

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

Application of San Diego Gas & Electric
Company (U 902 E) for Authority to Update Electric Rate
Design Effective on January 1, 2015

Application 14-01-____
(Filed January 31, 2014)

Application 14-01-____
Exhibit No.: (SDG&E-____)

**PREPARED DIRECT TESTIMONY OF
CHRIS YUNKER
CHAPTER 1
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**

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

JANUARY 31, 2014



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PREPARED DIRECT TESTIMONY OF
CHRIS YUNKER
CHAPTER 1

I. INTRODUCTION

A. Overview

California is the most populous state in the nation and the 8th largest economy in the world. It is fitting that California is also a national leader in innovative energy policies. These policies have resulted in some significant achievements. Per the Integrated Energy Policy Report “A wide array of energy efficiency programs for utility customers has contributed to keeping energy use per person in California relatively constant, while use in the rest of the United States has increased by roughly 40 percent.”¹ California also has a 33% renewable portfolio standard, one of the most ambitious in the country. California’s recognition of the transportation sectors contribution to greenhouse gas emissions has also lead to tangible outcomes. “As a result of the Alternative and Renewable Fuel and Vehicle Technology Program, California now has the largest network of electric vehicle charging systems and the largest number of hydrogen fueling stations in the country.”²

California seeks to continue to build on the past success of its energy policies. One of the means by which California seeks to accomplish this is through the state’s “Loading Order”. “The state’s “Loading Order” is a guiding policy which places energy efficiency (using less energy to do the same job) and demand response (modifying energy usage when needed for optimal grid operation) as top priorities for meeting California’s energy needs. Next, the loading order calls for renewable resources and distributed generation.”³ In order to maximize the benefit of the “Loading Order” and keep pace with changes caused by the Loading Order priorities, utility rate design must change. That is, rate design must evolve hand-in-hand with advances in energy efficiency, demand response, renewable energy and distributed generation. By updating utility rate design, the California Public Utilities Commission (“Commission”) can help ensure that as customers experience and live within the more modern and advanced energy world, they are provided accurate price signals that allow them to make economically efficient decisions about

¹ 2013 Integrated Energy Policy Report; page 26.

² 2013 Integrated Energy Policy Report; page 13.

³ 2013 Integrated Energy Policy Report; Page 1.

1 when and how to use energy. Adoption of rate design that is more consistent with the reality of
2 modern energy use and generation will also further the development and deployment of new low
3 carbon technologies.

4 This Rate Design Window (“RDW”) Application presents San Diego Gas & Electric
5 Company’s (“SDG&E’s”) proposals to update its rate design beginning in January of 2015. The
6 proposals are as follows:

- 7 • Shift its Time-of-Use (“TOU”) on-peak periods to include more evening
8 hours (moving the summer on-peak period to 2 p.m. to 9 p.m. weekdays,
9 extending the winter on-peak to 5 p.m. to 9 p.m. and creating a super off-
10 peak of midnight to 6:00 a.m. for all 365 days a year) and implement
11 mandatory TOU rates for non-residential customers;
- 12 • Reduce its baseline allowances to the minimum allowed by California Public
13 Utilities Code (“ P.U. Code”) 739;
- 14 • Move recovery of California Solar Initiative (“CSI”) and Self Generation
15 Incentive Program (“SGIP”) costs from distribution rates to Public Purpose
16 Program (“PPP”) rates;
- 17 • Reduce the Peak Time Rebate (“PTR”) incentive levels by \$0.25 to \$0.50 or
18 \$1.00 (depending on whether the customer is using enhanced technology);
19 and
- 20 • Satisfy Electric Vehicle (“EV”) Rate compliance.

21
22 SDG&E believes that its proposals are consistent with the California Public Utilities
23 Commission’s (“Commission’s” or “CPUC’s”) general policy of accurate price signals which
24 encourage conservation of energy and infrastructure while providing protections for customers who
25 are vulnerable. Indeed, the Commission’s policy goals, as set forth below (hereinafter referred to as
26 “Rate Design policy goals Nos. 1 – 10”), provided the direction under which SDG&E developed
27 this RDW Application’s proposals.

- 28 1. Low-income and medical baseline customers should have access to enough electricity to
29 ensure basic needs (such as health and comfort) are met at an affordable cost;
- 30 2. Rates should be based on marginal cost;

- 1 3. Rates should be based on cost-causation principles;
- 2 4. Rates should encourage conservation and energy efficiency;
- 3 5. Rates should encourage reduction of both coincident and non-coincident peak demand;
- 4 6. Rates should be stable and understandable and provide customer choice;
- 5 7. Rates should generally avoid cross-subsidies, unless the cross-subsidies appropriately
- 6 support explicit state policy goals;
- 7 8. Incentives should be explicit and transparent;
- 8 9. Rates should encourage economically efficient decision-making; and
- 9 10. Transitions to the new rate structures should emphasize customer education and outreach
- 10 that enhances customer understanding and acceptance of new rates, and minimizes and
- 11 appropriately considers the bill impacts associated with such transitions.⁴

12 In general, the aim of these policy goals is a low carbon economy where customers have a
13 wide variety of choices in the energy they purchase and technologies they utilize to manage their
14 energy consumption. By developing proposals that are consistent with the rate design objectives
15 outlined above, SDG&E is attempting to build a foundation upon which new technologies can be
16 adopted and new markets and technologies can be developed to meet the changing service
17 requirements of customers as they transition to a future where they are both suppliers and
18 consumers of grid services. Accurate prices and transparent and direct incentives and subsidies, to
19 the extent incentives and subsidies are required to promote California policy, can achieve the
20 Commission's objectives without requiring tradeoffs in the rate design goals to be made.

21 Consistent with this vision, SDG&E's proposals take necessary steps toward building a solid
22 foundation upon which California's policy can be achieved. The Application is supported by the
23 following prepared direct testimony:

- 24 • Chapter 2: (Cynthia Fang) addresses rate design proposals;
- 25 • Chapter 3: (David T. Barker) addresses the results of TOU periods and associated
- 26 proposals; and

⁴ R.12-06-013, Scoping Memo and Ruling of Assigned Commissioner, issued on November 26, 2012, Attachment A.

- Chapter 4: (Kenneth E. Schiermeyer) addresses 2015 Test Year Forecasted Sales.

B. Purpose Of My Testimony

The purpose of my testimony is to explain how SDG&E’s proposals support California’s vision of a low carbon future, the consistency of the proposals with past, pending and future proceedings, and the need to move forward with the proposals in this RDW Application.

My testimony is organized as follows:

- **Section II – SDG&E Policy Objectives:** describes how SDG&E’s proposals support the common energy-related policy objectives of California, SDG&E customers and a low carbon future;
- **Section III – Timing of Proposals Supports a Smooth Transition for SDG&E Customers:** describes how SDG&E’s proposals support a smooth transition to the CPUC’s rate policy objectives;
- **Section IV – Delivered & Net Rate Design Determinants:** describes the change in method in developing the forecasted sales and billing determinants;
- **Section V – New Rate Design Proposals:** describes the new rate design proposals in this RDW Application;
- **Section VI – Customer Impacts:** describes the need for customer outreach and education;
- **Section VII - Electric Vehicle (“EV”) Rate Compliance:** describes SDG&E’s compliance with the directive in Decision (“D.”) 11-07-029 regarding plug-in hybrids (“PEVs”) and EV use in California;
- **Section VIII – Summary and Conclusion:** provides a summary of recommendations; and
- **Section IX – Qualifications:** presents my qualifications.

II. SDG&E POLICY OBJECTIVES

SDG&E’s rate design policy supports California’s renewable energy and energy efficiency policies, the needs of SDG&E’s customers and the further development of a low carbon future in California. This low carbon future includes lowering the carbon intensity of our energy use through

1 a variety of measures including the adoption of renewable energy and supporting technologies such
2 as battery storage and smart inverters, EV and home area networks (“HAN”) and supporting
3 technologies that can manage customer loads. SDG&E’s proposals are in support of that objective.

4 **A. California Policy Supports a Low Carbon Future**

5 California’s support of a low carbon future can be seen in the Governor’s target for 12,000
6 megawatts (“MW”) of distributed renewable generation⁵ and Net Zero Buildings for all new
7 residential construction by 2020 and for new commercial construction by 2030.⁶ Along these lines
8 the legislature passed and Governor signed Assembly Bill (“AB”) 327, effective January 1, 2014,
9 lifting the cap on customer owned distributed renewables, codifying that the 33% Renewable
10 Portfolio Standard (“RPS”) was a floor and not a ceiling and directing Investor Owned Utilities
11 (“IOUs”) to file distribution plans that, among other things, include the evaluation of distributed
12 energy resources (“DER”).

13 **B. SDG&E’s Customers Support a Low Carbon Future**

14 SDG&E customers’ support for a low carbon future can be seen in their robust adoption of
15 new low carbon technologies. SDG&E customers are adopting distributed solar at record breaking
16 rates. In the last 3 years, customer adoption has gone from 300 customers per month to over 1000
17 customers per month. EV adoption has grown by 127% over 2013 for a total of 5,593 PEV.
18 Customer surveys have shown a demand for greater options to participate in renewable energy.
19 SDG&E customers have shown a willingness to pay more for the ability to be served by a higher
20 percentage of renewable energy.⁷

21

⁵ Governor’s “Clean Energy Jobs Plan”, p. 3.

⁶ California Code of Regulations, Title 24 (CA Building Standards Code).

⁷ SDG&E residential customer web-based panel survey, Feb. 2011. A total of 842 panelist completed survey providing 95% confidence level with margin of error +/- 2%. The research found that based on the survey respondent’s first impression of a local solar green program, 60% of respondents were at least somewhat interested in participating without knowing the price and of this group, 18% were very interested. Of those interested, 40% expressed willingness to pay an additional cost between \$11 and \$25 a month to participate in such a program.

1 **C. SDG&E Supports a Low Carbon Future**

2 SDG&E was the first utility to target 33% RPS prior to the passage of Senate Bill (“SB”) 2
3 in 2011 requiring utilities to achieve this target by 2020.⁸ SDG&E’s Sustainable Communities was
4 the first of its kind program in which the utility partnered with local businesses to deploy distributed
5 solar on their rooftops. SDG&E was chosen by the Department of Energy (“DOE”) to host an EV
6 Pilot analyzing consumer charging behaviors in response to TOU rates. SDG&E’s Borrego Micro
7 Grid was funded with \$8.0 million from the Department of Energy and \$2.8 million from the
8 California Energy Commission (“CEC”), plus matching funds from SDG&E and partners.
9 SDG&E’s development of an automated system to process Net Energy Metering (“NEM”)
10 applications has provided superior service with processing times of less than 4 days compared to 3
11 to 4 weeks, saving customer time and ratepayer money in the face of rapidly escalating adoption
12 rates. SDG&E was the first IOU to submit a Community Solar application providing any and all
13 customers access to higher levels of renewable energy prior to the recent passage of SB 43.⁹
14 SDG&E’s track record supports the vision of a low carbon future through its adoption of renewable
15 and supporting technologies and leveraging the knowledge gained to provide greater access to
16 SDG&E customers. SDG&E’s leadership is recognized nationally, having been awarded “Most
17 intelligent utility in the United States” by Intelligent Utility Magazine and IDC Energy Insights for
18 3 consecutive years

19 **D. SDG&E’s is Developing a Pricing Platform for Customer Choice**

20 SDG&E believes California’s vision of a low carbon future can be accomplished by
21 transitioning the electric system and market structure to one which acts as a platform for customers
22 to adopt low carbon technologies to meet their individual needs. This platform needs to be (1)
23 robust enough to account for a variety of customer options; and (2) provide the level of simplicity or

⁸ P.U. Code 399.15

⁹ SDG&E’s connected to the sun Application, A.12-01-008.

1 sophistication to satisfy a growing diversity of customer preferences. This framework underlies
2 SDG&E's roadmap to achieving California's vision. The proposals within this application are
3 necessary steps towards achieving that vision and support a transition path to default TOU rates for
4 residential customers in 2018.

5 **Utility Platform:** SDG&E put forth in its Smart Grid Deployment Plan that "*SDGE's vision*
6 *is that utilities will provide the foundation that facilitates the achievement of many of the state's*
7 *emission reduction goals.*"¹⁰ This foundation is built on a smart grid with low carbon technologies
8 both adopted by customers and deployed by the utility. The technologies that customers adopt are
9 driven by the price signals the utility sends.

10 **Pricing Component of Utility Platform:** In the Order Instituting Rulemaking on the
11 Commission's Own Motion to Conduct a Comprehensive Examination of Investor Owned Electric
12 Utilities' Residential Rate Structures, the Transition to Time Varying and Dynamic Rates, and
13 Other Statutory Obligations (Rulemaking ("R.") 12-06-013) ("Residential Rate OIR") proceeding,
14 SDG&E states the need for accurate price signals as part of the pricing platform:

15 SDG&E's Optimal Rate Design will allow customers to optimize the ways
16 in which electricity is produced and consumed that are specifically tailored
17 to meet their individual needs, and in a manner that is sustainable and fair
18 to all customers, while confirming that tools exist to ensure the continued
19 ability to more effectively promote short and long-term policy objectives
20 through transparent incentives that are more effectively designed to fulfill
21 policy goals.¹¹

22 The Commission has now directed SDG&E and the other IOUs to file a transition plan to
23 2018 rates. Energy Division ("ED") has developed a proposal that was entered into the record and
24 will serve as a tool to assess those transition plans.

25 IT IS RULED that:

26 ...

¹⁰ R.08-12-009 Smart Grid Deployment Plan, Section 2 at p. 12.

¹¹ R.12-06-013, SDG&E's Response to the Ruling of Administrative Law Judge ("ALJ") McKinney and the November 26, 2012 Scoping Memo and Ruling of Assigned Commissioner, filed May 29, 2013. at p. 2.

1
2 2. Phase 1 will address the rate design requests filed by the utilities for the
3 period after 2014 and the utilities specific plans for transition to 2018. The
4 scope of both phases will be set forth in more detail in a subsequent
5 amendment to this Amended Scoping Memo.

6 ...

7
8 I envision the ED Proposal to be a tool for utilities to develop future
9 residential rate designs, as well as a framework for parties to evaluate rate
10 change requests and applications. I expect the ED Proposal will play an
11 essential role in evaluating the rate change requests being considered in
12 this proceeding.¹²

13 SDG&E's proposal will be consistent with the ED proposal calling for default residential
14 TOU rates in 2018 as well as optional TOU rates as part of the transition path:

15 The ED Proposal recommends default time of use (TOU) for residential
16 customers in 2018, provided that adequate protections are in place for
17 vulnerable customers. The ED Proposal recommends a gradual transition
18 path toward default TOU.¹³

19 SDG&E agrees with the ED proposal recommending that TOU periods in particular should
20 be examined in a utility rate setting proceeding in a timely manner to support a transition to default
21 TOU rates in 2018:

22 Given the points raised in this discussion, Staff believes that TOU time
23 periods and rate design need to be carefully developed in the context of
24 GRCs, or comparable rate setting proceedings. Between now and the time
25 of the default to TOU rates in 2018, the Commission should assess the
26 appropriate TOU time periods,....¹⁴

27 The Ruling also supports Tier reform and the move to accurate price signals consistent with
28 the proposals within this RDW Application.

29 With the passage of AB 327, the Commission and the utilities now have
30 the flexibility to implement default TOU residential rates starting in 2018.
31 They also have the flexibility to make immediate changes to the existing
32 tier system and to propose new fixed charges or bill minimums. Passage of
33 AB 327 demonstrates the legislature's desire to lift constraints on

¹² Rulemaking 12-06-013 AMENDED SCOPING MEMO AND RULING OF ASSIGNED COMMISSIONER, issued on January 6, 2014, at p. 10.

¹³ *Id.* at p. 4.

¹⁴ Energy Division Staff Proposal for Residential Rate in Compliance with R.12-06-013 and Assembly Bill 327, at p. 62.

1 residential rate design and move toward rates that are more closely aligned
2 with costs.¹⁵

3 As rates do not currently reflect the foundational elements or goals, as articulated by the
4 Commission in the Residential Rate OIR and the ED proposal, fundamental changes need to be
5 made. SDG&E’s proposals are timely and provide critical elements of the pricing platform in that
6 (1) TOU periods provide both information to customers and policy makers on shifting cost drivers
7 associated with when energy is used; (2) Baseline and PTR adjustments provide for a transition that
8 looks to mitigate bill impacts as we move to just and reasonable rates for all customers while
9 mitigating “rate shock” through a smooth transition; and (3) accounting for CSI and SGIP revenues
10 in PPP provides for greater transparency in pricing as California looks to adopt rates that will
11 require accurate price signals in order to seamlessly adopt new technologies that complement
12 distributed renewables, such as batteries and smart inverters.

13 **III. TIMING OF PROPOSALS SUPPORTS A SMOOTH TRANSITION FOR SDG&E**
14 **CUSTOMERS**

15 The steady progression towards a structure that is in line with the CPUC’s rate policy
16 objectives can be seen in the alignment of past, present and future rate design proceedings and
17 applications. A high level perspective of the progression of rate applications allows for greater
18 understanding of how discreet proposals within this RDW Application are needed now to support a
19 smooth transition of SDG&E’s rate design to one which supports California low carbon policy.

20 **A. Past Applications**

21 **i. Dynamic Pricing Program (“DPP”) Rates**

22 DPP rates were first introduced in SDG&E’s service territory in 2008 with the approval of
23 default critical peak pricing (“CPP”) rates for SDG&E’s Medium & Large Commercial and
24 Industrial (“M/L C&I”) customers, pursuant to D.08-02-034 in A.07-01-047, customers who were
25 largely already required to take service on TOU rates. Since then, rate reform at the CPUC and

¹⁵ Rulemaking 12-06-013, AMENDED SCOPING MEMO AND RULING OF ASSIGNED COMMISSIONER, issued on January 6, 2014, at p. 6.

1 legislature, renewable energy procurement and customer adoption of technologies has overtaken the
2 original proposals, making an update to TOU periods timely. D.12-12-004 in A.10-07-009
3 approved optional TOU and CPP rates for Residential and Small Non-Residential customers, as
4 well as default CPP rates and mandatory TOU rates for Small Non-Residential customers to be
5 implemented at a later date. Updating the TOU periods at this time will allow SDG&E to better
6 align the implementation of default CPP and mandatory TOU rates for Small Non-Residential
7 customers with the new TOU periods proposed in this RDW Application.

8 **ii. 2012 General Rate Case Phase 2 (“2012 GRC P2”)**

9 SDG&E’s 2012 GRC P2 Application updated SDG&E rates for updated marginal cost
10 studies, revenue allocation and to reflect the following policy guidance:

- 11 • Create Clear and Accurate Price Signals;
- 12 • Promote Fairness and Equity;
- 13 • Empower and Inform Customers; and
- 14 • Mitigate Customer Impacts Associated with Rate Proposals.

15 D.14-01-002 issued in SDG&E’s 2012 GRC P2 approved a Settlement on revenue allocation and
16 rate design, and deferred unresolved residential rate design issues to the Residential Rate OIR.

17 **iii. NEM Grandfathering**

18 Grandfathering proposals have been submitted to the Commission for the current NEM
19 customers in advance of the new rules for NEM that are to be established in a statewide rulemaking
20 by March 2014.

21 **iv. SB 695 – CARE and Tier 1 & 2 increases**

22 Advice Letter (“AL”) 2568-E will implement small statutory annual increases to Tiers 1 and
23 2 rates, effective February 1, 2014, previously permitted under SB 695 to help reduce the cost shift
24 between lower and upper tier rates resulting from the cap imposed by AB 1X.

25 **v. Residential Rate OIR Phase 2 Application (Summer Rate Relief)**

1 SDG&E filed an application on November 22, 2013 in the Residential Rate OIR proceeding
2 that represents the initial implementation of SDG&E's Optimal Residential Rate Design for rates
3 effective 2014 and permissible under AB 327, which is one characterized by the following:

- 4 • Utilities charge for the services they provide;
- 5 • Rates are designed to recover costs on the same basis as they are incurred; and,
- 6 • Incentives or subsidies that have been deemed necessary to further public policy objectives
7 are separately and transparently identified.

8 While this Optimal Rate Design structure was included in R.12-06-013 addressing residential rate
9 design, SDG&E believes this is the Optimal Rate design structure for all customers.

10 On January 28, 2014, SDG&E re-filed its November 22 filing for rates effective 2014 under
11 the direction of the Second Amended Scoping Memo issued on January 24, 2014, as well as the
12 guidance from Administrative Law Judge ("ALJ") McKinney and Commissioner Peevey's office at
13 the January 8, 2014 Prehearing Conference ("PHC") in Phase 2 of R.12-06-013. IOU proposals for
14 rates beginning in 2015 and the roadmap to 2018 default TOU rates permissible under AB 327 will
15 be filed as part of Phase 1 of R.12-06-013.

16 **B. Current Application – RDW Application**

17 Each of the proposals in this RDW Application addresses a part of the pricing foundation
18 needed to achieve a sustainable electric rate structure. So while each component is appropriately
19 assessed individually, it is important to note how the proposals interrelate. This interdependency
20 underlines the importance of finalizing current proceedings before the Commission and the need to
21 put forward the RDW proposals now, so as to inform future proceedings and provide for a timely
22 transition.

1 **C. Future Proceedings**

2 **i. Residential Rate OIR Phase 1 Application**

3 In Phase 1 of R.12-06-013, SDG&E will be filing its proposal to implement rates
4 permissible under AB 327 effective 2015 and the roadmap to default TOU in 2018.

5 **ii. NEM 2.0 Rulemaking**

6 The Commission is to establish new NEM rules in a statewide rulemaking by December 31,
7 2015. These new rules will “[e]nsure that the total benefits of the standard contract or tariff to all
8 customers and the electrical system are approximately equal to the total costs.”¹⁶ A likely
9 component of any rate design that will satisfy the requirements of AB 327 is TOU periods and rates.
10 The change in TOU periods and increased accuracy in distribution pricing (by moving CSI and
11 SGIP to be collected through PPP rates), as proposed in this RDW Application, will support this
12 rulemaking.

13 Rate reform should be considered from both a short and long term perspective. As noted
14 above, AB 327 directs the CPUC to design new NEM rules by December 31, 2015 and provides the
15 CPUC the authority to adopt default TOU rates for residential customers in 2018. California has
16 policy goals of having all new residential construction to be net-zero energy by 2020. The CEC
17 discusses the “Loading Order” of preferred resources in the 2013 Integrated Energy Policy Report
18 (“IEPR”), emphasizing energy efficiency and demand response priorities.¹⁷ Customers will need to
19 make economically efficient decisions for energy efficiency and demand response if a sustainable
20 market for net-zero construction is to be achieved.

¹⁶ P.U. Code 2827.1(b)(4).

¹⁷ 2013 IEPR Page 1: *The 2013 Integrated Energy Policy Report (IEPR) looks at a variety of energy issues facing the state today. The state’s “Loading Order” is a guiding policy which places energy efficiency (using less energy to do the same job) and demand response (modifying energy usage when needed for optimal grid operation) as top priorities for meeting California’s energy needs. Next, the loading order calls for renewable resources and distributed generation. To produce the energy needed by a growing population and recovering economy, maximizing the use of these “preferred resources” becomes even more important as California works toward reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050.*

1 Taking action now will provide much needed time for customers and the market to react to a
2 peak that is shifting to later in the day. Appropriate price signals are necessary for the emerging
3 technology market to identify and develop products that customers can utilize. The proposals that
4 are part of RDW Application are necessary steps to keep California's momentum towards achieving
5 medium and long-term environmental objectives on track.

6 **IV. DELIVERED AND NET RATE DESIGN DETERMINANTS**

7 The billing determinants used for rate design in this RDW Application are based on the 2015
8 sales forecasts presented in the testimony of SDG&E witness Mr. Schiermeyer (Chapter 4). Two
9 sets of determinants are used in rate design: bundled determinants applied to commodity and system
10 determinants applied to all other rate components such as distribution. Previously, the only
11 adjustment that differentiated bundled and system determinants was sales forecasts associated with
12 departing load customers, to account for departing load customers that received commodity services
13 from alternative providers while still receiving all other services from the utility.

14 Today, customers are exporting energy onto the grid in volumes that require further
15 adjustment to bundled determinants. The appropriate billing determinants used in establishing rates
16 are critical to accurate price signals. Accurate price signals are a foundational element that allows
17 customers to make economically efficient decisions which conserve energy and infrastructure.
18 SDG&E will continue to study the treatment of behind the meter distributed generation in the
19 development of rate design determinants in future proceedings to support the common objective of
20 a low carbon future.

21 **V. NEW RATE DESIGN PROPOSALS**

22 **A. TOU Periods**

23 **i. Description**

24 As described in more detail in the testimony of SDG&E witness Mr. Barker (Chapter 3),
25 SDG&E's TOU proposal shifts the summer on-peak period later in the day, from 2:00 p.m. to 9:00

p.m. on non-holiday weekdays, extends the winter on-peak from 5:00 p.m. to 9:00 p.m. on non-holiday weekdays and establishes a super off-peak period to all TOU rate schedules of midnight to 6:00 a.m. daily. The remaining hours are in the semi-peak period. The table below presents the proposed TOU periods:

Summer (May - October)		
	Weekdays	Weekends/Holidays
On-Peak	2pm To 9pm	N/A
Semi-Peak	6am To 2pm And 9pm to 12m	6am to 12m
Super Off-Peak	12m To 6am	12m to 6am

Winter (November - April)		
	Weekdays	Weekends/Holidays
On-Peak	5pm To 9pm	N/A
Semi-Peak	6am To 5pm And 9pm to 12m	6am to 12m
Super Off-Peak	12m To 6am	12m to 6am

The purpose of SDG&E’s TOU proposal is to align the TOU periods with SDG&E’s shift in marginal costs consistent with the CPUC’s Rate Design policy goal No. 2 (Rates should be based on marginal cost), such that consumers can make economically efficient decisions in how they consume energy, which is consistent with Rate Design policy goal No. 8(Incentives should be explicit and transparent).

ii. Benefits

1. Aligns prices with periods of peak capacity needs

SDG&E’s TOU proposal benefits customers by sending accurate information on the cost of services provided to them. This allows customers to make economically efficient decisions on their energy use, which can ultimately lower the overall cost of service by utilizing existing infrastructure more efficiently. Customers can benefit by shifting their demand from periods of peak capacity, thereby lowering their overall cost and reducing the need for new infrastructure, which is consistent with Rate Design policy goal No. 5(Rates should encourage reduction of both coincident and non-

1 coincident peak demand). Avoiding the need for new infrastructure is also a conservation benefit
2 because it avoids the environmental impacts of that infrastructure, which is consistent with Rate
3 Design policy goal No. 4(Rates should encourage conservation and energy efficiency).

4 **2. Aligns prices with periods of high marginal prices**

5 Aligning TOU periods with periods of high marginal commodity costs, both energy and
6 capacity, allows customers to benefit by shifting consumption away from higher costs of energy that
7 the utility would otherwise incur. Typically, this energy would come from generation such as
8 peaker plants requiring more natural gas, and more emissions, per kilowatt hours (“kWh”)
9 produced. Thus, aligning TOU periods with costs can benefit customers through lower bills and
10 promotes California’s low carbon policy by lowering emissions.

11 **3. Necessary to support California Policy Objective of Renewable** 12 **Generation**

13 The new TOU periods are driven in large part by California’s renewable energy policy. As
14 described in the testimony of SDG&E witness Mr. Barker (Chapter 3), SDG&E’s capacity needs
15 are no longer driven by SDG&E’s peak demand, but rather SDG&E’s peak load net of intermittent
16 renewable generation. In order to support the adoption of renewable generation, TOU periods need
17 to be updated to reflect the new impact of high levels of intermittent resources in California’s
18 generation mix. Adjusting TOU periods can support renewable integration by reducing the need for
19 fossil generation to meet peak capacity needs in early evening when solar can no longer provide
20 capacity and by reducing the need for flexible fossil capacity by increasing consumption in low net
21 load periods and decreasing consumption in high net load periods.

22 **4. Encourages adoption of technologies that will be required in** 23 **order to achieve California’s policy of a low carbon future**

24 Updating TOU periods will encourage the adoption of low carbon technologies. As the peak
25 shifts to later in the day, technologies that are focused on managing residential loads will become
26 increasingly important. Residential customers’ contribution to peak capacity needs increases in the

1 afternoon and evening hours. Providing a super off-peak period for all customers provides the
2 opportunity for customers to shift or build load in a period with low loads. SDG&E's local capacity
3 needs are unique to SDG&E, as they are impacted by both SDG&E's customers and the resources
4 in the local planning area.

5 **iii. Urgency**

6 **1. Significant Increase in Renewable Generation On-Line (2014 –** 7 **2016)**

8 As noted in the testimony of SDG&E witness Mr. Barker (Chapter 3), a significant portion
9 of the renewable energy procured by SDG&E to achieve a 33% Renewable Portfolio Standard will
10 come on-line in San Diego and Imperial Valley in the 2014 and 2015 time frame. It is necessary to
11 move SDG&E's time periods now to reflect the new reality of SDG&E's energy mix; renewables
12 shift the time periods of when capacity is needed in the San Diego local capacity planning area.

13 **2. Informs rate design proceedings (Residential Rate OIR Phase I,** 14 **NEM Rule Making, NEM Grandfathering)**

15 Moving TOU periods now will also help inform current and future CPUC proceedings. The
16 Commission has directed SDG&E to file an application in which SDG&E will include a transition
17 to default residential TOU rates in 2018. The recent passage of AB 327 requires the CPUC to
18 establish grandfathering for NEM customers by March of 2014.

19 **3. Informs Demand Response and Time of Delivery Periods**

20 In order to properly value the benefits that new demand response and generation provides,
21 updated TOU periods are required. For example, SDG&E's RPS Plan for future RFOs, adopted
22 November 14, 2013, updated the time of delivery periods to align with the hourly time periods in
23 this RDW.

24 **4. Default CPP and Mandatory TOU Rates**

25 SDG&E also intends to ask the Commission to align the roll out of mandatory TOU and
26 default CPP rates with the new TOU periods proposed in this RDW Application, so that Small Non-

1 Residential customers will not be required to take service on a TOU rate until the TOU periods have
2 been updated as proposed in this proceeding. Ensuring that customers default to a single set of
3 accurate and representative TOU periods will reduce customer confusion and allow them to more
4 accurately assess their current experience under TOU rates and elect future energy options.

5 **iv. Alignment with CPUC Rate Policy**

6 SDG&E's TOU proposal is consistent with "*with long-standing legislative and policy goals*"
7 as outlined in the Residential Rate OIR¹⁸. By aligning TOU periods with SDG&E's marginal costs,
8 there is alignment with the following goals: (2) (rates should be based on marginal cost); and (3)
9 (rates should be based on cost-causation principles). Aligning TOU periods with the new reality of
10 California's and SDG&E's mix of generation, in particular the increasing percentage of renewable
11 generation, encourages customers to utilize infrastructure more efficiently. Utilizing existing
12 infrastructure more efficiently is an increasingly important component of conservation in
13 California's low carbon future and supports goal (4) (rate should encourage conservation and
14 energy efficiency) and (5) (rates should encourage reduction of both coincident and non-coincident
15 peak demand).

16 Aligning TOU periods with SDG&E marginal costs and cost causation allows customers
17 who benefit from shifting their energy usage patterns to periods with lower rates to corresponding
18 reductions in SDG&E's procurement costs. This is consistent with goal (7) (rates should avoid
19 cross-subsidies, unless the cross-subsidies appropriately support explicit state policy goals).
20 Customers who benefit from lower rates, without a corresponding reduction in SDG&E costs, shift
21 costs to other customers. Goal (7) is complimentary to goal (9) (incentives should be explicit and

¹⁸ Rulemaking 12-06-013, ASSIGNED COMMISSIONER AND ADMINISTRATIVE LAW JUDGES' JOINT RULING INVITING COMMENTS AND SCHEDULING PREHEARING CONFERENCE, issued on September 20, 2012, at p. 7.

1 transparent). Accurate price signals ensure that any incentive that is provided is both explicit and
2 transparent, as opposed to embedded in rates.

3 **B. Baseline**

4 **i. Description**

5 Based on an updated baseline study for energy use and the movement to legislated levels for
6 baseline allowances, SDG&E witness Ms. Fang (Chapter 2) proposes a movement to legislated
7 minimum levels for all residential customers. To mitigate customer impacts, Ms. Fang proposes
8 that for all-electric customers, the change should be gradually implemented over 5 years.

9 **ii. Benefit**

10 **1.** The need to move to the appropriate baseline levels is driven by customer
11 equity. Increasing cost pressures on upper tier rates is unsustainable and understood by policy
12 makers, as can be seen by the passage of AB 327, the Energy Division proposal and the direction to
13 file Phase 1 and Phase 2 applications for rate reform in the Residential Rate OIR. Updating the
14 baseline study and moving baseline allowances to legislated levels is a reasonable step to reigning
15 in mounting cost pressures on upper tier rates.

16 **2.** With respect to all-electric customers, measured adjustments to baseline
17 allowances will balance rate impacts to upper and lower tier customers by providing a gradual
18 adjustment phased in over 5 years. Measured steps are necessary now in order to provide for a
19 smooth transition to a stable rate structure and are a necessary component of the transition path to
20 2018 rates.

21 **iii. Urgency**

22 Currently, upper tier rates are facing increasing pressures from increasing costs and
23 downward pressure on upper tier sales from distributed generation that offsets a higher percentage
24 of upper tier sales compared to lower tier sales. This year alone SDG&E will see an over \$400

1 million increase in commodity costs in pending proceedings¹⁹ for which the upper tier customers
2 will bear a disproportionate percentage of the cost. At the same time, SDG&E is seeing record
3 breaking adoption of distributed solar, which is largely marketed to offset upper tier sales. This
4 naturally decreases the volume of sales on which costs are loaded, compounding the rate pressure to
5 upper tiers. As noted in the Commission study on NEM conducted by E3²⁰ solar adopters are more
6 affluent than the average customer. Also noted in the Commission NEM study conducted by E3 is
7 that the average NEM customer uses energy well into the upper tiers, using roughly 60% more
8 energy than the average customer on SDG&E's residential schedule DR.²¹ It is important to note
9 that upper tier sales have generally the same income demographics breakdown as lower tier sales.²²
10 If the more affluent customers are the ones that are avoiding the upper tier rates, then this will
11 naturally result in an increasing percentage of remaining upper tier sales being born by less affluent
12 customers.

13 **iv. Alignment with CPUC Rate Policy**

14 The establishment of the baseline energy usage is consistent with CPUC Rate Design Goal
15 1. (Low-income and medical baseline customers should have access to enough electricity to ensure
16 basic needs (such as health and comfort) are met at an affordable cost.) It is also consistent with
17 P.U. Code 739 ("Baseline quantity" means a quantity of electricity or gas allocated by the

¹⁹ SDG&E's Energy Resource Recovery Account ("ERRA") Forecast Application (A.13-09-017): On September 27, 2013, SDG&E filed its annual ERRA Forecast application for approval of its forecasted electric procurement revenue requirements for 2014. This Application is anticipated to result in a SAR increase of approximately 7% from current rates.

SDG&E's ERRA Trigger Application (A.13-04-017): On April 30, 2013 SDG&E filed an Expedited Trigger Application ("Trigger Application") requesting recovery of an undercollection in SDG&E's ERRA balancing account. On December 2, 2013, SDG&E filed Response to the November 21, 2013 *Assigned Commissioner and Administrative Law Judge Ruling Requesting Response to Selected Inquiries* in that proceeding identifying and updating the estimated ERRA year-end balance to \$213.3 million undercollected. Implementation of this balance would result in an increase to SAR of approximately 7%.

²⁰ California Net Energy Metering Rate payer Impacts Evaluation, October 2013, Figure 27: NEM 2010 Household Income by Installation Year Compared to IOU and California Median Income page 113.

²¹ California Net Energy Metering Rate payer Impacts Evaluation, October 2013, Table 50: Residential Average Monthly Usage for Schedule Average and NEM Accounts (kWh/month) page 102.

²² SDG&E prepared its NEM income analysis response as comments to the CPUC's June 2012 CSI Annual Program Assessment. SDG&E utilized Census income information.

1 commission for residential customers based on from 50 to 60 percent of average residential
2 consumption...The commission shall designate a baseline quantity of gas and electricity which is
3 necessary to supply a significant portion of the reasonable energy needs of the average residential
4 customer.”) Appropriately setting baseline based on P.U. Code 739 is therefore consistent with
5 ensuring basic needs are met at an affordable price.

6 **C. Move Recovery of CSI and SGIP from Distribution to PPP**

7 **i. Description**

8 SDG&E proposes to move the collection of CSI and SGIP revenues from the distribution
9 rate component to the PPP rate, as addressed in the testimony of SDG&E witness Ms. Fang
10 (Chapter 2). Distribution costs are more accurately the costs to provide distribution services. CSI
11 and SGIP are an incentive based on California policy and are appropriately collected in the PPP
12 component.

13 **ii. Benefit**

14 Transparent incentives avoid cost shifts that are not intended, consistent with CPUC Rate
15 Goal 7 (Rates should generally avoid cross-subsidies, unless the cross-subsidies appropriately support
16 explicit state policy goals) and 8 (Incentives should be explicit and transparent). Currently, CSI and
17 SGIP are collected through distribution rates, which obscures the cost of distribution services.
18 Moving the collection of CSI and SGIP to PPP increases transparency in the cost of distribution
19 services provided to customers. This better informs customers, regulators and other stakeholders
20 and supports economically efficient decisions.

21 **iii. Urgency**

22 A solid foundation needs to be established now in order to sustainably support the low
23 carbon policy programs that California is pursuing. As noted earlier, distributed solar is being
24 adopted at record breaking rates. The Energy Storage OIR and Distributed Generation (“DG”) OIR
25 both are addressing the role of storage and how best to encourage adoption. The time is now to

1 appropriately account for the cost of incentives so that the technologies emerging today, and
2 technologies that have yet to be conceived, can be accounted for transparently with those costs
3 collected equitably from customers.

4 **iv. Alignment with CPUC Rate Policy**

5 The move of SGIP and CSI to the PPP rate component is consistent with rate design goals 7
6 (Rates should avoid cross-subsidies, unless the cross-subsidies appropriately support explicit state
7 policy goals); 8. (Rates should encourage economically efficient decision-making); and 9.
8 (Incentives should be explicit and transparent).

9 **E. Peak-Time Rebate (“PTR”)**

10 **i. Description**

11 The PTR rebate is being adjusted, as addressed in the testimony of SDG&E witness Ms.
12 Fang (Chapter 2), consistent with the transition to dynamic pricing rates for all SDG&E customers
13 as adopted in D.12-12-004.

14 **ii. Benefit**

15 Consistent with D.12-12-004 adopting dynamic pricing rates in SDG&E’s DPP Application
16 (A.10-07-009), SDG&E believes that CPP is the preferred dynamic pricing rate compared to PTR.
17 More specifically, SDG&E stated in the DPP proceeding:

18 SDG&E proposed, and the Commission adopted in D.08-02-034, PTR as a dynamic pricing
19 program for residential customers because the ABIX rate cap requirement prevented time-
20 variant dynamic pricing rates such as PSH from being implemented as a default rate for
21 residential customers. Residential customers that are individually metered by SDG&E will
22 automatically be enrolled in the PTR program as soon as smart meters are deployed and
23 PTR billing on those meters is possible, which is projected to occur in 2011. PTR is being
24 implemented as a transitional mechanism until a dynamic pricing rate can be implemented
25 for residential customers. For this reason, as discussed in Section VII of my testimony,
26 SDG&E proposes reductions to the PTR credit levels in 2013, the year PSH is scheduled to
27 be implemented, to transition residential customers from PTR to PSH.²³

²³ A.10-07-009, Prepared Direct Testimony of William G. Saxe (Chapter 3), pp. WGS-6 to -7.

1 This position is consistent with the ED proposal that recommends optional cost-based TOU and
2 CPP for the residential transition path to a 2018 end-state of default TOU with optional CPP. In
3 addition, this is consistent with the Commission position stated in D.09-03-026 that "... the PTR
4 program should be regarded as a transitional program that the Commission intends to review when
5 the AB 1X rate protections change."²⁴

6 **iii. Urgency**

7 This is the appropriate timing for this step. The next opportunity for an adjustment would
8 likely come in SDG&E's 2016 GRC Phase 2 Application to be filed in the first quarter of 2015
9 which could result in an unnecessary one to two year delay.

10 **iv. Alignment with CPUC Rate Policy**

11 Making this change to the PTR incentive now is consistent with Rate Design goal 10
12 (Transitions to the new rate structure should emphasize customer education and outreach that
13 enhances customer understanding and acceptance of new rates, and minimizes and avoids the
14 potential for rate shock).

15 **VI. CUSTOMER IMPACTS**

16 **A. Customer Outreach and Education**

17 Providing customers with information about potential rate design changes gives customers
18 the opportunity to make educated decisions about their energy use. Understanding how rates and
19 bills are determined helps customers make decisions about how much energy they use and when.

20 Although the items contained in this RDW Application are proposals at this stage, SDG&E
21 will be utilizing a variety of methods to communicate the proposed rate design changes to
22 customers, especially as the CPUC proceeding advances and it becomes more clear what type of
23 changes might be adopted by the CPUC. Examples of those methods include messaging through
24 bill inserts (separate informational notices mailed with the bills), messages on bills themselves (bill
25 inserts) and SDG&E's rate reform website, where a variety of resources provide customers with
26 information on the CPUC's rate reform efforts.

27

²⁴ D.09-03-026, p. 121.

1 **B. Public School Proposal**

2 SDG&E recognizes the special circumstances associated with public schools, such as their
3 limited budget control and inability to change use patterns tied to periods during which they must
4 serve the needs of children. SDG&E is committed to working with the public schools to find a
5 solution and is preparing to offer such schools a bill credit or other solutions associated with the
6 change in TOU periods.

7 **VII. ELECTRIC VEHICLE (“EV”) RATE COMPLIANCE**

8 The Commission initiated an EV Rulemaking (R.09-08-009 the EV-OIR) in accordance
9 with SB 626, which added P.U. Code Section 740.2, to evaluate policies to develop infrastructure
10 sufficient to overcome barriers for the widespread deployment and use of PEVs and EVs in
11 California.

12 In July 2011, D. 11-07-029 (Ordering Paragraph 3) required SDG&E to include EV rate
13 proposals in its 2013 RDW Application. Although this application is being filed in 2014, as
14 permitted via extensions granted by Executive Director Paul Clanon, it is effectively SDG&E’s
15 2013 RDW Application. Thus, in compliance with the directive in D.11-07-029, SDG&E’s PEV
16 and EV rates can be found in Attachments A, B, D, and E of SDG&E witness Ms. Fang’s testimony
17 (Chapter 2) .

18 Additionally, regarding Ordering Paragraphs 3, 6 and 7 of D.11-07-029, SDG&E was
19 directed to include an analysis of PEV and EV charging load profiles, the costs and benefits of PEV
20 and EV integration and charging, and consumer responses to PEV and EV TOU price differentials.
21 This analysis, referred to as “load research,” addresses the Commission’s EV objectives. The load
22 research examines PEV charging behavior and tracks costs associated with service upgrades that
23 were required due to the incremental PEV load. The scope was proposed and refined by the IOUs
24 in December of 2011 and was further discussed at a public workshop held at the CPUC on February
25 16, 2012. As a result of ALJ DeAngelis’ Ruling on August 21, 2012 addressing the scope, the
26 IOUs filed the revised scoping document detailing how the requirements in D.11-07-029 would be
27 met. SDG&E along with Southern California Edison (“SCE”) and Pacific Gas & Electric
28 (“PG&E”) filed the load research report on December 28, 2012.

29 In July 2013, the CPUC issued D.13-06-014 that directed the IOUs to continue its load
30 research reporting for 3 additional years until June 2016. The IOU load research report that was
31 filed at the end of 2012 cautioned against making any policy decisions from the first load research

1 report, as there is still much uncertainty around EV market as it is still evolving. The CPUC in
2 D.13-06-014 agreed with the IOU load research report in that more time was needed to evaluate EV
3 charging behaviors as well as tracking service upgrade costs. The second annual load research is
4 scheduled to be filed with the CPUC on January, 31st 2014, which is the same day as the filing of
5 this RDW Application.

6 **VIII. SUMMARY AND CONCLUSION**

7 My testimony explained how SDG&E's RDW Application proposals support California's
8 vision of a low carbon future, the consistency of these proposals with past, pending and future
9 proceedings, and the need to move forward with these proposals. For these reasons, SDG&E
10 recommends that the Commission adopt the proposals discussed above.

11 This concludes my prepared direct testimony.

1 **IX. WITNESS QUALIFICATIONS**

2 My name is Christopher F. Yunker. My business address is 8330 Century Park Court, San
3 Diego, California, 92123. I have been employed as the Rates & Analysis Manager overseeing the
4 Electric Rates, Load Analysis and Demand Forecasting groups for San Diego Gas & Electric
5 Company since 2010. Prior to my position as Rates & Analysis Manager I was employed as
6 Strategic Planning Manager from 2009 to 2010. I have held a variety of positions at SDG&E in the
7 Resource Planning, Technology Development and Finance departments. I began work with Sempra
8 Energy in 2002, working as a Financial Analyst with Sempra Connections. Prior to my work with
9 Sempra Energy, I worked for GEA Power Cooling Systems, Inc., as an Application Engineer and
10 Project Development Engineer developing vacuum condensing systems for combined cycle,
11 combined heat and power and waste to energy power plants.

12 I received a B.S. in Mechanical Engineering from the University of California, San Diego
13 and a Masters in Business Administration from the University of Southern California. I am a
14 Professional Engineer in Mechanical Engineering in the State of California and a Certified Energy
15 Manager through the Association of Energy Engineers.

16 I have previously testified before the Commission.