels such as e-mail or text messaging, event notification through paid and earned

media when available and post-event performance notification, also through e-mail or text messaging when available. As noted above, costs for 2013/2014 in the same category will be dramatically reduced as we hope to move to e-mail and text messaging as our primary communication channel for the program.

Program administration does not solely include "distribution, only, of the materials" (UCAN, page 5) but also includes program administration duties such as event day administration and analysis, coordination with billing and IT departments, performance analysis and campaign management, all aimed at increasing the potential load reduction of the program.

II. CUSTOMER EDUCATION, AWARENESS AND OUTREACH

A. Rebuttal to UCAN testimony

UCAN appears to believe that the budget for Customer Education, Awareness and Outreach would be targeted primarily at small customers, which would limit it to PTR. As indicated in GMK-62, the target audience for the Customer Education, Awareness and Outreach effort is actually all SDG&E customers, regardless of size. Outside of the new dynamic rates, SDG&E is proposing a full portfolio of demand response programs for all classes of customer. Much of the education, awareness and outreach budget is dedicated to medium and large customers and the level of funding requested is actually slightly lower than in past years due to the success of our previous efforts.

We agree that the device retailers and/or third-party aggregators will have a large role in educating customers; but we also believe that the base level of knowledge, understanding and acceptance of demand response must be activated by the utility. SDG&E must establish program awareness that retailers and aggregators can leverage to ensure credibility of their offerings with customers. We fully intend to develop messages that enable this new marketplace as it begins to be realized.

However, customer acceptance of these programs first revolves around understanding the basic concept of the necessity for demand response, and that is what this program intends. As stated in the program rationale on GMK-61, "Increased education will be needed to help customers understand that demand response is about more than shifting load on hot days... demand response events continue to be...episodic. Customers may experience long delays between enrollment in a program and an actual need for program participation." Therefore continued education and awareness efforts are necessary to "continue momentum and ensure that SDG&E receives the necessary participation/reduction when demand response events are called." All of this rationale is pointed towards a level of customer education around demand response far above and beyond the basic integrated information on all EE and DR programs that will be offered through dynamic pricing efforts. For this reason, SDG&E believes it is critical to fully fund the efforts of this program, as outlined in the program implementation plan, and not "halve" the budget as UCAN recommends.

III.SMALL COMMERCIAL TECHNOLOGY DEPLOYMENT (SCTD)

A. Rebuttal to DRA testimony

On page 3-15, DRA states a concern over the completion date of the RACT pilot, which is intended to provide information for SCTD's program design. As of this testimony, the RACT pilot is close to deployment, and is on schedule to complete by the end of 2011. The report will be available in the first quarter of 2012, in time to inform the rollout of the new SCTD program.

DRA recommends that the commission not approve the SCTD program until the cost effectiveness is brought to a TRC ratio above one. SDG&E disagrees with this recommendation for a number of reasons. The SCTD program is designed to kick start the market for new consumer technology. DRA's statement that the program is not cost effective is correct; it is our stance that this cannot be the only consideration. When considering new technology and the

adoption curve needed for these enabling technologies we believe we are aptly placed to move the market forward. In the long term, as pricing for the technology comes down and consumer acceptance grows, the cost-effectiveness for these technologies will improve.

As stated at GMK-55, and reiterated by DRA, we seek approval of the SCTD program and budget at this time, but will not launch the program prior to approval of the advice letter that we plan to file upon completion of the RACT pilot. Interveners will have the opportunity to address any concerns then.

B. Rebuttal to UCAN testimony

UCAN asserts that SCTD is incorrectly designed and that the costs are excessive. They calculate a cost per customer of \$727.80, but seem to indicate that this would be the cost of the device. The estimated equipment costs include providing customers with devices like Gateways, Programmable, Communicating Thermostats and Direct Load Control devices. While these costs are not insignificant, this program, like other programs, includes labor, program administration, marketing and overhead costs. As the technologies are not decided, and will not be until completion of the RACT pilot, we cannot validate the idea that "few customers would pay for a device that exceeded \$150 retail." Additionally the cost estimates for the enabling devices were based on current costs. These costs may decrease by the time we file our advice letter and this reduction would be reflected in the final program plan that will be submitted.

UCAN recommends a budget of \$4 million to provide a "50% bill credit on any device purchased and used for one year" in addition to a "consumer product lab" and posting of results/information on the web. The idea that 50,000 customers would install nascent enabling technologies for a \$50 per device bill credit is in direct conflict with the projected market uptake forecasted by our Load Analysis group.

In their analysis, UCAN appears to be considering "IHDs", which we know as "In-Home Displays" – this type of device does not automate load control. The SCTD program is focused on devices that do automate load control, such as programmable communicating thermostats, pool pump controls and other devices that can automate demand response. Since the majority of their proposed program design revolves around a completely different kind of technology deployment, it should be rejected.

We agree with UCAN's assessment that the consumer marketplace is in need of some sort of product testing to ensure that these device are interoperable with SDG&E's grid. The RACT pilot will provide the first list of devices approved for interoperability. SCTD will be informed of approved devices from the RACT pilot and, on a going forward basis, continued testing performed by the Emerging Technologies Program.

IV. SUMMER SAVER

A. Rebuttal to UCAN testimony (Marcus)

UCAN claims (at page 1 lines 23-24) that SDG&E "appears not to care very much about reducing residential peak loads." It goes on to further cite SDG&E's apparent "slashed spending on energy efficiency program with the greatest peak benefits—efficiency and quality installation of air conditioners" (at page 1 lines 27-28, page 2 line 1) and that it "has all but gutted its air conditioning energy efficiency programs" (at page 4 line 17). Because UCAN's testimony addresses energy efficiency, it is out of scope for this Demand Response proceeding. In the face of that, we offer the following testimony to counter UCAN's misplaced attack on our A/C efforts.

What UCAN fails to point out is that SDG&E actually offers a full suite of comprehensive program services that address the HVAC market. Included in Table 1 is a list of

¹ SDG&E's program implementation plans for all its energy efficiency programs are available at: http://eega.cpuc.ca.gov/Main2010PIPs.aspx.

1 SDG&E's available energy efficiency offerings with its expenditures-to-date as of May 2011.²

2 This is a more comprehensive picture of SDG&E's HVAC portfolio compared to the misleading

3 | tables presented by UCAN (at pages 11 to 12). In fact, SDG&E's 2006-2008 energy efficiency

portfolio had less than 5% of its budget allocated to HVAC. The 2010-2012 program cycle's

5 HVAC budget represents over 10% of its portfolio budget, an increase of 100% over its 2006-

2008 budget allocation.

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SDG&E continues to support the HVAC end use consistent with the Energy Efficiency program policies as articulated by the Energy Efficiency Strategic Plan ("EESP") HVAC strategies adopted by the Commission.³ The primary goals and outcomes of the EESP HVAC strategies focus on the following⁴:

Goal	Outcome
1. Consistent and effective compliance,	HVAC-related permits are obtained for
enforcement, and verification of HVAC-related	50% of installations by 2015 and 90+% by
building and appliance standards.	2020.
2. Quality installation and maintenance	By 2020 100% of systems are installed
becomes the industry and market norm.	to quality standards and optimally maintained
	throughout their useful life.
3. Whole building design and	Integrated design and construction
construction practices fully integrate building	practices are standard practice by 2020.
performance objectives to reduce cooling and	
heating loads.	
4. New climate-appropriate HVAC	At least 15% of equipment shipments
technologies (equipment and controls,	are optimized for California's climate by 2015
including system diagnostics) are developed	and 70% by 2020
with accelerated market penetration.	

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The goals listed above are focused on market transformation efforts, particularly on improving compliance, quality installation and maintenance, integrated approaches and lastly the

development of more climate-appropriate HVAC equipment in California. The SDG&E

⁴ *Ibid*, page 54.

² SDG&E's complete April 2011 monthly report is available at http://eega.cpuc.ca.gov/Main2010.aspx.

³ http://www.engage360.com/images/stories/ceesp/caenergyefficiencystrategicplan_jan2011.pdf

programs listed by UCAN on page 12 of its testimony are designed to address these HVAC market transformation strategic goals. SDG&E, together with the other utilities, is working closely with industry participants in order to promote and achieve these objectives. SDG&E is an active participant in the Western HVAC Performance Alliance ("WHPA") that works to develop an HVAC quality installation program and a practical implementation plan to integrate ANSI/ASHRAE/ACCA Standard 180-2008 into the 2010-12 HVAC programs.

Contrary to UCAN's claim that SDG&E no longer uses its third party program implementers for its HVAC tune-up and rebate programs (at page 13 lines 26 to 28), SDG&E continues to utilize its same 2006-2008 implementers, and has in fact worked with them to redesign the programs improve the reliability of the services and to be consistent with the EESP goals.⁵ In fact, SDG&E was the only utility offering HVAC quality installation services in 2010.

In addition to the obvious HVAC tune-up and rebates, SDG&E offers a variety of comprehensive whole house programs to its residential customers that not only address air-conditioning but approach the home as a complete system. The Statewide Prescriptive Whole House Retrofit Program, now known as the Energy Upgrade California ("EUC"), is designed to treat the home as a complete system with heating, air conditioning, water and other systems working together to more effectively help lower energy bills. SDG&E's Local Whole House Performance program complements the EUC program and is designed to deliver comprehensive energy efficiency improvement packages tailored for both the home resale and home modeling markets. This program includes incentives and available financing options to help offset the initial homeowners cost for the energy efficiency Home Performance improvements.

Contractors would receive an incentive for formal home diagnostics, post retrofit quality

⁵ SDG&E's third party programs continue to be implemented by the contractors awarded programs in its 2006-2008 EE portfolio.

assurance testing and reporting data on all jobs. Furthermore, the program would provide consistent standards and professional identity in association with the national Home Performance with ENERGY STAR® program. The list of measures include: thermal load reduction via air sealing, insulation, ventilation, windows, right-sizing and proper installation of HVAC systems including duct sealing, baseload reduction opportunities (lighting, plug loads, water heating, pool-pump, and energy efficient appliances and equipment); where applicable - solar water heating, photovoltaic (PV) installations, self generation, demand response applications. Another innovative SDG&E pilot program is its Local Island Program, also called the Micro Grid Comprehensive Energy Efficiency Delivery Pilot. The 2010-2012 Micro Grid Pilot will recommend and deliver specific single-family and multi-family EE and DR home improvement packages that will drive participants to Zero Net Energy in Borrego Springs. The program will directly assist residential customers through progressive stages of energy efficiency planning and implementation including: (1) education and information gathering; (2) comprehensive home audit, which will generate a checklist of action items and a comparative analysis of energy- and cost-savings as well as DR and self-generation opportunities; and (3) Whole-house focused installation of energy measures, backed by strong financial incentives. Among the measures rebated include HVAC measures.

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Therefore, contrary to UCAN's claim that SDG&E "has all but gutted its air conditioning energy efficiency programs," SDG&E's 2010-2012 Energy Efficiency portfolio includes a robust offering of HVAC programs that are designed to not only transform the HVAC market by vigorously working with industry participants to ensure quality installation and maintenance, improved HVAC systems designed for California's climate and code compliance, but to continue to work with its customers to promote the installation of high efficiency HVAC equipment

through more comprehensive whole house approaches. Furthermore, SDG&E's programs

support the Commission's Integrated Demand Side Management ("IDSM") objectives by

offering not only energy efficiency HVAC measures but also DR (which includes its Summer

Saver, Dynamic Pricing Options and its proposed Small Customer Technology Deployment)

programs and solar measures. Therefore, the Commission should deny UCAN's recommendation

programs and solar measures. Therefore, the Commission should deny UCAN's recommendation

"to reject SDG&E's DR programs without ordering SDG&E to reprioritize money back to its air

conditioner efficiency programs" (at page 13 lines 23 to 25).

We agree with UCAN's request to provide A/C energy efficiency programs through third parties, and as described above, SDG&E will continue to do so. However, UCAN also recommends that "SDG&E should be required to enhance its Summer Saver program." (Marcus, page 14, line 2) without knowing the full picture of the program's cost effectiveness. The TRC for Summer Saver for the 2012 to 2014 program cycle is 0.72. We are under a 10-year contract with AER, and are at this time obligated to fulfill the terms of that contract, which is why we filed to maintain the program as is. An expansion of the program would potentially further lower the cost effectiveness of the portfolio. While Summer Saver and SCTD have similar TRCs, Summer Saver is a mature program that recently had a reduction in the contracted cost for new and existing load and there is no expectation that this program, over time, will become more cost effective. Conversely, SCTD is deploying new technologies that are expected to see significant price reductions in the near- to mid-term. These reductions will directly impact its cost effectiveness.

V. BASE INTERRUPTIBLE PROGRAM (BIP)

A. Rebuttal to DRA's testimony

DRA states on page 3-4, line 3 that "PG&E's Proposal to Screen and Deter Non-compliant participants should be extended to SCE and SDG&E's BIP programs." SDG&E

agrees with DRA recommendation that SDG&E should implement a pre-enrollment qualification for new BIP applicants and a re-test for non-complying BIP participants. BIP participants that are not able to achieve their Firm Service Level during an event will have their Firm Service Level set to the level they achieved during the event. Participants requesting a higher Firm Service Level will require a re-test. A tariff for the BIP program that reflects the proposed changes, as well as an updated Program Implementation Plan, can be found in Appendix A.

VI. GUARANTEED THREE YEAR AGGREGATOR PAYMENT FOR CBP AND TI (VIA CPP)

A. Rebuttal to DRA's testimony

DRA opposes SDG&E's proposal for a guaranteed payment rate for a three year period for the Capacity Bidding Program and the Technology Incentive Program (for CPP customer support), because it does not utilize limited ratepayer funds efficiently and effectively.

SDG&E conducted stakeholder input sessions to gather feedback and understand barriers to participation. The barriers that were identified included the year-to-year nature of the current agreements and the hesitation that aggregators have when enroll new customers towards the end of the three year program cycle when future payment rates are not certain. SDG&E's proposal simply seeks to commit the pricing structures approved in this application for three years from contract commencement as long as the agreement was initiated during this cycle. The confidence in the pricing addresses the customer and aggregator's uncertainty as well as helping ensure that there is commitment from both customers and aggregators that they will continue to participate in our demand response programs for the three year duration. This assurance will allow aggregators to focus on new customers as opposed to re-selling existing customers or risk a drop in enrollments at the end of the program cycle. By helping to assure participation for a solid three years, we feel this is an efficient use of funds.

VII. BACK-UP GENERATION

A. Rebuttal to CLECA's testimony

CLECA rejects SDG&E proposal to modify the BIP and CBP tariffs to remove the backup generation provision and add a clause to prohibit back-up generation for load reduction. Ms. Barkovich feels that SDG&E has misread the decision.

SDG&E feels its proposal to prohibit backup generation for load reduction is in accordance with Commission's guidance in D.09-08-027, but is neutral on the topic. We are looking for guidance from the Commission on this topic. SDG&E will remove the language from its tariffs restricting back-up generation if, as Ms. Barkovich states, SDG&E has misread the decision.

VIII. PERMANENT LOAD SHIFT PROGRAM

A. Rebuttal to CALMAC's testimony

SDG&E disagrees with CALMAC assertion that "a reasonable incentive would be \$1,200-\$1,500 per kW shifted from the peak electric rate period". SDG&E supports the findings from the PLS study that ratepayer neutral incentives of around \$500/kW are sufficient for PLS systems using mature technologies and a higher rate for emerging technologies – up to \$750/kW in the case of our proposed Locational Demand Response Pilot. In review CALMAC's testimony we re-examined our PLS incentive levels SDG&E and concluded that, in fact, over time the \$500-750/kW could be too large an incentive. Although historic costs for PLS systems may have supported the need for the incentive level listed above, SDG&E believes that as these costs continue to come down incentive levels this high will not be needed. As such, SDG&E is proposing a modification to the programs originally provided: reducing the incentive cap from 50% of project costs to 15% of project costs with a cap of \$500 and add additional language that would exclude the cost of non-PLS equipment (e.g. A/C unit) from the project cost. SDG&E

recognizes that these systems can cost more than \$4000/kW and supports incentives in the range 2 of \$500-\$750/kW, but as equipment costs come down so should incentive payment. The 15% 3 cap will help ensure that occurs. The additional language excluding non-PLS equipment is to ensure that the incentive does not pay for equipment that would be required regardless of 5 whether there is a PLS system or not, like a packaged A/C unit. Updated Program Implementation Plans are available in Appendix B. 6 7 IX. COST OF DYNAMIC PRICING APPLICATION 8 A. Rebuttal to UCAN's testimony 9 Mr. Shames accurately points out that the \$70.1M cost shown in Table A-2 for the 10 Dynamic Pricing Application is not the total cost. This table only shows cost for the proposed 11 2012 through 2014 time period. In addition to the \$70.1 M for the years 2012 through 2014, 12 SDG&E requested an additional \$47.7 M for the years 2010 (\$4.4 M), 2011 (\$30.1 M) and 2015 13 (\$13.3M). 14 X. UPDATES TO TABLE A-3 AND THE PROGRAM IMPLEMENTATION PLANS 15 Included in my testimony are updates to the program's cost effectiveness. The costs 16 effectiveness value shown in Table A-3 (provided in Appendix A) and the Program 17 Implementation Plans (provided in Appendix B) reflect the updated values that are informed 18 from Kevin McKinley's analysis and testimony submitted on July 12, 2011. 19

This concludes my rebuttal testimony.

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