Application of SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E) For Authority To Update Marginal Costs, Cost Allocation, And Electric Rate Design.

Application 11-10-002
Exhibit No.: (SDG&E-101)

REVISED 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

FEBRUARY 2012

Doc #264327

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REVISED PREPARED DIRECT TESTIMONY OF
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(CHAPTER 1)

I. INTRODUCTION

This General Rate Case (GRC) Phase 2 Application (Application) presents San Diego Gas & Electric Company's (SDG&E's) electric revenue allocation and rate design proposals for implementing the GRC Phase 1 electric sales forecast that will be determined in A.10-12-005. Testimony supporting the Application presents SDG&E's marginal cost analyses, revenue allocation and rate design.

In addition to SDG&E's proposals related to the traditional revenue allocation and rate design components of the GRC Phase 2, SDG&E proposes: (1) replacing its 17 cent/day minimum bill (approximately $5.00/month) with a $3.00 monthly Basic Service Fee for residential customers; (2) implementing a new Tariff Rule 20D to facilitate underground conversion of overhead distribution lines for fire safety reasons; and (3) offering a new optional pre-pay program for customers.

The purpose of my testimony is to discuss the overarching policy framework that guides SDG&E's proposals for revenue allocation and rate design, including our proposed Basic Service Fee. I also discuss cost-based rate design principles that create the need (1) to move customer-specific costs such as distribution towards non-coincident demand charges and (2) to allocate system-level costs such as capacity and transmission to on-peak demand charges. I also address the use of marginal costs for cost allocation, customer usage and average costs for rate design, and the potential for incorporation of more marginal price signals in future rates. In this regard, I discuss how SDG&E's proposals fit into a transition towards the long-term objective of designing rates to send clear and accurate price signals based on proper assignment of customer cost responsibility.

Finally, although not proposed in this Application, I discuss one long-term rate design objective that will be addressed in a future rate design proceeding – Time-of-Use (TOU) periods and to what extent it is appropriate to shift on-peak periods to later in the day as well as align the periods across customer classes.

II. GRC PHASE 2 APPLICATION OVERVIEW

This Application includes the traditional elements of GRC Phase 2 cost allocation and rate design, as well as proposals for a new residential Basic Service Fee, an amendment to Rule 20 for fire safety purposes, and a Prepay Program option. The Application is supported by the following testimony:

- Chapter 2: (Cynthia Fang) describes electric revenue allocation and rate design;
- Chapter 3: (William G. Saxe) applies the marginal cost to derive revenue allocations;
- Chapter 4: (William G. Saxe) describes certain "clean up" adjustments to SDG&E's electric tariffs and customer bills;
- Chapter 5: (David T. Barker) describes the results of commodity cost studies and associated proposals;
- Chapter 6: (Robert M. Ehlers) describes the results of distribution cost studies;
- Chapter 7: (Robert M. Ehlers) describes the results of street lighting cost studies and associated rate design proposals.
- Chapter 8: (Rick Gardner) describes SDG&E's proposed Rule 20D, designed to facilitate undergrounding distribution lines for fire safety purposes; and
- Chapter 9: (David W. Cheng) describes SDG&E's proposed optional Prepay Program.

Citations to testimony herein are to the foregoing.

III. SDG&E'S POLICY OBJECTIVES

This Application proposes various rate design changes to create a clear and smooth path forward for implementation of the state's low carbon policies. Driven by public policy initiatives and a desire to reduce their carbon footprint, SDG&E's customers are using low carbon energy technology alternatives in increasing numbers. Today, this includes using solar panels, wind energy, fuel cells, plug-in electric vehicles, and hourly energy usage information. SDG&E expects to see increased use of new emerging behind-the-meter technologies moving forward, which promise customers the ability to automate their energy use to minimize bills, consumption, and emissions. To fully realize the promise of these technologies, utility pricing must be designed to accommodate these changes.

SDG&E seeks to achieve the following policy goals through the rate design proposals advanced in this Application:

1. Create Clear and Accurate Price Signals. Underlying the proposals set forth in this application is SDG&E's policy goal of providing customers with clearer, more accurate signals for the services they receive. Clear and accurate price signals will enable customers to make good economic decisions regarding electricity use and the use of new technologies. By sending customers clear price signals regarding the cost of electricity and the cost of using the electric grid for whatever services they receive, SDG&E aims to give customers the best possible opportunity to make good economic and environmental decisions about their energy use.

As presented in Ms. Fang's testimony (Chapter 2), SDG&E proposes to reflect in its rate design updated marginal costs and revenue allocations. In addition, as is discussed in greater detail later in this testimony, SDG&E proposes to move price signals for system-level resources, such as transmission and capacity, towards system pricing (i.e., peak and TOU) and more localized resources (*i.e*. distribution) on the basis of customer-specific demand.

By providing the market with more accurate price signals through the rate design proposals advanced in the Application, SDG&E will move toward aligning customers' energy decisions with utility costs. This will help to provide greater rate design stability going forward and reduce existing cross-subsidies.

The introduction of a Basic Service Fee for residential customers will create more accurate price signals because it will ensure that at least a portion of fixed costs are recovered from customers in the manner they are incurred. This will also minimize the opportunity for customers to bypass these costs. In this sense, more accurate price signals minimize the opportunity for unintended consequences in a rapidly changing energy market in which greater choice is available to consumers. California's movement toward a low carbon future also calls for SDG&E's transition to a rate structure that assigns utility costs more accurately and fairly.

2. Promote Fairness and Equity. Fairness and equity dictate that customers are made responsible for the fixed costs that are incurred to provide them with service on a fixed cost basis. To the extent SDG&E incurs fixed costs to serve one customer, but that customer does not pay for those costs, someone else must pay them. For this reason, we are proposing to implement the Basic Service Fee for residential customers, to begin to recover a portion of a customer's fair share of fixed costs through a fixed charge.

3. Empower and Inform Customers. SDG&E believes that customers should have readily accessible and reliable information regarding their energy usage and understand how and when energy is consumed. SDG&E has been seeking to employ tools to better inform customers for many years, including through our recent Smart Meter deployment. To further empower customers, pricing options and accurate price signals must be provided so that customers can use the information to make informed energy management decisions. In this way, consumers can better understand how they use electricity, the information regarding the cost of electricity services at different times of day and the benefits of changing and reducing their energy consumption. This will help customers minimize bills and the emissions associated with their electricity use. This approach is consistent with SDG&E and California goals to minimize the costs of, and emissions associated with, providing reliable, safe, and environmentally-friendly electric service.

4. Mitigate Customer Impacts Associated with Rate Proposals. While it is important to move towards more accurate prices signals in our rates, it is also important to ensure that our implementation of these changes takes into account the potential bill impacts on customers and the need to avoid sudden and significant increases in customer bills. Ms. Fang's testimony (Chapter 2) details SDG&E's proposals to mitigate customer bill impacts as we move to more accurate price signals. For example, SDG&E's has taken bill impact mitigation into account in proposing the initial monthly customer charge at only $3.00 per month. This amount represents only 19 percent of the average residential customer's fully allocated cost, replacing SDG&E's existing 17 cent/day (approximately $5.00/month) minimum bill.

IV. NEW RATE DESIGN PROPOSAL: BASIC SERVICE FEE

The Basic Service Fee proposed by SDG&E would recover costs associated with serving customers that do not vary with a customer's use of energy or energy infrastructure. They are the fixed costs associated with serving a customer, including billing, having a call center standing by, and providing a meter. SDG&E currently has basic service fees for non-residential, which is addressed in Ms. Fang's testimony (Chapter 2). This testimony addresses the propriety of a basic service fee for residential customers.

A. The Basic Service Fee Creates More Accurate Price Signals

Recovery of fixed costs through fixed charges on a cost causation basis ultimately ensures that customers pay based on costs they cause the utility to incur. By introducing a modest basic

service fee of $3 for residential customers and eliminating the existing $0.17 per day minimum bill, SDG&E will move towards ensuring that a customer's rates accurately reflect the costs SDG&E incurs to serve that customer. To the extent that SDG&E incurs a fixed cost to maintain service to one customer, such cost should be recovered from that same customer so others do not have to pay it. While the $3.00 Basic Service Fee will reflect only a small portion of the fixed costs that SDG&E actually incurs to provide service to every residential customer, without regard to consumption, it is a step in the direction of implementing more accurate price signals, and one that is sufficiently small as to avoid material bill impacts on customers.

B. The Basic Service Fee Will Improve Fairness and Equity

The $3 charge per month represents roughly 19% of full cost, representing about $0.10 per day. Taking into account the elimination of the current $0.17 per day minimum bill, this is a reasonable level at which to introduce the charge, minimizing potential bill impacts to low use customers. Under a minimum bill, customers effectively do not pay an energy rate until they hit a minimum threshold ($0.17/day). Under the Basic Service Fee, customers will pay the customer charge plus an energy rate.

The revenue recovered from the basic service fee will be taken out of Tier 1, thereby maintaining the effective rate for Tier 1 customers and satisfying P.U. Code Section 739.9. To accomplish this, the Tier 1 energy rate will be reduced from what it otherwise would have been to reflect the revenue collected from the customer charge. So while the effective Tier 1 rate remains unchanged, there can be negligible bill impacts associated with the change from a minimum bill to a customer charge.

Note that cost allocation, treatment of costs and rate design associated with the Basic Service Fee are addressed by other testimonies supporting this Application. The costs that are incorporated into the Basic Service Fee are addressed in Mr. Ehlers' testimony (Chapter 6). The allocation of costs to the basic service fee is addressed in Mr. Saxe's testimony (Chapter 3). The rate design for the Basic Service Fee is outlined in Ms. Fang's testimony (Chapter 2).

V. CLASS COST RESPONSIBILITY AND CUSTOMER REVENUE RECOVERY: ALLOCATION AND RATE DESIGN PRINCIPALS

This section outlines the principles that show how SDG&E's proposed rates reflect the cost responsibility for individual classes and customers and how system costs and customer costs are

determined by coincident and non-coincident use in a manner that will promote more accurate price signals.

A. Class Responsibility Is Based on Marginal Cost

Mr. Saxe (Chapter 3) testifies that class responsibility for costs is determined on the basis of marginal costs. For instance, industrial customers have different demands at system peak, as well as different individual peak demands, than residential customers. To the extent that these characteristics are different between customer classes, it is appropriate for customer classes to be assigned a different level of responsibility for particular classes of costs. It is also appropriate to assign these costs based on an accurate price signal to incentivize efficient usage of infrastructure and resources. Allocation on a marginal cost basis supports such price signals. For distribution demand, marginal cost allocation is based on the class contribution to coincident circuit and substation demand, as shown in Mr. Saxe's testimony.

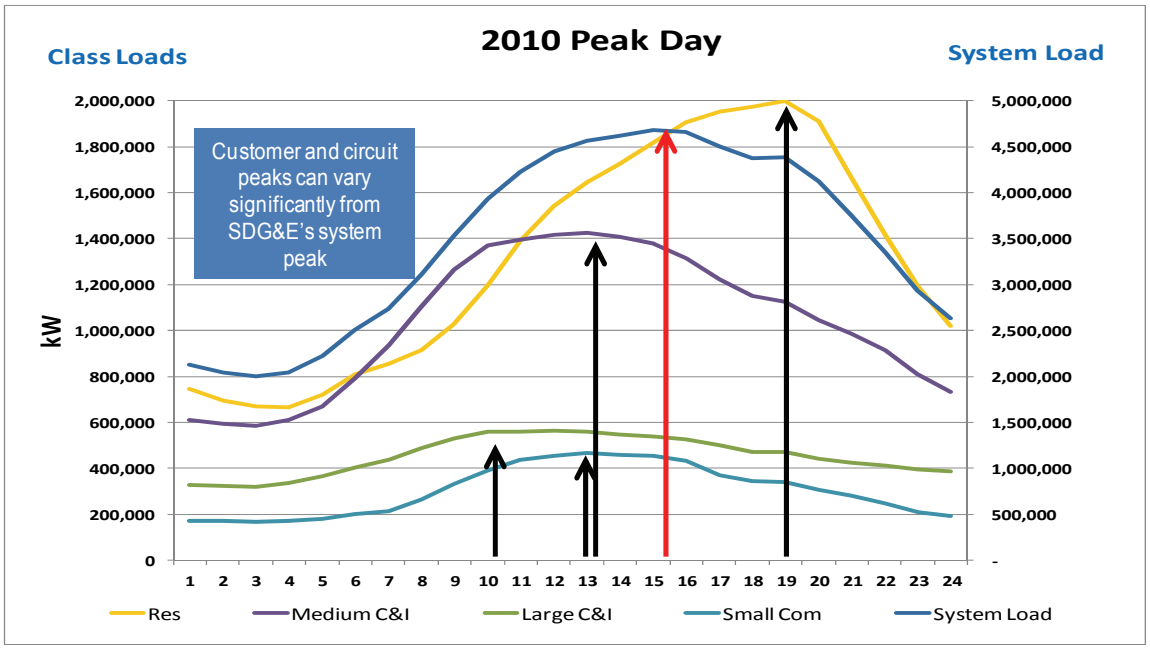
B. Customer Revenue Recovery Is Based on Usage and Class Average Costs

Today, the revenue recovered from individual customers is largely based on a customer's use and class average costs. While marginal costs are accurate, California has incorporated usage into rate design to encourage conservation and disproportionately assign costs to high usage customers. For the residential class this is most evident in the tiered rates structure. Though for all classes, the energy rates becomes the catch-all for all costs not recovered through a basic service fee or demand charge.

Rates incorporating cost causation provide customers accurate signals to encourage more efficient use of the electrical system. Time variant and dynamic pricing are examples of rate components incorporating marginal costs. While future rate design may ultimately incorporate more marginal, as well as locational-based, pricing components, on a customer level the proposed revenue recovery for this case is largely based on usage and average costs.

C. Customer-Level Costs Are Created by Customer-Specific Use

When looking at customer-specific, demand-related costs, the measure that most accurately reflects the costs incurred to provide distribution services is non-coincident use, as opposed to use coincident with the system peak demand. This is because circuits peak at different times and circuits are built and maintained based on the energy use of the customers on an individual circuit. Non-coincident use, or a customer's use independent of the timing of other customer's use, is an appropriate way to allocate costs when a cost is not tied to the system peak.



D. System Level Costs Are Coincident to Peak Times

When costs are driven by use during times of peak demand, those costs are appropriately collected through coincident rates, or rates that are based on the peak system demand. Capacity and transmission represent such costs. On a high level, customer loads that drive system level costs should be charged on the basis of coincident or on-peak rates. In these instances, it is *when* a customer uses energy or system-level infrastructure that fundamentally creates system-level, or on-peak, costs. Given that, it is appropriate to look at all SDG&E's TOU periods in order to provide an accurate price signal to all customers.

E. Incorporation of Marginal Price Signals in Rates in the Future

Costs incurred to meet peak demand are system level costs. Assigning system level costs to time periods with peak demand increases pricing accuracy. For example, assigning capacity costs to on-peak periods provides an accurate price signal for the cost of providing energy during peak periods.

Going forward, the same logic applies to other categories of costs such as distribution demand costs. Excluding the super off-peak period from the recovery of some level of distribution demand costs increases pricing accuracy in that energy use during that time period is typically low and generally does not create additional distribution demand costs. Limiting the collection of distribution demand revenues to time periods in which additional load can create additional costs increases the accuracy in retail price signals through marginal cost methodologies.

As discussed in section VI below, SDG&E plans to conduct a comprehensive analysis of TOU periods and present the findings in a future rate design proceeding. In that proceeding, SDG&E will examine offering rate options that incorporate a super off-peak period for all customers that exclude the recovery of distribution demand costs for that period when the distribution system demand is typically low. Excluding the recovery of distribution demand costs from the super off-peak period will create incentives to shift demand to hours in which additional load does not generally create additional distribution infrastructure costs.

F. Summary – SDG&E's Proposed Allocation and Rate Design Creates More Fair, Equitable and Accurate Price Signals

Sending accurate price signals to all customers avoids shifting costs between ratepayers based on how they use resources and infrastructure, regardless of the technologies they choose to adopt. Ultimately, rate design should move toward collecting the fair share of system costs based on how a customer uses energy and infrastructure. Accuracy in collecting such costs will allow technologies such as solar, advanced storage and home area networks to evolve and grow without creating unintended subsidies.

VI. FUTURE PROPOSALS AND OBJECTIVES THAT WILL GUIDE SDG&E RATE DESIGN IN THE MID TO LONG-TERM

A. TOU Periods: The Need for a Comprehensive Proposal

While SDG&E is not proposing to alter TOU periods in this GRC Phase 2, SDG&E intends to conduct a comprehensive analysis of TOU periods for all customers in a future rate design proceeding. This is consistent with the goal to provide accurate price signals so that customers can make decisions that ultimately serve to lower costs and reduce greenhouse gas emissions (GHG). This comprehensive analysis is important, given the general trends observed of demand shifting to later in the day, as detailed Attachment A of the testimony of David T. Barker (Chapter 5), and it is consistent with SDG&E's decision to maintain a winter on-peak period of 5:00 to 8:00 p.m. As noted in Mr. Barker's testimony, customers are paying resource adequacy costs for this period and significant penetration of solar energy will drive the peak net of solar toward evening hours in the winter and summer. SDG&E plans to undertake this review once a significant portion of all customer classes have a year's worth of interval data available for analysis.

All things being equal, rapidly increasing adoption of distributed solar generation is shifting load to later in the day. This potentially significant future change, coupled with SDG&E's existing tariffs (which have a wide range of definitions for on-peak, semi-peak, off-peak and super off-peak time periods), call for a comprehensive review of TOU periods. SDG&E's goal in this effort is to provide a consistent price signal to all customers.

This concludes my testimony.

VII. QUALIFICATIONS

My name is Christopher F. Yunker. My business address is 8330 Century Park Court, San Diego, California, 92123.

I have been employed as the Rates & Analysis Manager in the Strategic Pricing & Analysis group of San Diego Gas & Electric Company since 2010. Prior to that I was employed as Strategic Planning Manager from 2009 to 2010 in the same department. Before that I was employed in various positions at SDG&E as a Principal Financial Analyst, Technology Development Advisor, Resource Planner and Sr. Business Analyst. I began work with Sempra Energy in 2002, working as a Financial Analyst with Sempra Connections. Prior to my work with Sempra Energy, I worked for GEA Power Cooling Systems, Inc., as an Application Engineer and Project Development Engineer.

I received a B.S. in Mechanical Engineering from the University of California, San Diego and a Masters in Business Administration from the University of Southern California. I am a Professional Engineer in Mechanical Engineering in the State of California.

I have previously provided testimony to the Commission.