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

**FILED**
8-03-15
04:59 PM

| | |
|---|---|
| Order Instituting Rulemaking to Develop a Successor to Existing Net Energy Metering Tariffs Pursuant to Public Utilities Code Section 2827.1, and to Address Other Issues Related to Net Energy Metering. | Rulemaking 14-07-002<br>(Filed July 10, 2014) |

# SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E) PROPOSAL FOR SUCCESSOR NET ENERGY METERING TARIFF

AIMEE M. SMITH
8330 Century Park Court, CP32
San Diego, California 92123
Telephone: (858) 654-1644
Facsimile: (858) 654-1586
amsmith@semprautilities.com

Attorney for
SAN DIEGO GAS & ELECTRIC COMPANY

August 3, 2015

## TABLE OF CONTENTS

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

| | |
|---|---|
| Order Instituting Rulemaking to Develop a Successor to Existing Net Energy Metering Tariffs Pursuant to Public Utilities Code Section 2827.1, and to Address Other Issues Related to Net Energy Metering. | Rulemaking 14-07-002 (Filed July 10, 2014) |

# SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E) PROPOSAL FOR SUCCESSOR NET ENERGY METERING TARIFF

## I. INTRODUCTION AND BACKGROUND

In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (the "Commission"), the *Administrative Law Judge's Ruling (1) Accepting into the Record Energy Division Staff Papers on the AB 327 Successor Tariff or Contract; (2) Seeking Party Proposals for the Successor Tariff or Contract; (3) Setting a Partial Schedule for Further Activities in this Proceeding* ("ALJ Ruling") issued in the above-captioned proceeding on June 4, 2015 and the June 23, 2015 *Assigned Commissioner's Ruling Granting in Part Motion of the Alliance for Solar Choice and Revising Procedural Schedule* extending the filing deadline for proposals, San Diego Gas & Electric Company ("SDG&E") hereby submits its proposal for a successor to the existing net energy metering ("NEM") tariff.

NEM is a tariff billing mechanism that allows eligible customer-generators to rely on an on-site distributed generation ("DG") system to serve a portion of their energy needs, and to receive compensation for generation exported to the utility grid. NEM was originally adopted in California in 1995 pursuant to Senate Bill ("SB") 656.[1/] Supporters of the measure claimed that

[1/] Senate Bill 656 (Stats. 1995, ch. 369).

it would provide electric costs savings to customer-generators, incent installation of solar photovoltaic ("PV") – which at that time was a nascent technology – positively impact economic growth, and provide diversification of the State's energy resource mix.[2/] In the two decades since SB 656 was adopted, the rate of solar adoption has grown significantly with the support of numerous state[3/] and federal[4/] incentive programs, as well the expansion of the NEM program through several legislative amendments.[5/] Today, California leads the nation with 247,041 solar installations resulting in approximately 2,407 megawatts ("MW") installed.[6/]

The San Diego region is one of the fastest growing areas for deployment of rooftop solar, with nearly 60,000 rooftop solar installations. This translates into more than 400 MW of clean power for homes and businesses in Southern California.[7/] While the cost-shift in the early days of the program was relatively minor, the dramatic growth in the number of customer-sited solar PV systems that has occurred more recently has significantly increased the cost-shift to non-NEM customers. The Commission's own study determined that NEM will cost the State $1.1 billion in 2020.[8/] In SDG&E's service territory, the cost-shift to non-NEM customers is

---

2/ *See* SB 656 Bill Analysis, Assembly Committee on Appropriations, p. 2, available at: ftp://www.leginfo.ca.gov/pub/95-96/bill/sen/sb_0651-0700/sb_656_cfa_950706_101245_asm_comm.html.

3/ *E.g.*, Self-Generation Incentive Program ("SGIP"); Emerging Renewables Program ("ERP"); New Solar Homes Partnership ("NSHP");and the California Solar Initiative ("CSI").

4/ See Federal incentives detailed at http://energy.gov/savings/business-energy-investment-tax-credit-itc.

5/ For example, program eligibility has expanded to include small commercial customers, as well as commercial, industrial and agricultural customers. The system capacity size limit has increased from 10 kW to 1 MW. The program cap has also been raised from 1% to 5%. Finally, a significant program benefit was added in 2011 with implementation of Assembly Bill ("AB") 920 and rules regarding "net surplus compensation."

6/ https://www.californiasolarstatistics.ca.gov/.

7/ SDG&E reported to the CPUC on June 30, 2015, that its total NEM interconnections (approved and pending) totaled 60,844 or 422 megawatts. This total represents 3.48% of the 607 megawatt cap established in AB 327 for the existing NEM program.

8/ *California Net Energy Metering Ratepayer Impacts Evaluation*, issued on October 28, 2013, p. 6 ("NEM Report"). Available at: http://www.cpuc.ca.gov/PUC/energy/Solar/nem_cost_effectiveness_evaluation.htm

estimated to be in excess of $100 million annually and growing. The cost that a residential NEM customers shift today is 3.5 times greater than that of a business NEM customer due to the distorted rates that are currently in place. For every new residential NEM customer, there is an associated cost-shift of over $1,600 per year to those customers who have not elected to or do not have the resources and/ or necessary access to install solar on their rooftop.[9/]

The cost-shift under the current NEM program results from the combination of the NEM billing mechanism and a retail rate design that fails to reflect accurate prices. The problem is most apparent in the residential NEM program inasmuch as the residential rate structure is fully volumetric and does not reflect how the cost of services are actually incurred. The retail rate for residential customers is fully bundled and recovers the utility's cost of providing service, which includes the costs of grid services and energy services as well as legislative and regulatory mandated public policy programs.[10/] A significant percentage of these costs of providing service are fixed, *i.e.*, they do not vary based on a customer's energy use. Nevertheless, *all* of the utility's costs of providing service (including fixed costs) are recovered from residential customers through a per-kWh volumetric rate.

The result is that as the residential NEM customer-generator's volumes are reduced through on-site consumption and netting, the utility's ability to recover its cost of providing service through billing the customer-generator on a per-kWh volumetric basis is likewise reduced. Thus, under the current NEM program, residential customer-generators contribute very

[9/] Assumes median residential NEM customer of 4kW.

[10/] Since Commercial and Industrial ("C&I") NEM customers currently have a rate structure with fixed charges and demand charges, they do not present the same cost-avoidance issues related to infrastructure costs as residential customers.

little toward the infrastructure costs of serving them. There is generally little if any corresponding reduction in the utility's cost of providing service to NEM participants, however. These costs are simply shifted to other non-NEM customers.

In addition, NEM customer-generators receive a bill credit for exported generation based upon the retail rate in the tariff that serves their customer-class. Since the residential retail rate is fully bundled and includes more than just the cost of wholesale electricity, the credit provided to retail NEM customers is unreasonably high. A NEM subsidy program that continues to provide a credit at the retail rate level will perpetuate the current, and growing, cost-shift. Finally, NEM customers are exempt from charges that are typical for other customer generators, such as standby charges and interconnection charges, which further increases the cost-shift to non-NEM customers.

While the Commission has reformed the residential tiered rate structure to some extent, the deficiencies inherent in the current approach remain since the retail rate for residential customers continues to be a fully volumetric rate that does not reflect how the costs of the services are actually incurred. Thus, the problem with today's NEM continues to exist – customer-generators continue to (i) avoid costs by reducing their volumes of billed generation under a fully bundled volumetric rate structure; (ii) receive the value of the full retail rate for electricity services, which for residential includes the costs of system infrastructure, grid use, public policy programs, etc., through a bundled rate structure rate for each kWh of generation rather than the actual cost of electricity; and (iii) avoid the interconnection and standby charges paid by other customer-generators.

Thus, the question before the Commission is how best to remedy the flaws of the current NEM program in order to prevent the unfair cost-shift that occurs today, and how to move forward with a NEM program that will ensure sustainable growth of all distributed energy resource ("DER") technologies, current and future, in a manner that fairly allocates cost, ensures transparency and provides universal access to DER technologies for all customers.

SDG&E's proposal for a successor NEM tariff is intended to ensure equitable recovery of infrastructure costs needed to support continued DER growth and adoption, as well as the elimination of rate distortions caused by hidden indirect subsidies -- treating all customers fairly and equally. To achieve this goal, SDG&E proposes a default successor tariff that includes: (i) a System Access Fee[11/] for the recovery of curb-to-meter infrastructure and customer services, as well as public purpose programs; (ii) a Grid Use Charge[12/] for the recovery of distribution infrastructure costs; (iii) a Time-of-Use ("TOU") rate charged for energy delivered; and (iv) a wholesale rate for energy exported. SDG&E also proposes a Sun Credits tariff option for NEM customers who elect to sell all of their generation to the utility. A detailed description of SDG&E's successor NEM tariff proposal and supporting analysis are provided in Attachment A hereto.

In addition, SDG&E proposes to invest up to $50 million in a utility-owned solar program intended to ensure solar growth in currently under-served in Disadvantaged Communities. This element of SDG&E's NEM proposal is addressed in Attachment B hereto. With a program budget capped at $50 million, the revenue requirement for SDG&E's proposed Disadvantaged Communities Program is calculated to be $71.5 million over 25 years. Program costs would be recovered from all customers, except residential customers and public K-12

[11/] This fee will be charged on a $ per month basis.
[12/] This charge will be based on a customer's maximum demand.

schools in Disadvantaged Communities (using the definition for "disadvantaged communities" adopted in this proceeding). In order to avoid delay in implementation of its Disadvantaged Communities program, SDG&E respectfully requests that the Commission authorize its recovery request in the instant proceeding rather than through a separate, subsequent application proceeding. Inasmuch as the instant filing is intended to take the place of a separate application filing, SDG&E includes in Attachment C the information that is required under Rules 2.1, 2.2 and 3.1 of the Commission's Rules of Practice and Procedure.

## II.
## CLEAN ENERGY LEADERSHIP

California has long been a leader in shaping global energy policy. Its adoption of a set of comprehensive policies and initiatives aimed at significantly reducing Greenhouse Gas ("GHG") emissions puts it at the vanguard of the movement toward a more sustainable energy future. Leadership is nothing new for SDG&E. In addition to leading in safety, reliability and service, SDG&E is a strong leader in clean energy and has been recognized on a national level for its efforts. In recent years, for example, the Environmental Protection Agency ("EPA"), has twice honored SDG&E with its Climate Leadership Award, acknowledging SDG&E's "exemplary corporate, organizational, and individual leadership in response to climate change."[13/] SDG&E's environmental stewardship is a corporate value and an important part of the company's culture. SDG&E takes a holistic and comprehensive view on sustainability and proactively looks at incorporating sustainable best practices in all business processes.

SDG&E has demonstrated steadfast commitment to California's GHG reduction goals. Even prior to adoption of Assembly Bill ("AB") 32, California's landmark GHG reduction measure, SDG&E demonstrated its leadership in GHG mitigation by publicly and voluntarily

[13/] *See* Description of the EPA Climate Leadership Awards program. Available at: http://www.epa.gov/climateleadership/awards/.

reporting its GHG emissions from the generation and distribution of natural gas and electricity under the California Climate Action Registry's rigorous registry program, earning the status of "Climate Action Leader." SDG&E remains committed to the State's vision of a low-carbon, sustainable energy future. It has been a leader in energy efficiency efforts and in promoting development of renewable energy resources. It is on track to achieve the State's 33% renewable portfolio standard ("RPS") by year-end 2015 – the first of any utility and a full five years ahead of the required schedule – and expects to deliver 40% of its power from renewable resources within the next two years as a demonstration of its ongoing commitment to a clean energy future.

In addition, SDG&E continues to proactively support its customers' adoption of rooftop solar. For example, SDG&E created its Distribution Interconnection Information System ("DIIS") in order to streamline interconnection of customer-sited solar PV systems. DIIS was developed in response to the rapid adoption of rooftop solar PV in the San Diego service area and is a leading platform to process NEM applications in both traditional and fast-track methodologies. Customers submitting a fast-track application to SDG&E seven days prior to SDG&E receiving the electrical permit sign-off are then authorized to operate their solar system within five days of SDG&E's receipt of electric permit sign-off, and in some instances are authorized to operate their solar system *the same day*.[14/] In addition, SDG&E has a pending patent on a new product, the Renewable Meter Adapter ("RMA"), which simplifies the interconnection process for renewable generating facilities. RMA contains the necessary overcurrent protection for solar, which can eliminate electrical panel upgrades – saving customers time and money. This device is of great interest to many customers, including solar customers, and will be available soon on a pilot basis.

---

[14/] SDG&E's DIIS fast-track process is available to customers installing solar systems sized at 30 kW or less that submit a fast-track application seven days prior to SDG&E receiving the electrical permit sign off.

SDG&E continues to explore new avenues for achieving the State's GHG reduction goals and to propose new initiatives aligned with this goal. Its proposed electric vehicle charging program, for example, will assist in reducing GHG emissions in the transportation sector, which accounts for far more GHG emissions than any other sector (37.3%). In keeping with its leadership role in energy efficiency, RPS and clean transportation, SDG&E embraces this opportunity to act as a strong partner in re-defining the NEM program in a way that will help the State to realize its long-term clean energy vision.

## III.
## NEM'S ROLE IN A CLEAN ENERGY FUTURE

Assembly Bill ("AB") 327 directs the Commission to develop a replacement NEM contract or tariff that meets new requirements no later than December 31, 2015. The legislation operates to "re-set" the current NEM program by requiring a program design that: (i) is "based on the costs and benefits of the renewable electrical generation facility;"[15/] (ii) ensures "total benefits of the standard contract or tariff to all customers and the electrical system are approximately equal to total costs;"[16/] and (iii) ensures "sustainable growth."[17/] Thus, this proceeding offers the Commission the opportunity to adopt changes to the current NEM program that will ensure the State's policy goals are achieved in a manner that allows all technologies to compete on an equal footing, and that maximizes customers' access to these technologies while minimizing the cost borne by all customers. This will require that the Commission move forward with a NEM successor tariff that is based on accurate price signals and transparent incentives.

---

[15/] § 2827.1(b)(3).
[16/] § 2827.1(b)(4).
[17/] § 2827.1(b)(1).

The relationship between a rational NEM rate structure that provides accurate price signals to customers and growth of DER adoption is apparent. In its 2014 study, *Rate Design for the Distribution Edge: Electricity Pricing for a Distributed Resource Future*, the Rocky Mountain Institute ("RMI") observes that "[m]ore sophisticated rate structures can unleash new investments and innovations in DERs, and direct the deployment of these resources in a manner that maximizes the benefits to the system as a whole.[18/] It notes that a failure to respond to the need for more sophisticated rates that offer accurate price signals to customers will interfere with rational decision-making regarding investment in DERs, pointing out that "as DERs become ever more accessible and dynamic, consumers will make or forego investments in DERs (often with long-term commitments) in more haphazard ways, without sensitivity to price signals or the impact to the grid as a whole."[19/] As DER adoption continues to grow and to influence how customers rely on and interact with the utility grid, clear price signals and transparent incentives will help customers understand how to maximize grid value in the context of DERs (*e.g.*, through time-of-use principles, etc.) and will create an economic motivation for doing so.[20/]

It is beyond dispute that DERs and the advanced grid necessary to support them will be an integral element of California's clean energy future. In order to unleash innovation and promote these new DER technologies, reform of the existing NEM subsidy program is essential – and critical. This theme is echoed by academics, including Severin Borenstein, Director Emeritus of the University of California Energy Institute and the Energy Institute at Haas School

---

[18/] Rocky Mountain Institute, *Rate Design for the Distribution Edge: Electricity Pricing for a Distributed Energy Future*, August, 2014, p. 10. Available at: http://www.rmi.org/elab_rate_design.

[19/] *Id*.

[20/] *Id*. at p. 12.

of Business.[21/] Dr. Borenstein points out that reducing GHG emissions is the paramount goal of energy policy today. He explains that an important component of the strategy for achieving this goal is a careful examination of how technologies are subsidized. He notes that unreasonably high subsidies that result in inaccurate price signals, such as those provided through the NEM program, are counter-productive and should be avoided, suggesting that "…we should craft incentives that accurately reflect the net benefits each alternative technology offers. I'm not sure exactly how those incentives should be structured. But I can tell you that they don't involve paying households retail rates for power injected into the system, as net metering policies currently do."[22/]

Since the NEM program is expressly intended to allow residential customer-generators to *reduce* the volume for which they are billed, the current residential NEM program involving recovery of infrastructure costs through a per-kWh volumetric rate makes little sense and results in exactly the type of subsidy Dr. Borenstein warns against. The solution, as suggested by Dr. Borenstein, and indeed required under § 2827.1, is to craft a NEM tariff that accurately reflects the costs of and net benefits offered by rooftop solar PV technology. In considering the problem of the cost-shift that occurs under the current NEM program, the Massachusetts Institute for Technology ("MIT") report, *The Future of Solar Energy*, observes that "the economically obvious solution is to move away from the prevalent design of distribution network charges that

---

[21/] Severin Borenstein is E.T. Grether Professor of Business Administration and Public Policy at the Haas School of Business and is a Research Associate of the Energy Institute at Haas. He is an affiliated professor in the Agricultural and Resource Economics department and the Energy and Resources Group at UC Berkeley.

[22/] Severin Borenstein, *Is Residential Solar the Future of Electric Generation,* 2015. Available at: http://blogs.berkeley.edu/2015/05/08/is-residential-solar-the-future-of-electricity-generation/.

recovers distribution infrastructure costs via a volumetric (per-kWh) charges . . . the ideal approach would be to recover utilities' distribution costs through a system of charges that reflect each individual customer's contribution to those costs, not their kWh consumption."[23/]

SDG&E agrees with this conclusion and notes that utilities in jurisdictions across the country are confronting this issue. While the adopted solutions vary, the common theme is the conclusion reflected in the MIT study that the answer lies in moving away from a bundled, volumetric rate structure to a structure that seeks to recover costs on the basis by which they are incurred. In other words, to move toward a "system of charges that reflect each individual customer's contribution to those costs."[24/] A survey of the range of options adopted or proposed by utilities across the country illustrates this evolution toward further unbundling of retail energy rates for residential NEM:

- Hawaiian Electric Company has a proposal pending for increased fixed charges for residential NEM customers.
- Arizona Public Service provides solar customers with billing options that include fixed charges and either installed capacity or demand charge options for residential solar customers, and different prices for delivered and exported energy.
- Salt River Power District residential NEM customers pay a higher fixed charge and tiered demand charge for the recovery of fixed and infrastructure costs.
- Alabama Power Company provides residential solar customers with billing options that include higher fixed charges, installed capacity charges, and different charges for delivered and exported energy.
- Westar Energy Inc. has proposed that its residential solar customers have the option of a fixed charge and demand charge or larger fixed charge, both with different rates for delivered and exported energy.

[23/] Massachusetts Institute of Technology, *The Future of Solar Energy,* 2015, p. 220.
[24/] *See id*.

- Wisconsin Energy provides a higher fixed charge and includes an installed capacity charges in its residential rates. It also differentiates the rate applied to delivered and exported energy for its residential NEM rate options, which include an option with a demand charge.

- Georgia Power provides a higher fixed charge and differentiates the rate applied to delivered and exported energy for residential NEM options, which include an option with a demand charge.

It is imperative that the Commission adopt a residential NEM rate structure that prevents the current cost-shift (currently, over $100 million annually) and ensures that all NEM customers pay for the grid and other services they receive. SDG&E submits that a NEM rate structure that is aligned with the following basic principles will spur growth in DER, ensure fair treatment of all customers and help the State to achieve its clean energy goals:

1. Fairness: Cost-based | transparent | reduces cross-subsidies
2. Grid Enhancing: Rate structure optimizes grid benefits
3. Choice: Provides customers options
4. Policy Goals: Aligns with State's goals and supports continued growth of DER adoption

SDG&E's proposed successor NEM tariff is designed to achieve these objectives. As discussed herein, SDG&E's NEM proposal ensures fair recovery of the investments in utility infrastructure that are critical to the continued growth of DER adoption; its proposed NEM rate structure treats all customers equally and fairly, and ensures that the NEM program is no longer dependent on hidden indirect subsidies, with cost-shifts to non-NEM customers.

## IV.
## FUTURE OF THE GRID

In his inaugural address earlier this year, Governor Brown described the key role to be played by the electric grid in enabling California to realize a clean energy future. Reform of the current NEM program – and adoption of a rate design that ensures that all users of the electric

grid are paying for the service they receive – is essential to accomplishing Governor Brown's vision of a fully-integrated advanced electric grid. Governor Brown described the transformation of the electric grid into a platform capable of supporting "a wide range of initiatives: more distributed power, expanded rooftop solar, micro-grids, an energy imbalance market, battery storage, the full integration of information technology and electrical distribution and millions of electric and low-carbon vehicles."[25/] Indeed, the electric grid is a critical enabler of the State's policy agenda. In addition to providing safe and reliable services, strategic investments in the grid will be critical for the on-going support of integration of increasing levels of renewable energy and DER, utilization of battery storage, clean transportation efforts, demand response programs and more.

A recent RMI report, *Net Energy Metering, Zero Net Energy and the Distributed Energy Resource Future*, observes that "California's electricity system stands at the forefront of changes that are transforming the electricity industry globally. These changes include integration of increasing amounts of renewable electricity supplies, creation and execution of programs to improve customers' energy efficiency, and implementation of new smart grid technologies for better coordination, control, and communication in managing the electricity grid."[26/] Indeed, there is consensus that the utility power grid "is evolving from a one-way centralized power delivery system to a more open, flexible, multipoint digitized network (or platform) with a

---

[25/] Edmund G. Brown Jr., Inaugural Address Remarks as Prepared January 5, 2015. Available at: http://gov.ca.gov/news.php?id=18828.

[26/] Rocky Mountain Institute ("RMI"), *Net Energy Metering, Net Zero Energy and the Distributed Energy Resource Future*, p. 2. Available at: http://www.rmi.org/rmi_pge_adapting_utility_business_models.

collection of technologies and assets, some controlled by the utility and some not."[27/] This concept of the grid as a "plug-and-play platform" for integration of new services and technologies is relatively recent, but it is undeniably the shape of things to come.

The RMI report points out that the transformed role of the consumer – from passive recipient of service to an active participant in an interconnected grid – brings a new dimension to the electric utility business environment. It notes that "the electricity system of the future is likely to encompass an increasingly diverse and interconnected set of actors, with widely varying assets, behaviors, and motivations."[28/] The Report observes further that "the effectiveness of a utility's role in conducting the orchestra of distributed energy resources that interact with its system will be a critical factor in achieving favorable outcomes for all stakeholders. *And the long-term health and stability of the electricity grid will be essential to making such a system work*."[29/] In other words, significant investment in upgrading the grid will be necessary in order to successfully manage the evolution of the electric grid to a "grid of things" that seamlessly integrates new energy resources and technologies.

## V.
## UNIVERSAL ACCESS

SDG&E embraces the opportunity presented in this proceeding to develop a NEM solution for disadvantaged communities. As SDG&E noted in its recently-filed Distribution Resources Plan ("DRP"), the concept of universal service is an important element of the State's objective of broader deployment of DER.[30/] SDG&E supports the goal of universal access to

---

[27/] The Edison Foundation Institute for Electric Innovation, *Innovations Across the Grid*, *Vol.2,* December, 2014, p. 3. Available at: http://www.edisonfoundation.net/iei/Documents/IEI_InnovationsGrid_volII_final_LowRes.pdf

[28/] RMI Report, *supra,* note 27, p. 2.

[29/] *Id* (emphasis added).

[30/] *Application of San Diego Gas & Electric Company for Approval of Distribution Resources Plan*, filed July, 2015 in A.15-07-003, p. 5.

DER of all types for all customers. It believes, however, that many of its residential customers face obstacles to participating in the NEM program. Residential solar providers often seek out and market to candidates that meet certain qualifications (*e.g.*, single-family homeowners with high energy usage, incomes, and credit scores). While this may make sense given the business strategies of these companies, excluding a large percentage of customers from the opportunity to obtain DER diminishes the State's ability achieve its clean energy policy goals. SDG&E believes that cost-effective utility programs and investments that address customers who are not specifically marketed to by DER providers can help fill the gap in meeting the Commission's policy goals. To that end, SDG&E's Disadvantaged Communities proposal is designed to leverage unique avenues specific to utilities to successfully achieve a greater penetration of solar PV systems among multi-family housing and to advance the State's clean energy vision in communities that have been left out of the current market.

## VI.
## NEED FOR A RATIONAL AND FAIR NEM RATE STRUCTURE

The continuation of the current NEM subsidy gives rise to three specific areas of concern, which individually and together, undermine the policy goals of the State. First, shifting the cost of maintaining the grid to a dwindling population of utility customers will undermine California's ability to achieve its goal of transforming the distribution grid into a next-generation open platform for integrating new services and technologies. Second, the subsidy that currently exists under the NEM program (over $100 million annually and growing) is fundamentally unfair, violates the express requirements of § 2827.1 and § 451, and is inconsistent with the rate design principles articulated in D.15-07-001. Finally, a rate design that shifts significant cost to non-NEM customers invites backlash and may interfere with the public's willingness to support California's clean energy goals.

### *A. Continuation of the Current NEM Subsidies Would Undermine the State's Goal of a Transformed Electric Grid*

Continuation of the current NEM subsidies would create a significant obstacle to attainment of the State's vision of a fully-integrated advanced electric grid that serves as a platform for supporting a wide range of policy initiatives. As discussed above, the current residential NEM rate structure allows customers-generators to avoid paying most or all of the infrastructure costs related to providing them service. This is true despite the fact that NEM customers arguably place *greater* demands on the distribution grid than do non-NEM customers. NEM customer-generators remain connected to the utility grid to ensure that power is available at night or during periods when on-site systems do not produce sufficient generation to meet their needs. NEM customers receive 7/24 instantaneous supply/demand balancing services. This adds an entirely new dimension to the utility's basic mission of providing reliable electric service; the utility must ensure that the instantaneous transition back and forth between a customer-generator's on-site system and the utility grid is seamless and that no interruption in the flow of power or other reliability problems occurs.

The need to accommodate a two-way flow of generation (delivered and exported) places a new burden on the distribution system, which was engineered in most cases to handle a one-way flow. The utility must ensure that the grid can handle integrating the variable, fluctuating levels of generation exported by NEM systems, which requires investment and upgrades to the distribution systems to avoid overloaded circuits and/or voltage regulation or power quality problems, and to ensure safety of the public and utility personnel. The distribution grid serves a critical role as both battery for absorption of over-generation and back-up generator for supply

during times of on-site system unavailability. Yet residential NEM customer-generators contribute significantly less than non-NEM customers toward the cost of maintaining and upgrading the distribution network.

The failure of residential NEM customer-generators to pay the cost of the distribution grid services they receive does not result in those costs vanishing. Rather, the cost of providing the reliability and other services required by residential NEM customer-generators, as well as the significant investments required to transform the distribution grid into the next-generation platform described above, are borne by non-NEM customers. This is both unfair and unsustainable. If the current NEM subsidies remain in place, more customers will be incented to adopt NEM; the portion of infrastructure costs shifted to the remaining non-NEM customers will continue to grow, rates will increase, which will incent further adoption of NEM, and the pool of utility customers paying to maintain and upgrade the grid will continue to dwindle. Non-NEM customers will pay a growing and discriminatory burden of costs if NEM is not reformed.

It is clear that achievement of California's clean energy goals will require an electric grid capable of supporting expanded distributed generation, energy storage, clean transportation, and myriad other advanced technologies and services. In order to achieve this vision, significant investment in the electric grid will be required. This cost will be repaid many times over in savings – using the grid as a shared resource is far more economically efficient than installing reserves or batteries at every DER location.

### *B. The Current NEM Framework is Inequitable and Unreasonable*

By allowing residential NEM customer-generators to reduce the volume of generation, for which they are billed, the current NEM program allows them to likewise reduce their payment toward the infrastructure cost of providing them service, and to avoid costs of public

policy programs such as the PPP charge. This results in a shortfall in the utility's recovery of the cost of maintaining the grid and of providing service to residential NEM customers. The failure of NEM customer-generators to pay the costs they cause does not result in disappearance of these costs. Rather, the costs are shifted to the remaining non-NEM customers. This currently amounts to over $100 million annually.

The MIT Study, *The Future of Solar Energy*, provides a succinct summary of the problem: ". . . most U.S. utilities bundle distribution network costs, electricity costs, and other costs and then charge a uniform per-kWh rate that just covers all these costs. When this rate structure is combined with net metering, which compensates residential PV generators at the retail rate for the electricity they generate, the result is a subsidy to residential and other distributed solar generators that is paid by other customers on the network."[31/] The cost-shift that occurs under the current NEM program is fundamentally unfair; it violates the express requirements of §2827.1, contravenes § 451 and is inconsistent with the rate design principles articulated in D.15-07-001.

Section 2827.1(b) requires the Commission to ensure that the total benefits of the NEM program to *all* customers (including non-NEM customer) and the electrical system are approximately equal to the total cost.[32/] This means that NEM customer-generators must pay for the benefits they receive and, likewise, that non-NEM customers must not be burdened with costs that exceed the total benefits they receive. The current residential NEM rate design, which shifts the costs of the benefits received by NEM customers (*i.e.*, generation, distribution, transmission services, etc.), along with public policy components such the PPP, to non-NEM customers, is entirely out of sync with the requirements of § 2827.1. In addition, the rate

[31/] Massachusetts Institute of Technology, *The Future of Solar Energy,* 2015, p. xviii.
[32/] Emphasis added.

increases borne by non-NEM customers as the result of the cost-shift currently experienced under the NEM program contravene the requirement under § 451 that utility rates be "just and reasonable."

Finally, in its recent decision addressing residential rate reform, D.15-07-001, the Commission established ten rate design principles ("RDPs") intended to guide evaluation of rate design options.[33/] It noted that while the RDPs conflict in some instances, "[b]ringing the price signal in line with cost and policy considerations, while assuring that vulnerable customers continue to be protected, is the first step in fulfilling a maximum number of rate design principles."[34/] The current NEM program violates several of these RDPs established by the Commission. The current NEM program combined with the improved, but still insufficient, residential rate structure (i) produces rates that fail to meet the Cost of Service RDPs -- are not based on marginal cost (RDP #2); (ii) violates cost-causation principles (RDP #3); (iii) causes a cross-subsidy that is no longer justified by State policy (RDP # 7); (iv) fails to make explicit and transparent the incentives provided to NEM customers (RDP #8); and (v) fails to result in rate that would encourage economically efficient decision-making.

---

[33/] D.15-07-01, *mimeo* p. 28. The Commission adopted the following RDPs:

1. Low-income and medical baseline customers should have access to enough electricity to ensure basic needs (such as health and comfort) are met at an affordable cost;
2. Rates should be based on marginal cost;
3. Rates should be based on cost-causation principles;
4. Rates should encourage conservation and energy efficiency;
5. Rates should encourage reduction of both coincident and non-coincident peak demand;
6. Rates should be stable and understandable and provide customer choice;
7. Rates should generally avoid cross-subsidies, unless the cross-subsidies appropriately support explicit state policy goals;
8. Incentives should be explicit and transparent;
9. Rates should encourage economically efficient decision-making;
10. Transitions to new rate structures should emphasize customer education and outreach that enhances customer understanding and acceptance of new rates, and minimizes and appropriately considers the bill impacts associated with such transitions.

[34/] *Id*. at p. 4 (emphasis added).

Under the current NEM program, the true cost of receiving service is obscured. Thus, the NEM program fails to encourage residential NEM customers to make economically efficient decisions (RDP #9). RMI has pointed out that the existing NEM rate structure fails to provide accurate economic signals to align distributed generation investment with system costs and benefits over the long term, observing that "[r]etail net energy metering, combined with tiered volumetric rates does not provide a sustainable long-term business model for electric utilities, nor does it provide accurate price signals for customers. *As more investment is made outside of the utility's control, new rate structures, price signals and incentives will be critical for directing that investment for greatest system benefit*."[35/] Accordingly, the Commission must adopt a NEM rate structure that is rational, fair, transparent, and based on the cost of service.

### *C. The Current Cost-Shift to Non-NEM Customers Invites Backlash that Could Jeopardize the State's Ability to Achieve it Environmental Goals*

The original NEM legislation was adopted with a full understanding of the cost-shift that would occur, based upon the justification that adoption of the measure would promote California's environmental goals.[36/] While the cost-shift in the early days of the program was relatively minor, the dramatic growth in the number of customer-sited solar PV systems that has occurred more recently has significantly increased the impact of the cost-shift to non-NEM customers. It is clear that the cross-subsidy that exists today (over $100 million annually and growing) under the current NEM program is grossly unfair and irresponsible. Californians support policies aimed at protecting and improving the environment, however it is critical to avoid eroding this support through imposition of an unfair, costly and ill-conceived initiative.

---

[35/] Rocky Mountain Institute ("RMI"), *Net Energy Metering, Net Zero Energy and the Distributed Energy Resource Future*, p. 4 (emphasis added).

[36/] *See* SB 656 Bill Analysis, Assembly Committee on Appropriations, (noting that "[t]he net energy metering approach has the effect of shifting distribution costs to other ratepayers."). Available at: ftp://www.leginfo.ca.gov/pub/95-96/bill/sen/sb_0651-0700/sb_656_cfa_950706_101245_asm_comm.html.

Disregard for the significant rate impacts of the current NEM program invites voter and ratepayer backlash. There is little to be gained by protecting the current NEM subsidy if the end result is withdrawal of public support for the program as a whole.

The Legislature has recognized the need to undertake reasonable cost containment measures and to ensure that utility customers are not burdened with excessive energy rates. Section 399.15 (c)-(g), for example, sets a procurement expenditure limitation ("PEL") for procurement under the RPS program. Adoption of the PEL signals the Legislature's recognition of the fact that a "renewables at any cost" approach to procurement could result in a dramatic increase in the rates paid by utility customers, which could threaten their ongoing support for the RPS program. Similar consideration must be given to the cost associated with the NEM program and whether the rate impacts for non-NEM customers are such that utility customers' support for the NEM program might evaporate.

It is worth noting that as a component of California's larger strategy for increasing procurement of renewable resources, the NEM program is something of a "weak link" – the generation procured through the program is non-dispatchable, it cannot be used to meet the evening peak demand and it is extremely expensive. NEM is not the most effective means of ensuring achievement of California's renewables procurement goals.[37/] Thus, imposing significant additional cost on non-NEM customers in order to support a program that provides limited benefits is an approach that could create ratepayer/voter dissatisfaction.

---

[37/] *See, e.g.*, Brattle Group, *Comparative Generation Costs of UtilityScale and Residential-Scale PV in Xcel Energy Colorado's Service Area*, July 2015, p. 45. Available at: http://brattle.com/system/publications/pdfs/000/005/188/original/Comparative_Generation_Costs_of_Utility-Scale_and_Residential-Scale_PV_in_Xcel_Energy_Colorado%27s_Service_Area.pdf?1436797265

While it is clear that solar DG market proponents and marketers benefit immensely from the current NEM cross-subsidy, and will likely advocate strongly for its preservation, recognition of this fact is not the end of the analysis. The Commission's obligation is to protect the public interest rather than a particular market segment. The most prudent course of action is to develop a sustainable, fair and rational rate structure for the residential NEM program that does not impose NEM program costs on non-NEM customers, but does allows for explicit incentives to be provided to the extent they are necessary to accomplish specific goals such as ensuring the sustainability of the NEM program.[38/] In the long run, this approach, which minimizes the risk of "rate shock" and reduces the likelihood that customers will react negatively, is the best means of protecting the ongoing existence of the NEM program and ensuring its sustainable continuation.

## VII.
## SUMMARY OF PROPOSAL FOR A SUCCESSOR NEM TARIFF

California stands at a critical juncture in its journey toward a clean energy future. Its demonstrated commitment to enabling innovative services and technologies designed to reduce GHG emissions must be balanced against its enduring obligation to protect customers, and to adhere to principles of fairness and transparency in establishing policies that guide electricity pricing. California has made tremendous progress towards its clean energy goals and, in particular, has achieved the aim of stimulating significant growth in adoption of rooftop solar. It is critical that as the State moves forward into the next decade, its policies and initiatives be carefully crafted to maintain the current momentum toward realization of a low-carbon, sustainable energy future, while minimizing cost impacts on utility customers. There will likely

[38/] See § 2827.1(b)(1).

be more change within the electric industry in the next ten years than in the past 100 – California must anticipate this change and implement well-conceived policies that further rather than impede advancement.

A NEM rate structure that provides accurate price signals to customers will "unleash new investments and innovations in DERs," and will help to ensure that deployment of DER resources occurs in a manner that benefits the system as a whole.[39/] AB 327 provides the means of pursuing this outcome; it is up to the Commission to achieve it. The Commission has a significant opportunity before it. Eliminating the cost-shift that occurs under the current NEM program will align the program with the rate design principles articulated by the Commission and will ensure that grid costs are paid for by *all* users. Given the significant investment that will be required over the near term to realize California's vision of an advanced, fully-integrated grid supporting DERs, this is critical. Allowing a sub-set of grid users to avoid payment for the services they receive is fundamentally unfair and will hinder the ability of the utilities to achieve California's aggressive grid-related goals.

SDG&E's proposal for a successor NEM tariff is intended to ensure fair and equitable recovery of infrastructure costs needed to support continued DER growth and adoption, as well as the elimination of rate distortions caused by hidden indirect subsidies to ensure that all customers are treated equally. These subsidies exceed $100 million annually today and are growing. As detailed in the attached proposal documents, SDG&E proposes to offer NEM customers within each customer class two tariff option: (i) a class-differentiated unbundled rate option as the Default Unbundled Rate Option for each customer class; and (ii) a Sun Credits Option for customers that elect to sell all their NEM generation to the utility.

---

[39/] *See* 2014 RMI study, *Rate Design for the Distribution Edge: Electricity Pricing for a Distributed Resource Future*, p. 10.

In addition, SDG&E proposes two programs intended to ensure solar growth in Disadvantaged Communities that involve placement of utility-owned solar resources at customer-owned sites. SDG&E is confident that its successor NEM tariff proposal will further the State's efforts to achieve its vision of a clean energy future, while ensuring fair treatment of all customers and adhering to the rate design principles articulated by the Commission. Accordingly, SDG&E's successor NEM tariff should be approved.

## VIII.
## CONCLUSION

For the reasons set forth herein and in the attached proposal document, SDG&E respectfully requests that the Commission approve of its proposed successor NEM tariff proposals and authorize recovery of $71.5 million for its Disadvantaged Communities Program.

Respectfully submitted this 3rd day of August, 2015.

/s/ *Aimee M. Smith*
AIMEE M. SMITH
8330 Century Park Court, CP32
San Diego, CA 92123
Telephone: (858) 654-1644
Facsimile: (858) 654-1586
E-mail: amsmith@semprautilities.com

Attorney for
SAN DIEGO GAS & ELECTRIC COMPANY

# ATTACHMENT A

***Proposal for Successor Net Energy Metering Tariff***

## TABLE OF CONTENTS

**SAN DIEGO GAS & ELECTRIC COMPANY**
**PROPOSAL FOR SUCCESSOR NET ENERGY METERING TARIFF**

## I. INTRODUCTION

Net energy metering ("NEM") is a tariff billing mechanism established pursuant to Public Utilities Code § 2827 that allows eligible customer-generators to rely on an on-site distributed generation ("DG") system to serve a portion of their energy needs, and to receive compensation for generation exported to the utility grid.[1/] Assembly Bill ("AB") 327 adopted § 2827.1, which directs the California Public Utilities Commission ("Commission" or "CPUC") to develop a replacement NEM contract or tariff that meets specified requirements no later than December 31, 2015.[2/]

The *Administrative Law Judge's Ruling (1) Accepting into the Record Energy Division Staff Papers on the AB 327 Successor Tariff or Contract; (2) Seeking Party Proposals for the Successor Tariff or Contract; (3) Setting a Partial Schedule for Further Activities in this Proceeding* issued in Rulemaking ("R.") 14-07-002 on June 4, 2015 ("ALJ Ruling") directs parties to present their proposals for a successor NEM tariff or standard contract, including alternatives for disadvantaged communities, using the information and processes contained in the *Energy Division Staff Paper on the AB 327 Successor Tariff or Standard Contract* ("Staff Paper"). It further requires that parties demonstrate satisfaction of the criteria set forth in § 2827.1(b)(1), (3), (4) and (5) through analysis using the Public Tool adopted in R.14-07-002, and solicits comments in response to specific questions included in the ALJ Ruling.

The successor NEM tariff proposed by SDG&E is intended to provide fairness to all customers and to ensure equitable recovery of the infrastructure investments required to support continued adoption of distributed energy resources ("DERs"), as well as elimination of rate

1/ All statutory references herein are to the Public Utilities Code, unless otherwise noted.
2/ Assembly Bill (AB) 327 (Stats. 2013, Ch. 611),

distortions caused by hidden indirect subsidies – treating all customers equally. To achieve this goal, SDG&E proposes to offer NEM customers within each customer class two tariff option: (i) a class-differentiated unbundled rate option as the Default Unbundled Rate Option for each customer class; and (ii) a Sun Credits Option for customers that elect to sell all their NEM generation to the utility.

In addition, in Attachment B, SDG&E proposes two programs intended to ensure solar growth in Disadvantaged Communities that involve placement of utility-owned solar resources at customer-owned sites. SDG&E's proposal for a successor NEM tariff and its supporting analysis are presented below.

## II. SUMMARY OF PROPOSAL FOR NEM SUCCESSOR TARIFF

### *A. SDG&E's NEM Successor Tariff Proposal*

SDG&E proposes new NEM options to replace the current NEM tariff (Schedule NEM), which operates in conjunction with the NEM customer's Otherwise Applicable Tariff ("OAT") for utility services. Rather than offering a single NEM billing approach, SDG&E proposes to offer choices for NEM 2.0 customers within each customer class by providing two NEM tariff options.[3/] This will allow NEM customers to select the option that best fits their needs. As discussed in detail below, SDG&E proposes the following NEM billing options:

- *Default Unbundled Rate Option*: The Default Unbundled Rate Option is an unbundled rate which consists of a class-differentiated: (i) System Access Fee - ($/month) for the recovery of curb-to-meter infrastructure and customer services, as well as the Public Purpose Program ("PPP") surcharge; (ii) Grid Use Charge - ($/NCD-kW) for the recovery of capacity-related distribution costs; (iii) time-of-

[3/] SDG&E's proposals differ by customer class due to the different rate structures of in place for the different customer classes.

use ("TOU") rate charged for energy delivered to the customer-generator; and (iv) a wholesale rate for energy exported by the customer-generator.[4/]

- *Sun Credits Option*: This rate option is for NEM customers that elect to sell all of their generation to the utility. All generation produced by a customer-generator's on-site DG system would be exported to the grid. Under this option, SDG&E would compensate the customer-generator for exported generation through a bill credit equivalent to the retail system average commodity rate. This option requires an installation of a separate meter to track the generation exported to the grid at the customer-generator's expense. Utility services received would then be charged through the standard OAT.

Under SDG&E's successor NEM tariff, NEM customers would be responsible for charges paid by non-NEM customer-generators, such as interconnection charges and standby charges. Under the Default Unbundled Rate Option, billing would occur on a monthly basis based on energy delivered and exported without netting. SDG&E proposes to eliminate the current option for annual true-up. Accordingly, annual net surplus compensation would be eliminated, as customers will receive compensation for their excess generation on a monthly basis. Under the Sun Credits Option, the generation from the customer-generator is billed separately from their other utility services on a monthly basis. The customer-generator continues to receive service on their OAT for utility services.

### *B. Use of Bookend Cases*

Consistent with the direction set forth in the July 20, 2015 Administrative Law Judge Ruling ("July 20 Ruling"), SDG&E includes analysis based on the Revised Public Tool as updated in the July 20 Ruling based on both the "low DG" value and "high DG" value for the following cases, resulting in 6 bookends:

[4/] In D.11-06-016, the Commission determined that the DLAP price represents avoided costs for purposes of establishing the net surplus compensation rate. D.11-06-016, *mimeo*, Ordering Paragraph 1.

1. A Two-Tier rate structure with a minimum bill with cutoff for Tier 2 at 100% of baseline for Pacific Gas and Electric ("PG&E") and Southern California Edison ("SCE") and 130% of baseline for SDG&E, and Tier 2 rates 25% higher than Tier 1 rates.

2. A bookend seasonal TOU rate structure with minimum bill with a 4 p.m. – 8 p.m. peak period, a baseline credit, on-peak rates 100% higher than off-peak rates, and summer rates 25% higher than winter rates.

3. A bookend seasonal TOU rate structure with minimum bill with a 2 p.m. – 8 p.m. peak period, a baseline credit, on-peak rates 100% higher than off-peak rates, and summer rates 25% higher than winter rates.

### *C. Satisfaction of Relevant Statutory Criteria*

Section 2827.1 requires that the successor NEM tariff (i) be based on the costs and benefits of the renewable electrical generation facility;[5/] (ii) ensure that the total benefits of the standard contract or tariff to all customers and the electrical system are approximately equal to total costs;[6/] and (iii) ensure "sustainable growth."[7/] SDG&E defines the terms "cost" and "benefits" from the perspective of the utility cost of service; this approach makes sense inasmuch as utility tariffs are designed to address and reflect the services customers receive from the utility and the costs utilities incur to provide those services to their customers. SDGE&E defines sustainable growth as a process that allows all customers to participate in the NEM program without negatively impacting non-participating customers, either by shifting costs to non-participating customers or putting at risk the safety and reliability of the grid. As discussed below, SDG&E's proposal for a successor NEM tariff is intended to ensure that NEM customers pay the cost of the services they receive under the program. SDG&E's proposal eliminates hidden indirect subsidies and requires NEM customers to pay their fair share of infrastructure costs. Accordingly, it achieves the objectives set forth in the statute.

---

[5/] § 2827.1(b)(3).
[6/] § 2827.1(b)(4).
[7/] § 2827.1(b)(1).

### *D. Open Statutory, Policy, or Practical Issues*

As discussed in Section F below, SDG&E does not believe that legal impediments to adoption of its NEM successor currently exist. It notes, however, the existence of an open legal question regarding collection of the PPP surcharge. SDG&E's successor NEM tariff proposal contemplates recovery of the PPP surcharge through a fixed $/month charge to ensure that the surcharge is nonbypassable. SDG&E submits that although the electric PPP surcharge has historically been collected on a per-kWh volumetric basis, SDG&E's proposed approach is consistent with the requirement under Public Utilities Code § 381 that the PPP surcharge be assessed based upon "usage" since NEM customers use utility services and the monthly charge assigns responsibility based on this use. SDG&E does not believe that the Commission has previously addressed this question.

## III. BACKGROUND

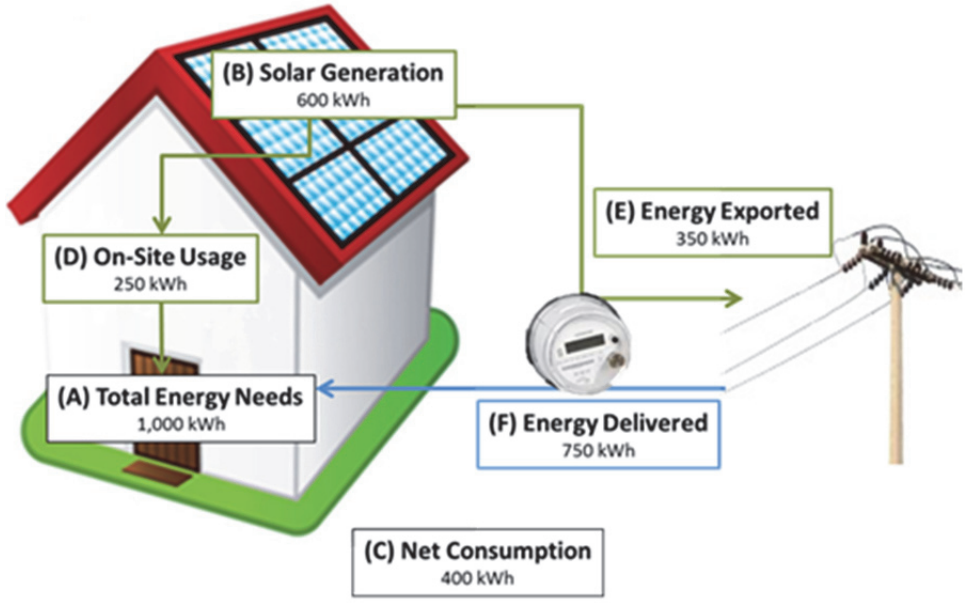
### *A. The Current NEM Program*

#### 1. How NEM Works Today

In the absence of an on-site DG system, energy delivered from the grid by SDG&E meets all of the energy needs of a customer. Under the current NEM program, a customer may install a solar system to serve a portion of their energy needs. The on-site solar system typically only serves the customer's energy needs during certain periods of the day. Thus, after installing solar, the customer must remain connected to the utility grid in order to ensure that power is available at night, when the sun is not shining or during periods when the customer-generator's system does not produce enough generation to meet the customer's needs. In addition, NEM customers rely on the utility grid to integrate exported generation. Unlike a typical residential customer requiring only services related to one-way delivery, NEM customers require two-way delivery capability, depending on the grid to integrate exported generation delivered instantaneously.

The current NEM program bills customers on the basis of "net consumption" – *i.e.*, rather than billing the customer for the total amount of energy delivered from the utility, the customer is billed for the energy delivered minus the energy exported to the grid. The diagram below provides an illustration of how a residential solar customer's "net consumption" (C in Diagram 1) varies from the total energy delivered (F in Diagram 1) from the utility and the total energy exported (E in Diagram 1) back to the grid.

**Diagram 1: Illustrative Solar Customer**




In this illustrative example, the residential customer over the course of the month has total energy needs of 1,000 kWh (A in Diagram 1). In the same month, their solar system generates 600 kWh during the day (B in Diagram 1). Of this 600 kWh, the customer only uses 250 kWh (D in Diagram 1) to meet their needs at the time of generation, and the remainder, 350 kWh (E in Diagram 1), is exported back to the grid. During the night, the customer continues to rely on the utility to deliver energy to meet their remaining energy needs.

In this example, after taking into account on-site usage, the customer still has energy needs of 750 kWh (A – D = F). This 750 kWh is delivered by the utility. Under the current NEM program, this customer is billed on the "net consumption" (C in Diagram 1) for the month – *i.e.*, the difference between delivered energy (750 kWh) and exported energy (350 kWh), which is 400 kWh (F – E = C). Thus, rather than being billed for the full 750 kWh of energy delivered by the utility, the NEM customer is only billed for 400 kWh.

Under the current NEM program, the energy that a customer exports back to the grid during times when their solar system produces more than is being used on-site ("exported energy") is valued at the value of the full retail rate established in the customer-generator's OAT. For residential customers, the retail rate is fully bundled and recovers the utility's cost of providing service, which includes (i) customer costs; (ii) distribution demand capacity costs; (iii) systems capacity costs; (iv) commodity costs; and (v) costs related to public policy programs. That means that residential NEM customers receive a bill credit that reflects not only the value of the commodity, but also the non-commodity costs of providing service.

In addition to allowing customers to (i) reduce their on-site load; and (ii) receive a bill credit for exported energy based on the OAT retail rate, the NEM program also provides "Net Surplus Compensation" for NEM customers that have exported more generation than they have consumed over the course of 12 months. This benefit is provided separate from and in addition to the monthly bill benefits. If the customer's total generation over the 12-month period is *greater* than its energy consumption, it is a "net generator" and is deemed to have made a net sale of electricity to the utility. It is paid a net surplus compensation rate based on the wholesale energy price, which is set at the default load aggregation point ("DLAP") price.[8/] NEM

[8/] *See* D.11-06-016.

customer-generators may opt to receive a payment for net surplus generation or to roll a credit for that generation into the next 12-month true-up period (the value of the net surplus generation is converted to a monetary credit before being carried forward).[9/]

### 2. NEM Program Subsidies

The current NEM program results in NEM customers bypassing costs of providing utility services. The subsidy NEM customers receive today has four components:

#### a. Reduced Payment for Infrastructure and Public Policy Programs

Although NEM customer-generators continue to take service under their OAT, they reduce the volume of deliveries for which they are billed under their OAT by relying on their on-site DG system to serve a portion of their load. The reduction in customers energy needs met by on-site usage is a good thing. It creates an issue only when there is a fully bundled volumetric rate structure, as is currently the case for residential customers. Under a fully bundled volumetric rate structure, the reduction in the volume for which residential NEM customers are billed results in a corresponding reduction in their payment toward the infrastructure cost of providing them service, as well as avoidance of nonbypassable regulatory costs such as the PPP surcharge.[10/] This problem arises with residential NEM customers due to the volumetric residential rate structure, which does not reflect how the cost of services are actually incurred.

As noted above, the retail rate for residential customers is a fully bundled rate which recovers the utility's cost of providing service. The utility's cost of providing service includes (i) customer costs; (ii) distribution demand capacity costs; (iii) systems capacity costs; and (iv)

---

[9/] *Id.* at p. 51.

[10/] A report prepared by the Commission's Energy Division has estimated that under the current rate design, with a complete deployment of systems to the NEM cap, NEM customers would avoid approximately **$142 million** in PPP charges in 2020. *California Net Energy Metering Ratepayer Impacts Evaluation*, issued on October 28, 2013, p. 27 ("NEM Report"). Available at: http://www.cpuc.ca.gov/NR/rdonlyres/75573B69-D5C8-45D3-BE22-3074EAB16D87/0/NEMReport.pdf020556C41457/0/NEMReportWithAppendices.pdf

commodity costs. In addition, retail rates also recover the costs of legislative and regulatory mandated public policy programs from utility customers.[11/] A significant percentage of the cost of providing utility services – specifically customer costs, distribution demand capacity costs, and systems capacity costs – do not vary based on a customer's energy use (kWh). Nevertheless, *all* of the utility's costs of providing service (including fixed costs) are recovered from residential customers through a per-kWh volumetric rate.

The result, as noted above, is that as the residential NEM customer-generator's volumes are reduced, the utility's ability to recover its cost of providing service through billing the customer-generator on a per-kWh volumetric basis is likewise reduced. As such, residential NEM customers contribute very little towards the infrastructure costs of serving them since there is generally little if any corresponding reduction in the utility's costs of providing service to NEM participants. This issue does not arise to nearly the same degree with Medium/Large Commercial & Industrial ("M/L C&I") NEM customers inasmuch as these customers have an unbundled rate structure with fixed charges and demand charges that recover most of the infrastructure costs of serving them.[12/] Today, the cost that a NEM residential customer shifts is 3.5 times greater than that of a NEM business customer for the same 1 kW of solar installation

---

[11/] For SDG&E customers, these latter costs include nonbypassable charges related to, for example, the PPP surcharge, which provides support to the California Alternate Rates for Energy ("CARE") program, energy efficiency and renewable incentive programs, and research and development ("R&D") programs, as well as other mandated charges such as the nuclear decommissioning ("ND") charge; the Ongoing Competition Transition ("CTC") charge and the Department of Water Resources ("DWR") bond charges.

[12/] Certain costs are avoided by these customers notwithstanding the unbundled (with fixed and demand charges) rate structure. The PPP surcharge, for example, is collected through the volumetric component of the M/L C&I customer rate. Thus, the load reduction resulting from on-site consumption by these customers causes an under-collection of the PPP surcharge from NEM customers.

due to the distorted residential rate structure currently in place. The failure of residential NEM customer-generators to pay the infrastructure costs does not result in disappearance of these costs. Rather, the costs are shifted to the remaining non-NEM customers.

**b. The "Netting" Issue**

The current NEM program bills customers on the basis of "net consumption" rather than for the total amount of energy delivered to the customer from the utility. In other words, the customer's exported generation is netted against the amount of electricity delivered by the utility. As demonstrated in Diagram 1 above, while the NEM customer relies on the utility to deliver 750 kWh (F in Diagram 1) to meet their remaining energy needs, the customer is billed on the basis of "net consumption" (400 kWh). This results in NEM customers paying for only a portion of energy delivered to them by the utility. This, in turn, results in cost shifts to non-NEM customers.

**c. Compensation for Exported Generation**

NEM customer-generators receive the value of the full retail rate established in their OAT for the generation they export to the grid. For residential customers, the retail rate is fully bundled and fails to account for the time of day when excess generation is needed most on the system. This results in NEM customers being over-compensated for the energy exported back to the grid. The services related to delivered energy include benefits associated with the delivery of that energy, such as infrastructure benefits (*i.e.,* distribution, transmission), as well as the energy (commodity) itself. Energy exported to the grid by NEM customers, on the other hand, includes none of these benefits, other than the energy. In short, non-NEM customers are paying NEM customer-generators for benefits they do not receive. The over-valuation of exported NEM generation adds to the cost-shift experienced under the current NEM program.

### d. Exemption from Other Charges

NEM customer-generators receive a subsidy in the form of an exemption from charges that are typical for other customer generators, such as standby charges and interconnection charges, which further increases the cost-shift to non-NEM customers.

## *B. The Role of NEM and Other Initiatives in Stimulating Growth of Solar DG*

NEM was originally adopted in California in 1995 pursuant to Senate Bill ("SB") 656.[13/] Supporters of the measure claimed that it would provide electric costs savings to customer-generators, incent installation of solar electric systems, positively impact economic growth, and provide diversification of the state's energy resource mix.[14/] Opponents of the measure pointed out that the proposal to provide compensation for exported generation at the full retail rate, rather than at the wholesale rate, would shift distribution costs to non-NEM customers, thereby creating an unfair subsidy.[15/] Despite the concerns regarding cost-shift and ratepayer inequity, SB 656 was adopted and the investor-owned utilities ("IOUs") became obligated to offer NEM to

---

[13/] Senate Bill 656 (Stats. 1995, ch. 369).

[14/] *See* SB 656 Bill Analysis, Assembly Committee on Appropriations, p. 2, available at: ftp://www.leginfo.ca.gov/pub/95-96/bill/sen/sb_0651-0700/sb_656_cfa_950706_101245_asm_comm.html.

[15/] *Id*. The SB 656 Bill Analysis notes that:

> Opposition claims that the purpose of this measure is to provide an electric ratepayer subsidy to purchasers of expensive residential photovoltaic systems. They claim that the accounting system by which the kilowatt hours are supplied to the utility would be "netted out" against kilowatt hours sold to the utility. This approach assumes that such kilowatt have the same value, when they do not. Electricity sold to consumers includes, in the rate charged, the costs of distribution on the utilities electrical grid, transformer and power station maintenance, etc. Thus a kilowatt hour delivered to a customer is a retail commodity while a kilowatt hour sold to the utility is a wholesale commodity which does not include the distribution costs a utility bears in delivering the power to customers. Accordingly, the costs for the two commodities are different. The net energy metering approach has the effect of shifting distribution costs to other ratepayers.

residential customers with installations sized at 10 kW or less, subject to a program cap for each IOU of 1% of the IOU's peak electricity demand forecast for 1996 – a cap of approximately 3.6 megawatts ("MW") for SDG&E.[16/]

In the two decades since SB 656 was adopted, the NEM program has been expanded through numerous legislative amendments. Program eligibility has expanded to include small commercial customers, as well as commercial, industrial and agricultural customers. The system capacity size limit has increased from 10 kW to 1 MW. The program cap has also been raised over time from 1% to 5% and the cap calculation modified,[17/] such that the program cap for SDG&E has increased significantly from 3.6 MW in 1995 to 607 MW today. Finally, a significant program benefit was added in 2011 with implementation of AB 920 and rules regarding "net surplus compensation."[18/] While the NEM program had always provided a credit at the full retail rate for energy exported to the grid, program rules prior to AB 920 provided that at the annual true-up, customer-generators were not entitled to receive compensation for surplus kilowatt hours that exceeded the customer-generator's load for that 12-month period. Under AB 920, however, customer-generators could elect to receive net surplus compensation – *i.e.*, compensation for generation that exceeded the customer-generator's on-site load for a specified 12-month true-up period (net surplus energy).[19/]

In addition to the NEM program, the State has implemented several other incentive programs over the years aimed at promoting self-generation and distributed generation. These include, for example, the Self-Generation Incentive Program ("SGIP"), which established incentives for solar projects over 30 kW; the Emerging Renewables Program ("ERP"), which

---

[16/] Based on a 1996 peak system demand of 3609 MW for SDG&E.
[17/] D.12-05-36, *mimeo*, Ordering Paragraph 2.
[18/] Assembly Bill 920 (Stats. 2009, ch. 376). *See* D.11-06-016.
[19/] Net surplus compensation is set at an avoided cost rate based upon the DLAP. D.11-06-016, *mimeo*, Ordering Paragraph 1.

established incentives for solar projects under 30 kW; the New Solar Homes Partnership ("NSHP"), which provides financial incentives and other support to promote installation of solar systems on new residential construction; and the California Solar Initiative ("CSI"), which includes the Multifamily Affordable Solar Housing ("MASH") program and the Single Family Affordable Solar Homes ("SASH") program. CSI provides incentives for small solar systems installed on residential and other eligible properties.

SDG&E's efforts have materially contributed to the State's success in stimulating adoption of solar DG. For example, SDG&E created its Distribution Interconnection Information System ("DIIS") in order to provide a streamlined interconnection of customer-sited solar PV systems. DIIS was developed in response to the rapid adoption of rooftop solar PV in the San Diego service area and is a highly effective platform for processing NEM applications in both traditional and fast-track methodologies. Customers submitting a fast-track application to SDG&E seven days prior to SDG&E receiving the electrical permit sign-off are then authorized to operate their solar system within five days of SDG&E's receipt of electric permit sign-off, and in some instances are authorized to operate their solar system *the same day*.[20/] In addition, SDG&E has a pending patent on a new product, the Renewable Meter Adapter ("RMA"), which simplifies, and could significantly reduce the customer's expense for, the interconnection process for renewable generating facilities. RMA contains the necessary overcurrent protection for solar, which can eliminate electrical panel upgrades – saving customers time and money. This device is of great interest to many customers and solar customers, and will be available soon on a pilot basis.

[20/] SDG&E's DIIS fast-track process is for customers installing solar systems sized at 30kW or less and for those customers submitting a fast-track application seven days prior to SDG&E receiving the electrical permit sign off.

These efforts to promote solar self-generation have been highly successful in terms of stimulating customer adoption rates and achieving market growth. In the Commission's recently issued *California Solar Initiative Annual Program Assessment* issued in June, 2015 ("Report"), the Commission describes a mature and robust market for customer-sited solar DG. The Report notes that the market for solar generating equipment in California has grown at a rapid pace since 2007, and that the cost associated with customer-sited solar has declined significantly.[21/] The Report concludes that the State has succeeded in achieving its objective of stimulating widespread adoption of solar and creating a "self-sustaining" market, free of direct cost-support in the form of program rebates.[22/] It finds that the continued increase in statewide solar installations despite the declining incentive levels and the fact that many of the IOU's CSI programs are now closed, suggests that the CSI program's use of declining incentive levels as the market matures has been successful.[23/]

### *C. AB 327 Establishes a New Direction for the NEM Program*

Adopted in the current environment of a "self-sustaining" solar market,[24/] the NEM provisions of AB 327 reflect a markedly different approach to determining customer-generator compensation and other NEM program details than in earlier periods. In place of the highly prescriptive language that appears in the existing NEM provision (§ 2827) regarding pricing, metering, true-up period, fee exemptions, etc., the new NEM provision (§ 2827.1) establishes

---

[21/] Report, pp. 8, 25-27.

[22/] The Report opines, however, that "[t]he solar industry may continue to require the support of Federal Tax Credits and Net Energy Metering, or a successor tariff, for a longer term before achieving self-sustainability." *Id*. at p. 25, note 28.

[23/] *Id*. at p. 27.

[24/] Press release, *CPUC Shines Spotlight on Solar Program Success,* issued June 30, 2015 ("The California Public Utilities Commission [CPUC] today said that consumer solar installations continued to increase in 2014, largely without rebate incentives, demonstrating that the state's California Solar Initiative [CSI] program has **substantially reached its goal of stimulating widespread adoption of solar energy and creating a self-sustaining market**." Emphasis added.).

few program details, focusing instead on the desired outcome of the legislation – *i.e.*, that the total benefits realized by customers and the electrical system under NEM are approximately equal to the total costs – and leaves it to the Commission to determine the appropriate NEM program rate structure consistent with its general obligation under § 451 to ensure just and reasonable rates.

Thus, § 2827.1 operates to "re-set" the current NEM program; rather than further amending the existing NEM provision, the Legislature adopted a new NEM provision that essentially starts over with a rate structure requirement that reflects legislative intent to establish a more traditional rate structure that ties rates to the cost of providing service and eliminates subsidies (*i.e.*, ensures that benefits do not exceed costs).[25/] As context for the proposal, the AB 327 bill analysis discussed the "substantial subsidy" provided to NEM customers, pointing out that the Legislature had in the past justified the subsidy provided under NEM as necessary to stimulate the solar industry, help the state reach its renewable energy goals and provide other external benefits.[26/] The express acknowledgment in the bill analysis of the cost shift that occurs under the current NEM program, coupled with the clear legislative direction to ensure that NEM customer-generators do not continue to receive benefits that exceed costs, makes it plain that the re-designed NEM program must eliminate the cost shift to non-NEM customers that exists under the current NEM program. Indeed, the AB 327 bill analysis explicitly states that the § 2827.1 is intended to "require the CPUC to develop a new standard contract or tariff for NEM *that*

---

[25/] The provision states, in pertinent part, that "*[n]otwithstanding any other law*, the commission shall develop a standard contract or tariff, which may [or may not] include net energy metering, for eligible customer-generators with a renewable electrical generation facility that is a customer of a large electrical corporation . . ." (emphasis added).

[26/] AB 327 Bill Analysis, Senate Appropriations Committee, p. 2. Available at: http://www.leginfo.ca.gov/pub/13-14/bill/asm/ab_0301-0350/ab_327_cfa_20130830_113209_sen_comm.html

*prevents a cost shift to non-NEM customers.*"[27/] Thus, the provision requires that the cost borne by NEM customer-generators be equal to the benefit/service provided by the utility, and likewise that the NEM-related costs borne by other customer not exceed the value of the benefit received.

In light of the maturity of, and strong growth in, the solar self-generation market, as well as the State's successful progress toward its Renewable Portfolio Standard ("RPS") goals,[28/] it is clear that the justification for the substantial subsidy provided under the prior NEM program no longer exists. The Legislature's adoption of § 2827.1 signifies that the time has come to eliminate the current NEM program and its attendant cost-shift and develop a successor program that ensures that the NEM rate structure is rational, fair, transparent, and based on the cost of the services provided by the utility.[29/]

## IV. DEVELOPMENT OF A SUCCESSOR NEM TARIFF

In developing the standard contract or tariff to replace the existing NEM tariff, the Commission is obligated to, *inter alia*, (i) ensure that customer-sited renewable DG continues to grow sustainably; (ii) ensure that the standard contract or tariff made available to eligible customer-generators is based on the costs and benefits of the renewable electrical generation facility; and (iii) ensure that the total benefits of the standard contract or tariff to all customers and the electrical system are approximately equal to the total costs.[30/]

---

[27/] *Id.* at p. 5 (emphasis added).

[28/] *See* Commission estimates of the percentage of RPS procurement currently under contract for 202 (SDG&E: 38.8%, PG&E: 31.3%, SCE: 23.5%). Available at: http://www.cpuc.ca.gov/PUC/energy/Renewables/.

[29/] In accordance with D.14-03-041, customer-generators participating in the existing NEM program prior to a specified date will be grandfathered and will continue to receive service under currently-applicable NEM tariffs for a transition period of 20 years.

[30/] § 2827.1(b).

SDG&E's proposed successor tariff is intended to establish a NEM rate design that is fair to all customers by providing accurate price signals such that customers can make an honest and accurate evaluation of the best distributed generation that meets their needs (*i.e.*, ties the cost to the benefit received) and eliminates implicit subsidies[31/] in favor of direct, transparent incentives. This approach is consistent with the ten Rate Design Principles ("RDPs") established in R.12-06-013,[32/] and will further the important policy goals of the State and the Commission.

SDG&E has defined accurate price signals as rates that are tied to the cost borne by the utility, and are designed to recover costs in a manner consistent with how they are incurred:[33/]

- *Customer Costs* – SDG&E incurs these costs on a fixed basis for each interconnected customer regardless of the amount of electricity they consume. Therefore, these costs should be recovered in a fixed or monthly charge ($/month).

---

31/ Under the existing NEM program, customers receive direct incentives through state programs, such as California Solar Incentive Program ("CSI") and federal incentives ("ITCs"). Customers also receive indirect incentives through the exemptions of charges that are typical for other customers, such as demand charge, standby charge, customer charge, minimum monthly charge, interconnection charge and/or other charges that other customer generators may pay, as well as incentives embedded in rate design (*i.e.*, the ability to offset all components in the retail energy rate with DER generation). In SDG&E's service territory, this has resulted in indirect incentives for NEM customers estimated to be in excess of $100 million annually, which then result in a corresponding cost-shift of $100 million to non-NEM customers, estimated by taking the calculated total kWh PV-Generation multiplied by the difference between the estimated effective credit per kWh PV-generation and an assumed avoided cost per kWh.

32/ R.12-06-013 Rate Design Principles:
1. Low-income and medical baseline customers should have access to enough electricity to ensure basic needs (such as health and comfort) are met at an affordable cost.
2. Rates should be based on marginal cost.
3. Rates should be based on cost-causation principles.
4. Rates should encourage conservation and energy efficiency.
5. Rates should encourage reduction of both coincident and non-coincident peak demand.
6. Rates should be stable and understandable and provide customer choice.
7. Rates should generally avoid cross-subsidies, unless the cross-subsidies appropriately support explicit state policy goals.
8. Incentives should be explicit and transparent.
9. Rates should encourage economically efficient decision-making.
10. Transitions to new rate structures should emphasize customer education and outreach that enhances customer understanding and acceptance of new rates, and minimizes and appropriately considers the bill impacts associated with such transitions.

33/ 2012 GRC Phase 2 (A.11-10-002), R.12-06-013, VGI (A.14-04-014), and 2016 GRC Phase 2 (A.15-04-012).

- *Distribution Demand Costs* – SDG&E incurs these costs independent of energy usage, on the basis of local capacity needs to meet the combined maximum demand of customers served on a circuit. Therefore these costs should be recovered in a non-coincident demand ("NCD") charge ($/NCD – kW).

- *System Capacity/Transmission Costs* – SDG&E incurs these costs independent of energy usage, on the basis of meeting peak capacity needs of the system. Therefore these costs should be recovered in a peak demand charge, that is, demand at time of system peak ($/peak-kW).

- *Commodity Costs* – SDG&E incurs these costs on a variable basis (based on energy usage), and the cost depends on the time of delivery. Therefore these costs should be recovered in an energy charge ($/kWh) that varies by time period.

In order to establish rates that are tied to utility cost and recover costs in a manner consistent with how they are incurred, it is necessary to adopt an unbundled rate structure. A comparison of SDG&E's residential rate structure versus the rate structure for M/L C&I customers highlights the problem that arises from a fully bundled volumetric rate structure, particularly in the context of the NEM program.

As discussed above, SDG&E's residential rate structure is fully bundled with the recovery of all of the utility's cost of providing service (including fixed costs) through a volumetric per-kWh rate. The reduction in volume of deliveries for which NEM customer-generators are billed, along with the credit back of the full residential retail energy rate, results in a cost-shift to non-NEM customers since under a volumetric rate structure, NEM customers contribute very little towards the infrastructure costs to serve them.

The M/L C&I rate structure, on the other hand, is unbundled. It consists of fixed charges, demand charges and TOU energy rates. This rate design significantly limits cost-shift to other customers; the cost-shift that occurs from NEM adoption by M/L C&I customers is significantly less than the cost-shift that results from NEM adoption from residential customers for the same 1 kW of adoption. As discussed in greater detail in Section V.B.3.e.ii below, the cost that a NEM residential customer shifts today is 3.5 times greater than that of a NEM business customer for

the same 1 kW of solar installation due to the distorted residential rates that are currently in place. The majority of infrastructure costs from M/L C&I customers are recovered through fixed and demand charges. Thus, the cost shift that results from NEM adoption by an M/L C&I customer is far more limited; it results from the inability to fully recover the costs of public policy programs such as the PPP and other mandated charges.

The obstacle to recovering these charges from M/L C&I NEM customers results from inclusion of the PPP and other mandated charges in the volumetric portion of the retail M/L C&I rate. When M/L C&I NEM customers reduce their volumes through reliance on generation produced on-site, they avoid the PPP and other mandated charges. In addition, the credit received for the exported generation of M/L C&I customers is set at the full retail rate. Since the retail rate for M/L C&I customers includes the PPP and other mandated charges, the subsidy (*i.e.*, the full retail rate credit) provided to M/L C&I customers for generation results in over-compensation for exported generation – a cost that is borne by non-NEM customers.

Notwithstanding this limited cost-shift, the M/L C&I customer class rate structure offers guidance and a useful template for development of NEM tariff options for other customer classes, including residential. It is an established, vetted approach to recovering costs and is a rate structure that has been in place for utility customers for decades. Adoption of a residential NEM rate structure similar to the M/L C&I rate structure – *i.e.*, fixed charges, demand charges and TOU energy rates – would largely eliminate the cost shift to other customers related to the recovery of utility's costs of providing service (including infrastructure costs) that occurs under the combination of the current NEM program with a fully bundled volumetric residential rate structure.

Even with unbundled rates (fixed charge and demand charge) for the recovery of infrastructure costs, the problem of the subsidy resulting from provision of bill credits at the full retail rate established under the OAT still exists. However, this concern can be addressed through adjustment of the credit provided to customer-generators to reflect the benefit received by the utility (*i.e.*, the value of the exported generation). Specifically, compensating exported energy based upon wholesale energy costs (*i.e.*, the DLAP price) better aligns with the directive set forth in AB 327 to ensure that the cost imposed equal the benefit received.[34/] Valuing exported energy at the wholesale price will ensure that non-NEM customers pay the cost that is equal to the energy-only benefit that exported energy from customer generators provides.

SDG&E believes that a NEM successor tariff incorporating the elements described above would best effectuate the intent of AB 327 to ensure that the costs of the NEM program are equivalent to benefits, and to eliminate the cost shift to non-NEM customers. Accordingly, as discussed below, SDG&E's proposed default option for the NEM 2.0 Successor Tariff is developed in accordance with these principles. SDG&E is committed, however, to providing its customers with the flexibility to choose the option that best fits their needs. Thus, it also proposes to offer a Sun Credits Option, in addition to its Default Unbundled Rate Option, for customers that elect to sell all of their generation to the utility rather than using it on-site.

In developing its proposal for a new NEM successor tariff, SDG&E surveyed the literature on this issue and reviewed NEM rate offerings of utilities across the country to determine what strategies were being considered and implemented to address the concerns discussed here. It also conducted customer research to receive customer feedback on various options identified. Finally, it assessed potential rate options against the Rate Design Principles adopted by the Commission in R.12-06-013.

---

[34/] § 2827.1(b)(4).

### *A. Literature Review*

The Rocky Mountain Institute ("RMI") 2014 paper, *Rate Design for the Distribution Edge,* makes the case for further rate unbundling.[35/] The paper specifically speaks to the need to have pricing structures that address the different utility service (*i.e.* price energy, capacity, ancillary services, etc.), as well as the move towards time-differentiated prices that vary in response to marginal prices or other market signals.[36/] In addition to the general guidance related to unbundling, RMI also explains the importance of distinguishing the price signals for energy and capacity:

> Separating energy and capacity charges offers several benefits . . . A demand charge creates an incentive to add combinations of DERs that more evenly spread use throughout the day, thereby lowering the impact and cost on the system. When a customer with a demand charge is also a net metered customer, the demand charge is not avoided by excess generation credits, resulting in better cost recovery for the capacity required to support some DERs. A demand charge also begins to reduce intra-class cross-subsidies created between customers with different load factors.[37/]

RMI further stresses the importance of transparency as part of unbundling in supporting public policy decision-making:

> More granular rates will allow the benefits and costs of each individual attribute associated with reliable electric service to be evaluated and clearly and transparently priced. This will enable regulators to strike an appropriate and intentional balance between incentivizing DERs and ensuring grid infrastructure costs are recovered.[38/]

RMI recognizes that this greater sophistication of rates that results from unbundling can pose challenges and notes that options may provide a solution to assist with that transition:

---

[35/] Rocky Mountain Institute, *Rate Design for the Distribution Edge: Electricity Pricing for a Distributed Energy Future*, August, 2014. Available at: http://www.rmi.org/elab_rate_design.
[36/] *Id*. at p. 21.
[37/] *Id.* at p. 23.
[38/] *Id.* at p. 18.

> Multiple rate options can offer customers choices that meet their lifestyle, technology requirements, and budget. Within a handful of years, significant progress could be made to introduce new, more sophisticated default rate options along all three of these continuums in many areas of the country, guided by the particular local circumstances . . . Some customers (perhaps those with no DERs) could elect to opt out to a less sophisticated fully bundled rate, while other customers may elect even more sophisticated options that harness the capabilities of a broader array of DERs.[39/]

### *B. Survey of Other Utilities*

In reviewing the NEM offerings of other utilities, SDG&E identified four general approaches, all of which are moves towards greater unbundling of rates:

(1) Increased fixed charge recovery in which NEM customers would pay a greater fixed charge than non-NEM customers.

(2) Installed Capacity charges in which NEM customers are charged based on the installed capacity of their solar system and/or other DER investment.

(3) Fully unbundled rates that would include fixed charges, demand charges and TOU energy rates.

(4) Feed-in Tariff and/or Value of Solar options in which all solar generation is separately metered and exported to the grid and not used to offset personal consumption.

In addition, IOUs also differentiated the rates applied to delivered and exported energy. Table 1 below provides a summary of utilities that have adopted these varying approaches. Unlike California, many of these IOUs already had in place partially unbundled rates for all their customers including residential. In other words, these IOUs' residential customers already paid some level of fixed charge prior to adoption of solar. It should be noted that options provided by utilities may be influenced by operational considerations (*e.g.*, availability of smart metering technology).

---

[39/] *Id.* at p. 21.

**Table 1: NEM Options of Other Utilities**

| Increased Fixed Charge | Installed Capacity | Unbundled Rate with Demand Charge | Feed-in-Tarff/ Value of Solar[40/] |
|---|---|---|---|
| Hawaii Electric Company: proposed fixed charge that is $*12 or $16 greater than the standard residential fixed charge (varies by island).*[41/] | Alabama Power Company: *includes capacity reservation charge of $5.00/kW or $0.70/kWh energy charge during Summer on-peak hours. Additional fixed charge of $0.82 per month.*[42/] [43/] | Salt River Project (AZ): *seasonal fixed charge, three tiered demand charge, and TOU energy charges. NEM fixed charge is$12-25over the standard residential fixed charge.*[44/] [45/] | Austin Energy (TX): *customer charged for all energy consumption on standard schedule, and given credit at the calculated Value of Solar for all generation.*[46/] |
| Georgia Power: *Fixed charge $4.50 above standard residential charge. Available in conjunction with standard tiered schedule or residential demand charge option.*[47/] | Arizona Public Service Company: *Standard fixed charge applies with current installed capacity charge of $0.70/kW (with proposal to raise this to $3.00/kW).*[48/] | Westar Energy (KS): *NEM options include increased fixed charge ($35 above standard) with tiered energy charges or standard fixed charge with demand charge and flat energy charge.*[49/] | |

[40/] Hawaii Electric Company has proposed a Feed-in-Tariff option.

[41/] http://files.hawaii.gov/puc/4_Book%201%20%28transmittal%20ltr_DGIP_Attachments%20A-1%20to%20A-5%29.pdf.

[42/] http://www.alabamapower.com/residential/pricing-rates/pdf/PAE.pdf.

[43/] APC's NEM tariff indicates a $0.82/month fixed charge for NEM customers. APC's standard residential tariff includes a fixed charge of $14.50/month. SDG&E assumes the NEM fixed charge of $0.82/month is incremental.

[44/] SRP NEM customer's additional monthly fixed charge is based on their Amp Service level, *i.e.*, electrical panel size.

[45/] http://www.srpnet.com/prices/priceprocess/pdfx/April2015RatebookPUBLISHED.pdf.

[46/] https://austinenergy.com/wps/wcm/connect/c6c8ad20-ee8f-4d89-be36-2d6f7433edbd/ResidentialSolar.pdf?MOD=AJPERES&projectid=2492f86b-3966-4c22-8be3-b97d4dea7d4a&projectid=2492f86b-3966-4c22-8be3-b97d4dea7d4a&projectid=2492f86b-3966-4c22-8be3-b97d4dea7d4a&pro.

[47/] http://www.georgiapower.com/pricing/files/rates-and-schedules/renewable-nonrenewable/11.10_RNR-8.pdf.

[48/] https://www.aps.com/library/rates/epr-6.pdf.

[49/] https://www.westarenergy.com/Portals/0/Resources/Documents/RateCasePDF/Direct_Testimony_of_Ahmad_Faruqui_on_behalf_of_Westar_Energy.pdf.

| | | | |
|---|---|---|---|
| | Wisconsin Energy: *Available 1/1/16 with fixed charge that is $0.05951 per day (about $1.79 per month) greater than the standard residential fixed charge.*[50/] | Arizona Public Service Company: *Standard fixed charge applies with current installed capacity charge of $0.70/kW (with proposal to raise this to $3.00/kW).*[51/] | |
| | Dominion Virginia Power: *NEM customer must be served on a non-TOU schedule or a Demand Charge-based TOU schedule. Includes Distribution Standby Charge of $2.79 per kW.*[52/] | Alabama Power Company: *includes capacity reservation charge of $5.00/kW or $0.70/kWh energy charge during Summer on-peak hours. Additional fixed charge of $0.82 per month.*[53/] [54/] | |
| | | Georgia Power: *Fixed charge $4.50 above standard residential charge. Available in conjunction with standard tiered schedule or residential demand charge option.*[55/] | |
| | | Dominion Virginia Power: *NEM customer must be served on a non-TOU schedule or a Demand Charge-based TOU schedule. Includes Distribution Standby Charge of $2.79 per kW.* [56/] | |

### *C. Customer Research*

After reviewing the different NEM rate structures put in place by other utilities, SDG&E conducted a customer research study to solicit customer feedback regarding the different

---

[50/] http://www.we-energies.com/pdfs/etariffs/wisconsin/ewi_sheet2016-2018.pdf.

[51/] https://www.aps.com/library/rates/epr-6.pdf.

[52/] https://www.dom.com/library/domcom/pdfs/virginia-power/rates/shared/entire-filed-tariff.pdf.

[53/] http://www.alabamapower.com/residential/pricing-rates/pdf/PAE.pdf.

[54/] APC's NEM tariff indicates a $0.82/month fixed charge for NEM customers. APC's standard residential tariff includes a fixed charge of $14.50/month. SDG&E assumes the NEM fixed charge of $0.82/month is incremental.

[55/] http://www.georgiapower.com/pricing/files/rates-and-schedules/renewable-nonrenewable/11.10_RNR-8.pdf.

[56/] https://www.dom.com/library/domcom/pdfs/virginia-power/rates/shared/entire-filed-tariff.pdf.

structures for the recovery of distribution infrastructure costs. SDG&E surveyed over 400 potential residential NEM customers. Specifically, SDG&E tested the following options: (1) Demand Charge (2) Installed Capacity and (3) Panel Rate (in which distribution costs would be recovered on the basis of potential demand related to the size of a customer's electrical panel). In addition, SDG&E also included a Feed-In Tariff ("FIT")/Value of Solar ("VOS") as an option for customer consideration. The primary goal of the study was to gain a better understanding of customer preferences regarding which structure for distribution cost recovery customers preferred and why, as well as the factors most important to customers in choosing a rate plan.

Based on the research results, the two most important factors to potential residential NEM customers in selecting a rate plan are: (1) "saves money" and (2) "simple". Table 2 below provides a summary of the rankings of the key factors associated with each of the options tested.

**Table 2: Importance of Choice Factors**

| Applicable Choice Factors (% Applicable) (in order of importance) | | Option A Demand Charge | Option B Installed Capacity | Option C Feed-In-Tariff/VOS | Option D Panel Rate |
|---|---|---|---|---|---|
| Saves Money | Provides opportunity to save even more money on my bill by changing my energy use behavior. | 59% bcd | 13% | 36% bd | 11% |
| Simple | Does not require a lot of effort to understand how my energy use behavior will affect my bill. | 24% | 26% | 28% | 26% |
| Fair | Seems like a fair way to be charged for energy. | 22% bd | 15% d | 37% abd | 9% |
| Works for Me | Fits my habits and lifestyle. | 17% | 12% | 18% | 8% |
| Predictable | I know about how much my bill amount should be each month. | 11% | 41% acd | 12% | 34% ac |
| Reflects Cost of Service | Charges me about the same amount that it actually costs my electric utility company to provide service. | 9% | 16% a | 18% ad | 13% |
| Understandable | In language I can understand. | 28% | 27% | 33% | 28% |
| Stable | Will not cause my bill to change a lot from month to month, or from season to season (winter / summer). | 8% | 35% ac | 11% | 38% ac |
| Worry-Free | I don't need to pay attention to when during the day or month I use energy. | 7% | 27% ac | 15% | 26% ac |

The Demand Charge ranked highest as having the attribute "saves money" with 59% of respondents. Respondents identified "saves money" as the most important attribute for a rate plan, as noted above. The FIT/VOS ranked highest for the attributes "fair" (37%), "saves money" (36%), with "fair" and "saves money" being the two of the three most important attributes identified by respondents, and "understandable" (33%). Both Installed Capacity and Panel Rate are considered "predictable" (41% and 34% respectively) and "stable" (35% and 38% respectively). While "predictable" and "stable" were identified as the key attributes for the Installed Capacity and Panel Rate options, these attributes were not identified as top priorities by the respondents when assessing preferred rate options.

In addition, the customer research included a Conjoint exercise in which paired options were compared in order to gauge customer preference of one option over the other. The results show that FIT/VOS is preferred by 3:1 compared to Demand Charge, by 4:1 over Installed Capacity and by 6:1 over Panel Rate. Demand Charge is preferred over Installed Capacity by about 4:3 and the Panel Rate was the least preferred option.

### *D. Rate Design Principles*

In addition, SDG&E examined these four alternative approaches to NEM rate structures in the context of the 10 Rate Design Principles ("RDP") adopted in R.12-06-013.

//

//

//

**Table 3: Rate Design Principles**

| Cost Of Service RDP | Affordable Electricity RDP | Conservation RDP | Customer Acceptance RDP |
|---|---|---|---|
| (2) Rates should be based on marginal cost;<br>(3) Rates should be based on cost-causation principles;<br>(7) Rates should generally avoid cross-subsidies, unless the cross-subsidies appropriately support explicit state policy goals;<br>(8) Incentives should be explicit and transparent;<br>(9) Rates should encourage economically efficient decision-making. | (1) Low-income and medical baseline customers should have access to enough electricity to ensure basic needs (such as health and comfort) are met at an affordable cost. | (4) Rates should encourage conservation and energy efficiency;<br>(5) Rates should encourage reduction of both coincident and non-coincident peak demand. | (6) Rates should be stable and understandable and provide customer choice;<br>(10) Transitions to new rate structures should emphasize customer education and outreach that enhances customer understanding and acceptance of new rates, and minimizes and appropriately considers the bill impacts associated with such transitions. |

### 1. Cost of Service ("COS") RDPs

Only with an unbundled rate structure does one have rates based on marginal cost and cost-causation principles. It is only with these accurate price signals that rates avoid cross subsidies and encourage economically efficient decision-making. While fixed charges for the recovery of customer costs would result in rates that better reflect marginal costs and cost-causation principles, full unbundling is required to ensure that all rates fully reflect marginal costs and cost causation principles. Unless the installed capacity charge has a direct relationship to utility cost of service, an installed capacity charge will not satisfy RDPs 2 and 3. A FIT/VOS option separates the pricing of service provided by the utility to meet the customer's energy needs and the compensation received for the customer's solar generation. The question of whether a FIT/VOS option meets these principles is dependent on the price received for the customers' solar generation.

### 2. Affordable Electricity RDP

To ensure that programs designed to meet the affordable electricity RDP, such as California Alternative Rates for Energy Program ("CARE") and Disadvantaged Communities, also meet the COS RDPs, the incentives for these programs should reside outside of rate design to avoid distorting price signals. They should be handled through direct, transparent incentives. Indeed, RDP 8 makes clear that "[i]ncentives should be explicit and transparent."

### 3. Conservation RDPs

RDP 4 advocates that rates should encourage conservation and energy efficiency. RDP 4 must be placed in context with the other RDPs – a balanced application of the RDPs suggests an approach that relies on economically efficient conservation and energy efficiency. The unbundled rate structure results in rates that provide economically efficient price signals for reduction of both coincident and non-coincident peak demand. The other options do not provide price signals that incent behavior to reduce coincident and non-coincident peak demand.

### 4. Customer Acceptance RDPs

Based on SDG&E's customer research, and specifically the customer feedback regarding the different rate options, it is apparent that customers understand the impacts that the different options would have on their bill. As is the case with any new rate option, it is critical that sufficient outreach and education is implemented to ensure customer understanding of any new rate structure and how it affects their bills.

## V. REPONSES TO QUESTIONS IN ALJ RULING

### *A. Linking Public Tool Results to Statutory Criteria Set Forth in Section 2827.1.*

***Please ensure your response covers the following areas:***

***1. Proposal for what metric(s) should be used to measure 'sustainable growth' as used in Section 2827.1(b)(1).***

*SDG&E Response*

*SDG&E notes that this issue is addressed in its March 16 comments. In accordance with the direction set forth in the ALJ Ruling, it restates here the discussion that appears at pp. 3-5 of its March 16 comments.*

SDGE&E submits that to grow sustainably means to grow without electric ratepayer subsidies. Sustainable growth should be defined as a process which allows all customers to participate in the NEM program without negatively impacting non-participating customers, either by shifting costs to non-participating customers or putting at risk the safety and reliability of the grid. It means that all customers pay for the services they receive and that the rates they pay are based on the costs that are incurred to provide those services. The election of one technology by a customer should not penalize non-participating customers, nor should it result in non-participating customers paying for costs incurred to provide service to those customers who participate in NEM.

As new technologies emerge, customers should be able to adopt any appropriate technology they deem fit without financially burdening other non-participating customers. From this perspective, "sustainability" means that all technologies have an equal opportunity to enter the market. Only when rates fully capture the costs of providing utility services to customers will there be a rate structure that does not create competitive bias toward one customer option relative to another.

Utilities stand ready to provide instantaneously the services each customer requests and requires, and therefore each customer should pay for the services they receive. Only when customers base their decisions on accurate price signals can there be a foundation that will enable customer choice and promote innovation in new technologies in a manner that maximizes economic efficiency and minimizes costs, to the benefit of all customers. To the extent that

subsidies or incentives are deemed necessary to implement state policy goals, including short-term growth in market penetration by DER technologies, those subsidies/incentives should be transparently identified so they do not distort the relative value of these services. In addition, this structure will provide a mechanism such that these incentives can be adjusted as market conditions change and eliminated as the need for a subsidy/incentive ceases to exist.

Transparency will provide customers that benefit from subsidies/incentives the opportunity to respond to accurate price signals that are clearly identified separately from the subsidy/incentive. Subsidies/incentives that are hidden in distorted price signals prevent a sustainable market from developing, misinform customers as to the costs associated with the energy consumption, reduce the amount of Energy Efficiency and Demand Response that would otherwise exist, make it difficult for regulators to adjust subsidies/incentives based on changing market conditions, and lead to inflated rates for those that may not be able to invest in customer-owned generation.

***2. Proposal for what metric(s) should be used to address the provision in Section 2827.1(b)(3) that the standard contract/tariff is "based on the costs and benefits of the renewable electrical generation facility."***

*SDG&E Response*

*SDG&E notes that this issue is addressed in its March 16 comments. In accordance with the direction set forth in the ALJ Ruling, it restates here the discussion that appears at pp. 7-8 of its March 16 comments.*

Section 2827.1(b)(3) provides that the NEM 2.0 Tariff shall be "based on the costs and benefits of the renewable electrical generation facility." SDG&E submits that the terms "costs" and "benefits" should be defined from the perspective of the utility cost of service. This interpretation will allow § 2827.1(b)(3) to be read in a manner that is consistent with the language set forth in § 2827.1(b)(4). When looking at utility contract and tariff offerings, the

costs and benefits being addressed should be tied to the utility cost of service, since both tariffs and contracts are designed to address and reflect the services customers receive from the utility and the costs utilities incur to provide those services to their customers. And thereby the appropriate measure would be to identify the services the utility provides to NEM customers as well as the costs the utility incurs to provide each of these services.

With respect to customers with renewable electrical generation facilities, the costs should be identified on the basis of the costs utilities incur to provide the utility services still needed to serve the NEM customer. The utility cost of service broadly includes customer related costs, distribution demand capacity costs, systems capacity costs, customer costs and commodity costs. Some specific examples of services that a NEM customer will continue to need and the associated costs include interconnection costs, integration costs, provision of storage, reliability/capacity services, customer service costs, process costs, and upgrades to utility facilities (*e.g.*, voltage monitoring and regulating equipment), and replacement of service equipment.

The benefits that should be considered are the benefits associated with the utility services for which the renewable generation resource now provides a substitute. More specifically, the benefits in the instance of a customer with renewable generation facilities should be identified on the basis of the services the customer owned generation provides to the energy grid as well as the services the customer no longer requires from their utility and valued based on the costs avoided by the utility. For instance, solar generation would provide a substitute for energy otherwise provided through utility commodity services. However, it does not provide the reliability, capacity or storage services that would be necessary to ensure that solar customers are able to turn on the lights at night and other times when their solar is not generating. Since the customer

continues to need utility services associated with distribution and transmission services, such as, integration services, provision of storage, reliability/capacity services, the customer should continue to pay the costs of these services to avoid shifting costs to other customers.

In addition, SDG&E believes all customers should pay their fair share of costs of the public purpose programs ("PPP") determined by the State and the Commission to warrant support by ratepayer funding. The question pending before the Commission is whether customers should be able to avoid contributing to these programs simply because they self-provide some or all of their own energy requirements.

***3. Proposal for what metric(s) should be used to address the provision in Public Utilities Code Section 2827.1(b)(4) that the "total benefits of the standard contract or tariff to all customers and the electrical system are approximately equal to total costs."***

*SDG&E Response*

*SDG&E notes that this issue is addressed in its March 16 comments. In accordance with the direction set forth in the ALJ Ruling, it restates here the discussion that appears at pp. 8-9 of its March 16 comments.*

Pursuant to § 2827.1(b)(4), the Commission is required to ensure that the total benefits of the NEM 2.0 program to all customers and the electrical system are approximately equal to the total costs. § 2827.1(b)(4) specifically defines these "benefits" as those that accrue to customers of the electric utility and to the electric system. As a result, it is apparent that benefits are to be valued on the basis of the utility cost of service and the extent to which such costs can be avoided as a result of benefits provided by customer-owned generation.

For the forgoing reasons, the term "benefits" should tie directly to the utility services for which the renewable generation substitutes where the utility no longer needs to provide those services, such as supply energy. This would effectively implement the specific language that

defines total benefits on the basis of the extent to which they accrue, "to all customers and the electrical grid."

***B. Using the Same Bookend Input Values and Retail Rate Assumptions.***

***1. In order to allow for relevant comparisons across different parties' proposals, parties must run their successor tariff proposals in the Public Tool using the "bookend cases" used in the Staff Tariff Paper. Specifically, parties must use the inputs included in Table 1 of the Staff Tariff Paper to evaluate their successor tariff proposals.***

*********

***Parties may also submit a third case to evaluate their proposal using their own input drivers. If a third case is submitted, the inputs must be transparently documented, justified, and compared to the inputs in the "bookend cases."***

***a. All inputs that a party has modified in the Public Tool must be clearly documented, justified, and included as an attachment, clearly titled and identified, to the party's proposal.***

***b. To facilitate parties' abilities to run each other's cases, Energy Division staff will collect and post to the Commission's web page all of the parties' input cases. Each party making a proposal must submit to staff an Excel file with the "bookend cases" inputs and the additional party-defined inputs used in the Public Tool for its proposal, not later than the next business day after the party files and serves its proposal. . .***

***2. In order to allow for relevant comparisons across different parties' proposals, and to allow the Staff Tariff Paper and proposals to be comparable, parties must run their successor tariff proposals in the Public Tool . . . If the Commission has issued a decision on residential rate reform in R.12-06-013 prior to the time the parties prepare their proposals, parties must run their proposals using only the rate structure adopted by the Commission (ALJ Ruling, note 9.)***

***3. Please ensure the description of your successor tariff proposal and the evaluation of your proposal include the following:***

***a. Describe whether your proposed policy should be adopted as a tariff or a standard contract, or both. Please provide a rationale for your recommendation.***

***b. Provide a thorough description of the proposed successor tariff, including attributes of the tariff (e.g., bill credits v. payment for generated energy;***

***whether credits are based on total system generation or exports to the grid only; how compensation for exported energy is calculated; true-up periods; etc.)***

***c. If your proposal requires netting, please use the 30-minute netting interval in the Public Tool. If you would like to propose a different netting interval in your proposal, please describe and justify it. Please provide a rationale for whatever recommendation of netting is made.***

***d. Evaluate your proposal against the AB 327 elements listed below for each scenario in your proposal, using at a minimum the bookend scenarios used in Table 1 of the Staff Paper.***

- ***Ensure that customer-sited renewable generation "continues to grow sustainably."***
- ***Ensure that the new standard contract/tariff "is based on the costs and benefits of the renewable electrical generation facility."***
- ***Ensure that the "total benefits of the standard contract or tariff to all customers and the electrical system are approximately equal to the total costs."***

*SDG&E Response*

Consistent with the June 20 Ruling, SDG&E includes an analysis for both its Default Unbundled Rate Option and Sun Credits Option based on both the "Low DG" value and "High DG" value for the following cases, resulting in 6 bookends for each:

1. A Two-Tier rate structure with a minimum bill with cutoff for Tier 2 at 100% of baseline for PG&E and SCE and 130% of baseline for SDG&E, and Tier 2 rates 25% higher than Tier 1 rates.
2. A bookend seasonal TOU rate structure with minimum bill with a 4 p.m. – 8 p.m. peak period, a baseline credit, on-peak rates 100% higher than off-peak rates, and summer rates 25% higher than winter rates.
3. A bookend seasonal TOU rate structure with minimum bill with a 2 p.m. – 8 p.m. peak period, a baseline credit, on-peak rates 100% higher than off-peak rates, and summer rates 25% higher than winter rates.

In utilizing the results from the Public Tool, it is important to account for certain limitations associated with the Tool. A number of these limitations are recognized by Energy Division Staff and E3 but could not be resolved due to time restrictions. All three IOUs provided

comments regarding various concerns regarding the limitations of the Public Tool on April 28, 2015 with issues ranging from incorrect assumptions to limited functionality. While not an exhaustive list, issues with the Tool included (i) its limited ability to model all characteristics of proposed residential and non-residential rate designs such as the ability to charge one rate for delivered energy and a separate rate for exported energy, (SDG&E comments at page 1 - 4); (ii) the energy price shape by TOU periods showed minimal change over time in contrast with general modeling expectations for a changing hourly energy price shape as solar energy is added to the grid (SDG&E comments at page 5); (iii) the historical adoption rates underrepresented actual adoptions (SDG&E comments at page 7 and PG&E comments at page 23); (iv) PV costs were incorrect (SCE comments at page 3 and PG&E comments at page5); (v) avoided costs assumptions were incorrect (SCE comments at page 4 and PG&E at page 21); (vi) estimated avoided energy prices were too high and not dynamic (PG&E comments at page 5-6); and (vii) RPS prices used to calculate RPS avoided costs were too high (PG&E comments at page 18).

Some of these issues have been addressed through the Public Tool update but many remain. In addition, on July 31, Energy Division issued a *Notice of Calculation Error in Public Tool* identifying an issue with impacts the residential Export-Only Ratepayer Impact Results when the following combination of Compensation Structure and Rate Design.[57/] SDG&E re-iterates three concerns raised specific to the rate design ability of the model that continue to be issues in the updated Public Tool.

*(1) Absence of Super-User Electricity Surcharge*

The Commission adopted D.15-07-001 in the residential rate design proceeding on July 3, 2015. It included, among other things, a Super-User Electric ("SUE") Surcharge for residential customers who consume above 400% of baseline beginning in 2017, with a 219%

[57/] SDG&E does not include the results of this specific analysis.

differential between Tier 1 and the SUE Surcharge by 2019. The residential tiered rate structure provides significant benefits for residential solar adoption under the current NEM program. As discussed in more detail below, SDG&E estimates that approximately 40% of the current cost shift from residential NEM results from the current tiered rates structure.

The current Public Tool does not have the ability to model SUE. Tiered rate differentials can be a major driver in many of the parameters being evaluated. For instance, the absence of SUE will underestimate the cost shift because the results will fail to account for the ability of customers to avoid paying a higher rate than the Tier 2 rate assumed in the Public Tool. SDG&E estimates that under current NEM, once the 5% cap is reached, the exclusion of the SUE surcharge results in roughly a 10% underestimation of the residential cost shift.[58/] While D.15-07-001, also provides the roadmap for residential default TOU beginning in 2019, the opt-out rate for residential customers will be tiered rates with SUE and therefore will continue to be an important rate option for residential customers.

*(2) TOU Period Definitions*

The Public Tool only allows for a TOU structure that has two periods for residential and only two winter periods for all customer classes. This does not reflect SDG&E's current TOU period structure. SDG&E's current standard TOU period has three periods for both summer and winter.

In addition, the Public Tool models different TOU periods for Residential and non-Residential. TOU periods are intended to provide customers with price signals related to commodity services that are driven by system needs. As such it is reasonable, and a better

[58/] This is estimated assuming 2019 rates, an 8 cent avoided cost and roughly 37% of generation avoiding up to 130% of baseline, 55% of generation avoiding between 130%-400% of baseline and 8% of generation avoiding SUE.

reflection of how costs are incurred, that TOU periods should be consistent for all customer classes, as proposed by SDG&E in its 2015 Rate Design Window ("RDW"), A.14-01-027.

Additionally, the Public Tool is limited in its ability to model certain TOU periods, specifically on-peak TOU periods are constrained to hours beginning and ending in even numbers. The scenarios residential TOU for the Public Tool end at 8 p.m. For SDG&E's Residential class, the hour between 8 p.m. and 9 p.m. is of particular significance; in the last 10 years the Residential class has peaked between 8 p.m. and 9 p.m. 28% of the time.[59/] The tool's current limitations does not allow for the incorporation of that hour without extending the on-peak period to 10 p.m.

*(3) Ratemaking Process*

The Public Tool cannot model the effective current rate structures for any of SDG&E's tariffs, or the exact proposal for a successor tariff. While it is understood that a tool usable by all parties is helpful, it is important that the Commission remain mindful of the fact that the Public Tool is a simplification of the actual utility ratemaking process and as such the rates developed by the tool will likely bear little resemblance to rates ultimately seen by customers. Only the energy rates are scaled to match the calculated revenues of the tool in the first year. In later years, all components are scaled to match the revenue requirement calculated by the tool.[60/] In reality, rate components would move differently based on which revenues are changing. For example, in SDG&E's rate design the "Fixed Monthly Charge" would only change with changes to the distribution or PPP rate components, and similarly the energy rates would not change with changes to distribution or PPP.

---

[59/] Based on 2004-2013 Monthly Residential Class peaks from publicly available Dynamic Load Profiles.

[60/] Appendix A includes a comparison of SDG&E calculated rates versus the Public Tool calculated rates for 2017.

All future rates are heavily subject to input assumptions, especially when forecasting rates for the next 35 years until 2050, and should only be used in the context of comparison within the Public Tool, not to predict a specific future outcome. It is important to consider these limitations in reviewing the analysis of the results of the Public Tool. Specifically, while the Public Tool may provide a meaningful ability to compare scenarios (*i.e.*, "No Change" under the 2-Tier bookend to the Default Option), use of the specific values of the results from the Public Tool should be considered with awareness of these limitations.

***3. Please ensure the description of your successor tariff proposal and the evaluation of your proposal include the following:***

***a. Describe whether your proposed policy should be adopted as a tariff or a standard contract, or both. Please provide a rationale for your recommendation.***

While, as SDG&E noted in its March 16, 2015 comments, a tariff and a standard contract can both be structured to accommodate the objectives of the successor NEM program, SDG&E's proposal contemplates adoption of a tariff. Tariffs have broad customer applicability and provide a high level of transparency. They are consistently applied to all customers, ensuring that all customers receive "like" treatment, which SDG&E believes should be a priority here. The tariff mechanism also provides a vehicle through which to address changes or updates by ensuring that such changes or updates are reflected in a single document applicable to all customers, both at the time of implementation and going forward for future customers.

The rates in SDG&E's successor NEM tariff would be subject to the same ratemaking treatment as is currently in place for SDG&E's rates under its other tariffs. Specifically:

- The rates on these new NEM Successor Tariffs would be subject to the same regulatory mechanism that currently exists for other rates on other tariffs for revenue requirements changes; and

- Rate design updates would be permitted to be made with IOUs individual rate design proceedings (RDW, General Rate Case Phase 2 ("GRC P2")) consistent with the regulatory mechanism that currently exists for rates on other tariffs.

***b. Provide a thorough description of the proposed successor tariff, including attributes of the tariff (e.g., bill credits v. payment for generated energy; whether credits are based on total system generation or exports to the grid only; how compensation for exported energy is calculated; true-up periods; etc.)***

SDG&E proposes two successor NEM tariff options for each customer class: (i) an unbundled rate option as the Default Unbundled Rate Option for each customer class; and (ii) a Sun Credits Option available to all customer classes.

**(i) <u>Default Unbundled Rate Option – Description of Tariff Offering</u>**

SDG&E's proposed Default Unbundled Rate Option for NEM customer-generators is an unbundled rate option that differs by customer class. This option is designed to ensure equitable recovery of infrastructure costs and elimination of indirect subsidies. Customer-generators would continue to have the ability to use generation produced by their DG system to offset their on-site usage, but SDG&E proposes to charge different rates to energy delivered by the utility to the customer-generator than for energy exported from the customer-generator to the utility grid. SDG&E describes below the default rate for each customer class, but notes generally that the default rate is intended to accomplish the following for all customer classes:

- <u>Tying rates to equitable recovery of infrastructure costs</u>: SDG&E believes that all customers should pay their cost of service associated with the utility infrastructure. Accordingly, the default rate includes:
    - **System Access Fee** ($/month) for the recovery of customer-related distribution costs, and
    - **Grid Use Charge** ($/NCD-kW) for the recovery of capacity-related distribution costs.

- Elimination of Indirect Subsidies:

    - **Ensure Public Policy Programs are no longer bypassable**: Currently, costs associated with public policy programs such as low income and energy efficiency are recovered through volumetric rates ($/kWh). As a result, the reduction in usage that results from the adoption of solar generation creates the ability to bypass these costs. SDG&E proposes to collect costs currently recovered through PPP rates through a $/month charge included in the System Access Fee to ensure PPP costs are not bypassed.

    - **Proper valuation of Delivered and Exported energy**: Currently, NEM customers are billed based on net energy consumption, which is the net of energy delivered by the utility and energy exported from the customer. SDG&E proposes to charge different rates for energy delivered by the utility to the customer versus energy exported from the customer to the utility grid in order to better reflect the cost of utility services associated with the delivered energy. Customer generation would still be used to offset on-site usage.

        - Delivered Energy Rate: The rate charged for delivered energy will be the full retail rate. That is, the cost of the commodity services as well as other utility services still included in the energy rate. This delivered energy rate will have a TOU structure.

        - Exported Energy Rate: The price for exported energy will reflect the price of wholesale energy based on SDG&E's DLAP price. This is consistent with the Annual Compensation for Excess Generation.[61/] The wholesale compensation price is a rolling average based on SDG&E's DLAP price from 7 a.m. to 5 p.m. This ensures that exported energy receives the wholesale energy value that aligns with the time of generation.

    - **Payment of OAT charges**:

        - Interconnection Charges: Currently, NEM customers are exempt from interconnection charges, which include interconnection application fees, interconnection study fees, and distribution upgrade fees, applicable to other customer generators, resulting in the cost of those services being shifted to other customers in a non-transparent manner. SDG&E proposes that under the successor NEM tariff, customers pay interconnection charges consistent with other customer-generators.

[61/] SDG&E's Annual Compensation for Excess Generation rate is based upon the net surplus compensation rate adopted in D.11-06-016.

- Standby Charges: Currently, NEM customers are exempt from standby charges applicable to other customer generators, resulting in the cost of these services being shifted to other customers in a non-transparent manner. SDG&E proposes that under the successor NEM tariff, customers pay standby charges similar to other customer-generators. Intermittent technologies, such as solar, will not be subject to standby charges.

**(ii) Default Unbundled Rate Option – Residential Customers**

The Default Unbundled Rate Option for residential customers includes the following components:

- System Access Fee ($/month): Each residential NEM customers would pay for the portion of the distribution costs that is directly related to the customer through a $/month charge. In addition, customers would pay for the recovery of public policy program costs currently in PPP through a $/month charge.

- Grid Use Charge ($/NCD-kW): This charge would recover that portion of the distribution costs related to a customer's demand or impact on the grid through a $/NCD-kW charge. This would be billed based on the maximum hourly usage that a customer (*i.e.*, based on a residential customer's NCD) has in a given billing cycle.[62/]

- Energy rate structure: SDG&E proposes to charge different rates for energy delivered by the utility to the customer than for energy exported from the customer to the utility grid.

    - Delivered energy rate: Customer-generators will pay a TOU rate ($/kWh) for all energy delivered from the grid. The rates charged for delivered energy will include the recovery of Transmission, Reliability Services, programs including California Solar Initiative ("CSI"),[63/] Self Generation Incentive Program ("SGIP"),[64/] Demand Response ("DR"), Nuclear Decommissioning ("ND"), Competition Transition Charge ("CTC"), Local Generation Charge ("LGC"), Department of Water Resources Bond Charge ("DWR-BC"), Greenhouse Gas ("GHG"), as well as commodity costs. Currently SDG&E's TOU periods do not align with the cost of providing commodity services. SDG&E has a proposal

---

[62/] Typically a "non-coincident" demand charge includes a "ratchet", such that the Non-Coincident Demand Charge is based on the higher of the Maximum Monthly Demand or 50% of the Maximum Annual Demand. Given that residential customers have not had experience with demand-related rates, for residential customers, SDG&E does not include a ratchet for residential customers at this time.

[63/] In SDG&E's 2016 GRC P2 (A.15-04-012), SDG&E proposes to recover CSI and SGIP costs through the PPP rate.

[64/] See footnote 66.

pending in its 2015 RDW (A.14-01-027) before the Commission to change its TOU periods to more accurately reflect how costs are incurred.[65]

- Export energy rate: Customer-generators will be credited a flat energy rate ($/kWh) that reflects wholesale cost of energy based on SDG&E's DLAP price. The wholesale compensation price is a rolling average based on SDG&E's DLAP price from 7 a.m. to 5 p.m. SDG&E provides this rate for exported energy ensure consistency with how the Annual Compensation for Excess Generation is currently applied.

Table 4 below provides illustrative rates for SDG&E's proposed residential Default Unbundled Rate Option. SDG&E includes the TOU rates under two different definitions of TOU periods: current and as SDG&E had proposed in its 2015 RDW.

//
//
//

[65] Proposed in A.14-01-027:

| Current Standard TOU Periods | | 2015 RDW Proposed TOU Periods | |
|---|---|---|---|
| **Summer on-peak** | 11am - 6pm non-holiday weekdays | **Summer on-peak** | 2pm - 9pm non-holiday weekdays |
| **Winter on-peak** | 5pm - 8pm non-holiday weekdays | **Winter on-peak** | 5pm - 9pm non-holiday weekdays |
| **Off-peak** | 12am - 6am & 10pm-12am non-holiday weekdays and all weekends/holidays | **Super off-peak** | 12am - 6am daily |
| **Semi-peak** | All other times | **Semi-peak** | All other times |

**Table 4: Illustrative Rates for Residential Default Unbundled Rate Option**

| **System Access Fee** | ($/month) | |
|---|---|---|
| Customer Costs (Transformer, Service Lines, Meters, Customer Accounts and Services) | 14.34 | |
| PPP (Low Income, Energy Efficiency, EPIC) | 6.20 | |
| Total | 20.54 | |
| **Grid Use Charge** | ($/NCD-kW) | |
| Distribution Demand Costs (Feeders and Local Distribution, Substation) | 9.19 | |
| **Delivered Energy** (Transmission, Reliability Services, CSI, SGIP, ND, CTC, LGC, DWR-BC, GHG, commodity costs) | (¢/kWh) | |
| **TOU Periods** | **2015 RDW** | **Current**[66/] |
| Summer | | |
| On-Peak | 33.4 | 23.8 |
| Semi-Peak | 13.1 | 18.0 |
| Off-Peak | 10.0 | 13.8 |
| Winter | | |
| On-Peak | 12.7 | 14.0 |
| Semi-Peak | 11.1 | 12.5 |
| Off-Peak | 10.2 | 10.5 |
| **Exported Energy** (wholesale energy – DLAP)[67/] | (¢/kWh) | |
| | 4.0 | |

Rates presented above assume the following:

- Illustrative proposed rates are based on current effective rates.[68/]
- The Customer Cost component of the System Access Fee and the Distribution Demand Cost component of the Grid Use Charge reflect the residential Customer Costs and Distribution Demand costs as proposed in SDG&E's 2016 GRC P2 (A.15-04-012), adjusted for current revenue allocations. The PPP component of the System Access Fee is based on current class allocation of PPP costs and assumes customer count from SDG&E's 2016 GRC P2.
- Customer costs and distribution demand costs are set to recover all distribution revenue requirements allocated to the residential class.[69/]
- Commodity rates assume SDG&E's 2015 RDW proposed TOU periods in order to align more closely with the TOU Bookends in the Public Tool.

[66/] Based on current (AL-2733-E) effective commodity rates for Schedule TOU-DR.
[67/] Based on July 2015 Annual Compensation for Excess Generation based on 12-month average of SDG&E's DLAP price from 7am to 5pm.
[68/] AL 2733-E.
[69/] Excludes CSI, SGIP and DR currently recovered in distribution rates.

### (iii) Default Unbundled Rate Option – Small Commercial Customers

The Default Unbundled Rate Option for small commercial customers includes the following components:

- System Access Fee ($/month): Each small commercial NEM customers would pay for the portion of the distribution costs that is directly related to the customer through a $/month charge. In addition, customers would pay for the recovery of public policy program costs currently in PPP through a $/month charge.

- Grid Use Charge ($/NCD-kW): This charge would recover that portion of the distribution costs related to a customer's demand or impact on the grid through a $/NCD-kW charge.

- Energy rate structure: SDG&E proposes to charge different rates for energy delivered by the utility to the customer than for energy exported from the customer to the utility grid.

    - Delivered energy rate: Customers will pay a TOU rate ($/kWh) for all energy delivered from the grid. The rates charged for delivered energy will include the recovery of Transmission, Reliability Services, CSI, SGIP, ND, CTC, LGC, DWR-BC, GHG as well as commodity costs. Currently SDG&E's TOU periods do not align with the cost of providing commodity services. SDG&E has a proposal pending in its 2015 RDW before the Commission to change its TOU periods to better reflect how costs are incurred.

    - Export energy rate: Customers will be credited a flat energy rate ($/kWh) that reflects the wholesale cost of energy based on SDG&E's DLAP price. The wholesale compensation price is a rolling average based on SDG&E's DLAP price from 7 a.m. to 5 p.m. SDG&E provides this rate for exported energy to be consistent with how the Annual Compensation for Excess Generation is currently applied.

Table 5 below provides illustrative rates for SDG&E proposed Small Commercial Default Unbundled Rate Option. SDG&E includes the TOU rates under two different definitions of TOU periods: current and as SDG&E had proposed in its 2015 RDW.

**Table 5: Illustrative Rates for**

**Small Commercial Default Unbundled Rate Option**

| **System Access Fee** | ($/month) | |
|---|---|---|
| Customer Costs (Transformer, Service Lines, Meters, Customer Accounts and Services) | 48.09 | |
| PPP (Low Income, Energy Efficiency, EPIC) | 20.69 | |
| Total | 68.78 | |
| **Grid Use Charge** | ($/NCD-kW) | |
| Distribution Demand Costs (Feeders and Local Distribution, Substation) | 12.00 | |
| **Delivered Energy** (Transmission, Reliability Services, CSI, SGIP, ND, CTC, LGC, DWR-BC, GHG, commodity costs) | (¢/kWh) | |
| **TOU Periods** | **2015 RDW**[70/] | **Current** |
| Summer | | |
| On-Peak | 20.7 | 22.1 |
| Semi-Peak | 16.5 | 17.8 |
| Off-Peak | 14.1 | 13.8 |
| Winter | | |
| On-Peak | 12.5 | 13.5 |
| Semi-Peak | 10.9 | 12.1 |
| Off-Peak | 9.3 | 10.2 |
| **Exported Energy** (wholesale energy – DLAP)[71/] | (¢/kWh) | |
| | 4.0 | |

Rates presented above assume the following:

- Illustrative proposed rates are based on current effective rates.
- The Customer Cost component of the System Access Fee and the Distribution Demand Cost component of the Grid Use Charge reflect the residential Customer Costs and Distribution Demand costs as proposed in SDG&E's 2016 GRC P2 (A.15-04-012), adjusted for current revenue allocations. The PPP component of the System Access Fee is based on current class allocation of PPP costs and assumes customer count from SDG&E's 2016 GRC P2.
- Customer costs and distribution demand costs are set to recover all distribution revenue requirements allocated to the small commercial class excluding programs.
- Commodity rates assume current TOU period definitions and rates based on Schedule TOU-A to more closely align with TOU Bookends in the Public Tool.

[70/] Illustrative rates based on SDG&E's 2015 RDW filed commodity rates scaled to current authorized commodity revenue requirement.

[71/] Based on July 2015 Annual Compensation for Excess Generation based on 12-month average of SDG&E's DLAP price from 7am to 5pm.

### (iv) Default Unbundled Rate Option – Medium and Large Commercial and Industrial Customers

SDG&E proposes that Medium and Large Commercial and Industrial (M/L C&I) customers be required to take utility service on the standard rate options for M/L C&I customers (Schedules AL-TOU/A6-TOU), which already have monthly fixed charges (System Access Fee), peak demand charges and NCD demand charges (Grid Use Charge) and TOU energy charges, along with the modifications identified below. Under this default option, customers will continue to be able to use solar generation to offset their on-site usage.

- In addition to the existing monthly service fee (System Access Fee), customers would pay a $/month charge for the recovery of PPP costs.
- Energy rate structure: SDG&E proposes to charge different rates for energy delivered by the utility to the customer than for energy exported from the customer to the utility grid.
    - Delivered energy rate: Customers will pay a TOU rate ($/kWh) for all energy delivered from the grid. The rates charged for delivered energy will include the recovery of Transmission, Reliability Services, programs including CSI, SGIP, DR, ND, CTC, LGC, DWR-BC, GHG as well as commodity costs. Currently SDG&E's TOU periods do not align with the cost of providing commodity services. SDG&E has a proposal pending in its 2015 RDW before the Commission to change its TOU periods to better reflect how costs are incurred.
    - Export energy rate: Customers will be credited a flat energy rate ($/kWh) that reflects wholesale cost of energy based on SDG&E's DLAP price. The wholesale compensation price is a rolling average based on SDG&E's DLAP price from 7 a.m. to 5 p.m. SDG&E provides this rate for exported energy to be consistent with how the Annual Compensation for Excess Generation is currently applied.

Table 6 below provides illustrative rates for SDG&E proposed M/L C&I Default Unbundled Rate Option. SDG&E includes the TOU rates under two different definitions of TOU periods: current and as SDG&E had proposed in its 2015 RDW.

**Table 6: Illustrative Rates for**

**M/L C&I Default Unbundled Rate Option**

| **System Access Fee** | ($/month) | |
|---|---|---|
| | <500kW | >500kW |
| OAT basic service fee | 116.44 | 465.74 |
| PPP (Low Income, Energy Efficiency, EPIC) | 441.69 | 441.69 |
| Total | 558.13 | 907.43 |
| **Grid Use Charge** | ($/NCD-kW) | |
| OAT NCD Demand Charge | 24.43 | |
| **OAT On-Peak Demand Charges** (Transmission, Distribution and portion of Generation capacity included in Commodity rates) | ($/peak-kW) | |
| **TOU Periods** | **2015 RDW** | **Current** |
| Summer | 22.19 | 21.40 |
| Winter | 8.04 | 7.66 |
| **Delivered Energy** – OAT energy rate excluding PPP | (¢/kWh) | |
| **TOU Periods** | **2015 RDW**[72] | **Current** |
| Summer | | |
| On-Peak | 11.2 | 11.3 |
| Semi-Peak | 10.0 | 10.3 |
| Off-Peak | 6.2 | 7.2 |
| Winter | | |
| On-Peak | 10.2 | 10.1 |
| Semi-Peak | 8.2 | 8.5 |
| Off-Peak | 6.1 | 6.3 |
| **Exported Energy** (wholesale energy – DLAP) [73] | (¢/kWh) | |
| | 4.0 | |

Rates presented above assume the following:

- Current effective rates for SDG&E's standard M/L C&I tariff, Schedule AL-TOU.
- The PPP component of the System Access Fee is based on current class allocation of PPP costs and assumes customer count from SDG&E's 2016 GRC P2.
- Commodity rates assume current TOU period definitions and rates based on Schedule AL-TOU to more closely align with TOU Bookends in the Public Tool.

[72] Illustrative rates based on SDG&E's 2015 RDW filed commodity rates scaled to current authorized commodity revenue requirement.

[73] Based on July 2015 Annual Compensation for Excess Generation based on 12-month average of SDG&E's DLAP price from 7am to 5pm.

### (v) Default Unbundled Rate Option – Agricultural Customers

SDG&E's Agricultural class consists of two rate schedules: (1) Schedule PA, which is the standard rate for this customer class and has a rate structure similar to SDG&E's standard Small Commercial rate, and (2) Schedule PAT1, which is an optional rate for customers in this class and has a monthly service fee, demand charges, and TOU energy rates, similar to SDG&E's standard M/L C&I rate.

***Standard Agricultural - Schedule PA***:

- System Access Fee ($/month): Each customers would pay for the portion of the distribution costs that is directly related to the customer through a $/month charge. In addition, customers would pay for the recovery of public policy program costs currently in PPP through a $/month charge.

- Grid Use Charge ($/NCD-kW): This charge would recover that portion of the distribution costs related to a customer's demand or impact on the grid through a $/NCD-kW charge.

- Energy rate structure: SDG&E proposes to charge different rates for energy delivered by the utility to the customer than for energy exported from the customer to the utility grid.

    - Delivered energy rate: Customers will pay a TOU rate ($/kWh) for all energy delivered from the grid. The rates charged for delivered energy will include the recovery of Transmission, Reliability Services, programs including CSI, SGIP, ND, CTC, LGC, DWR-BC, GHG as well as commodity costs. Currently SDG&E's TOU periods do not align with the cost of providing commodity services. SDG&E has a proposal pending in its 2015 RDW before the Commission to change its TOU periods to better reflect how costs are incurred.

    - Export energy rate: Customers will be credited a flat energy rate ($/kWh) that reflects wholesale cost of energy based on SDG&E's DLAP price. The wholesale compensation price is a rolling average based on SDG&E's DLAP price from 7 a.m. to 5 p.m. SDG&E provides this rate for exported energy to be consistent with how the Annual Compensation for Excess Generation is currently applied.

Table 7 below provides illustrative rates for SDG&E proposed Default Unbundled Rate Option for the standard rate for Agricultural customers. SDG&E includes the TOU rates under two different definitions of TOU periods: current and as SDG&E had proposed in its 2015 RDW.

**Table 7: Illustrative Rates for**

**Agricultural (Schedule PA) Default Unbundled Rate Option**

| **System Access Fee** | ($/month) | |
|---|---|---|
| Customer Costs (Transformer, Service Lines, Meters, Customer Accounts and Services) | 120.92 | |
| PPP (Low Income, Energy Efficiency, EPIC) | 88.47 | |
| Total | 209.39 | |
| **Grid Use Charge** | ($/NCD-kW) | |
| Distribution Demand Costs (Feeders and Local Distribution, Substation) | 8.32 | |
| **Delivered Energy** (Transmission, Reliability Services, CSI, SGIP, ND, CTC, LGC, DWR-BC, GHG, commodity costs) | (¢/kWh) | |
| Summer | **2015 RDW**[74] | **Current** |
| On-Peak | 20.2 | 22.7 |
| Semi-Peak | 15.0 | 18.1 |
| Off-Peak | 13.0 | 13.2 |
| Winter | | |
| On-Peak | 8.3 | 8.6 |
| Semi-Peak | 7.0 | 7.5 |
| Off-Peak | 5.7 | 6.1 |
| **Exported Energy** (wholesale energy – DLAP) | (¢/kWh) | |
| | 4.0 | |

Rates presented above assume the following:

- Illustrative proposed rates are based on current effective rates.
- The Customer Cost component of the System Access Fee and the Distribution Demand Cost component of the Grid Use Charge reflect the residential Customer Costs and Distribution Demand costs as proposed in SDG&E's 2016 GRC P2 (A.15-04-012), adjusted for current revenue allocations.[/] The PPP component of the System Access Fee is based on current class allocation of PPP costs and assumes customer count from SDG&E's 2016 GRC P2.
- Customer costs and distribution demand costs are set to recover all distribution revenue requirements allocated to the residential class excluding programs.
- Commodity rates assume current TOU period definitions and rates based on Schedule TOU-PA to more closely align with TOU Bookends in the Public Tool.

[74/] Illustrative rates based on SDG&E's 2015 RDW filed commodity rates scaled to current authorized commodity revenue requirement.

In addition, SDG&E's Agricultural class includes Schedule PAT1. Schedule PAT1 is optionally available, on an experimental basis, to Agricultural and water pumping customers whose maximum monthly demand is expected to be above 500 kW and who are classified with one or more of the North American Industry Classification ("NAICS") Codes identified in the tariff. This schedule is also available to those Agricultural and water pumping customers whose maximum demand is less than 500 kW who are installing or have installed facilities or procedures to reduce their annual on-peak energy consumption by 1,500 kWhrs and are also classified by the one of the identified NAICS Codes. Schedule PAT1 includes fixed charges, non-coincident and peak demand charges as well as TOU energy rates, similar to the rate structure for M/L C&I customers. As such, SDG&E proposes that NEM 2.0 customers taking service on Schedule PAT1 would continue to receive service on Schedule PAT1 with the modifications identified below consistent with the treatment of M/L C&I customers. Under this default option, customers will continue to be able to use solar generation to offset their onsite usage.

- In addition to the existing monthly service fee, customers would pay a $/month charge for the recovery of PPP costs equivalent to Schedule PA.
- Energy rate structure: SDG&E proposes to charge different rates for energy delivered by the utility to the customer than for energy exported from the customer to the utility grid.
    - Delivered energy rate: Customers will pay a TOU rate ($/kWh) for all energy delivered from the grid. The rates charged for delivered energy will include the recovery of Transmission, Reliability Services, programs including CSI, SGIP, DR, ND, CTC, LGC, DWR-BC, GHG as well as commodity costs.
    - Export energy rate: Customers will be credited a flat energy rate ($/kWh) that reflects wholesale cost of energy based on SDG&E's DLAP price. The wholesale compensation price is a rolling average based on SDG&E's DLAP price from 7 a.m. to 5 p.m. SDG&E provides this rate for exported energy to be consistent with how the Annual Compensation for Excess Generation is currently applied.

**(vi) Sun Credits Tariff Option – Description of the Tariff Offering**

The Sun Credits Option would be offered as an additional option for all customer classes. Under the Sun Credits option, all generation produced by a customer-generator's on-site DG system would be exported to the grid and the customer-generator would receive a bill credit for the exported generation. Since the customer's generation would no longer be used to offset on-site usage under the Sun Credits Option, SDG&E proposes to compensate the exported generation at a higher value than the rate applied to exported energy under the Default Unbundled Rate Option. Specifically, SDG&E proposes that generation under the Sun Credits Option receive a price set at retail system average commodity rate.

While SDG&E recognizes that a TOU structure would better reflect cost-causation, SD&E's current TOU periods do not line up with the times in which generation capacity is most costly. This would result in overcompensation for the value of solar generation received, which is contrary to the express direction in § 2827.1(b)(4). Thus, SDG&E currently proposes this rate be a flat rate reflecting the system average commodity rate at this time. Once SDG&E's TOU periods are changed to align with generation costs of service, SDG&E will request to change this rate to a TOU structure. This option requires the installation of a separate meter to track the generation exported to the grid at the customer-generator's expense. Utility services would then be received through the standard OAT.

***c. Netting Interval***

SDG&E's Default and Sun Credits tariff options involve no netting. Under the Default Unbundled Rate Option, customers continue to be served by a single meter. Thus, these customers would be billed for the full amount of energy delivered under the delivered energy rate and compensated through a bill credit for exported energy based on the export energy rate.

Under the Sun Credits Option, customers would continue to receive utility services under their OAT and under all exported energy would be separately metered and compensated through a bill credit based on the Sun Credits rate. Billing will occur on a monthly basis based on energy delivered and exported without netting. SDG&E proposes to eliminate the current option for annual true-up. Accordingly, annual net surplus compensation would be eliminated, as customers will receive compensation for their excess generation on a monthly basis.

The current annual true-up structure both creates customer confusion related to the true benefits customers receive from program and can be a financial hardship for customers. The annual true-up process contemplates that residential and small commercial customers will pay their bill for electric service only once per year, which can result in significant outstanding balances for NEM customers. Nearly 85% of SDG&E's NEM customers are net consumers at the end of the 12 month true-up period. The average annual customer bill for these solar customers is $900 and nearly 15% of these customers see annual bills that exceed $1,500. Presented with significant outstanding balances at the end of the true-up period, 30% of these customers see some type of credit action initiated as a result of not paying their annual bill on-time.

This information shows that it can be a hardship for many residential and small commercial solar customers to pay only once per year. It is important to note, that approximately 75% of SDG&E's NEM customers are currently making two or more payments within their 12 month true-up period, so making payments each month would not be a significant change for most customers. The movement to requiring monthly bill payments in a manner consistent with all other customers would eliminate the confusion caused by the annual true-up

process and eliminate the financial hardship from large annual outstanding balances. SDG&E's proposal to eliminate the annual true-up process would address these customer issues.

***d. Other Existing Solar Rate Option***

In addition to its proposed successor NEM tariff options, SDG&E proposes the following changes to its existing solar rate options.

- Residential: SDG&E currently offers Schedule DR-SES, a voluntary option for residential customers with solar energy systems. SDG&E proposes to close Schedule DR-SES to NEM 2.0 customers. Existing NEM customers would continue to be eligible for services on this schedule.

- M/L C&I: SDG&E currently has Schedule DG-R, a voluntary option for non-residential customers with annual peak less than or equal to 2MW, and who have DG greater than or equal to 10% of their annual peak load. SDG&E proposes to close Schedule DG-R to NEM 2.0 customers, with the exception of public K-12 schools. SDG&E proposes that the DG-R rate option remain available to public K-12 school NEM 2.0 customers. Existing NEM customers would continue to be eligible for services on this schedule.

For public K-12 schools, Schedule DG-R would continue to be available but with the same modifications applied to M/L C&I NEM 2.0 customers – *i.e.,* with: (1) the $/month recovery of PPP costs and (2) the differentiation of rates applied to delivered/exported energy.

***e. Evaluation of proposal against the AB 327 elements***

SDG&E utilizes the Public Tool for the following analysis in evaluating its two proposed options against the AB 327 elements:

- Ensure that customer-sited renewable generation "continues to grow sustainably."

- Ensure that the new standard contract/tariff "is based on the costs and benefits of the renewable electrical generation facility."

- Ensure that the "total benefits of the standard contract or tariff to all customers and the electrical system are approximately equal to the total costs."

SDG&E describes in Section V.A. above, and in its March 16, 2015 comments, the appropriate metrics for evaluating compliance with §§ 2827.1.b(1), (3), and (4). In the following section, SDG&E presents the results of the Public Tool consistent with the evaluation presented in the Staff Paper.

Table 8 below describes the 18 runs of the Public Tools (which is comprised of six scenarios for No Change, six scenarios for SDG&E's proposed Default Option, and six scenarios for SDG&E's proposed Sun Credits Option) as well as provides the naming convention used in displaying the Public Tool's results.

Consistent with the direction set forth in the July 20 ALJ Ruling, SDG&E uses the three bookend scenarios. These three bookends scenarios vary based on residential rate structures and assume the same non-residential rate structures, which represent SDG&E's current rates adjusted to conform to the TOU limitations of the Public Tool.

1. A Two-Tier rate structure with a minimum bill with cutoff for Tier 2 at 100% of baseline for PG&E and SCE and 130% of baseline for SDG&E, and Tier 2 rates 25% higher than Tier 1 rates (2-Tiered).
2. A bookend seasonal TOU rate structure with minimum bill with a 4 p.m. – 8 p.m. peak period, a baseline credit, on-peak rates 100% higher than off-peak rates, and summer rates 25% higher than winter rates (TOU Bookend 1).
3. A bookend seasonal TOU rate structure with minimum bill with a 2 p.m. – 8 p.m. peak period, a baseline credit, on-peak rates 100% higher than off-peak rates, and summer rates 25% higher than winter rates (TOU Bookend 2).

Results for each scenario include the High Renewable DG Value (High DG) Case and the Low Renewable DG Value Case (Low DG).

SDG&E provides the results from these six bookends without any additional change to the NEM program as a "No Change" scenario to be used as a reference point for evaluating the Public Tool results against SDG&E's NEM Successor Tariff proposal. In addition, SDG&E presents Public Tool results and the six bookends to run its proposed two NEM 2.0 Successor

Tariff options: (1) Default Option,[75/] and (2) Sun Credits Option.[76/] Note that the No Change scenario is used as a reference point and is not a proposal.

**Table 8: Public Tool Scenarios**

| Scenario | Description |
|---|---|
| No change | |
| 2-Tiered-low | Pre-loaded bookend provided by ED with a 2 Tiered Residential Rate Structure under the Low DG Value Case |
| 2-Tiered-high | Pre-loaded bookend provided by ED with a 2 Tiered Residential Rate Structure under the High DG Value Case |
| TOU-Bookend-1-low | Pre-loaded bookend provided by ED with a TOU Residential Rate Structure based on an on-peak period of 4-8 p.m. under the Low DG Value Case |
| TOU-Bookend-1-high | Pre-loaded bookend provided by ED with a TOU Residential Rate Structure based on an on-peak period of 4-8 p.m. under the High DG Value Case |
| TOU-Bookend-2-low | Pre-loaded bookend provided by ED with a TOU Residential Rate Structure based on an on-peak period of 2-8 p.m. under the Low DG Value Case |
| TOU-Bookend-2-high | Pre-loaded bookend provided by ED with a TOU Residential Rate Structure based on an on-peak period of 2-8 p.m. under the High DG Value Case |
| SDG&E's Proposed Default Option: | |
| 2-Tiered-low-Default | Includes SDG&E's proposed Default Option NEM Successor Tariff with a 2 Tiered Residential Rate Structure under the Low DG Value Case |
| 2-Tiered-high-Default | Includes SDG&E's proposed Default Option NEM Successor Tariff with a 2 Tiered Residential Rate Structure under the High DG Value Case |
| TOU-Bookend-1-low-Default | Includes SDG&E's proposed Default Option NEM Successor Tariff with a TOU Residential Rate Structure based on an on-peak period of 4-8 p.m. under the Low DG Value Case |
| TOU-Bookend-1-high-Default | Includes SDG&E's proposed Default Option NEM Successor Tariff with a TOU Residential Rate Structure based on an on-peak period of 4-8 p.m. under the High DG Value Case |
| TOU-Bookend-2-low-Default | Includes SDG&E's proposed Default Option NEM Successor Tariff with a TOU Residential Rate Structure based on an on-peak period of 2-8 p.m. under the Low DG Value Case |
| TOU-Bookend-2-high-Default | Includes SDG&E's proposed Default Option NEM |

[75/] Assumes all NEM 2.0 customers elect the Default Option.
[76/] Assumes all NEM 2.0 customers elect the Sun Credits Option.

| | |
|---|---|
| | Successor Tariff with a TOU Residential Rate Structure based on an on-peak period of 2-8 p.m. under the High DG Value Case |
| SDG&E's Proposed Sun Credits Option: | |
| 2-Tiered-low-Sun Credits | Includes SDG&E's proposed Sun Credits Option NEM Successor Tariff with a 2 Tiered Residential Rate Structure under the Low DG Value Case |
| 2-Tiered-high-Sun Credits | Includes SDG&E's proposed Sun Credits Option NEM Successor Tariff with a 2 Tiered Residential Rate Structure under the High DG Value Case |
| TOU-Bookend-1-low-Sun Credits | Includes SDG&E's proposed Sun Credits Option NEM Successor Tariff with a TOU Residential Rate Structure based on an on-peak period of 4-8 p.m. under the Low DG Value Case |
| TOU-Bookend-1-high-Sun Credits | Includes SDG&E's proposed Sun Credits Option NEM Successor Tariff with a TOU Residential Rate Structure based on an on-peak period of 4-8 p.m. under the High DG Value Case |
| TOU-Bookend-2-low-Sun Credits | Includes SDG&E's proposed Sun Credits Option NEM Successor Tariff with a TOU Residential Rate Structure based on an on-peak period of 2-8 p.m. under the Low DG Value Case |
| TOU-Bookend-2-high-Sun Credits | Includes SDG&E's proposed Sun Credits Option NEM Successor Tariff with a TOU Residential Rate Structure based on an on-peak period of 2-8 p.m. under the High DG Value Case |

***(i) Ensure that customer-sited renewable generation "continues to grow sustainably."***

While § 2827.1 does not include a definition of "sustainable growth," SDG&E has explained that to grow sustainably means to grow without electric ratepayer subsidies. Sustainable growth should be defined as a process that allows all customers to participate in the NEM program without negatively impacting non-participating customers, either by shifting costs to non-participating customers or putting at risk the safety and reliability of the grid. It means that all customers pay for the services they receive and that the rates they pay are based on the costs that are incurred to provide those services. The election of one technology by a customer should not penalize non-participating customers, nor should it result in non-participating

customers paying for costs incurred to provide service to those customers who participate in NEM.

Consistent with the Staff Paper evaluation for sustainable growth, SDG&E includes below the following results from the Public Tool:

(1) The results from the Participant Cost Test ("PCT") and the implied payback period for participating technologies;

(2) The resulting forecast of participating customer adoptions between 2017-2025

(3) The results of the Ratepayer Impact Measure ("RIM") Test and the percentage impact as a percent of the total revenue requirement.

Applying SDG&E's definition of sustainable growth as being growth that does not require ratepayer subsidies, the results of the RIM test under positive adoption rates should be the criteria for assessing sustainable growth. SDG&E's proposals meet the requirement of sustainable growth, with Public Tool results that show significant reductions in ratepayer impacts (an up to 30% improvement in the RIM ratio and a greater than 2/3 reduction in %TRR increase under SDG&E's Default Option) while adoption rates see an average year-over-year growth rate of 8-9% under SDG&E's Default Rate Option over an 8-year period. Ratepayers will continue to be burdened by the cost-shift from current grandfathered NEM customers. In addition, adoption rates will be influenced by factors outside of the scope of this proceeding as acknowledged in the Staff Paper.[77/] SDG&E's proposed options results in significant reductions in ratepayer impacts while continuing to support significant adoption rates. Accordingly SDG&E's NEM proposal meets the requirement that customer-sited DG continue to grow sustainably.

As noted above, SDG&E's analysis focuses on the relative results, comparing the results from the Public Tool under SDG&E's proposed options with the No Change scenarios. While

[77/] Staff Paper, pp. 1-9.

adoption rates and the benefits to participating customers are an important consideration in assessing sustainable growth, the impact to other customers of potential cost shifts, as reflected in the RIM test, should be a priority in assessing sustainability.

Table 9 presents the results from the PCT and the implied payback period for participating technologies, and a forecast of the cumulative adoption from 2017-2025.

**Table 9: Comparison of PCT Results and Average Implied Payback and Forecasted Adoptions for Post-2017[78/]**

| Renewable DG Case | Compensation Structure (Full Scenario Name) | Average Participant Benefit/Cost Ratio | Average Implied Payback of DER Systems (Years) | Forecasted Installations Post-2017 (MW)* |
|---|---|---|---|---|
| **No Change** | | | | |
| Low | 2-Tiered | 1.51 | 6.5 | 1,374 |
| High | 2-Tiered | 2.76 | 3.6 | 1,511 |
| Low | TOU-Bookend-1 | 1.57 | 6.3 | 1,305 |
| High | TOU-Bookend-1 | 2.9 | 3.7 | 1,345 |
| Low | TOU-Bookend-2 | 1.48 | 6.6 | 1,430 |
| High | TOU-Bookend-2 | 2.73 | 3.6 | 1,552 |
| **SDG&E's Proposed Default Option** | | | | |
| Low | 2-Tiered-Default | 1.26 | 7.8 | 632 |
| High | 2-Tiered-Default | 2.66 | 3.7 | 535 |
| Low | TOU-Bookend-1-Default | 1.25 | 7.9 | 631 |
| High | TOU-Bookend-1-Default | 2.58 | 3.8 | 539 |
| Low | TOU-Bookend-2-Default | 1.2 | 8.2 | 620 |
| High | TOU-Bookend-2-Default | 2.52 | 3.9 | 535 |
| **SDG&E's Proposed Sun Credit Option** | | | | |
| Low | 2-Tiered-Sun Credit | 0.68 | 14.5 | 292 |
| High | 2-Tiered-Sun Credit | 1.37 | 7.2 | 1,117 |
| Low | TOU-Bookend-1-Sun Credit | 0.68 | 14.5 | 292 |
| High | TOU-Bookend-1-Sun Credit | 1.37 | 7.2 | 1,117 |
| Low | TOU-Bookend-2-Sun Credit | 0.68 | 14.5 | 292 |
| High | TOU-Bookend-2-Sun Credit | 1.37 | 7.2 | 1,117 |

[78/] "Post 2017" includes 2017 through 2025.

- *The Participant Cost Test*

The PCT is the measure of the quantifiable benefits and costs to the customer that result from participation in a program. The benefits considered in the calculation include the reduction in a customer's utility bill, incentives received, tax credits, etc. Costs considered in the calculation include any out of pocket expenses and/or increases to their utility bill. The PCT is used as a measure of the desirability of a program to estimate participation rates, and incentive levels. However, since many customers do not base their decision to participate in a program entirely on quantifiable variables, this test cannot be a complete measure of the benefits and costs of a program to a customer.

Table 9 above displays the results of the PCT, associated with SDG&E's proposed options and the No Change scenario. Using the PCT, a benefit-cost ratio of greater than 1 indicates that the program is one in which quantifiable Participant benefits exceed quantifiable Participant costs, while a ratio of less than 1 indicates that the program will provide quantifiable costs that exceed quantifiable benefits from the perspective of the participating customer. As seen in Table 9, the majority of the tested scenarios show results that are favorable to participants with the exception of the Sun Credits Option under Low DG. SDG&E's Default Option continued to show positive benefits to participants under all rate and DG scenarios with benefits under the High DG case of more than double the costs.

- *Implied Payback*

As shown in Table 9 above, the results from the Public Tool show implied payback under No Change of 3.6-3.7 years under the High DG Cases and 6.3-6.6 years under the Low DG Cases. Overall, shorter payback periods occur in the High DG cases relative to the Low DG cases. Results for the average implied payback periods for the Default Option scenarios show

minimal change when compared to the No Change scenarios—approximately 3.4-3.9 years for the High DG Cases and approximately 7.8-8.2 years for the Low DG Cases. Results for the Sun Credits Option scenarios show notably higher implied payback periods when compared to the No Change or Default scenarios, with the Low DG Cases resulting in 14.5 years and the High DG value cases resulting in 7.2 years.

- *Adoption Rates*

Table 9 above presents the results for the forecasted cumulative DER adoption for the period 2017 through 2025. The forecasted installations under the No Change scenario project incremental adoptions ranging from 1,305-1,430 MW under the Low DG Case and 1,345-1,552 MW under the High DG cases for the period of 2017 through 2025. The current NEM program, currently results in roughly $131 million in estimated annual cost shifts as of the end of June 2015. Once SDG&E reaches the 607MW cap, this cost shift is estimated to continue to increase to roughly $177 million or 36% increase.[79/] Based on the additional adoption results from the No Change Scenario, without reform to the current NEM program, SDG&E's cost shift would increase by over $400 million.[80/] Adoption rates achieved through cost shifts of this magnitude are not sustainable.

Under SDG&E's proposed Default Unbundled Rate Option, adoption rate results from the Public Tool are much more sustainable, approximately 50% lower than under the No Change scenario, with slightly lower adoption under the High DG Case relative to the Low DG Case.

---

79/ SDG&E calculates the current cost shift associated with NEM customers as total NEM generation in kWh x applicable retail rate in that period less avoided cost. Avoided cost value is based on the market price benchmark. NEM generation is calculated assuming capacity factors from E3 from the California Net Energy Metering Ratepayer Impacts Evaluation, October 2013. For TOU rates, the calculation has an assumption about TOU buckets for the generation – based on solar profile for PV production. For residential, there is an assumption on tier usage offset of 63/37 upper/lower tiers. No demand reduction is assumed.

80/ Average of 2-tier High and Low bookend adoptions, current non-residential rates and 2019 residential rates with rate reform. Assumes no change to revenues from current effective rates (5/1/2015).

Under SDG&E's Default Option, DER adoption under the High DG case would increase to 1071-1076 MW by 2025, or almost double from SDG&E's cap of 607 MW. Under the Low DG case, DER adoption increase to 1156-1168 MW, or nearly doubles from SDG&E's cap. This represents an average year-over-year growth rate of 8-9% under SDG&E's Default Option over an 8 year period while having a rate structure in place that would mitigate future cost shifts. Unlike the No Change and Default Option, the Sun Credits Option shows much greater difference in adoption over the time period under the Low DG Case (approximately 290 MW) compared to the High DG Case (over 1,000 MW).

- *Ratepayer Impact Method (RIM)*

The RIM test measures the impact to customer bills or rates due to changes in utility revenues and operating costs as the result of a program, and indicates the direction and magnitude of any anticipated impacts. The benefits considered in this calculation include utility savings from avoided costs. The costs included in this calculation include utility program costs (program administration, customer incentives), and increased or decreased revenues and supply costs due to increases or decreases in load.

Table 10 below provides the results of the RIM test. To interpret the RIM test, a benefit-cost ratio that is greater than 1 indicates a decrease in average rates for all customers as the result of a program or project, while a ratio less than 1 indicates that an increase in average customer rates is expected. As seen in Table 10, the benefit-cost ratio for each scenario is less than 1, indicating that average rates will increase regardless of the scenario. For the scenarios run in this proceeding, no RIM ratio is greater than 1, which means that the average rates will increase. SDG&E's Default Option results in an up to 30% improvement over the No Change scenario

under the Low DG case and has minimal change relative to the No Change scenario under the High DG case.

While neither of SDG&E's proposed tariff rate options fully eliminate cost shift to non-NEM customers, both the Default Option and even more so the Sun Credits Option notably reduce the overall impact when compared to the No Change scenario. SDG&E further compares the RIM results for % of Total Revenue Requirement (%TRR) under the No Change scenarios with SDG&E's proposal which represents the difference between the costs and benefits to the ratepayers of a customer adopting DG, as a percentage of the total revenue requirement. Under the No Change scenarios, %TRR values range from 9.68-10.13% in the Low DG case and from 6.86-7.25% in the High DG case, depending on the residential rate structure. Under SDG&E's Default Option the %TRR decreases by 66-70% when compared to the No Change Scenario, with %TRR values range from 3.07-3.29% in the Low DG case and from 2.29-2.43% in the High DG case, depending on the residential rate structure. In addition, under SDG&E's Default Option there is much less variance between the %TRR under either a High or Low DG case. SDG&E's Sun Credits Option provides significant reductions in the %TRR with %TRR values approaching zero, the Low DG case about 0.50% and the High DG case about 0.15%.

**Table 10: Cost Impacts to Non-Participating Customers for Systems Installed 2017-2025 (RIM All Generation Case)**

| Renewable DG Case | Compensation Structure (Full Scenario Name) | Avg Non-Participant Benefit /Cost Ratio | Ratepayer Impact/Bill Increase (% of Total RR) | Ratepayer Impact/Bill Increase (% of Res. RR) | Ratepayer Impact/Bill Increase (% of Non-Res. RR) |
|---|---|---|---|---|---|
| **No Change** | | | | | |
| Low | 2-Tiered | 0.26 | 9.80% | 18.31% | 2.69% |
| High | 2-Tiered | 0.46 | 7.11% | 12.62% | 2.83% |
| Low | TOU-Bookend-1 | 0.26 | 9.68% | 17.99% | 2.69% |
| High | TOU-Bookend-1 | 0.44 | 6.86% | 11.97% | 2.82% |
| Low | TOU-Bookend-2 | 0.27 | 10.13% | 19.07% | 2.69% |
| High | TOU-Bookend-2 | 0.47 | 7.25% | 12.95% | 2.84% |
| **SDG&E Default Option** | | | | | |
| Low | 2-Tiered-Default | 0.33 | 3.29% | 5.54% | 1.32% |
| High | 2-Tiered-Default | 0.47 | 2.43% | 3.74% | 1.37% |
| Low | TOU-Bookend-1-Default | 0.33 | 3.25% | 5.45% | 1.32% |
| High | TOU-Bookend-1-Default | 0.48 | 2.37% | 3.60% | 1.37% |
| Low | TOU-Bookend-2-Default | 0.34 | 3.07% | 5.08% | 1.32% |
| High | TOU-Bookend-2-Default | 0.49 | 2.29% | 3.41% | 1.37% |
| **SDG&E Sun Credit Option** | | | | | |
| Low | 2-Tiered-Sun Credit | 0.59 | 0.50% | 1.05% | 0.00% |
| High | 2-Tiered-Sun Credit | 0.97 | 0.15% | 0.29% | 0.03% |
| Low | TOU-Bookend-1-Sun Credit | 0.59 | 0.50% | 1.05% | 0.00% |
| High | TOU-Bookend-1-Sun Credit | 0.97 | 0.15% | 0.29% | 0.03% |
| Low | TOU-Bookend-2-Sun Credit | 0.59 | 0.50% | 1.05% | 0.00% |
| High | TOU-Bookend-2-Sun Credit | 0.97 | 0.15% | 0.29% | 0.03% |

### *(ii) Ensure that the new standard contract/tariff "is based on the costs and benefits of the renewable electrical generation facility."*

Section 2827.1(b)(3) provides that the NEM 2.0 Tariff shall be "based on the costs and benefits of the renewable electrical generation facility." As discussed above, SDG&E submits that the terms "cost" and "benefits" *should be defined from the perspective of the utility cost of service*. This interpretation is necessary to allow § 2827.1(b)(3) to be read in a manner that is consistent with the language set forth in § 2827.1(b)(4). The costs and benefits established in the successor NEM tariff offering should be tied to the utility cost of service, since tariffs are

designed to address and reflect the services customers receive from the utility and the costs utilities incur to provide those services to their customers.

SDG&E discusses below the results of the PCT and the implied payback period, as they relate to this statutory criterion. The PCT results demonstrate that under SDG&E's Default Unbundled Rate Option NEM customers continue to receive benefits that exceed the costs they pay (with PCT ratio greater than 1) and minimal change in implied payback. However, these measures (the PCT and implied payback) do not ensure that the costs and benefits tie to utility cost of service.

Only when costs and benefits tie to utility cost of service will the results take into account the cost shift implications when participants do not pay their full cost of service. In other words, in looking at the benefits to the participants, it is also important to look at the cost shift that can result if participants fail to pay the full cost of utility services provided. As of the end of June 2015, SDG&E had 394 MW of installed capacity under NEM, with 287 MW residential and 107 MW non-residential. SDG&E estimates the cost shift from residential to be $118M per year and from non-residential $13M per year.[81/] For the same 1 kW of installed capacity, the cost shift from residential is 3.5 times that of the same 1 kW of non-residential installed capacity, which represents a cost shift of $412 per installed kW per year for residential and $117 per installed kW per year for non-residential. This difference in cost shift is the result of the difference in the underlying rate structure – the M/L C&I rates structure continues to ensure that M/L C&I customers still pay the majority of their cost of service even under the current NEM program.

Given the significance of an unbundled rate structure in mitigating cost shift, as well as ensuring that all customers pay for grid services, a key component of SDG&E's proposal is the unbundling of residential rates through the equitable recovery of infrastructure costs and the

[81/] See footnote 77.

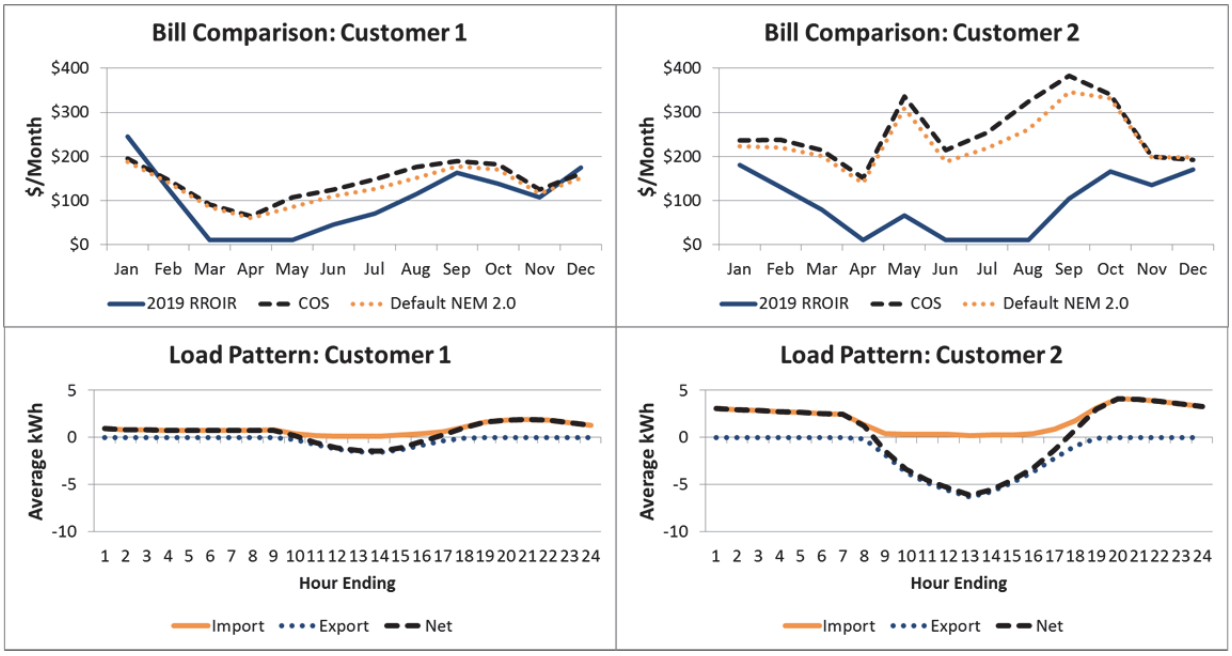
elimination of indirect subsidies. For a single residential customer under NEM today, the annual cost shift assuming a solar system of 4kW of installed capacity[82/] is approximately $1600, or approximately $130 per month. This $130 per month is broken into the following components:[83/]

- $54 (or 41%) is associated with Distribution and Public Purpose Program costs. SDG&E addresses the current bypass of these costs through the introduction of a System Access Fee and Grid Use Charge.
- $20 (or 15%) is associated with Transmission and other regulatory costs (*i.e.,* Nuclear Decommissioning, DWR-Bond Charge, etc.). SDG&E addresses the current bypass of these costs by proposing that NEM 2.0 customers pay for these costs based on delivered energy. NEM 2.0 customers will continue to receive the benefit of reductions in these charges on their bill due to ability to use generation to offset onsite usage.
- $50 (or 39%) is associated with the subsidies inherent in the residential tiered rate structure and is thereby addressed by removing NEM 2.0 customers off of tiered rates.
- The remaining $6 (or 4%) is reflective of the difference in commodity services[84/] and avoided commodity costs.

The discussion above looks at the breakdown of the cost shift associated with an average residential NEM customer today. SDG&E provides additional examples to further illustrate the issues related to cost of service as it pertains to customers with different load profiles. Diagram 2 below presents two NEM customers with very different cost of service. The details of their profile are provided in Table 11 below.

82/ Current median installed capacity.
83/ Total may not sum to 100% due to rounding.
84/ Includes DWR Credit and GHG.

## Diagram 2: Comparison of Two Residential NEM Customers




## Table 11: Average Monthly Profile of Two Residential NEM Customers

| | NEM Customer 1 | NEM Customer 2 |
|---|---|---|
| Maximum demand (NCD-kW) | 3.9 | 8.1 |
| On-peak demand (peak-kW) | 3.7 | 7.5 |
| Delivered energy (kWh) | 618 | 1,442 |
| Exported energy (kWh) | 245 | 1,220 |
| Net consumption (kWh) | 373 | 222 |
| Solar installed capacity (installed kW) | 6.9 | 14.9 |
| | | |
| Cost of Service | **$142** | **$257** |
| Bill under current NEM | **$101** | **$89** |
| SDG&E's proposed NEM 2.0 Default Option | **$130** | **$236** |

Customer 2 is a customer with a higher cost of service when compared to Customer 1. Customer 2 has a cost of service[85/] of $257 per month, over 80% higher than Customer 1, due to higher maximum demand at 8.1kW (106% higher), peak demand of 7.5 kW (over 100% higher), and delivered energy of 1,442 kWh (over 130% higher). But under the current NEM program, Customer 2's average monthly bill is 12% lower than that of Customer 1.[86/] This disconnect between the bills these customers pay under the current NEM program and their actual cost of service is the result of the current bundled residential rate structure and the current NEM program bills NEM customers on net consumption rather than energy delivered. SDG&E's proposed Default Option would provide customers with a more unbundled rate structure (*i.e.*, one that ties rates to equitable recovery of distribution infrastructure costs) and elimination of cross subsidies (ensuring customers pay for the costs of delivered energy, removal of tiered rates). Under SDG&E's proposed Default Option, these two NEM customers are treated more equitably – both NEM customers pay closer to their cost of service and the difference in cost of service between the two NEM customers is better reflected in their bill.

***(iii) Ensure that the "total benefits of the standard contract or tariff to all customers and the electrical system are approximately equal to the total costs."***

Pursuant to § 2827.1(b)(4), the Commission is required to ensure that the total benefits of the successor NEM program to all customers and the electrical system are approximately equal to the total costs. Section 2827.1(b)(4) specifically defines these "benefits" as those that accrue to customers of the electric utility and to the electric system. Thus, the requirement that the costs

---

85/ Cost of Service rates include distribution customer costs as $/month, PPP as $/month, Distribution demand and Transmission as $/NCD-kW, Commodity capacity as $/On-Peak kW, TOU commodity rates with SDG&E's proposed 2015 RDW time periods, and delivered energy charged retail rates and exported energy receives a wholesale credit.

86/ Assumes 2019 rate design with 2-tiers + SUE and a minimum bill, based on current revenues (5/1/2015).

paid by NEM customers be equal to the benefits they receive makes clear that "benefits" are to be valued on the basis of the utility cost of service. The provision requires that the cost borne by NEM customer-generators must be equal to the benefit/service provided by the utility, and likewise that the NEM-related costs borne by other customer must not exceed the value of the benefit they receive.

Results of the RIM test show that total benefits do not equal total costs under all scenarios. The question still to be answered is whether these results meet the standard of total costs being "approximately" equal to total benefits. In making that determination, the Commission must also take into consideration that any cost shift for adoption from 2017-2025 under NEM 2.0 would be incremental to the on-going cost-shift that will continue to occur under the existing NEM program, which is currently over $100 million a year for SDG&E and growing. As SDG&E noted, benefits should tie directly to the utility cost of service. An additional benefit from SDG&E's proposed Default Option is that NEM 2.0 customers will see price signals that incent behavior that aligns with utility cost of service for grid services. To date, the Commission has strongly advocated accurate prices, in the form of TOU and dynamic pricing, for commodity services. By November 2015, TOU rates will be mandatory for SDG&E's non-residential customers.

In addition, D.15-07-001 in the Residential Rate Reform proceeding (R.12-06-013) provides the roadmap for default TOU for residential customers beginning in 2019. Given the importance of utility grid services to enable the State and the Commission's Clean Energy Policy goals, it is important to ensure that customers have price signals that incent behavior that aligns with the cost of grid services.

### *C. Systems Larger Than One Megawatt*

1. ***Section 2827.1(b)(5) allows projects greater than 1 Megawatt (MW) that "do not have a significant impact on the distribution grid to be built to the size of the onsite load if the projects with a capacity of more than one megawatt are subject to reasonable interconnection charges established pursuant to the commission's Electric Rule 21 and applicable state and federal requirements. Please ensure that your proposal for a successor tariff covers how systems sized larger than 1 MW should be treated. Include a rationale for your proposal, and apply the evaluation metrics described in section A above, as appropriate.***

*SDG&E Response*:

While participation in the NEM program has historically been limited to projects sized at 1 MW and below, § 2827.1(b)(5) allows projects greater than 1 MW to participate in the NEM program, provided that certain conditions are met. First, a project larger than 1 MW is eligible to participate in the NEM program *only if* it does not have a "significant impact" on the distribution grid. This "no significant impacts" requirement is a threshold determination regarding NEM eligibility. A project larger than 1 MW that the utility determines will not cause a significant impact on the distribution grid may be built to the size of the on-site load, but is subject to reasonable interconnection charges established pursuant to the Commission's Rule 21 process and applicable state and federal requirements.

In accordance with the direction set forth in § 2827.1, SDG&E proposes to allow NEM installations greater than 1 MW to participate in the NEM program so long as such projects: (i) do not have a significant impact on the distribution grid; (ii) do not exceed the size of on-site load; and (iii) comply with the Rule 21 process, including payment of applicable Rule 21 fees. If a proposed installation is greater than 1 MW and SDG&E determines that it *would* have a significant impact on the distribution grid, it will not be eligible to participate in the NEM program, but may apply to interconnect under other SDG&E tariffs.

### *i. Significant Impacts*

The threshold determination in evaluating NEM eligibility for an installation greater than 1 MW is whether the installation will have a "significant impact" on the distribution grid. This determination is made by SDG&E as part of the Rule 21 interconnection study process. It is important to note that even small projects can have a significant impact on the distribution grid. Indeed, it is possible for a solar PV installation that is *smaller* than 1 MW to have a significant impact. Once the 1 MW project size threshold is crossed, the likelihood of significant system impacts increases markedly. A 3 MW solar PV system located in a rural area, for example, could require replacement of existing conductors and equipment, which could include overhead poles or underground conduit to accommodate the larger conductors.

While § 2827.1 does not define the term "significant impact" for purposes of determining NEM eligibility, SDG&E submits that, in general, a "significant impact" is one that causes the utility to incur material upgrade costs. Such costs could include equipment replacement and upgrade costs, as well as the cost of new equipment such as monitoring equipment. Tying the "significant impacts" determination to cost-causation is consistent with the intent of § 2827.1 to eliminate cost shift and ensure that costs and benefits are equal. From a procedural perspective, SDG&E proposes to use the current Rule 21 process to determine whether a proposed installation would have a significant impact on the distribution grid. Specifically, it would deem a project that fails the Rule 21 fast-track process to have a significant impact on the distribution grid. Such projects would be ineligible to participate in the NEM program.

### *(ii) Sized to On-site Load*

Section 2827.1 conditions NEM participation by projects greater than 1 MW on the requirement that such installations be "sized to onsite load." The determination of whether a

project is properly sized to on-site load should be made based upon a two-pronged analysis. First, the installation should be sized no larger than the annual on-site load of the customer. Second, the nameplate capacity of a NEM system should be no larger than the maximum demand of the customer over the past 12 months. The nameplate capacity should not exceed that maximum demand level.

Both prongs should be met to determine the maximum size of the NEM installation. The system will therefore be sized to the lessor of the two prongs above. This will help to mitigate some of the distribution issues that occur when large and/or over-sized systems are installed.

***(iii) Compliance with Rule 21; Reasonable Interconnection Costs***

As noted above, proposed projects greater than 1 MW will be evaluated through the Rule 21 process and will be subject to standard Rule 21 fees. Reasonable interconnection costs for systems greater than 1 MW include all study costs incurred to analyze the generating project as well as the cost for interconnection facilities and distribution upgrades necessary to interconnect the project as identified in the interconnection studies.

Costs to interconnect may include, but are not necessarily limited to, the following:

- Interconnection Request Fee
- Supplemental Review Fee
- Detailed Study Cost
- Interconnection Facilities Cost
- Distribution Upgrade Cost
- Transmission Network Upgrade Cost

Under the Rule 21 process, SDG&E is afforded a reasonable period of time within which to study the impacts of the interconnection request. If the study reveals the need for upgrades to

the transmission and/or distribution system, SDG&E shall be afforded the time necessary to complete those upgrades before the generating facility is interconnected. The costs of the network and/or distribution upgrades shall be borne by the interconnection customer.

***D. Additional Elements***

1. ***As part of your successor tariff design, please explicitly discuss whether (and if so, how) current variations, or secondary benefits of the existing NEM program, would apply, be modified, or would not apply. Please provide a rationale for each choice. These include:***
    - ***a. Variations on NEM***
        - ***Virtual Net Metering (VNM)***
        - ***NEM Aggregation (NEMA)***
    - ***b. Exemptions from interconnection application fees, interconnection study fees, and distribution upgrade fees.***
    - ***c. Exemptions from standby charges.***
    - ***d. Payment of nonbypassable charges.***

**a.** ***SDG&E Proposals related to Variations on NEM***

*SDG&E Response*

SDG&E proposes changes to the following variations on NEM:

- Schedule NEM-V: Virtual Net Metering for Multi-Tenant and Multi-Meter Properties;
- Schedule VNM-A: Virtual Net Energy Metering for Multifamily Affordable Housing;
- NEM Aggregation under Special Condition 8 of Schedule NEM;
- Schedule NEM-FC: Net Metering for Fuel Cell Customer-Generators; and
- Schedule RES-BCT: Local Government Renewable Energy Self-Generation Bill Credit Transfer.

***(i) Schedule NEM-V***

Schedule NEM-V is optionally available to qualified customers, defined as either: (i) the Owner or Operator of the multi-tenant, multi-meter Property with one or more separately metered accounts; (ii) an entity authorized by the Owner to install and/or operate the generating

facility and who will be the Utility's customer of record for the Generating Facility; or (iii) a tenant/occupant of the Property with a separately metered account, which is physically connected to the same Service Delivery Point to which the Eligible Generator is connected. Under this schedule, benefitting accounts receive the same benefits associated with netting as currently exists for customers receiving service under Schedule NEM. That is, an allocated share of the output from the eligible customer generator is "netted" against the customer usage without necessarily having solar on their rooftop.

SDG&E does not propose to change the "virtual" aspect of the benefits on this schedule – such an option is critical to ensure access to solar for customers in some multi-tenant/multi-meter locations. Under Schedule NEM-V, the generation is already separately metered. SDG&E proposes that Schedule NEM-V going forward would be modified to be consistent with SDG&E's Sun Credits Option proposal. Specifically, customers would no longer receive an allocation of the generation to "virtually" offset their consumption but would instead receive credits based on allocated share of generation priced at the Sun Credits rate.

***(ii) Schedule VNM-A***

Schedule VNM-A is optionally available to qualified customers defined as a customer that is receiving service on a rate schedule that would be applicable to a similar customer receiving service in combination with Schedule NEM and is located on the same property as the Owner's eligible customer-generator, and is physically connected to a different Service Delivery Point, where the Owner is a Multifamily Affordable Solar Housing ("MASH") Program participant. Under this schedule, benefitting accounts receive the same benefits associated with netting as currently exists for customers receiving service under Schedule NEM, that is, an

allocated share of the output from the eligible customer generator is "netted" against the customer usage without necessarily having solar on their rooftop.

SDG&E does not propose to change the "virtual" aspect of the benefits on this schedule – such an option is critical to ensure access to solar for customers in some multi-tenant/multi-meter locations. Under Schedule VNM-A, the generation is already separately metered. SDG&E proposes that Schedule VNM-A going forward would be modified to be consistent with SDG&E's Sun Credits option proposal. Specifically, customers would no longer receive an allocation of the generation to "virtually" offset their consumption but would instead receive credits based on allocated share of generation, priced at the Sun Credits rate. Eligible owners would continue to receive benefits from existing programs, *i.e.*, MASH Installation Incentives (D.08-10-036/D.11-07-031), CARE, Family Electric Rate Assistance Program ("FERA"), and Medical Baseline.

***(iii) NEM Aggregation***

NEM Aggregation is available to eligible customer-generator with multiple meters who elect to aggregate the electrical load of the meters located on the property where the Renewable Electrical Generation Facility is located, and on all property adjacent or contiguous to the property on which the Renewable Electrical Generation Facility is located, provided that all properties are solely owned, leased, or rented by the eligible customer-generator. Under this schedule, benefitting accounts receive the same benefits associated with netting as currently exists for customers receiving service under Schedule NEM. That is, an allocated share of the output from the eligible customer generator is "netted" against the customer usage without necessarily having solar on their rooftop. SDG&E does not propose to change the aggregation aspect of the benefits on this schedule – such an option is critical to ensure access to solar for

customers in some /multi-meter locations. Under NEM Aggregation, the generation is already separately metered. SDG&E proposes that NEM Aggregation going forward would be modified to be consistent with SDG&E's Sun Credits Option proposal. Specifically, customers would no longer receive an aggregated portion of the generation to offset their consumption but would instead receive credits based on allocated share of generation priced at the Sun Credits rate.

***(iv) Schedule NEM-FC***

Schedule NEM-FC is available to applicable customers with an Eligible Fuel Cell Electrical Generating Facility. Pursuant to § 2827.10, this schedule is available on a first-come, first-served basis for the operating life of the Eligible Fuel Cell Electrical Generating Facility. The schedule will be closed to new customers once the utility reaches a level equal to its proportionate share of a statewide limitation of 500 megawatts, as calculated by a ratio of the utility's peak demand compared to the total statewide peak demand. This ratio is calculated to be 37 megawatts for SDG&E. The benefits for customers under Schedule NEM-FC differ from those under Schedules NEM/NEM-V/VNM-A, in that these customers only receive the benefit of netting associated with the generation rate component. Customers on this rate are also exempt from paying standby charges and the Departing Load Cost Responsibility Surcharge. Once the 37 MW is achieved on this schedule, SDG&E proposes that eligible customers move to the applicable successor NEM tariff.

### *(v) Schedule RES-BCT*

Schedule RES-BCT is optionally available to bundled service Local Government[87/] customers using an Eligible Renewable electrical generating facility on a first-come-first-served basis, until the combined rated generating capacity of Eligible Renewable Generating Facilities within SDG&E's service territory reaches SDG&E's share of 8.1% of the statewide 250 MW limitation. Under this schedule, Benefitting Accounts may receive the benefit of bill credits associated with their allocated share of credits from power delivered by the Generating Account, with these credits being based on the commodity rate of the Generating Account. Once the cap is achieved on this schedule, SDG&E proposes that eligible customers move to the applicable successor NEM tariff.

### *b. Exemptions from interconnection application fees, interconnection study fees, and distribution upgrade fees.*

SDG&E proposes that the exemptions from interconnection application fees, interconnection study fees, and distribution upgrade fees that exist under the current NEM program be eliminated under the successor NEM program. In adopting § 2827.1, the Legislature made clear that the new NEM program is intended to eliminate the cost shift that results from the current NEM program design. NEM customers' ability to avoid otherwise-applicable fees has been a significant contributor to the cost shift that § 2827.1 is intended to prevent. Section 2827.1 does not retain the exemptions from interconnection application fees, interconnection

87/ Special Condition 2 - Local Government: Per § 2830, means a city, county, (whether general law or chartered, city and county), special district, school district, political subdivision, or other local public agency, if authorized by law to generate electricity, but shall not mean a joint powers authority, the state or any agency or department of the state, other than an individual campus of the University of California or the California State University.

study fees, and distribution upgrade fees that exist under the current program. Thus, it is logical to conclude that the intent of the legislation is to ensure that NEM customers are no longer permitted to avoid these fees.

SDG&E offers above it proposal for handling interconnection costs for installations greater than 1 MW. NEM customers with installations greater than 1 MW will proceed through the Rule 21 process and be responsible for applicable Rule 21 fees and other interconnection-related costs. SDG&E proposes a different approach for installations sized at 1 MW or less. It submits that these NEM customers should pay an interconnection application fee, but proposes to set the fee for installations of 1 MW or less at the average cost to process a current NEM customer. Within the category of NEM customers with installation sized at or below 1 MW, SDG&E proposes two separate interconnection application fees – one applicable to projects up to and including, 30 kW and the other applicable to projects between 30 kW and 1 MW.

The vast majority of SDG&E's NEM customers – roughly 98% – have installations sized at 30 kW or below. For these projects (30 kW and below), SDG&E proposes an interconnection application fee of $280. This $280 value is based on historic and current costs incurred by SDG&E. These projects interconnect through SDG&E's Distribution Interconnection Information System ("DIIS"), which offers a streamlined application and interconnection process. The cost to maintain the DIIS and to process more complex applications could cause the average price to increase in the future. Thus, SDG&E may file for an adjustment to this $280 fee in the future to ensure that NEM customers pay their fair share of interconnection application processing costs.

Less robust data exist for the roughly 2% of installations greater than 30 kW. Such installations may cause greater disruptions to the system and therefore may require additional studies; as outliers, their impacts are difficult to predict. SDG&E proposes that these customers pay a $280 application fee, but also be obligated to pay the cost of additional studies and/or system upgrade costs, to the extent such studies and/or upgrades are deemed by SDG&E to be necessary. If NEM customers with installations greater than 30 kW trigger upgrade costs, they will be required to comply with the Rule 21 process.

***c. Exemptions from standby charges.***

SDG&E proposes that the current exemptions from standby charge be eliminated. Currently, NEM customers are exempt from standby charges applicable to other customer generators, resulting in the cost of these services being shifted to other customers in a non-transparent manner. In order to effectuate the intent of § 2827.1 to eliminate the current cost shift, NEM customers should no longer be permitted to avoid these fees. The NEM successor tariff should require that NEM customers pay standby charges, similar to other customer generators. Intermittent technologies, such as solar, will not be subject to standby charges.

***d. Payment of nonbypassable charges.***

The Commission has defined nonbypassable charges as including "transmission charge, Public Purpose Program Charge, Nuclear Decommissioning Charge, Competition Transition Charge, New System Generation Charge,[88/] Department of Water Resources bond charge, and the Power Cost Indifference Amount applicable only to DA and CCA customers."[89/] Currently, these charges are recovered through volumetric rates ($/kWh). As discussed above, customers' ability under the NEM program to reduce the volume of energy for which they are billed results

[88/] The equivalent charge for SDG&E is its Local Generation Charge ("LGC").
[89/] D.13-10-019, *mimeo*, p. 3, note 2.

in an under-collection (in effect, a bypass) of nonbypassable charges. SDG&E proposes to recover these charges through the Delivered Energy Rate under its Default tariff option and through the NEM customer's OAT under the Sun Credits tariff option.

***E. Safety and Consumer Protection Issues***

***1. Describe what, if any, elements of your proposal address the safety of either or both of the customer-sited generation system or the interconnected distribution system. If your proposal does not address this issue, please explain why it is not necessary to do so.***

SDG&E is committed to maintaining a safe and reliable electric grid. The successor NEM tariff must keep safety as the top priority by incorporating the safety requirements set forth in the current NEM tariff. These safety requirements include the anti-islanding, visible disconnect, suitable equipment, and protective functions provisions of Rule 21. In addition, to the extent projects greater than 1 MW are permitted to participate in the NEM program, they should be required to have a supervisory control and data acquisition ("SCADA") devise or similar device that allows visibility by the utility into the status of the generating resource. In addition, the successor tariff should include the option of establishing technology-specific safety requirements, as there might be technologies connecting in the future that have not been contemplated to date.

***2. Describe what, if any, elements of your proposal address any consumer protection issues, other than safety, associated with your proposal or with a successor tariff program more generally. If your proposal does not address this issue, please explain why it is not necessary to do so.***

The relative large size and long duration of investments that a consumer must make for a renewable distributed generation system are compelling reasons for the Commission to consider measures to protect consumers from uninformed or unskilled contractors and/or use of shoddy or substandard equipment. With respect to contractors, the Commission should consider working

cooperatively with other state agencies with consumer protection responsibility (*e.g.*, Department of Consumer Affairs, Contractors State License Board, and others) to enhance oversight of contractors installing renewable distributed generation systems. In particular, a method of monitoring, and correcting when necessary, the marketing and advertising claims being made by contractors merits further study by the Commission.

Consideration should also be given to the development of a standardized disclosure document that must be given to and signed by every consumer prior to the consumer being legally obligated to proceed. The purpose of the disclosure document would be to simply and accurately describe the new program, the full cost of the renewable system that is being proposed, the expected benefits or savings and the assumptions supporting such benefits or savings, among other items critical to a consumer's decision to proceed. Unfortunately, many current marketing and advertising materials for renewable energy systems are misleading, and the situation is unlikely to improve without some action by the Commission.

There are several existing methods to file complaints against contractors that need not be duplicated. However, the Commission should consider working cooperatively with those existing agencies to monitor complaints made against renewable distributed generation system contractors. This would enable the Commission to determine whether the incidence of complaints against renewable distributed generation system contractors is growing and to identify trends or common issues that could be addressed by the Commission.

With respect to approved equipment lists and warranty requirements, the commission should follow current practice of requiring all equipment to be UL listed, and all installations should conform to the National Electric Code ("NEC"). Warranties are the purview of the

consumer and the contractor, but should be sufficiently clear to ensure that consumers are made aware of their rights and responsibilities.

### *F. Legal Issues*

1. ***Identify all legal issues associated with your successor tariff proposal (e.g., compliance with the federal Public Utility Regulatory Policies Act of 1978 (PURPA); consistency with other Commission decisions or statutory requirements; tax implications for customers; etc.).***
2. ***Describe each issue, including appropriate legal citations. Explain how your proposal is consistent with the relevant legal requirements.***
3. ***If there are or may be open legal questions related to your proposal, please identify them, including appropriate legal citations, and explain their importance to your proposal.***

*SDG&E Response*

SDG&E's proposal is designed to comply with all applicable legal requirements. As discussed below, its proposal raises a legal question related to the Commission's interpretation of § 381 as it relates to collection of the PPP surcharge through a fixed monthly charge rather than on a per-kWh volumetric basis. SDG&E addresses this question and the other legal issues raised in the ALJ Ruling below.

#### *1. Compliance with the Federal Public Utility Regulatory Policies Act of 1978*

The ALJ Ruling directs parties to address compliance with the federal Public Utility Regulatory Policies Act of 1978 ("PURPA"). Under the Federal Power Act ("FPA"), exclusive authority to set the rates for the sale of electric energy at wholesale rests with the Federal Energy Regulatory Commission ("FERC").[90/] A state or state commission is authorized to set a rate for wholesale power only under the limited jurisdiction conferred on it by PURPA.[91/] PURPA requires that the selling entity be a Qualifying Facility ("QF") and that the state-adopted rate for

[90/] 16 USC Sec. 791 *et. seq*.
[91/] 16 United States Code ("USC") Sec. 8241-3(d), *et seq*.

QF energy or capacity not exceed the purchasing utility's avoided cost.[92/] A negotiated rate (as opposed to an administratively-set rate) also satisfies PURPA requirements.[93/] All other wholesale ratemaking falls within the exclusive jurisdiction of FERC.

FERC has found that a net billing arrangement in which the customer-generator receives a credit against its retail power purchase and no "net sale" is made to the utility over the relevant billing period is not a wholesale sale subject to FERC jurisdiction.[94/] Only in a circumstance where a customer-generator makes a net sale or sells its full output to the utility for monetary compensation is the transaction considered a wholesale sale that must comply with the requirements of the FPA (if the selling entity is not a QF) or PURPA (if the selling entity is a QF).[95/] As discussed above, SDG&E's proposed NEM program offers each customer class billing options that are intended to allow customers to select the option that best fits their needs. All of SDG&E's proposed customer billing options contemplate that NEM customer-generators will be compensated for exported generation through a bill credit. SDG&E's proposed billing options do not include an express net surplus compensation component, such as that adopted in D.11-06-016, and generally do not contemplate monetary payment for exported generation. Accordingly, SDG&E's proposed billing options are generally not FERC-jurisdictional.

---

92/ Avoided cost is defined as "the incremental costs to an electric utility of electric energy or capacity or both which, but for the purchase from the qualifying facility or qualifying facilities, such utility would generate itself or purchase from another source." 18 C.F.R. § 292.101(b)(6).

93/ *See* 18 C.F.R. § 292.301(b).

94/ *See, e.g*., *MidAmerican Energy*, 94 FERC ¶ 61,340 (2001); SunEdison LLC, 129 FERC ¶ 61,146 (2009). FERC Order 2003-A, 106 FERC ¶ 61,220 (2004) at p. 747. *See also* FERC Order 2003-A, 106 FERC ¶ 61,220 (2004). p. 747 (holding that FERC "does not exert jurisdiction over a net energy metering arrangement when the owner of the generator receives a credit against its retail power purchases from the selling utility.").

95/ *See, e.g,* SunEdison LLC, at ¶ 18; D.11-06-016, *mimeo*, pp. 9-10.

It is important to note, however, that although SDG&E's proposed NEM billing options are not designed to provide monetary compensation for exported generation, there may nevertheless be limited instances in which NEM customer-generators *do* receive monetary compensation for their exported generation – for example, if the customer-generator terminates service and has a credit due. In such a case, SDG&E would pay the customer-generator the credit due through a monetary payment. This means that the Commission's consideration of SDG&E's proposed NEM billing options must take into account PURPA requirements. In other words, even though SDG&E's billing options generally do not implicate PURPA, to account for the limited instances in which monetary payment might be made by NEM customer-generators for exported generation, it is necessary that (i) NEM participants be QFs; and (ii) rates be set at avoided cost or at a negotiated/voluntary rate. SDG&E's proposed NEM successor tariff satisfies these requirements. First, NEM participants are required to be QFs.[96/] Second, SDG&E has voluntarily proposed compensation for exported generation rather than seeking to have the compensation rate set administratively. Thus, PURPA requirements are satisfied.

### *2. Consistency with Other Commission Decisions or Statutory Requirements*

#### a. Collection of the PPP Surcharge Through a Fixed Monthly Charge

Section 381(a) requires electrical corporations to charge customers a nonbypassable surcharge to fund certain public purpose programs described in § 381(b) (*i.e.*, energy efficiency activities, research and development, and operation and development of renewable resource technologies) and § 382 (*i.e.*, the CARE and LIEE programs). The provision requires that each electrical corporation identify a separate rate component to collect the PPP charge, and specifies that "[t]he rate component shall be a nonbypassable element of the local distribution service and

[96/] 18 C.F.R. § 292.203(d) exempts qualifying small power production facilities of less than 1 MW from self-certification filing requirements to claim QF status. Projects above 1 MW, however, will be required to follow the FERC process to claim QF status in order to participate in the NEM program.

collected on the basis of usage."[/] SDG&E's proposed NEM tariff would collect the PPP surcharge imposed pursuant to § 381 though a customer class-specific fixed monthly charge rather than on the current volumetric, per-kWh basis.

The current NEM program, which collects the PPP surcharge on a volumetric, per-kWh basis through the customer-generator's OAT, has resulted in a significant under-collection of PPP charges from NEM customers.[97/] Indeed, the Commission has estimated that under the current rate design, with a complete deployment of systems to the NEM cap, NEM customers would avoid approximately $142 million in PPP charges in 2020. By allowing NEM customer-generators to reduce or eliminate their billed volume of delivered generation, the current NEM program allows them to likewise reduce or eliminate payment of nonbypassable regulatory costs such as the PPP surcharge. As a practical matter, it makes little sense to seek to collect PPP surcharges from NEM customers on a volumetric basis given that the NEM program is designed to *reduce* the volume of electricity for which a customer is billed (through both load reduction and reduction in the bill amount through credit for exported generation at the full retail rate). The current approach to collecting PPP surcharges from residential NEM customers is illogical and violates the requirement under § 381 that PPP surcharges be collected from all customers on a nonbypassable basis.

As the Commission has observed, "[t]he objectives of the PPP surcharge go to the core of providing basic electricity and natural gas service in California."[98/] The Legislature and Commission have both made clear that electricity is an essential commodity critical to the safety, health, and welfare of all citizens of the State.[99/] The Commission has pointed out that "[t]he Legislature's purpose in requiring all of the utilities' customers to pay nonbypassable PPP

---

[97/] NEM Report, *supra*, note 10, p. 27.
[98/] D.07-09-016, *mimeo*, p. 13 (citations omitted).
[99/] *Id*.

surcharges was to ensure funding for these essential public purpose programs."[100/] In light of the importance of the PPP and its role in ensuring access to basic electric service, the Commission is prohibited from discounting or exempting electric customers from the PPP surcharge.[101/]

The Commission has explained that "[t]he PPP is deemed to be so important that customers must still pay this surcharge even when customers leave the distribution system by relying on 'distributed generation' . . . customers departing for distributed generation must continue to pay for these programs, thereby avoiding unwarranted cost shifts to other ratepayers."[102/] In a decision rejecting the proposal to allow large C&I customers to pay a reduced PPP, the Commission warned of the danger inherent in allowing a sub-set of customers to avoid PPP costs: "Once the loophole is opened, it will only continue growing and growing until there is a sub-class of the largest customers paying less than all other customers for valuable social programs. There is a very real risk of losing a funding source for these programs – fewer and fewer customers paying higher and higher portions of the costs, until this funding source is depleted."[103/]

The same concern exists here. The NEM program has created a loophole that allows residential NEM customers to avoid the PPP surcharge – *i.e.*, to "pay less than all other customers for the valuable social programs the surcharge funds."[104/] Accordingly, as noted above, SDG&E proposes to collect the PPP surcharge through a customer class-specific fixed monthly charge designed to ensure that NEM customers are not able to avoid PPP costs. While this approach is logical in light of the State's strong policy in favor of ensuring funding for PPP

---

[100/] *Id* (citations omitted).
[101/] *Id.* at p. 14 ("The plain language of §§ 381 and 399.8 confirms that the Commission is prohibited from discounting or exempting electric customers from the PPP surcharge.").
[102/] *Id*. at p. 16.
[103/] D.07-09-016, *mimeo*, p. 14.
[104/] *See id*.

programs, it requires the Commission to find that collection through a monthly rather than per kWh volumetric rate satisfies the requirement under § 381 that the surcharge be collected "on the basis of usage." SDG&E submits that this finding is reasonable inasmuch as a conclusion otherwise would frustrate the intent of the statute to ensure that all electric customer pay PPP surcharges on a nonbypassable basis with no exceptions.[105/]

It is a fundamental rule of statutory construction that "every word, phrase or provision is presumed to have been intended to have a meaning and perform a useful function."[106/] If a particular construction would render a statutory provision **ineffective** and meaningless, that construction must be rejected.[107/] The California Supreme Court has explained that "[t]o interpret statutory language, the courts must ascertain the intent of the legislature so as to effectuate the purpose of the law."[108/] Although the Commission has far-reaching powers to set utility rates, its exercise of its ratemaking authority cannot be contrary to legislative directives.[109/] The Commission has observed that "[i]n the end, '[w]e must select the construction that comports most closely with the apparent intent of the Legislature, with a view to promoting rather than defeating the general purpose of the statute, and avoid an interpretation that would lead to absurd consequences.'"[110/]

Here, the clear intent of the Legislature is to ensure that all electric customers contribute their fair share toward funding PPP programs. Interpreting the term "usage" for purposes of § 381 as meaning that the collection of the surcharge must in all cases occur on volumetric per-

---

[105/] *Id.* at p. 15 ("The tern 'nonbypassable' has been consistently interpreted by this Commission and state courts as meaning no exceptions.").
[106/] *Rosenfield v. Superior Court* 143 Cal.App.3d 198, 202 (1983).
[107/] *Id.*
[108/] *California Teachers Assn. v. Governing Bd. Of Rialto United School Dis.* 14 Cal.4th 627, 632 (1997).
[109/] *See Southern California Edison Co. v. Peevey* 31 Cal. 4th 781, 801 (2003); *Assembly v. Public Utilities Com.* 12 Cal.4th 87, 103 (1995); *California Teachers Assn. v. Governing Bd. Of Rialto United School Dis.* 14 Cal.4th 627, 632 (1997).
[110/] D.03-06-076, *mimeo*, p. 24 (quoting *People v. Jenkins* (1995) 10 Cal.4th 234, 246.).

kWh basis would lead to the "absurd consequence" of NEM customers continuing to avoid PPP surcharges.[111/] In order to effectuate the intent of the statute, the Commission must adopt a definition of usage that ensures that PPP surcharges are not avoided or discounted. In the context of the NEM program, collection of PPP surcharges through a fixed charge that is based upon the customer-generator's use of the distribution network the best means of ensuring this outcome. Accordingly, the Commission should approve SDG&E's proposal to collect PPP surcharges from NEM customers through a customer class-specific fixed monthly fee.

**b. Proposal to Adopt Fixed Demand Charge and Fixed Monthly Charge in Excess of Limits Set Forth in §739.9**

Section 739.9(f) establishes dollar amount limits on the fixed charges that may be established for residential and CARE customers. Specifically, the section provides, in pertinent part, that "the commission may, beginning January 1, 2015, authorize fixed charges that do not exceed ten dollars ($10) per residential customer account per month for customers not enrolled in the CARE program and five dollars ($5) per residential customer account per month for customers enrolled in the CARE program." SDG&E's proposed NEM billing options include fixed monthly charges and demand charges that exceed the limits established in § 739.9(f). As discussed above, these fixed charges are designed to recover the fixed costs of providing service to NEM customers, as well as mandated regulatory charges such as the PPP surcharge, that are avoided by NEM customers under the current NEM program.

Section 2827.1(b)(7) permits the Commission to authorize fixed charges for residential NEM customers that differ from the fixed charges allowed under § 739.9(f). The rationale for including this provision in the legislation is clear from the AB 327 Bill Analysis, which acknowledges the significant cost shift that occurs under the current NEM program and makes

---

[111/] *See id.*

clear that the bill is intended to eliminate this cost shift.[112/] To effectuate this intent, it is necessary to establish a fixed charge in order to recover the fixed cost of providing residential NEM service rather than seeking to recover these fixed costs on a volumetric basis. As discussed above, the NEM program is expressly intended to *reduce* the volume of electricity for which the residential NEM customer-generator is billed. Accordingly, the current NEM program approach of seeking to recover the fixed cost of providing service on a per-kWh volumetric basis is illogical and ineffective. It is this mismatch that has caused the cost shift to non-NEM customers that § 2827.1 is intended to eliminate.

By expressly providing that fixed charges adopted in the context of the NEM program could exceed the limits established in § 739.9, the Legislature signaled its acknowledgement of the fact that (i) elimination of the current cost shift will require adoption of fixed charges to recover the fixed cost of providing service; and (ii) the dollar amount of such fixed charges would likely be higher than the caps established in § 739.9. Thus, § 2827.1(b)(7) opens the door to Commission consideration of SDG&E's proposal to include fixed demand and monthly charges in its successor NEM tariff. SDG&E submits that the Commission should approve its proposal for the reasons set forth herein.

***3. Tax Implications for Customers***

The ALJ Ruling raises the question of the tax implications for customers presented by parties' successor NEM tariff proposals. SDG&E's corporate tax department does not typically opine on personal income tax matters or provide tax advice to utility customers. Each customer's tax situation is different, thus customers should consult their personal tax advisor regarding the tax issues arising from participation in the successor NEM program. To assist the

[112/] *See* AB 327 Bill Analysis, *supra*, note. 26.

Commission, however, SDG&E offers some general observations below regarding the potential income tax implications of its NEM successor tariff proposal.

First, the tax consequences to the customer of "net metering" are not clearly defined. There is the potential, however, that SDG&E would be required to issue a Form 1099 to a NEM customer if payment for exported generation exceeds $600 and is made through a check rather than as a bill credit.[113/] In general, individuals would be required to report 1099 income as taxable and would not receive a deduction for the expense incurred to generate electricity since a deduction is not specifically provided under the tax code (as there is for home mortgage interest, charitable contributions, etc.). Small commercial customers would also be required to report 1099 income as taxable under the general rule. However, if they are organized as a corporation or a limited liability company that is treated as a C- or S-Corporation, the payments made to them by SDG&E would not be required to be reported on Form 1099.

Second, if it is determined that SDG&E does *not* have a 1099 reporting requirement under the Form 1099 reporting rules, NEM customers might nevertheless be required to self-report payments received from SDG&E as taxable income on their personal or business income tax returns. Finally, SDG&E notes that the Edison Electric Institute ("EEI") has requested that the U.S. Treasury Dept. or Internal Revenue Service issue guidance on the circumstances, if any,

---

[113/] Form 1099 must be filed by a business (*i.e.*, SDG&E) when it makes payments to a person of at least $600 in a specific year for:

1. rents (box 1);
2. services performed by someone who is not your employee (including parts and materials), box 7;
3. prizes and awards (see instructions for boxes 3 and 7;
4. other income payments (box 3);
5. medical and health care payments (box 6);
6. crop insurance proceeds (box 10);
7. cash payments for fish (or other aquatic life) you purchase from anyone engaged in the trade or business of catching fish (box 7);
8. generally, the cash paid from a notional principal contract to an individual, partnership, or estate (box 7);
9. Payments to an attorney. See *Payments to attorneys*, later; or
10. Any fishing boat proceeds (box 5).

under which net metering transactions give rise to taxable income to utility customers and under what circumstances the utility would be required to issue a Form 1099. It is expected that this guidance will be provided sometime during the third quarter of 2015.

# ATTACHMENT A.1

***NEM Public Tool Rate Inputs***

| | SDG&E Calc'd Rates (Entered into Tool) | 2017 Public Tool Rate Output | | | | | |
|---|---|---|---|---|---|---|---|
| | | TOU Bookend 2 - Low | TOU Bookend 2 - High | TOU Bookend 1 - Low | TOU Bookend 1 - High | 2 Tiered Bookend - Low | 2 Tiered Bookend - High |
| **Residential - Default New DER Rate** | | | | | | | |
| Fixed Monthly Charge | 20.54 | 20.54 | 20.54 | 20.54 | 20.54 | | |
| Monthly Demand Charge | 9.19 | 9.19 | 9.19 | 9.19 | 9.19 | | |
| Winter TOU Off Peak Energy | 0.11 | 0.12 | 0.11 | 0.11 | 0.11 | High / Low Bookends same as TOU 1 | |
| Winter TOU Mid Peak Energy | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | | |
| Summer TOU Off Peak Energy | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | | |
| Summer TOU Mid Peak Energy | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | | |
| Summer TOU On Peak Energy | 0.33 | 0.30 | 0.30 | 0.29 | 0.29 | | |
| **Small Commercial - Default New DER Rate** | | | | | | | |
| Fixed Monthly Charge | 68.78 | 68.78 | 68.78 | | | | |
| Winter Monthly Demand Charge | 12.00 | 12.00 | 12.00 | | | | |
| Summer Monthly Demand Charge | 12.00 | 12.00 | 12.00 | | | | |
| Winter TOU Off Peak Energy | 0.11 | 0.09 | 0.09 | | | High / Low Bookends the same | |
| Winter TOU Mid Peak Energy | 0.14 | 0.10 | 0.10 | | | | |
| Summer TOU Off Peak Energy | 0.14 | 0.11 | 0.10 | | | | |
| Summer TOU Mid Peak Energy | 0.18 | 0.13 | 0.13 | | | | |
| Summer TOU On Peak Energy | 0.22 | 0.15 | 0.15 | | | | |
| **Medium Commercial - Default New DER Rate** | | | | | | | |
| Fixed Monthly Charge | 558.13 | 558.13 | 558.13 | | | | |
| Winter Monthly Demand Charge | 24.43 | 24.43 | 24.43 | | | | |
| Summer Monthly Demand Charge | 24.43 | 24.43 | 24.43 | | | | |
| Summer TOU On Peak Monthly Demand Charge | 21.40 | 21.40 | 21.40 | | | | |
| Winter TOU Off Peak Energy | 0.07 | 0.06 | 0.06 | | | High / Low Bookends the same | |
| Winter TOU Mid Peak Energy | 0.10 | 0.07 | 0.07 | | | | |
| Summer TOU Off Peak Energy | 0.07 | 0.06 | 0.06 | | | | |
| Summer TOU Mid Peak Energy | 0.10 | 0.07 | 0.07 | | | | |
| Summer TOU On Peak Energy | 0.11 | 0.08 | 0.08 | | | | |
| **Large Commercial - Default New DER Rate** | | | | | | | |
| Fixed Monthly Charge | 907.43 | 907.43 | 907.43 | | | | |
| Winter Monthly Demand Charge | 24.43 | 24.43 | 24.43 | | | | |
| Summer Monthly Demand Charge | 24.43 | 24.43 | 24.43 | | | | |
| Summer TOU On Peak Monthly Demand Charge | 21.40 | 21.40 | 21.40 | | | | |
| Winter TOU Off Peak Energy | 0.07 | 0.06 | 0.06 | | | High / Low Bookends the same | |
| Winter TOU Mid Peak Energy | 0.10 | 0.07 | 0.07 | | | | |
| Summer TOU Off Peak Energy | 0.07 | 0.06 | 0.06 | | | | |
| Summer TOU Mid Peak Energy | 0.10 | 0.07 | 0.07 | | | | |
| Summer TOU On Peak Energy | 0.11 | 0.07 | 0.08 | | | | |
| **Agricultural - Default New DER Rate** | | | | | | | |
| Fixed Monthly Charge | 209.39 | 209.39 | 209.39 | | | | |
| Winter Monthly Demand Charge | 8.32 | 8.32 | 8.32 | | | | |
| Summer Monthly Demand Charge | 8.32 | 8.32 | 8.32 | | | | |
| Winter TOU Off Peak Energy | 0.07 | 0.08 | 0.08 | | | High / Low Bookends the same | |
| Winter TOU Mid Peak Energy | 0.09 | 0.09 | 0.10 | | | | |
| Summer TOU Off Peak Energy | 0.13 | 0.13 | 0.13 | | | | |
| Summer TOU Mid Peak Energy | 0.18 | 0.17 | 0.17 | | | | |
| Summer TOU On Peak Energy | 0.23 | 0.20 | 0.21 | | | | |
| **Default Option (Wholesale) Export Compensation** | 0.05 | 0.06 | All Bookends the same | | | | |
| **Sun Credit Compensation** | 0.11 | 0.13 | | | | | |

| **Residential - Default Rate** | **2019 ALJ Ruling Rates** | | | |
|---|---|---|---|---|
| Tier 1 | 0.23 | | 0.24 | 0.23 |
| Tier 2 | 0.28 | | 0.29 | 0.28 |

*Note that the 4.7-cent Default Option (Wholesale) Export Compensation entered into the Public Tool was the average of the past 12 months Annual Compensation for Excess Generation, whereas the 4.0-cent credit noted in the Attachment reflects just the most recent month's (July 2015) credit.

| | | |
|---|---|---|
| **No Change:** | Compensation Structure | Full Retail Rate Credit |
| | Residential - New DER Rate | Default |
| | Small Commercial - New DER Rate | Default |
| | Medium Commercial - New DER Rate | Default |
| | Large Commercial - New DER Rate | Default |
| | Agricultural - New DER Rate | Default |
| **Proposed Default Option:** | Compensation Structure | Retail Rate Credit + Value Based Export Compensation |
| | Residential - New DER Rate | Seasonal Time-of-Use |
| | Small Commercial - New DER Rate | Seasonal Time-of-Use |
| | Medium Commercial - New DER Rate | Seasonal Time-of-Use |
| | Large Commercial - New DER Rate | Seasonal Time-of-Use |
| | Agricultural - New DER Rate | Seasonal Time-of-Use |
| | Non-Bypassable | Exports Non-avoidable (asymmetric) |
| **Proposed Sun Credit Option:** | Compensation Structure | Value Based Compensation |
| | Residential - New DER Rate | Default |
| | Small Commercial - New DER Rate | Default |
| | Medium Commercial - New DER Rate | Default |
| | Large Commercial - New DER Rate | Default |
| | Agricultural - New DER Rate | Default |

# ATTACHMENT B

***Proposal for NEM Disadvantaged Communities Program***

## TABLE OF CONTENTS

**SAN DIEGO GAS & ELECTRIC COMPANY**
**PROPOSAL FOR NET ENERGY METERING**
**DISADVANTAGED COMMUNITIES PROGRAM**

## I. INTRODUCTION

Public Utilities Code § 2827.1(b)(1) directs the Commission to ensure that the successor Net Energy Metering ("NEM") tariff or contract adopted pursuant to § 2827.1 includes "specific alternatives designed for growth among residential customers in disadvantaged communities."[1/] SDG&E supports the goal of ensuring that all types of customers have access to distributed energy resources ("DERs") and embraces the opportunity presented in this proceeding to develop a NEM solution for disadvantaged communities. Universal access to DERs is an important element of the State's clean energy strategy. SDG&E's commitment to enabling universal access to DERs is reflected in its recently-filed Distribution Resource Plan ("DRP") and provides the foundation for its proposals in the instant proceeding.

As discussed in more detail below, SDG&E's proposal is designed to support an overall "greening" of under-served communities, while helping these communities to overcome the barriers that have persisted in restricting the installation of solar energy systems, primarily on multi-family complexes, but also in single family homes. SDG&E's proposal is designed to complement the California Solar Initiative's ("CSI's") Multifamily Affordable Solar Housing ("MASH") program and to strengthen the overall ratepayer-funded portfolio of customer offerings for solar. The proposal addresses the most common economic barriers to solar adoption in disadvantaged communities, including the financing of the installation, ownership and maintenance associated with the systems, and the need for options that permit removal of the system should the roof need repair or replacement.

---

[1/] All statutory references herein are to the Public Utilities Code unless otherwise noted.

SDG&E's intent in offering these programs is to provide solar options to communities that have not historically been sought after by the wider commercial solar developer market. SDG&E believes that it is uniquely positioned to develop programs and solutions to better serve the customers in such communities. SDG&E has met with community partners, as well as other external stakeholders and incorporated feedback received. It has designed the Disadvantaged Communities Program with the aim of eliminating the obstacles to solar adoption that currently exist in order to achieve the overall goal of "greening" these disadvantaged communities.

## II. SUMMARY OF PROPOSAL AND REQUEST FOR AUTHORIZATION

SDG&E's NEM proposal for Disadvantaged Communities (the "Disadvantaged Communities Program or Proposal") includes two elements – the Multi-Family Solar Share program (the "MF Program") and the Solar At Schools program ("Schools Program") (together, the "Programs"). Both Programs involve installation of utility-owned solar photovoltaic ("PV") systems on customer-owned buildings that meet certain eligibility criteria and are located in Disadvantaged Communities (as that term is defined herein). Specifically, SDG&E proposes to:

(i) Install the solar PV system at no cost to the multi-family building owner/school, and operate and maintain the system at ratepayer expense. The proposed program would allow a building owner to request uninstallation and reinstallation of the solar PV system one time in the life of the system at ratepayer expense;

(ii) Pay the building owner/school a lease payment for the rooftop space occupied by the solar PV system based upon the size of the roof (or other suitable area) and the PV system. SDG&E proposes a lease payment of $5.00 per kW, paid annually for 20 years from the system in-service date;

(iii) Provide a bill credit to residential customers as follows:

a. Under the MF Program, residential customers in multi-family buildings would be credited for generation produced by the on-site solar system. Generation would be separately metered and all energy generated on-site would be credited at a rate consistent with SDG&E's Sun Credits successor NEM tariff option, currently proposed as the system average commodity rate. Credited generation would be allocated and presented as

bill credits for the building owner and tenants at that site. The building owner would receive an allocation of the generation credit for common area energy accounts, not to exceed 5% of the total energy generated on-site and not to exceed 100% of common area energy usage.

b. Under the Schools Program, low-income residential customers residing within the census tract of the school would be credited for generation produced by the on-site solar system at the relevant school. Generation would be separately metered and all energy generated on-site would be credited at a rate consistent with the Exported Energy rate set forth SDG&E's Sun Credits NEM successor tariff option, currently proposed as the system average commodity rate. Credited generation would be allocated and presented as bill credits for eligible low-income residential customers residing within the census tract of the relevant school.

(iv) SDG&E proposes that program costs be paid for by all ratepayers except residential customers and public K-12 schools located in Disadvantaged Communities. SDG&E's proposal is for a revenue requirement of $71.5 million to be recovered over 25 years. SDG&E further proposes to recover these costs through the Public Purpose Program ("PPP") rate, similar to other public policy programs such as the California Alternate Rates for Energy ("CARE") program. In order to avoid delay in implementation of its Disadvantaged Communities program, SDG&E respectfully requests that the Commission authorize its request for recovery of the $71.5 revenue requirement in the instant proceeding rather than through a separate, subsequent application proceeding.

Participants in both the MF Program and the Schools Program would continue to take electric service under their otherwise applicable tariff ("OAT"). Customers would also continue to be eligible for other assistance programs (*i.e.*, CARE).

With regard to compliance with the § 2827.1(b)(1) requirement to ensure growth in disadvantaged communities, SDG&Es' does not rely on Public Tool analysis to support its proposal. SDG&E agrees with the conclusion offered in the Staff Paper that it is not necessary to use the Public Tool for the evaluation of proposals to target specific Disadvantaged Communities.[2/] SDG&E also supports the Staff Paper's proposal that growth be evaluated based

[2/] *See Energy Division Staff Paper Presenting Proposals for Alternatives to the NEM Successor Tariff or Contract for Residential Customers in Disadvantaged Communities in Compliance with AB 327*, issued June 4, 2015 ("Staff Paper"), pp. 2-4.

on installed capacity and be measured on an annual basis.[3/] SDG&E proposes that for purposes of determining compliance with § 2827.1(b)(1), the term "growth" be defined as an increase in the total annual capacity installed by SDG&E within the Disadvantaged Communities located in its service territory, beyond the total annual capacity installed in the year prior to implementation of the Disadvantaged Communities Program. As discussed in more detail below, SDG&E's Disadvantaged Communities Proposal removes significant barriers to participation in the NEM program that exist today for residents located in Disadvantaged Communities. Given the attractive benefits offered under the program, participation is likely to be strong and to result in growth of solar adoption within Disadvantaged Communities.

In terms of the requirement in § 2827.1 that program costs equal benefits, SDG&E also agrees with Staff that proposals related to Disadvantaged Communities should not be subject to this requirement in every case.[4/] SDG&E's proposed Disadvantaged Communities Program is designed to contain costs while maximizing benefits. Thus, while SDG&E's proposal does envision that the customers in the Programs will receive benefits paid for by other customers, the Disadvantaged Communities Program is designed to ensure that costs remain in check.

SDG&E proposes a total funding cap of $50 million for the Disadvantaged Communities Program, with solar PV systems to be installed over 5 years and operated for 20 years (the average life of the system), and the option for renewal or extension with modifications based on performance. It further proposes that the utility-owned PV systems be maintained and rate-based for the life of the system (20 years). The option of PV system removal and replacement would be offered at a maximum of one time in the system's life. With a program budget capped at $50 million, the revenue requirement is calculated to be $71.5 million over 25 years. Program costs

---

[3/] *Id.* at pp. 2-8.
[4/] *Id.* at pp. 2-15.

would be recovered from all customers, except residential customers and public K-12 schools in Disadvantaged Communities. In order to avoid delay in implementation of its Disadvantaged Communities Program, SDG&E respectfully requests that the Commission authorize its request for recovery of the $71.5 revenue requirement in the instant proceeding rather than requiring that a separate application be filed.

## III. NEM DISADVANTAGED COMMUNITIES PROPOSAL

SDG&E proposes two Programs that target Disadvantaged Communities for the location of utility-owned solar PV systems for the direct benefit of "greening" those under-served communities. These Programs would utilize SDG&E's extensive marketing experience and leverage its existing relationship with its customers. The Programs are designed to eliminate the existing barriers to installation of solar PV in the residential segment, including economic, structural and ownership hurdles.

SDG&E proposes a total funding cap of $50 million to cover both Programs, with solar PV systems to be installed over five years and operated for 20 years (the average life of the system) with the option for renewal or extension with modifications based on performance. It further proposes that the utility-owned PV systems be maintained and rate-based for the life of the system (20 years). Finally, SDG&E proposes to offer the Disadvantaged Communities Program for the earlier of a period of five years from the date of Commission approval or until the MF Program is fully subscribed.

### *A. Overview - Multi-Family Solar Share and Solar At Schools Programs*

The MF Program involves siting of utility-owned solar PV systems on multi-family buildings located in Disadvantaged Communities that meet certain eligibility criteria. The utility-owned solar PV system would be sited on leased space at the building premises. SDG&E

would compensate the building owners for use of the PV site through a monthly lease payment for a term of 20 years. The solar PV system would be installed at no expense to the building owner in accordance with installation requirements established by SDG&E in order to meet specific system needs. SDG&E proposes to provide a lease payment to the building owner of $5.00 per kW, paid annually for 20 years from the system in-service date. As an illustrative example of the benefit provided to the building owner, a multi-family building, with a 50 kW PV system receiving a lease payment at the monthly rate of $5 per kW installed would receive $3,000 per annum or $60,000 over the 20-year lease period. The on-site solar system would be sized no larger than the on-site load of the multi-family complex, but must be at least 50 kW. Further benefits would be provided to residents, as well as to building owners (in the case of common area accounts) and homeowner associations ("HOAs"), in the form of bill credits for generation produced by the on-site solar PV system.

The MF Program would target multi-family complexes with at least 25 units since there is a high concentration of buildings of this size within the Disadvantaged Communities located in SDG&E's service territory. These buildings continue to have very low numbers of solar adoption or participation in the NEM program. The MF Program is designed to meet specific challenges that have remained in this segment in a manner that complements the existing MASH program within the CSI. The MF Program addresses the obstacles faced by building owners who are financially unable to adopt rooftop solar due to the specific challenge of economics without a full incentive to do so, or that elect not to install rooftop solar because they may have to replace the roof within the next 20 years.

The need to eliminate such obstacles is particularly apparent in multi-family housing context, where the building owner typically does not pay for the electric service of the tenants

and therefore has little incentive to install a solar PV system. The MF Program leverages the utility's unique position and ability to overcome these barriers. The key to the program's success is SDG&E's ability to utilize utility-specific expertise and economies of scale in order to:

1) Keep costs at a reasonable level and below the costs contemplated in most marketplace business models for administration and overhead, as well as using a lower cost of capital and competitively bidding services;

2) Manage numerous and large projects in order to install significant numbers of MWs while optimizing safety; and

3) Offer long-term financial stability in order to make the Program viable over the longer term.

SDG&E proposes that the MF Program be allocated 75% of the total $50 million proposed to fund the Disadvantaged Communities Proposal, with 25% allocated to the Schools Program (described below). If further proposes that this 75% allocation be increased to 100% if the uptake of the Schools Program is low.

SDG&E's second disadvantaged communities program, its Schools Program, is similar in many respects to the MF Program, but focuses on school campuses as a location for utility-owned solar PV systems. The Schools Program envisions placement of utility-owned solar PV systems at public K-12 school locations in Disadvantaged Communities for the benefit of (i) the schools, which would receive lease payments for use of the school premises; and (ii) local low-income residents, who would receive bill credits for the generation produced on-site at the school. SDG&E recognizes the challenging circumstances faced by many public schools, in particular their lack of resources and limited budgetary control, as well as the special role that schools play within the community. Developing a partnership with schools in Disadvantaged Communities is an effective means of furthering goal of increasing solar adoption in Disadvantaged Communities and, more generally, of ensuring universal access and achievement of the State's clean energy goals.

The Schools Program has many of the same program features as the MF Program. SDG&E would pay a lease payment to the school building owner, typically the school district, for the rooftop space (or other suitable area) occupied by the solar PV system based upon the size of the roof (or other suitable area) and the PV system. SDG&E proposes a lease payment of $5.00 per kW, paid annually for 20 years from the system in-service date. In terms of quantifying the benefit to the school, as an illustrative example, a school, with a 100 kW PV system receiving a lease payment at the monthly rate of $5 per kW installed would receive $6,000 per annum or $120,000 over the 20-year lease period. The on-site solar system would be sized no larger than the host school's on-site load, but must be at least 100 kW.

Compensation for the energy generated on-site would be in the form of bill credits to local low income-qualified residents within the same census tract (residential customer may reside in either a single or multi-family home so long as they are not already a participants in the MF Program). Generation would be separately metered and all energy generated on-site would be credited at a rate consistent with the Exported Energy rate set forth SDG&E's Sun Credits NEM successor tariff option, currently proposed as the system average commodity rate. Credited generation would be allocated and presented as bill credits for the building owner and tenants at that site. The building owner would receive an allocation of the generation credit for common area energy accounts, not to exceed 5% of the total energy generated on-site and not to exceed 100% of common area energy usage.

SDG&E proposes that the Schools Program be allocated 25% of the $50 million proposed for the total Disadvantaged Communities Program.

### *B. Eligibility Criteria*

#### 1. MF Program

For the MF Program, the host of the generating system (the "Host Customer") would be either the building owner of an apartment complex, or the collective building owners of a condominiums complex that is operated through a HOA. Buildings must have 25 units and/or a minimum installed capacity of 50 kW. SDG&E must determine, in its sole discretion, that the proposed customer site is suitable for PV installation – installation sites may include rooftops, existing carport structures or an area that would allow erection of a new freestanding carport structure. SDG&E would also evaluate whether a location site would offer the additional benefit of accommodating electric vehicle car charging stations under other eligible programs. SDG&E would determine where on the property the solar PV will be installed. Building owners would be required to implement, or have implemented within the prior three years, audits for energy efficiency ("EE") for the complexes being considered for this Program, using the same criteria as the MASH program.

Customers eligible to receive bill credits for on-site generation would include building owners/HOAs and current residents of multi-family structures participating in the MF Program, including the tenants of such rental properties, as well as owner-occupiers. Building owners, HOAs and tenants must be eligible customers of SDG&E with no other PV system on-site or any other renewable generation interconnected under Electric Rule 21. The accounts eligible for the bill credit would include those that cover common areas, outdoor lighting and HOA accounts, in addition to all of the accounts of the residents within the complex. Master metered customers would not be eligible due to meter constraints.

Taking into account stakeholder feedback SDG&E received regarding eligibility for the MF Program, SDG&E proposes that for the first three years of the MF Program, it would reserve 25% of the MF Program budget for complexes with 20% of its occupants being low-income residents defined as currently defined in the MASH program.[5/] In years four and five of the MF Program, any portion of that unused reserved capacity for low-income units would be made available to the other building owners meeting the rest of the eligibility criteria. Otherwise, SDG&E proposes to enroll building owners on a first-come, first-served basis, subject to buildings meeting all other criteria for eligibility. Pending review of the circuit analysis in the Disadvantaged Communities located in SDG&E's service territory, SDG&E may prioritize marketing to the areas where particular grid needs are identified that might be served with the installation of the PV.

**2. Schools Program**

For the Schools Program, the building owner must be a public school or school district, offering some combination of grades Kindergarten through 12th grade and must be located in a Disadvantaged Communities. The proposed customer site must have suitable space and location to successfully site a PV system, with a minimum system size of100 kW. SDG&E anticipates working collaboratively with school districts in order to identify schools where benefits might be optimal for both the school and the local residents. When siting the PV system on school premises, a preference would be given to installation in parking lots or solar canopies in order to mitigate potential roof issues.

Eligibility to receive the bill credit for the solar energy generated on-site is limited to residential customers (in single family or multi-family dwellings) residing in the same census tract as the school. Residents must be low-income, using the definition applied in the CSI's

5/ CPUC California Solar Initiative Program Handbook, August 2014, p. 21.

MASH and Single Family Affordable Solar Homes ("SASH") programs (for multi-family and single family residents, respectively). Residents would receive a bill credit based upon energy output from the school's PV system on a first-come, first-served basis. Each household's bill credit would be capped at an amount equivalent to 2 kW of the solar system for the 20-year participation period (or until the resident leaves the relevant Disadvantaged Community). . Thus, the number of residential customers that benefit from each school's solar installation would depend upon the size of the particular solar installation. For example, a solar installation sized at 100 kW would allow 50 residential customer accounts to participate in the program and receive a bill credit for the on-site generation produced. Once the limit is reached on the number of households that may receive bill credits from a particular school's installation, no new households may be enrolled to receive generation credits for the relevant school. A waitlist may be created by SDG&E in order to ensure that the credits for on-site generation are fully allotted.

Of the total proposed budget of $50 million for the Disadvantaged Communities Program, 25% would be reserved for the Schools Program. Similar to the MF Program low-income allocation, if this budget reservation of 25% is not subscribed by the end of year three of the Schools Program, the budget allocation, all or part, may be used in the MF Program, to the extent demand exists.

**3. Definition of Disadvantaged Communities**

SDG&E proposes to define "Disadvantaged Communities" for purposes of the MF Program and Schools Program as locations that are within the top 20% of census tracts within SDG&E's service territory that are designated as "disadvantaged communities" by the California Environmental Protection Agency's ("Cal EPA's") California Communities Environmental

Health Screening tool ("CalEnviroScreen 2.0"). The Energy Division Staff Paper, similarly, proposed use of this tool.[6/]

SDG&E notes that the CalEnviroScreen tool is also being used within the Green Tariff Shared Renewables ("GTSR") Program approved by the Commission in D.15-05-051.[7/] Therefore, SDG&E is not opposed to using it for the Disadvantaged Communities Programs at this time, but recognizes that other tools may be developed in the future.

**4. System Installation and Lease Payments**

For both Programs, SDG&E proposes to require that solar PV systems be located on the customer's property and be sized no larger than the aggregated annual consumption of the benefitting customer's customer accounts, or the NEM system size interconnection limit, if any, adopted by the Commission (currently 1MW), whichever is smaller. Systems may be located wherever suitable on the building owner's premise, at SDG&E's discretion, which may include rooftops, parking lots, carport roofs (new or existing) or on the ground, so long as areas are safe, protected and deemed by SDG&E to be appropriate for use.

For the MF Program, SDG&E may deploy a portion or all of the system in the form of freestanding carports. In this case, building owners would not be eligible to receive payment for uninstallation/re-installation of the system. In the event that SDG&E deploys freestanding carports, every effort would be made to design the system in a way that would facilitate the addition of electric vehicle ("EV") charging infrastructure under other EV programs. There may be specific requirements imposed related to optimizing PV location or orientation based on system needs, or other criteria as determined by SDG&E.

---

6/ Staff Paper, pp. 2-4.

7/ For the GTSR Program, the Commission directed the utilities to identify the top 20% most impacted communities using CalEnviroScreen. The GTSR program includes a requirement to address environmental justice issues, as well as low-income disparity. The NEM program does not include these requirements. *See* D.15-01-051, *mimeo*, pp. 52-54.

In addition, as discussed below, the utility-owned solar PV systems involved in the Programs would be installed by SDG&E vendors selected through a competitive bidding process open to rooftop solar market participants. SDG&E believes that competitively bidding the PV systems and installation work to include local contractors and union shops may potentially provide scaling and other expertise benefits, as well as local employment opportunities. Installing qualifying PV systems in Disadvantaged Communities can provide local economic development benefits while advancing the State's clean energy policies, which ultimately benefits all customers.

With regard to lease payments, SDG&E proposes that lease payments to building owners be based equitably on the size of the PV system being installed. SDG&E proposes to pay building owners $5.00 per kW, per month, paid out annually in order to reduce the amount of administration required to support these payments.

**5. Credit Allocation**

For the MF Program, all energy generated on-site would be credited at a rate consistent with the Exported Energy rate included in SDG&E's Sun Credits option under its successor NEM tariff. Credit for the on-site generation would be allocated to residents and the building owner/HOA, and presented in the form of a bill credit on customers' monthly bill. Under this program, customers would receive the benefit of solar generation without needing to have solar physically installed on their rooftop, consistent with the mechanics of SDG&E's Virtual Net Metering (NEM-V), the details of which are addressed in Attachment A. The benefitting customers would receive a fixed allocation of the generation benefits. There would be no change to the customer's utility services which would continue to be served on the customers' OAT.

The building owner would submit a list of all benefitting units and the pre-determined portion of the total system generation to be allocated to them. Allocation would be based on unit size, number of bedrooms or some other equitable split to protect tenants' privacy, similar to what is used in the MASH program. SDG&E would make allocations to the corresponding meters associated with the identified units. A credit allocation would also be available to the building owner or HOA for common area accounts, based on an assessment of their site and accounts, with the credit not to exceed 5% of the total credited to all of the accounts at the site. SDG&E would leverage the back office processes of its Virtual Net Metering in order to standardize processes and manage costs.

For the Schools Program, the same process would be used to determine the rate at which on-site generation is credited, and to allocate the bill credits associated with the generation produced on-site. The bill credit would be provided to low-income eligible residential customers benefitting from the Schools Program (participating schools would not receive a bill credit).

**6. Program Elements**

**(a) Program Administration**

SDG&E proposes that it act as program administrator for the Programs. First, the generation will be sited, owned, controlled and maintained by SDG&E in order to optimize the generation for the greatest system benefits. The benefit of utility ownership in the siting and operation of distributed generation ("DG") is clear. As the Edison Electric Institute ("EEI") has explained, "[e]xperience has shown that utility participation, input, visibility, and control over the assets connected to the utility's transmission and distribution system is essential for optimal

siting and efficient operation of DG facilities, including solar."[8/] This control by the utility becomes even more important as the level of solar DG adoption increases. As EEI has observed, "as penetration of solar DG increases, the challenges in operating the electric grid to maintain safety and reliability mount and it is critical for a utility to be able to manage the solar DG assets connected to its system for the benefit of all customers."[9/]

Moreover, since the Programs contemplate that the solar PV systems will be owned and maintained over several years by SDG&E, it is preferable from a logistics and customer service standpoint that SDG&E maintain the relationship with the building owner, customers and the customer sites. SDG&E prides itself on its prioritization of safety, and will apply that value to these Programs as it owns, operates and maintains the PV systems.

Finally, SDG&E is well-positioned to market the Programs to Disadvantaged Communities in its service territory. SDG&E already markets its EE and customer assistance programs to these communities – these programs are key marketing segment "overlaps" with the MF and Schools Programs. SDG&E submits that a fully-integrated marketing approach will be optimal in order to realize the greatest amount of integrated demand-side management benefits possible, while minimizing administrative costs.

**(b) Marketing**

SDG&E proposes a Marketing, Education and Outreach ("MEO") plan intended to reach property owners, and to also offer an appropriate level of follow-up, outreach and education to tenants and residents on program benefits after a contract is signed with a building owner. The primary targets of the MEO plan are the schools and multi-family property owners in the

---

[8/] *Comments of the Edison Electric Institute On Net Benefits and Costs of Distributed Solar Energy and Innovative Solar Deployment,* p. 4. Available at: http://www.eei.org/issuesandpolicy/testimony-filings-briefs/Documents/140228ComerDoeSolarDeploymentModels.pdf.

[9/] *Id.*

identified Disadvantaged Communities. At present, based on preliminary evaluation, SDG&E estimates that there are between 600 and 700 complexes in the census tracts identified by the CalEnviroScreen 2.0 tool consistent with SDG&E's proposed definition of "Disadvantaged Communities" that may be of a size over 25 units, although not all of these locations will be suitable candidates for solar. SDG&E has also identified approximately 100 schools that are in the qualifying census tracts.

The objective of the MEO plan would be to leverage existing SDG&E relationships and to build new relationships to engage building owners, school districts and other stakeholders in Disadvantaged Communities to raise awareness, understand concerns or outstanding issues, and secure participation in the most effective programs possible. The specific strategies SDG&E plans to use to attain the objective include the following:

- Develop targeted communications to reach key decision makers
- Deploy SDG&E account executives to engage property management companies and school districts
- Leverage existing outreach tactics to trade associations through SDG&E's business outreach team and multi-family and school subject matter experts
- Conduct extensive stakeholder outreach in order to capture any outstanding issues or concerns from the communities or its residents

The specific tactics and marketing channels SDG&E plans to use to support the strategies of the MEO plan are as follows:

- Direct mail and e-mail to the known multi-family units and schools in the top 20% CalEnviroScreen 2.0 tool census tracts in SDG&E's service territory to support participation recruitment initially
- Follow up with residential customers served by the Energy Savings Assistance ("ESA") program in particular, as identified in the census tracts identified in the CalEnviroScreen 2.0 tool, for Integrated Demand Side Management ("IDSM") opportunities as well as further customer engagement

- One-on-one outreach with appropriate associations (*e.g*. school districts, Housing Federation, California Apartment Association, San Diego Housing Commission, San Diego County Apartment Association)
- Collateral, including in-language materials
- Website information

SDG&E believes that there are also opportunities with both Programs to leverage and optimize existing outreach efforts to ensure comprehensive EE, rate, program and renewable education and messaging to customers in line with the goals of the Commission's Integrated Demand Side Management ("IDSM") rulemaking (R.14-10-003). The purpose of the IDSM rulemaking is to develop methods for integrating demand-side program offerings to achieve maximum energy savings without duplicating efforts and while reducing transaction costs.[10/] The Commission has observed in that context that "each customer touch point can result in a significant amount of time and resources, and these separate touches may not take advantage of resource synergies or allow customers to optimize their energy management solutions across the different demand-side resources choices available to them."[11/] To address this concern, SDG&E currently uses an integrated approach to marketing its programs and rates, combining messaging to maximize the impact or education offered at each customer "touch point" in order to introduce the customer to additional ways they can save energy and money. The Programs proposed herein both present excellent opportunities to combine customer education and marketing on SDG&E's rates, EE, programs for low-income qualified customers, renewable energy and the like for the greatest impact, in alignment with the Commission's IDSM goals.

---

[10/] *Order Instituting Rulemaking to Create a Consistent Regulatory Framework for the Guidance, Planning and Evaluation of Integrated Demand-Side Resource Programs*, issued October 2, 2015 in R.14-10-003, p. 2.

[11/] *Id*. at p. 3.

SDG&E envisions a relatively conservative budget for the marketing plan, totaling $400,000. Expenses during the first five years of the Disadvantaged Communities Program would include message creation, email and direct mail pieces to building owners, HOAs and schools in the targeted census tracts to attract initial participation. Additionally, SDG&E envisions the need for an educational component for up to 20 more years (the life of the Program) to explain the benefits, bill credits and other program mechanics to the building tenants of participating buildings, as well as the low-income single-family and multi-family residential customers likely to qualify as beneficiaries of the Schools Program. This effort will also support educating new tenants who move into participating buildings and new low-income residential customers within the census tracts of participant schools over the entire life of the Disadvantaged Communities Program.

***Table 1 – Marketing, Education and Outreach (MEO) Costs***

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 – 25 | Totals |
|---|---|---|---|---|---|---|---|
| **Labor** | **$ 34,500.00** | **$ 21,300.00** | **$ 15,400.00** | **$ 15,400.00** | **$ 15,400.00** | **$ 153,000.00** | **$ 255,000.00** |
| **Direct Mail** | **$ 15,000.00** | **$ 15,000.00** | **$ 5,000.00** | **$ 5,000.00** | **$ 5,000.00** | **$ 22,500.00** | **$ 67,500.00** |
| **Email** | **$ 1,000.00** | **$ 1,000.00** | **$ 1,000.00** | **$ 1,000.00** | **$ 1,000.00** | **$ 15,000.00** | **$ 20,000.00** |
| **Collateral** | **$ 10,000.00** | **$ -** | **$ 3,500.00** | **$ -** | **$ 3,500.00** | **$ 20,000.00** | **$ 37,000.00** |
| **Web Updates** | **$ 1,000.00** | **$ -** | **$ 1,000.00** | **$ -** | **$ 1,000.00** | **$ 7,500.00** | **$ 10,500.00** |
| **Admin.** | **$ 500.00** | **$ 500.00** | **$ 500.00** | **$ 500.00** | **$ 500.00** | **$ 7,500.00** | **$ 7,500.00** |
| **TOTALS** | **$ 62,000.00** | **$ 37,800.00** | **$ 26,400.00** | **$ 21,900.00** | **$ 26,400.00** | **$ 225,500.00** | **$ 400,000.00** |

For the MEO costs reflected in the table above, SDG&E proposes to use the services in the labor category for partial time for one (1) Senior Market Advisor, one (1) Senior Communications Advisor, and one (1) Account Executive/Outreach Advisor to service the MEO activities of this Program.

**(c) Utility Ownership**

SDG&E proposes that the PV systems involved in the Disadvantaged Communities Program be sited, owned, controlled, maintained and rate-based by the utility. SDG&E would issue a Request for Proposals ("RFP") upon Commission approval of its Disadvantaged Communities Program to gather offers from potential vendors for the materials and installation of PV systems.

**(d) Termination Fees**

For both Programs, SDG&E proposes an early termination fee for building owners who terminate program participation prior to conclusion of the 20-year life of the system. This early termination fee is designed to ensure that there is an incentive to remain in the program and provides a protection to ratepayers for sunk costs. SDG&E proposes that the termination fee be equal to 50% of SDG&E's costs of uninstalling the system, regardless of what year of the contract the building owner elects to opt out. HOAs would not be able to terminate the contract prior to conclusion of the 20-year term for systems in townhomes or condominium complexes.

**(e) Program Costs**

SDG&E proposes a total budget for the Disadvantaged Communities Program (for both the MF and Schools Programs) not to exceed $50 million over 25 years. Initial cost categories for the Programs include capital for PV installations and information technology ("IT"), as well as Operations and Maintenance ("O&M") for lease fees to building owners that would extend 20 years from the in-service date of the PV systems. Other O&M costs will also include program administration and marketing, which SDG&E proposes should be capped at 10% of the total costs and not to exceed $5 million over the entire life of the Disadvantaged Communities Program.

***Table 2 – Capital Costs***

| **Capital Costs** | | | | | | | |
|---|---|---|---|---|---|---|---|
| (includes escalation, loaders, and sales tax) | | | | | | | |
| *(in $MM)* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022-2042 | Total |
| Equipment & EPC | $ 1.29 | $ 2.58 | $ 6.44 | $ 9.02 | $ 6.44 | $ - | $ 25.78 |
| Self Developed Software | $ 2.04 | - | - | - | - | - | $ 2.04 |
| **Total Capital Costs** | **$ 3.33** | **$ 2.58** | **$ 6.44** | **$ 9.02** | **$ 6.44** | **$ -** | **$ 27.82** |

***Table 3 – O&M Costs***

| **O&M Costs** | | | | | | | |
|---|---|---|---|---|---|---|---|
| (includes escalation, loaders, and sales tax) | | | | | | | |
| *(in $MM)* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022-2042 | Total |
| Marketing | $ 0.08 | $ 0.08 | $ 0.08 | $ 0.08 | $ 0.08 | - | $ 0.40 |
| Program Management | $ 0.11 | 0.11 | $ 0.11 | $ 0.11 | $ 0.11 | $ 2.02 | $ 2.56 |
| Periodic Equipment Maintenance Costs | $ 0.01 | $ 0.04 | $ 0.10 | $ 0.19 | $ 0.26 | $ 4.90 | $ 5.50 |
| Roof Lease Payment to Owner | $ 0.02 | $ 0.06 | $ 0.15 | $ 0.29 | $ 0.38 | $ 6.78 | $ 7.68 |
| Replace Inverter Year 10 | - | - | - | - | - | $ 3.22 | $ 3.22 |
| One-time Uninstall/Reinstall | $ 0.12 | $ 0.12 | $ 0.12 | $ 0.12 | $ 0.12 | $ 2.23 | $ 2.82 |
| **Total O&M Costs** | **$ 0.34** | **$ 0.40** | **$ 0.56** | **$ 0.79** | **$ 0.95** | **$ 9.15** | **$ 22.18** |

***Table 4 – Total Capital and O&M Costs***

| **Capital and O&M Costs** | | | | | | | |
|---|---|---|---|---|---|---|---|
| (includes escalation, loaders, and sales tax) | | | | | | | |
| | | | | | | | |
| *(in $MM)* | 2017 | 2018 | 2019 | 2020 | 2021 | 2022-2042 | Total |
| | - | - | - | - | - | - | - |
| Equipment & EPC | $ 3.33 | $ 2.58 | $ 6.44 | $ 9.02 | $ 6.44 | $ - | $ 27.82 |
| O&M | $ 0.34 | $ 0.40 | $ 0.56 | $ 0.79 | $ 0.95 | $ 19.15 | $ 22.18 |
| **Total Project Costs** | **$ 3.67** | **$ 2.98** | **$ 7.01** | **$ 9.81** | **$ 7.39** | **$ 19.15** | **$ 50.00** |

### (f) Cost Recovery

SDG&E's proposed Disadvantaged Communities Program will require additional funding. SDG&E proposes to track costs as well as revenues from termination fees using specific internal orders per SDG&E's standard accounting practices. SDG&E requests establishment of a new balancing account, to be called the Solar for Disadvantaged Communities Balancing Account ("SDCBA"), for treatment of these costs and revenues, including both the capital and O&M as described above. SDG&E requests that the Commission order it to file a Tier 1 advice letter and corresponding new Preliminary Statement for the balancing account within a reasonable time after Commission approval of SDG&E's Disadvantaged Communities Program in order to establish the cost recovery mechanism as described herein.

SDG&E proposes to recover the costs of the Disadvantaged Communities Program from all customers excluding residential customers and public K-12 schools located within the Disadvantaged Communities census tracts identified for this Program. In addition, given that the Disadvantaged Communities Proposal furthers State and Commission goals related to universal access and protection of Disadvantaged Communities, SDG&E proposes that the costs of the

program be recovered through a separate line item on customer bills through the Public Purpose Program ("PPP") component.

With a Program budget capped at $50 million, the revenue requirement is calculated to be $71.5 million over 25 years.

***Table 5 – Revenue Requirement***

| **Annual Revenue Requirement ($MM)** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *(in $MM)* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022-2042 | Total |
| | - | - | - | - | - | - | - | - |
| Depreciation: | $ 0.17 | $ 1.94 | $ 0.17 | $ 0.46 | $ 0.95 | $ 1.43 | $ 29.17 | $ 34.30 |
| O&M: | $ - | $ 0.34 | $ 0.40 | $ 0.56 | $ 0.79 | $ 0.95 | $ 19.15 | $ 22.18 |
| Return on Common: | $ 0.01 | $ 0.08 | $ 0.13 | $ 0.34 | $ 0.68 | $ 0.95 | $ 5.65 | $ 7.84 |
| Return on Preferred: | $ 0.00 | $ 0.00 | $ 0.00 | $ 0.01 | $ 0.02 | $ 0.03 | $ 0.18 | $ 0.25 |
| Return On Debt: | $ 0.00 | $ 0.03 | $ 0.05 | $ 0.14 | $ 0.29 | $ 0.40 | $ 2.39 | $ 3.31 |
| Property Taxes: | $ - | $ 0.01 | $ 0.02 | $ 0.03 | $ 0.09 | $ 0.18 | $ 1.78 | $ 2.11 |
| Federal Taxes: | $ 1.16) | $ 1.37 | $ (0.14) | $ 0.12 | $ 0.24 | $ 0.37 | $ (2.83) | $ (2.04) |
| State Taxes: | $ (0.29) | $ 0.31 | $ (0.06) | $ (0.11) | $ (0.20) | $ (0.24) | $ 1.21 | $ 0.62 |
| FF&U: | $ (0.04) | $ 0.14 | $ 0.02 | $ 0.06 | $ 0.11 | $ 0.15 | $ 2.13 | $ 2.57 |
| Working Capital: | $ - | $ 0.01 | $ 0.01 | $ 0.01 | $ 0.01 | $ .02 | $ 0.31 | $ 0.36 |
| **Revenue Requirement** | **$ (1.31)** | **$ 4.24** | **$ 0.60** | **$ 1.64** | **$ 2.97** | **$ 4.23** | **$ 59.14** | **$ 71.50** |

Table 6 below provides illustrative rate impacts by customer class of SDG&E's Disadvantaged Communities Proposal for 2017, the anticipated first year of implementation. A typical non-CARE residential customer living in the Inland climate zone and using 500 kilowatt-

hours per month under the current residential rate structure could experience a monthly summer bill increase of 0.1%, or $0.09, from a current monthly bill of $104.87 to $104.96.[12/]

***Table 6 – Illustrative 2017 Proposed Rate Impacts***

| Customer Class | Class Average Rates Effective 5/1/15 | 2017 Proposed Class Average Rates | Total Rate Change | Percentage Rate Change |
|---|---|---|---|---|
| | | | | |
| | ¢/kWh | ¢/kWh | ¢/kWh | % |
| | | | | |
| ( a ) | ( b ) | ( c ) | ( d ) | ( e ) |
| | | | | |
| Residential | 22.651 | 22.672 | 0.021 | 0.09% |
| | | | | |
| Small Commercial | 24.653 | 24.674 | 0.021 | 0.09% |
| | | | | |
| Med & Lg Commercial/Industrial | 19.529 | 19.55 | 0.021 | 0.11% |
| | | | | |
| Agriculture | 17.642 | 17.663 | 0.021 | 0.12% |
| | | | | |
| Street Lighting | 18.062 | 18.083 | 0.021 | 0.12% |
| | | | | |
| System Total | 21.154 | 21.175 | 0.021 | 0.10% |

### (g) Renewal and Program Adjustments

At the beginning of the fifth year of the five-year program period (or when the program is fully subscribed, if prior to the conclusion of the five-year period), SDG&E proposes that it have the option to request an extension of the MF Program and/or the Schools Program through the filing of a Tier 3 Advice Letter. SDG&E proposes further that it be permitted at any time during the program period to request changes to the Disadvantaged Communities Program through the filing of a Tier 2 Advice Letter in order to respond to market changes or Commission guidance

[12/] Based on current effective rates. *See* AL 2733-E.

regarding the Program, based on evaluation and reporting results, or to make other necessary program revisions.

## IV. SDG&E's PROPOSED PROGRAM ADDRESSES BARRIERS TO ADOPTION OF ROOFTOP SOLAR IN DISADVANTAGED COMMUNITIES

### *A. Economic and Property Ownership Barriers*

SDG&E is committed to the "greening" of Disadvantaged Communities. With that goal in mind, SDG&E has proactively met with and sought feedback from community partners and other external stakeholders in order to understand the barriers that currently exist to solar adoption, and incorporated their input to develop innovative solutions that remove such barriers and benefit customers in Disadvantaged Communities.

Many low-income residential customers in California are renters. Many also live in multi-family housing. These tenancy arrangements commonly present barriers to adoption of solar PV. Purchase of solar PV systems, either by the HOA in the case of condominiums or by the building owner of a multi-family housing complex, is often cost-prohibitive in Disadvantaged Communities where those costs would be passed on to residents, either in the form of higher HOA fees or higher rents for lower-income residents. In addition, building owners may lack incentive to install solar PV systems that do not provide them with a direct benefit.

SDG&E's MF and Schools Programs provide building owners with an incentive to install rooftop solar, where little incentive exists today. The MF Program offers lease fee income to building owners, allows building owners to offer an attractive amenity to tenants at no cost and provides a bill credit for common area accounts. This program overcomes the economic as well as ownership barrier for residents of multi-family units. Absent this incentive, the building owner has very little and often no motivation to install rooftop solar, regardless of MASH

incentives. SDG&E's MF Program is designed to complement the MASH program and strengthen the overall ratepayer funded portfolio of customer offerings for solar.

The Schools Program offers local residents an attractive credit as well, without the economic or property requirements associated with installing PV themselves. In addition, the Schools Program benefits the public interest to the extent that it helps to alleviate the challenging circumstances faced by public schools located in Disadvantaged Communities, providing schools with a stable and dependable source of revenue over a 20-year period.

### *B. Property Structure Barriers*

A significant barrier to PV in Disadvantaged Communities often is the aging housing stock and its condition, particularly with respect to roof quality. These proposed Programs seek to target building owners with a no-cost solar option that provides a lease fee as compensation, and generation credits to local residents. SDG&E suggests that these Programs support an overall increase in "pride of ownership" by building owners, who will have units for rent that are much more attractive to tenants. Additionally, the condition of the roof is taken into account, but the need for a new roof within any given time frame is not an obstacle for the building owner who wishes to participate and may be deterred from replacing the roof due to the PV installation. The Programs proposed offer a one-time system removal and re-installation for the purposes of allowing the building owner to replace the roof, if needed.

### *C. Marketing, Outreach and Linguistic Barriers*

SDG&E is able to market these attractive Programs directly to the targeted multi-family complexes and schools identified in the CalEnviroScreen 2.0 tool. Additionally, SDG&E has vast experience marketing its customer assistance programs where economic and linguistic barriers may exist, especially in Disadvantaged Communities. Therefore, SDG&E is well positioned to offer the customer education associated with this proposal for the participating

residential customers. Additionally, SDG&E has a strong existing network of industry associations as well as Community Based Organizations ("CBOs") and partners that can be leveraged to market the offerings both efficiently and effectively. These Programs also bypass any need for private financing in a community that often experiences predatory lending, or where financing is offered at higher interest rates while leveraging the stability of the utility as well as its access to capital, in order to benefit these communities.

***D. Contrast to Staff Paper Proposals in Addressing Barriers***

SDG&E appreciates the thoughtful and thorough analysis included in the Energy Division Staff Paper. It notes, however, the existence of certain practical issues that would likely limit participation in the programs proposed therein. The Neighborhood Virtual NEM proposal is creative, for example, but does not show a clear path forward. It is not apparent why a host customer under that proposal would elect to install solar and allocate the generation to third parties, except possibly in the case of schools as proposed herein by SDG&E, which are looking for all avenues possible to increase their budgets. The financing arrangements for PV could be confusing or even predatory. The recourse available in the event of default is also not clear. Staff states that "the host customer could be an entity whose mission is to serve the community, and may finance the system itself or through philanthropy."[13/] This may or may not come to fruition and relies heavily on the altruistic nature of an entity that may or may not have the financial ability or desire to offer this to its neighbors.

The Incentive Enhancement proposal is closer to SDG&E's proposal but also falls short of program goals. While SASH and MASH fill a particular gap in the development of the market, increasing funding to these programs does not overcome or remove the many barriers that exist in the current environment. The Staff Paper acknowledges that "the decision to go

[13/] Staff Paper, pp. 2-13.

solar would be the property owner's and not the tenant's."[14/] SDG&E's proposal specifically seeks to address this issue by providing the building owner with sufficient incentive to participate in the program, with very little risk, if any. SDG&E would maintain and operate the solar installation, which alleviates burden for the building owner. The SDG&E proposal provides a lease payment, defrays the cost of the installation and, in the case of the MF Program, provides the building owner a marketing tool for attracting new tenants.

SDG&E's Disadvantaged Communities Proposal is intended to operate as a complement to the MASH and SASH programs – addressing issues that those programs are not designed to resolve. It is a new approach to promoting solar adoption in Disadvantaged Communities that supplements rather than replaces SASH and MASH. While additional funding has been provided to those programs, SDG&E seeks to augment that approach with an attractive offering that will provide an even greater entry of PV into Disadvantaged Communities.

## V. THE PROGRAM DESIGN MEETS THE STATUTORY REQUIREMENTS

SDG&E's Programs meet the statutory requirement for the Disadvantaged Communities program contained in Section 2827.1. Specifically, it will effect an increase in the growth of renewable DG adoption within Disadvantaged Communities.

### *A. Growth*

As noted by Energy Division Staff, there has historically been limited adoption of renewable DG systems by residential customers in CalEnviroScreen-designated disadvantaged communities. Staff notes that only 6% of the capacity installed across the three investor-owned utilities; ("IOUs'") territories is located within these designated disadvantaged communities

[14/] *Id*. at pp. 2-18.

(using the top 25% of communities statewide in the CalEnviroScreen 2.0 tool as their marker). To date, SDG&E has approximately 1.54 MW installed in these areas, or about .6% of its total installations.[15/]

Staff recommends that growth be based on installed capacity and be measured on an annual basis. SDG&E proposes that for purposes of determining compliance with § 2827.1(b)(1), the term "growth" be defined as an increase in the total annual capacity installed by SDG&E within the Disadvantaged Communities located in its service territory, beyond the total annual capacity installed in the year prior to implementation of the Disadvantaged Communities Program. SDG&E agrees with Staff's proposal that subsequent years should be held to the same growth requirement, benchmarking against the year before the alternative was implemented instead of year-over-year growth.[16/] By its design, SDG&E's proposal presents an attractive offering that is likely to garner high participation to achieve the suggested growth requirements.

### *B. Evaluating Costs and Benefits*

SDG&E agrees with Staff that alternatives for Disadvantaged Communities should not be subject in each case to the same requirement as the standard NEM tariff/contract that costs must approximately equal benefits.[17/] SDG&E makes every effort in this proposal to contain costs for the highest degree of benefits possible. Costs for program administration and marketing will be capped at a reasonable 10%, which is lower than market averages for solar installations. Additionally, SDG&E is uniquely situated to utilize finance and regulatory ratemaking to achieve the most benefit for these communities in the most advantageous way. SDG&E's cost of

---

[15/] Staff Paper, pp. 2-7, quoting statistics derived from Staff analysis of responses to data requests to the three IOUs in California in Q1, 2015.

[16/] *Id.,* pp. 2-8.

[17/] *Id.,* pp. 2-15.

capital, currently 6.87%, without a developer fee, is below what is typically available to others in the marketplace. SDG&E proposes to spread program costs across all customers except residential and public K-12 schools in the target census tracts.

SDG&E proposes to credit the renewable energy generated by the utility-owned PV systems towards its Renewable Portfolio Standard ("RPS") goal. Likewise, to the extent it is able to do so, SDG&E proposes to credit the generation produced toward its Resource Adequacy ("RA") requirements.

## VI. PROGRAM MEASUREMENT, EVALUATION AND VERIFICATION

SDG&E proposes to provide semi-annual reports to the Energy Division that would include data for the specific period and also "Program to Date" data regarding (i) the numbers of applications received, approved and systems installed; (ii) the numbers of multi-family complexes and schools in each of those applications; (ii) the number of multi-family units in each complex, where applicable; (iii) the size of each system to be sited or installed (50 kW up to 1 MW); and (iv) the amount of energy generated (kWh) once in service. The report would also include the dollars spent in the period, to date, and by category for a complete picture of the Program metrics.

## VII. LEGAL ISSUES

SDG&E addresses in Attachment A the applicability of PURPA to its proposed successor NEM tariff, as well as the potential personal income tax implications presented by its proposal. Accordingly, it does not repeat that discussion here. SDG&E addresses below consistency of its proposed Disadvantaged Communities proposal with § 399.14 and Commission decisions related to utility ownership of renewable resources.

The Commission has a long history of encouraging utility ownership of renewable resources. Indeed, the State's first Energy Action Plan ("EAP I") describes utility-owned distributed generation as a "key component" of its energy strategy.[18/] The Commission has acknowledged the "unique and important role" played by utility-owned renewable resources ("UORR"), observing that UORR can keep renewable energy prices in check and can bring additional financial resources to bear where the market faces a challenging financial climate.[19/] The Commission has consistently urged the IOUs to consider the feasibility of UORR and to pursue such ownership when and where it makes sense.[20/]

Section 399.14 addresses Commission approval of UORR, and establishes a UORR target of 8.25 percent of anticipated retail sales by December 31, 2020 and thereafter. It further provides that the UORR must utilize a viable technology at a reasonable cost and must provide comparable or superior value to ratepayers when compared to then recent contracts for generation provided by eligible renewable energy resources. It directs the Commission to evaluate the UORR applying traditional cost-of-service ratemaking principles.

As detailed herein, SDG&E's Disadvantaged Communities proposal generally involves siting of utility-owned solar PV generation at schools and multi-family complexes pursuant to a lease agreement between the SDG&E and the building owner. The PV would be installed by SDG&E vendors (selected through a competitive bidding process) and provided at no charge to the building owner. Building owners would be compensated for use of the PV site through monthly lease payments for 20 years. The systems would be maintained and controlled by SDG&E and would be rate-based. All energy generated on site would be valued at the system

---

[18/] EAP I, pp. 7-8. *See also* D.10-09-016, *mimeo*, Finding of Fact 2.
[19/] D.10-04-052, *mimeo*, p. 18.
[20/] *See, e.g*, D. 07-02-011, *mimeo*, p. 25; D.08-02-008, *mimeo*, pp. 32-35.

average commodity rate, consistent with SDG&E's Sun Credits option in its proposed successor NEM tariff, and then allocated as a bill credit to the building owner and tenants (in the case of the MF Program) or other residential customers (in the case of the Schools Program).

The proposal is designed to achieve the objective set forth in § 2827.1(b)(1) regarding development of a NEM successor tariff that "include[s] specific alternatives designed for growth among residential customers in disadvantaged communities," further SDG&E's overarching goal of helping to ensure universal access by all customers to advanced technologies, and meet the requirements of § 399.14 related to UORR. SDG&E addresses alignment of its proposal with the requirements of § 2827.1 in the discussion above. With regard to satisfaction of § 399.14 requirements, SDG&E notes first that the proposed Disadvantaged Communities NEM programs are not expected to exceed the threshold of 8.25 percent of SDG&E's retail sales by December 31, 2020, and thereafter. Secondly, the proposal clearly meets the requirement that the resource in question be an eligible renewable energy resource utilizing a viable technology – rooftop PV is an RPS-eligible, mature technology that has been successfully deployed throughout SDG&E's service territory.

Finally, the proposed programs are designed to meet the requirement under § 399.14 that the UORR "provide comparable or superior value to ratepayers when compared to then recent contracts for generation provided by eligible renewable energy resources." As discussed above, SDG&E proposes to select solar installation vendors through a competitive bidding process open to rooftop solar market participants. This will ensure that the cost of the rooftop solar installations procured through the program is comparable to recent contracts for non-utility-owned rooftop solar.

Section 399.14 further directs the Commission to apply "traditional cost-of-service ratemaking" to UORR. In accordance with this requirement, SDG&E proposes to include the solar installations procured through the program in rate-base, and developed the program costs and its revenue requirement request in a manner consistent with traditional cost of service ratemaking. The provision also directs the Commission to specify the maximum cost determined to be reasonable and prudent for the construction of the facility and the cost of initial operation of the facility. As discussed above, SDG&E proposes a total Disadvantaged Communities Program cap of $50 million, which translates into a revenue requirement of $71.5 million over 25 years. Adoption of this cap will serve to ensure that program expenses include costs that are reasonable and prudent for the installation and operation of the PV included in the program. Accordingly, SDG&E's proposal meets the requirements of § 399.14.

# ATTACHMENT C

***Statutory and Procedural Requirements Related to Request for Authorization to Recover Disadvantaged Communities Program Costs***

# I.
# STATUTORY AND PROCEDURAL REQUIREMENTS

As detailed in Attachment B, SDG&E proposes to invest up to $50 million in a utility-owned solar program intended to ensure solar growth in currently under-served in Disadvantaged Communities. This element of SDG&E's net energy metering ("NEM") proposal is addressed in Attachment B hereto. With a program budget capped at $50 million, the revenue requirement for SDG&E's proposed Disadvantaged Communities Program is calculated to be $71.5 million over 25 years. Program costs would be recovered from all customers, except residential customers and public K-12 schools located in Disadvantaged Communities (using the definition for "disadvantaged communities" adopted in this proceeding). In order to avoid delay in implementation of its Disadvantaged Communities program, SDG&E respectfully requests that the Commission authorize its recovery request in the instant proceeding rather than through a separate, subsequent application proceeding. Inasmuch as the instant filing is intended to take the place of a separate application filing, SDG&E includes in this Attachment C the information that is required under Rules 2.1, 2.2 and 3.1 of the Commission's Rules of Practice and Procedure.

## A. Rule 2.1 (a) – (c)

### 1. Rule 2.1 (a) - Legal Name

SDG&E is a corporation organized and existing under the laws of the State of California. The exact legal name of the Applicant is San Diego Gas & Electric Company. SDG&E is engaged in the business of providing electric service to portions of southern Orange County and electric and gas service in San Diego County. SDG&E's principal place of business is 8330 Century Park Court, San Diego, California 92123.

### 2. Rule 2.1 (b) - Correspondence

Correspondence or communications regarding this filing should be addressed to:

Hannon Rasool
Regulatory Case Manager
San Diego Gas & Electric Company
8330 Century Park Court, CP32D
San Diego, California 92123
Telephone: (858) 654-1185
Facsimile: (858) 654-1788
HRasool@semprautilities.com

with a copy to:

Aimee Smith
Attorney for:
San Diego Gas & Electric Company
8330 Century Park Court, CP32D
San Diego, California 92123
Telephone: (858) 654-1644
Facsimile: (619) 699-5027
AMSmith@semprautilities.com

### 3. Rule 2.1 (c)

#### a. Proposed Category of Proceeding

SDG&E notes that the instant proceeding has been be categorized as ratesetting. Because SDG&E proposes to recover the costs incurred for the Disadvantaged Communities program from its ratepayers, the costs will result in an increase of SDG&E's rates.

#### b. Need for Hearings

SDG&E does not believe that approval of its funding request will require hearings. SDG&E has provided analysis and documentation in support of its authorization request that provide the Commission with a sufficient record upon which to grant the relief requested. It notes, however, that the Commission has previously concluded that hearings may be required in R.14-07-002.

### c. Issues to be Considered

The issues to be considered are whether to approve SDG&E's proposed Disadvantaged Communities proposal and authorize recovery of program costs, as described in Attachment B.

### d. Proposed Schedule

To the extent SDG&E's authorization request raises issues that must be addressed through an evidentiary hearing, SDG&E proposes that such issues be addressed in the hearing held in R.14-07-002 according to the procedural schedule adopted.

## B. Rule 2.2 – Articles of Incorporation

A copy of SDG&E's Restated Articles of Incorporation as last amended, presently in effect and certified by the California Secretary of State, was filed with the Commission on September 10, 2014 in connection with SDG&E's Application No. A.14-09-008, and is incorporated herein by reference.

## C. Rule 3.2 (a) – (d) – Authority to Increase Rates[1/]

In accordance with Rule 3.2 (a) – (d) of the Commission's Rules of Practice and Procedure, SDG&E provides the following information.

### 1. Rule 3.2 (a) (1) – balance sheet

SDG&E's Balance Sheet, Income Statement and Financial Statement for the three-month period ending March 31, 2015 are included as Attachment C.1.

### 2. Rule 3.2 (a) (2) – statement of effective rates

A statement of all of SDG&E's presently effective electric rates can be viewed electronically by accessing www.sdge.com/regulatory/tariff/current_tariffs.shtml. Attachment C.2 to provides the table of contents from SDG&E's electric tariffs on file with the Commission.

---

[1/] Rule 3.2(a) (9) is not applicable to this Application.

### 3. Rule 3.2 (a) (3) – statement of proposed increases

The rate impacts for SDG&E that will result from this Application are described in detail in Attachment B.

### 4. Rule 3.2 (a) (4) – description of property and equipment

SDG&E is in the business of generating, transmitting and distributing electric energy to San Diego County and part of Orange County. SDG&E also purchases, transmits and distributes natural gas to customers in San Diego County. SDG&E has electric transmission, distribution and service lines in San Diego, Orange and Imperial Counties. This includes a composite 92% ownership in the 500,000 volt Southwest Powerlink including substations and transmission lines, which run through San Diego and Imperial Counties to the Palo Verde substation in Arizona. This also includes full ownership of the 500,000 volt Sunrise Powerlink including substations and transmission lines, which run through San Diego and Imperial Counties to the Imperial Valley substation. Gas facilities consist of the Moreno gas compressor station in Riverside County and the Rainbow compressor station located in San Diego County. The gas is transmitted through high and low-pressure distribution mains and service lines.

Applicant's original cost of utility plant, together with the related reserves for depreciation and amortization three-month period ending March 31, 2015, is shown on the balance sheet included as Attachment C.3.

### 5. Rule 3.2 (a) (5) and (6) – summary of earnings

A summary of SDG&E's earnings (for the total utility operations for the company) for the three-month period ending March 31, 2015, is included as Attachment C.4.

### 6. Rule 3.2 (a) (7) – statement re tax depreciation

For financial statement purposes, depreciation of utility plant has been computed on a straight-line remaining life basis, at rates based on the estimated useful lives of plan properties. For federal income tax accrual purposes, SDG&E generally computes depreciation using the straight-line method for tax property additions prior to 1954, and liberalized depreciation, which includes Class Life and Asset Depreciation Range Systems, on tax property additions after 1954 and prior to 1981. For financial reporting and rate-fixing purposes, "flow through accounting" has been adopted for such properties. For tax property additions in years 1981 through 1986, SDG&E has computed its tax depreciation using the Accelerated Cost Recovery System. For years after 1986, SDG&E has computed its tax depreciation using the Modified Accelerated Cost Recovery Systems and, since 1982, has normalized the effects of the depreciation differences in accordance with the Economic Recovery Tax Act of 1981 and the Tax Reform Act of 1986.

### 7. Rule 3.2 (a) (8) – proxy statement

A copy of SDG&E's most recent proxy statement, dated March 26, 2015, as sent to all shareholders of SDG&E's parent company, Sempra Energy, was provided to the California Public Utilities Commission on April 28, 2015, and is incorporated herein by reference.

### 8. Rule 3.2 (a) (10) – statement re pass through to customers

SDG&E's recovery request included in Attachment B will result in an increase in rates for all customers, with the exception of residential customers and public K-12 schools located in Disadvantaged Communities, for the recovery of costs for the Disadvantaged Communities Program.

### 9. Rule 3.2 (b) – notice to state, cities and counties

In compliance with Rule 3.2 (b) of the Commission's Rules of Practice and Procedure, SDG&E will, within ten days after the filing of this document, mail a notice to the State of California and to the cities and counties in its service territory and to all those persons listed in Attachment C.5.

### 10. Rule 3.2 (c) – newspaper publication

In compliance with Rule 3.2 (c) of the Commission's Rules of Practice and Procedure, SDG&E, within ten days after the filing of this document, will post in its offices and publish in newspapers of general circulation in each county in its service territory notice of request.

### 11. Rule 3.2 (d) – bill insert notice

In compliance with Rule 3.2 (d) of the Commission's Rules of Practice and Procedure, SDG&E, within 45 days of the filing of this document, will provide notice of its request to all of its customers along with the regular bills sent to those customers that will generally describe the proposed revenue requirement changes.

## II.
## CONFIDENTIAL INFORMATION

No confidential information is included in this document.

## III.
## SERVICE

SDG&E will serve this document on parties to the service list for R.14-07-002 (Order Instituting Rulemaking to Develop a Successor to Existing Net Energy Metering Tariffs Pursuant to Public Utilities Code Section 2827.1, and to Address Other Issues Related to Net Energy Metering.). Hard copies will be sent by overnight mail to the Assigned Commissioner and Assigned Administrative Law Judge ("ALJ") in R.14-07-002 and Chief ALJ Karen Clopton.

## OFFICER VERIFICATION

I, Caroline A. Winn, declare the following:

I am an officer of San Diego Gas & Electric Company and am authorized to make this verification on its behalf. I am informed and believe that the matters stated in the foregoing **SAN DIEGO GAS & ELECTRIC COMPANY PROPOSAL FOR SUCCESSOR NET ENERGY METERING TARIFF** are true to my own knowledge, except as to matters which are therein stated on information and belief, and as to those matters I believe them to be true.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct to the best of my knowledge.

Executed this 3rd day of August, 2015, at San Diego, California.

*/s/ Caroline A. Winn*
Caroline A. Winn
Chief Energy Delivery Officer
SAN DIEGO GAS & ELECTRIC COMPANY

# ATTACHMENT C.1

***Balance Sheet, Income Statement and Financial Statement***

**SAN DIEGO GAS & ELECTRIC COMPANY**
**BALANCE SHEET**
**ASSETS AND OTHER DEBITS**
**MARCH 31, 2015**

| | 1. UTILITY PLANT | 2015 |
|---|---|---|
| 101 | UTILITY PLANT IN SERVICE | $13,888,198,694 |
| 102 | UTILITY PLANT PURCHASED OR SOLD | - |
| 104 | UTILITY PLANT LEASED TO OTHERS | 85,194,000 |
| 105 | PLANT HELD FOR FUTURE USE | 11,307,728 |
| 106 | COMPLETED CONSTRUCTION NOT CLASSIFIED | - |
| 107 | CONSTRUCTION WORK IN PROGRESS | 745,399,205 |
| 108 | ACCUMULATED PROVISION FOR DEPRECIATION OF UTILITY PLANT | (4,341,219,029) |
| 111 | ACCUMULATED PROVISION FOR AMORTIZATION OF UTILITY PLANT | (458,364,567) |
| 114 | ELEC PLANT ACQUISITION ADJ | 3,750,722 |
| 115 | ACCUM PROVISION FOR AMORT OF ELECTRIC PLANT ACQUIS ADJ | (812,656) |
| 118 | OTHER UTILITY PLANT | 958,512,529 |
| 119 | ACCUMULATED PROVISION FOR DEPRECIATION AND AMORTIZATION OF OTHER UTILITY PLANT | (234,482,149) |
| 120 | NUCLEAR FUEL - NET | - |
| | TOTAL NET UTILITY PLANT | 10,657,484,477 |

| | 2. OTHER PROPERTY AND INVESTMENTS | |
|---|---|---|
| 121 | NONUTILITY PROPERTY | 5,946,616 |
| 122 | ACCUMULATED PROVISION FOR DEPRECIATION AND AMORTIZATION OF NONUTILITY PROPERTY | (364,300) |
| 123 | INVESTMENTS IN SUBSIDIARY COMPANIES | - |
| 124 | OTHER INVESTMENTS | - |
| 125 | SINKING FUNDS | - |
| 128 | OTHER SPECIAL FUNDS | 1,150,445,512 |
| | TOTAL OTHER PROPERTY AND INVESTMENTS | 1,156,027,828 |

**SAN DIEGO GAS & ELECTRIC COMPANY**
**BALANCE SHEET**
**ASSETS AND OTHER DEBITS**
**MARCH 31, 2015**

## 3. CURRENT AND ACCRUED ASSETS

| | | 2015 |
|---|---|---|
| 131 | CASH | 12,803,142 |
| 132 | INTEREST SPECIAL DEPOSITS | - |
| 134 | OTHER SPECIAL DEPOSITS | - |
| 135 | WORKING FUNDS | 500 |
| 136 | TEMPORARY CASH INVESTMENTS | 13 |
| 141 | NOTES RECEIVABLE | - |
| 142 | CUSTOMER ACCOUNTS RECEIVABLE | 241,646,913 |
| 143 | OTHER ACCOUNTS RECEIVABLE | 35,833,872 |
| 144 | ACCUMULATED PROVISION FOR UNCOLLECTIBLE ACCOUNTS | (3,516,287) |
| 145 | NOTES RECEIVABLE FROM ASSOCIATED COMPANIES | 66,213,845 |
| 146 | ACCOUNTS RECEIVABLE FROM ASSOCIATED COMPANIES | 926,962 |
| 151 | FUEL STOCK | 5,706,237 |
| 152 | FUEL STOCK EXPENSE UNDISTRIBUTED | - |
| 154 | PLANT MATERIALS AND OPERATING SUPPLIES | 98,343,046 |
| 156 | OTHER MATERIALS AND SUPPLIES | - |
| 158 | ALLOWANCES | 177,304,021 |
| 163 | STORES EXPENSE UNDISTRIBUTED | - |
| 164 | GAS STORED | 370,952 |
| 165 | PREPAYMENTS | 181,458,995 |
| 171 | INTEREST AND DIVIDENDS RECEIVABLE | 714,576 |
| 173 | ACCRUED UTILITY REVENUES | 58,392,000 |
| 174 | MISCELLANEOUS CURRENT AND ACCRUED ASSETS | 2,569,500 |
| 175 | DERIVATIVE INSTRUMENT ASSETS | 123,240,048 |
| | TOTAL CURRENT AND ACCRUED ASSETS | 1,002,008,335 |

## 4. DEFERRED DEBITS

| | | |
|---|---|---|
| 181 | UNAMORTIZED DEBT EXPENSE | 32,941,942 |
| 182 | UNRECOVERED PLANT AND OTHER REGULATORY ASSETS | 3,580,564,086 |
| 183 | PRELIMINARY SURVEY & INVESTIGATION CHARGES | 5,088,779 |
| 184 | CLEARING ACCOUNTS | 128,035 |
| 185 | TEMPORARY FACILITIES | - |
| 186 | MISCELLANEOUS DEFERRED DEBITS | 49,608,555 |
| 188 | RESEARCH AND DEVELOPMENT | - |
| 189 | UNAMORTIZED LOSS ON REACQUIRED DEBT | 11,487,572 |
| 190 | ACCUMULATED DEFERRED INCOME TAXES | 589,950,886 |
| | TOTAL DEFERRED DEBITS | 4,269,769,855 |
| | TOTAL ASSETS AND OTHER DEBITS | 17,085,290,495 |

**SAN DIEGO GAS & ELECTRIC COMPANY**
**BALANCE SHEET**
**LIABILITIES AND OTHER CREDITS**
**MARCH 31, 2015**

## 5. PROPRIETARY CAPITAL

| | | 2015 |
|---|---|---|
| 201 | COMMON STOCK ISSUED | ($291,458,395) |
| 204 | PREFERRED STOCK ISSUED | - |
| 207 | PREMIUM ON CAPITAL STOCK | (591,282,978) |
| 210 | GAIN ON RETIRED CAPITAL STOCK | - |
| 211 | MISCELLANEOUS PAID-IN CAPITAL | (479,665,368) |
| 214 | CAPITAL STOCK EXPENSE | 24,605,640 |
| 216 | UNAPPROPRIATED RETAINED EARNINGS | (3,755,365,484) |
| 219 | ACCUMULATED OTHER COMPREHENSIVE INCOME | 11,929,808 |
| | TOTAL PROPRIETARY CAPITAL | (5,081,236,777) |

## 6. LONG-TERM DEBT

| | | |
|---|---|---|
| 221 | BONDS | (4,302,505,000) |
| 223 | ADVANCES FROM ASSOCIATED COMPANIES | - |
| 224 | OTHER LONG-TERM DEBT | (223,900,000) |
| 225 | UNAMORTIZED PREMIUM ON LONG-TERM DEBT | - |
| 226 | UNAMORTIZED DISCOUNT ON LONG-TERM DEBT | 12,053,184 |
| | TOTAL LONG-TERM DEBT | (4,514,351,816) |

## 7. OTHER NONCURRENT LIABILITIES

| | | |
|---|---|---|
| 227 | OBLIGATIONS UNDER CAPITAL LEASES - NONCURRENT | (645,989,045) |
| 228.2 | ACCUMULATED PROVISION FOR INJURIES AND DAMAGES | (28,805,702) |
| 228.3 | ACCUMULATED PROVISION FOR PENSIONS AND BENEFITS | (231,824,751) |
| 228.4 | ACCUMULATED MISCELLANEOUS OPERATING PROVISIONS | - |
| 230 | ASSET RETIREMENT OBLIGATIONS | (849,341,444) |
| | TOTAL OTHER NONCURRENT LIABILITIES | (1,755,960,942) |

**SAN DIEGO GAS & ELECTRIC COMPANY**
**BALANCE SHEET**
**LIABILITIES AND OTHER CREDITS**
**MARCH 31, 2015**

## 8. CURRENT AND ACCRUED LIABILITES

| | | 2015 |
|---|---|---|
| 231 | NOTES PAYABLE | 0 |
| 232 | ACCOUNTS PAYABLE | (352,235,840) |
| 233 | NOTES PAYABLE TO ASSOCIATED COMPANIES | - |
| 234 | ACCOUNTS PAYABLE TO ASSOCIATED COMPANIES | (28,204,833) |
| 235 | CUSTOMER DEPOSITS | (72,390,597) |
| 236 | TAXES ACCRUED | (192,995,402) |
| 237 | INTEREST ACCRUED | (56,283,382) |
| 238 | DIVIDENDS DECLARED | - |
| 241 | TAX COLLECTIONS PAYABLE | (4,985,065) |
| 242 | MISCELLANEOUS CURRENT AND ACCRUED LIABILITIES | (211,783,444) |
| 243 | OBLIGATIONS UNDER CAPITAL LEASES - CURRENT | (38,580,814) |
| 244 | DERIVATIVE INSTRUMENT LIABILITIES | (141,658,943) |
| 245 | DERIVATIVE INSTRUMENT LIABILITIES - HEDGES | - |
| | TOTAL CURRENT AND ACCRUED LIABILITIES | (1,099,118,320) |

## 9. DEFERRED CREDITS

| | | |
|---|---|---|
| 252 | CUSTOMER ADVANCES FOR CONSTRUCTION | (46,515,882) |
| 253 | OTHER DEFERRED CREDITS | (323,301,595) |
| 254 | OTHER REGULATORY LIABILITIES | (1,462,351,497) |
| 255 | ACCUMULATED DEFERRED INVESTMENT TAX CREDITS | (20,843,219) |
| 257 | UNAMORTIZED GAIN ON REACQUIRED DEBT | - |
| 281 | ACCUMULATED DEFERRED INCOME TAXES - ACCELERATED | - |
| 282 | ACCUMULATED DEFERRED INCOME TAXES - PROPERTY | (1,969,906,854) |
| 283 | ACCUMULATED DEFERRED INCOME TAXES - OTHER | (811,703,593) |
| | TOTAL DEFERRED CREDITS | (4,634,622,640) |
| | TOTAL LIABILITIES AND OTHER CREDITS | ($17,085,290,495) |

**SAN DIEGO GAS & ELECTRIC COMPANY**
**STATEMENT OF INCOME AND RETAINED EARNINGS**
**THREE MONTHS ENDED MARCH 31, 2015**

## 1. UTILITY OPERATING INCOME

| | | | |
|---|---|---|---|
| 400 | OPERATING REVENUES | | $1,081,681,542 |
| 401 | OPERATING EXPENSES | $632,170,225 | |
| 402 | MAINTENANCE EXPENSES | 27,392,356 | |
| 403-7 | DEPRECIATION AND AMORTIZATION EXPENSES | 139,383,925 | |
| 408.1 | TAXES OTHER THAN INCOME TAXES | 30,637,027 | |
| 409.1 | INCOME TAXES | 29,982,228 | |
| 410.1 | PROVISION FOR DEFERRED INCOME TAXES | 177,645,255 | |
| 411.1 | PROVISION FOR DEFERRED INCOME TAXES - CREDIT | (128,742,715) | |
| 411.4 | INVESTMENT TAX CREDIT ADJUSTMENTS | (771,946) | |
| 411.6 | GAIN FROM DISPOSITION OF UTILITY PLANT | - | |
| | TOTAL OPERATING REVENUE DEDUCTIONS | | 907,696,355 |
| | NET OPERATING INCOME | | 173,985,187 |

## 2. OTHER INCOME AND DEDUCTIONS

| | | | |
|---|---|---|---|
| 415 | REVENUE FROM MERCHANDISING, JOBBING AND CONTRACT WORK | - | |
| 417 | REVENUES OF NONUTILITY OPERATIONS | 2,024 | |
| 417.1 | EXPENSES OF NONUTILITY OPERATIONS | - | |
| 418 | NONOPERATING RENTAL INCOME | 24,034 | |
| 418.1 | EQUITY IN EARNINGS OF SUBSIDIARIES | - | |
| 419 | INTEREST AND DIVIDEND INCOME | 1,335,209 | |
| 419.1 | ALLOWANCE FOR OTHER FUNDS USED DURING CONSTRUCTION | 8,399,044 | |
| 421 | MISCELLANEOUS NONOPERATING INCOME | 113,125 | |
| 421.1 | GAIN ON DISPOSITION OF PROPERTY | - | |
| | TOTAL OTHER INCOME | 9,873,436 | |
| 421.2 | LOSS ON DISPOSITION OF PROPERTY | - | |
| 425 | MISCELLANEOUS AMORTIZATION | 62,512 | |
| 426 | MISCELLANEOUS OTHER INCOME DEDUCTIONS | 247,131 | |
| | TOTAL OTHER INCOME DEDUCTIONS | 309,643 | |
| 408.2 | TAXES OTHER THAN INCOME TAXES | 154,576 | |
| 409.2 | INCOME TAXES | (90,872) | |
| 410.2 | PROVISION FOR DEFERRED INCOME TAXES | 1,680,019 | |
| 411.2 | PROVISION FOR DEFERRED INCOME TAXES - CREDIT | (446,548) | |
| | TOTAL TAXES ON OTHER INCOME AND DEDUCTIONS | 1,297,175 | |
| | TOTAL OTHER INCOME AND DEDUCTIONS | | 8,266,618 |
| | INCOME BEFORE INTEREST CHARGES | | 182,251,805 |
| | EXTRAORDINARY ITEMS AFTER TAXES | | 12,557,074 |
| | NET INTEREST CHARGES* | | 47,618,566 |
| | NET INCOME | | $147,190,313 |

**NET OF ALLOWANCE FOR BORROWED FUNDS USED DURING CONSTRUCTION, ($3,268,054)*

**SAN DIEGO GAS & ELECTRIC COMPANY**
**STATEMENT OF INCOME AND RETAINED EARNINGS**
**THREE MONTHS ENDED MARCH 31, 2015**

## 3. RETAINED EARNINGS

| | |
|---|---|
| RETAINED EARNINGS AT BEGINNING OF PERIOD, AS PREVIOUSLY REPORTED | $3,608,175,171 |
| NET INCOME (FROM PRECEDING PAGE) | 147,190,313 |
| DIVIDEND TO PARENT COMPANY | - |
| DIVIDENDS DECLARED - PREFERRED STOCK | 0 |
| OTHER RETAINED EARNINGS ADJUSTMENTS | 0 |
| RETAINED EARNINGS AT END OF PERIOD | $3,755,365,484 |

**SAN DIEGO GAS & ELECTRIC COMPANY**
**FINANCIAL STATEMENT**
**March 31, 2015**

(a) Amounts and Kinds of Stock Authorized:

| | | | |
|---|---|---|---|
| Common Stock | 255,000,000 | shares | Without Par Value |

Amounts and Kinds of Stock Outstanding:

| | | | |
|---|---|---|---|
| **COMMON STOCK** | 116,583,358 | shares | 291,458,395 |

(b) Brief Description of Mortgage:

Full information as to this item is given in Application Nos. 08-07-029,10-10-023 and 12-03-005 to which references are hereby made.

(c) Number and Amount of Bonds Authorized and Issued:

| First Mortgage Bonds: | Nominal Date of Issue | Par Value Authorized and Issued | Outstanding | Interest Paid in 2015 |
|---|---|---|---|---|
| Var% Series OO, due 2027 | 12-01-92 | 250,000,000 | 150,000,000 | 7,612,500 |
| 5.85% Series RR, due 2021 | 06-29-93 | 60,000,000 | 0 | 0 |
| 5.875% Series VV, due 2034 | 06-17-04 | 43,615,000 | 43,615,000 | 2,562,373 |
| 5.875% Series WW, due 2034 | 06-17-04 | 40,000,000 | 40,000,000 | 2,350,000 |
| 5.875% Series XX, due 2034 | 06-17-04 | 35,000,000 | 35,000,000 | 2,056,250 |
| 5.875% Series YY, due 2034 | 06-17-04 | 24,000,000 | 24,000,000 | 1,410,000 |
| 5.875% Series ZZ, due 2034 | 06-17-04 | 33,650,000 | 33,650,000 | 1,976,938 |
| 4.00% Series AAA, due 2039 | 06-17-04 | 75,000,000 | 75,000,000 | 3,000,000 |
| 5.35% Series BBB, due 2035 | 05-19-05 | 250,000,000 | 250,000,000 | 13,375,000 |
| 5.30% Series CCC, due 2015 | 11-15-05 | 250,000,000 | 250,000,000 | 13,250,000 |
| 6.00% Series DDD. due 2026 | 06-08-06 | 250,000,000 | 250,000,000 | 15,000,000 |
| 1.65% Series EEE, due 2018 | 09-21-06 | 161,240,000 | 161,240,000 | 2,660,460 |
| 6.125% Series FFF, due 2037 | 09-20-07 | 250,000,000 | 250,000,000 | 15,312,500 |
| 6.00% Series GGG, due 2039 | 05-14-09 | 300,000,000 | 300,000,000 | 18,000,000 |
| 5.35% Series HHH, due 2040 | 05-13-10 | 250,000,000 | 250,000,000 | 13,375,000 |
| 4.50% Series III, due 2040 | 08-26-10 | 500,000,000 | 500,000,000 | 22,500,000 |
| 3.00% Series JJJ, due 2021 | 08-18-11 | 350,000,000 | 350,000,000 | 10,500,000 |
| 3.95% Series LLL, due 2041 | 11-17-11 | 250,000,000 | 250,000,000 | 9,875,000 |
| 4.30% Series MMM, due 2042 | 03-22-12 | 250,000,000 | 250,000,000 | 10,750,000 |
| 3.60% Series NNN, due 2023 | 09-09-13 | 450,000,000 | 450,000,000 | 15,840,000 |
| .4677% Series OOO, due 2017 | 03-12-15 | 140,000,000 | 140,000,000 | 0 |
| 1.9140% Series PPP, due 2022 | 03-12-15 | 30,551,353 | 30,551,353 | 0 |
| **Total 1st. Mortgage Bonds:** | | | | **181,406,020** |
| Unsecured Bonds: | | | | |
| 5.30% CV96A, due 2021 | 08-02-96 | 38,900,000 | 38,900,000 | 2,061,700 |
| 5.50% CV96B, due 2021 | 11-21-96 | 60,000,000 | 60,000,000 | 3,300,000 |
| 4.90% CV97A, due 2023 | 10-31-97 | 25,000,000 | 25,000,000 | 1,225,000 |
| **Total Unsecured Bonds** | | | | **6,586,700** |
| **Total Bonds:** | | | | **187,992,720** |

**SAN DIEGO GAS & ELECTRIC COMPANY**
**FINANCIAL STATEMENT**
**March 31, 2015**

| Other Indebtedness: | Date of Issue | Date of Maturity | Interest Rate | Outstanding | Interest Paid 2015 |
|---|---|---|---|---|---|
| Commercial Paper & ST Bank Loans | Various | Various | Various | 245,580,000 | $103,346 |

Amounts and Rates of Dividends Declared:
The amounts and rates of dividends during the past five fiscal years are as follows:

| Preferred Stock | Shares Outstanding 3/31/15 | Dividends Declared 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|
| 5.0% | | $375,000 | $375,000 | $281,250 | $0 | $0 |
| 4.50% | | 270,000 | 270,000 | 202,500 | 0 | 0 |
| 4.40% | | 286,000 | 286,000 | 214,500 | 0 | 0 |
| 4.60% | | 343,868 | 343,868 | 257,901 | 0 | 0 |
| $ 1.70 | | 2,380,000 | 2,380,000 | 1,785,000 | 0 | 0 |
| $ 1.82 | | 1,164,800 | 1,164,800 | 873,600 | 0 | 0 |
| | 0 | $4,819,668 | $4,819,668 | $3,614,751 | $0 | $0 |
| Common Stock | | | | | | |
| Dividend to Parent [1] | | $0 | $0 | $0 | $200,000,000 | $0 |

**NOTE 11 PREFERRED STOCK 10K:**
On October 15, 2013, SDG&E redeemed all six series of its outstanding shares of contingently redeemable preferred stock for $82 million, including a $3 million early call premium (pg 9).

[1] San Diego Gas & Electric Company dividend to parent.

# ATTACHMENT C.2

***Statement of Effective Rates on File with Commission***

# TABLE OF CONTENTS



The following sheets contain all the effective rates and rules affecting rates, service and information relating thereto, in effect on the date indicated herein.



(Continued)

# TABLE OF CONTENTS





(Continued)

# TABLE OF CONTENTS





(Continued)

# TABLE OF CONTENTS



## SCHEDULE OF RATES



(Continued)

# TABLE OF CONTENTS





(Continued)

# TABLE OF CONTENTS



SCHEDULE OF RATES



(Continued)

# TABLE OF CONTENTS





(Continued)

# TABLE OF CONTENTS



SAMPLE FORMS



(Continued)

# TABLE OF CONTENTS



SAMPLE FORMS



(Continued)

# TABLE OF CONTENTS



SAMPLE FORMS



(Continued)

# TABLE OF CONTENTS



## SAMPLE FORMS



(Continued)

# TABLE OF CONTENTS



## SAMPLE FORMS



(Continued)

# TABLE OF CONTENTS



## SAMPLE FORMS

# ATTACHMENT C.3

***Original Cost of Utility Plant, Together With the Related Reserves for Depreciation and Amortization Three-Month Period Ending March 31, 2015***

**SAN DIEGO GAS & ELECTRIC COMPANY**

**COST OF PROPERTY AND**
**DEPRECIATION RESERVE APPLICABLE THERETO**
**AS OF MARCH 31, 2015**

| No. | Account | Original Cost | Reserve for Depreciation and Amortization |
|---|---|---|---|
| | **ELECTRIC DEPARTMENT** | | |
| 302 | Franchises and Consents | 222,841.36 | 202,900.30 |
| 303 | Misc. Intangible Plant | 130,750,032.14 | 44,123,923.34 |
| | TOTAL INTANGIBLE PLANT | 130,972,873.50 | 44,326,823.64 |
| 310.1 | Land | 14,526,518.29 | 46,518.29 |
| 310.2 | Land Rights | 0.00 | 0.00 |
| 311 | Structures and Improvements | 94,373,291.24 | 36,558,156.06 |
| 312 | Boiler Plant Equipment | 166,496,015.17 | 62,428,319.39 |
| 314 | Turbogenerator Units | 131,184,022.25 | 41,460,062.21 |
| 315 | Accessory Electric Equipment | 85,658,938.03 | 29,923,835.25 |
| 316 | Miscellaneous Power Plant Equipment | 41,272,941.25 | 7,853,102.40 |
| | Steam Production Decommissioning | 0.00 | 0.00 |
| | TOTAL STEAM PRODUCTION | 533,511,726.23 | 178,269,993.60 |
| 320.1 | Land | 0.00 | 0.00 |
| 320.2 | Land Rights | 283,677.11 | 283,677.11 |
| 321 | Structures and Improvements | 277,056,869.05 | 271,035,015.47 |
| 322 | Boiler Plant Equipment | 591,918,694.87 | 414,486,820.04 |
| 323 | Turbogenerator Units | 144,904,264.99 | 137,460,463.10 |
| 324 | Accessory Electric Equipment | 173,367,620.53 | 168,082,213.69 |
| 325 | Miscellaneous Power Plant Equipment | 316,952,221.59 | 243,619,477.31 |
| 101 | SONGS PLANT CLOSURE GROSS PLANT- | (340,525,292.74) | (71,009,611.29) |
| | TOTAL NUCLEAR PRODUCTION | 1,163,958,055.40 | 1,163,958,055.43 |
| 340.1 | Land | 143,475.87 | 0.00 |
| 340.2 | Land Rights | 56,032.61 | 5,380.39 |
| 341 | Structures and Improvements | 22,703,423.92 | 5,518,875.81 |
| 342 | Fuel Holders, Producers & Accessories | 20,348,101.38 | 6,106,067.96 |
| 343 | Prime Movers | 85,663,135.71 | 27,626,417.85 |
| 344 | Generators | 341,381,604.65 | 110,916,508.39 |
| 345 | Accessory Electric Equipment | 32,506,374.56 | 10,216,465.20 |
| 346 | Miscellaneous Power Plant Equipment | 26,202,255.74 | 11,384,098.55 |
| | TOTAL OTHER PRODUCTION | 529,004,404.44 | 171,773,814.15 |
| | TOTAL ELECTRIC PRODUCTION | 2,226,474,186.07 | 1,514,001,863.18 |

| No. | Account | Original Cost | Reserve for Depreciation and Amortization |
|---|---|---|---|
| 350.1 | Land | 68,244,923.80 | 0.00 |
| 350.2 | Land Rights | 155,798,711.10 | 17,063,880.94 |
| 352 | Structures and Improvements | 382,472,816.08 | 51,239,619.90 |
| 353 | Station Equipment | 1,170,893,458.56 | 215,758,902.71 |
| 354 | Towers and Fixtures | 895,569,559.18 | 133,217,984.87 |
| 355 | Poles and Fixtures | 368,894,949.26 | 71,554,679.30 |
| 356 | Overhead Conductors and Devices | 514,229,156.93 | 201,687,115.41 |
| 357 | Underground Conduit | 331,712,940.31 | 39,958,824.13 |
| 358 | Underground Conductors and Devices | 353,266,375.08 | 40,986,206.59 |
| 359 | Roads and Trails | 305,809,689.05 | 19,330,074.79 |
| 101 | SONGS PLANT CLOSURE GROSS PLANT- | (5,943,752.68) | (5,943,752.68) |
| | TOTAL TRANSMISSION | 4,540,948,826.67 | 784,853,535.96 |
| 360.1 | Land | 16,176,227.80 | 0.00 |
| 360.2 | Land Rights | 82,330,177.09 | 37,427,330.56 |
| 361 | Structures and Improvements | 3,995,243.29 | 1,786,368.30 |
| 362 | Station Equipment | 469,255,160.23 | 130,401,112.93 |
| 363 | Storage Battery Equipment | 12,025,421.12 | 997,809.71 |
| 364 | Poles, Towers and Fixtures | 600,508,389.13 | 253,241,254.43 |
| 365 | Overhead Conductors and Devices | 477,508,481.33 | 183,559,955.49 |
| 366 | Underground Conduit | 1,066,629,378.30 | 424,034,465.89 |
| 367 | Underground Conductors and Devices | 1,382,191,806.27 | 829,622,471.36 |
| 368.1 | Line Transformers | 546,175,383.93 | 110,931,674.86 |
| 368.2 | Protective Devices and Capacitors | 22,765,556.57 | (3,647,500.75) |
| 369.1 | Services Overhead | 131,499,649.39 | 121,066,305.84 |
| 369.2 | Services Underground | 325,976,182.18 | 230,410,189.15 |
| 370.1 | Meters | 190,865,818.58 | 56,925,241.96 |
| 370.2 | Meter Installations | 55,670,470.16 | 14,189,379.17 |
| 371 | Installations on Customers' Premises | 7,898,830.34 | 10,791,007.41 |
| 373.1 | St. Lighting & Signal Sys.-Transformers | 0.00 | 0.00 |
| 373.2 | Street Lighting & Signal Systems | 26,593,201.69 | 19,356,966.47 |
| | TOTAL DISTRIBUTION PLANT | 5,418,065,377.40 | 2,421,094,032.78 |
| 389.1 | Land | 7,312,142.54 | 0.00 |
| 389.2 | Land Rights | 0.00 | 0.00 |
| 390 | Structures and Improvements | 32,300,384.48 | 23,115,761.04 |
| 392.1 | Transportation Equipment - Autos | 0.00 | 49,884.21 |
| 392.2 | Transportation Equipment - Trailers | 58,145.67 | 9,033.58 |
| 393 | Stores Equipment | 15,720.46 | 15,307.68 |
| 394.1 | Portable Tools | 22,720,448.31 | 7,334,000.50 |
| 394.2 | Shop Equipment | 341,135.67 | 231,299.92 |
| 395 | Laboratory Equipment | 2,145,336.65 | 133,688.42 |
| 396 | Power Operated Equipment | 60,528.93 | 117,501.67 |
| 397 | Communication Equipment | 237,155,596.48 | 84,603,439.90 |
| 398 | Miscellaneous Equipment | 2,991,920.73 | 445,861.22 |
| | TOTAL GENERAL PLANT | 305,101,359.92 | 116,055,778.14 |
| 101 | TOTAL ELECTRIC PLANT | 12,621,562,623.56 | 4,880,332,033.70 |

| No. | Account | Original Cost | Reserve for Depreciation and Amortization |
|---|---|---|---|
| **GAS PLANT** | | | |
| 302 | Franchises and Consents | 86,104.20 | 86,104.20 |
| 303 | Miscellaneous Intangible Plant | 0.00 | 0.00 |
| | TOTAL INTANGIBLE PLANT | 86,104.20 | 86,104.20 |
| 360.1 | Land | 0.00 | 0.00 |
| 361 | Structures and Improvements | 43,992.02 | 43,992.02 |
| 362.1 | Gas Holders | 0.00 | 0.00 |
| 362.2 | Liquefied Natural Gas Holders | 0.00 | 0.00 |
| 363 | Purification Equipment | 0.00 | 0.00 |
| 363.1 | Liquefaction Equipment | 0.00 | 0.00 |
| 363.2 | Vaporizing Equipment | 0.00 | 0.00 |
| 363.3 | Compressor Equipment | 0.00 | 0.00 |
| 363.4 | Measuring and Regulating Equipment | 0.00 | 0.00 |
| 363.5 | Other Equipment | 0.00 | 0.00 |
| 363.6 | LNG Distribution Storage Equipment | 2,052,614.24 | 924,950.70 |
| | TOTAL STORAGE PLANT | 2,096,606.26 | 968,942.72 |
| 365.1 | Land | 4,649,143.75 | 0.00 |
| 365.2 | Land Rights | 2,232,343.80 | 1,317,475.09 |
| 366 | Structures and Improvements | 11,981,697.11 | 9,846,121.89 |
| 367 | Mains | 183,519,677.29 | 66,281,952.41 |
| 368 | Compressor Station Equipment | 84,133,772.55 | 67,175,328.79 |
| 369 | Measuring and Regulating Equipment | 20,941,863.45 | 15,965,808.80 |
| 371 | Other Equipment | 0.00 | 0.00 |
| | TOTAL TRANSMISSION PLANT | 307,458,497.95 | 160,586,686.98 |
| 374.1 | Land | 102,187.24 | 0.00 |
| 374.2 | Land Rights | 8,226,459.55 | 6,559,126.52 |
| 375 | Structures and Improvements | 43,446.91 | 61,253.10 |
| 376 | Mains | 640,411,868.46 | 346,684,467.27 |
| 378 | Measuring & Regulating Station Equipment | 17,808,313.53 | 7,350,535.44 |
| 380 | Distribution Services | 250,795,634.14 | 290,824,938.85 |
| 381 | Meters and Regulators | 155,192,999.65 | 49,554,738.62 |
| 382 | Meter and Regulator Installations | 91,239,969.20 | 33,010,128.27 |
| 385 | Ind. Measuring & Regulating Station Equipme | 1,516,810.70 | 1,135,235.66 |
| 386 | Other Property On Customers' Premises | 0.00 | 0.00 |
| 387 | Other Equipment | 5,223,271.51 | 4,852,912.81 |
| | TOTAL DISTRIBUTION PLANT | 1,170,560,960.89 | 740,033,336.54 |

| No. | Account | Original Cost | Reserve for Depreciation and Amortization |
|---|---|---|---|
| 392.1 | Transportation Equipment - Autos | 0.00 | 25,503.00 |
| 392.2 | Transportation Equipment - Trailers | 74,500.55 | 74,500.68 |
| 394.1 | Portable Tools | 7,930,780.12 | 3,676,032.33 |
| 394.2 | Shop Equipment | 76,864.06 | 44,629.09 |
| 395 | Laboratory Equipment | 283,093.66 | 269,762.45 |
| 396 | Power Operated Equipment | 162,284.40 | 145,690.25 |
| 397 | Communication Equipment | 2,457,947.16 | 764,265.71 |
| 398 | Miscellaneous Equipment | 157,056.49 | 51,413.55 |
| | TOTAL GENERAL PLANT | 11,142,526.44 | 5,051,797.06 |
| 101 | TOTAL GAS PLANT | 1,491,344,695.74 | 906,726,867.50 |
| | **COMMON PLANT** | | |
| 303 | Miscellaneous Intangible Plant | 269,212,641.70 | 178,500,724.82 |
| 350.1 | Land | 0.00 | 0.00 |
| 360.1 | Land | 0.00 | 0.00 |
| 389.1 | Land | 7,168,914.56 | 0.00 |
| 389.2 | Land Rights | 1,080,961.15 | 27,776.34 |
| 390 | Structures and Improvements | 305,448,479.24 | 130,296,623.18 |
| 391.1 | Office Furniture and Equipment - Other | 26,321,488.32 | 12,574,340.36 |
| 391.2 | Office Furniture and Equipment - Computer E | 51,159,665.33 | 28,002,688.31 |
| 392.1 | Transportation Equipment - Autos | 33,942.29 | (338,930.17) |
| 392.2 | Transportation Equipment - Trailers | 33,369.38 | 24,278.83 |
| 393 | Stores Equipment | 79,141.34 | 59,194.74 |
| 394.1 | Portable Tools | 1,232,026.51 | 272,448.83 |
| 394.2 | Shop Equipment | 213,047.56 | 132,248.69 |
| 394.3 | Garage Equipment | 1,094,037.06 | 113,985.85 |
| 395 | Laboratory Equipment | 1,997,982.48 | 856,558.56 |
| 396 | Power Operated Equipment | 0.00 | (192,979.10) |
| 397 | Communication Equipment | 175,055,442.60 | 60,688,034.19 |
| 398 | Miscellaneous Equipment | 2,287,818.69 | 1,310,728.31 |
| 118.1 | TOTAL COMMON PLANT | 842,418,958.21 | 412,327,721.74 |
| | TOTAL ELECTRIC PLANT | 12,621,562,623.56 | 4,880,332,033.70 |
| | TOTAL GAS PLANT | 1,491,344,695.74 | 906,726,867.50 |
| | TOTAL COMMON PLANT | 842,418,958.21 | 412,327,721.74 |
| 101 & 118.1 | TOTAL | 14,955,326,277.51 | 6,199,386,622.94 |
| 101 | PLANT IN SERV-SONGS FULLY RECOVER | (1,163,958,055.43) | (1,163,958,055.43) |
| 101 | PLANT IN SERV-ELECTRIC NON-RECON Electric | (2,540,241.64) | 0.00 |

| No. | Account | Original Cost | Reserve for Depreciation and Amortization |
|---|---|---|---|
| 101 | PLANT IN SERV-ASSETS HELD FOR SALE | | |
| | Electric | 0.00 | 0.00 |
| | Common | 0.00 | 0.00 |
| | | 0.00 | 0.00 |
| 101 | PLANT IN SERV-LEGACY METER RECLASS | | |
| | Electic | 0.00 | 0.00 |
| 101 | PLANT IN SERV-SUNRISE FIRE MITIGATION | | |
| | Electic | 0.00 | 0.00 |
| 118 | PLANT IN SERV-COMMON NON-RECON | | |
| | Common - Transferred Asset Adjustment | (1,652,471.31) | (1,652,471.31) |
| 101 | Accrual for Retirements | | |
| | Electric | (3,582,874.22) | (3,582,874.22) |
| | Gas | (122,174.11) | (122,174.11) |
| | TOTAL PLANT IN SERV-ACCRUAL FOR RE | (3,705,048.33) | (3,705,048.33) |
| 102 | Electric | 0.00 | 0.00 |
| | Gas | 0.00 | 0.00 |
| | TOTAL PLANT PURCHASED OR SOLD | 0.00 | 0.00 |
| 104 | Electric | 85,194,000.02 | 9,264,542.12 |
| | Gas | 0.00 | 0.00 |
| | TOTAL PLANT LEASED TO OTHERS | 85,194,000.02 | 9,264,542.12 |
| 105 | Plant Held for Future Use | | |
| | Electric | 11,307,727.50 | 0.00 |
| | Gas | 0.00 | 0.00 |
| | TOTAL PLANT HELD FOR FUTURE USE | 11,307,727.50 | 0.00 |
| 107 | Construction Work in Progress | | |
| | Electric | 623,130,934.78 | |
| | Gas | 122,268,270.58 | |
| | Common | 115,005,306.22 | |
| | TOTAL CONSTRUCTION WORK IN PROGRESS | 860,404,511.58 | 0.00 |
| 108 | Accum. Depr SONGS Mitigation/Spent Fuel Disallowance | | |
| | Electric | 0.00 | 0.00 |

| No. | Account | Original Cost | Reserve for Depreciation and Amortization |
|---|---|---|---|
| 108.5 | Accumulated Nuclear Decommissioning Electric | 0.00 | 999,116,107.65 |
| | TOTAL ACCUMULATED NUCLEAR DECOMMISSIONING | 0.00 | 999,116,107.65 |
| 101.1 | ELECTRIC CAPITAL LEASES | 837,939,281.00 | 154,695,369.00 |
| 118.1 | COMMON CAPITAL LEASE | 19,634,004.78 | 18,308,057.38 |
| | | 857,573,285.78 | 173,003,426.38 |
| 120 | NUCLEAR FUEL FABRICATION | 62,963,775.37 | 40,861,208.00 |
| 120 | SONGS PLANT CLOSURE-NUCLEAR FUEL | (62,963,775.37) | (40,861,208.00) |
| 143 | FAS 143 ASSETS - Legal Obligation | 271,718,404.13 | (933,420,294.69) |
| | SONGS Plant Closure - FAS 143 contra | (270,338,553.03) | (61,166,058.00) |
| | FIN 47 ASSETS - Non-Legal Obligation | 69,819,775.07 | 28,560,831.60 |
| 143 | FAS 143 ASSETS - Legal Obligation | 0.00 | (1,342,317,463.35) |
| | TOTAL FAS 143 | 71,199,626.17 | (2,308,342,984.44) |
| | UTILITY PLANT TOTAL | 15,669,149,611.85 | 3,903,112,139.58 |

# ATTACHMENT C.4

***Summary of Earnings (for the total utility operations for the company) for the Three-Month Period Ending March 31, 2015***

**SAN DIEGO GAS & ELECTRIC COMPANY**
**SUMMARY OF EARNINGS**
**THREE MONTHS ENDED MARCH 31, 2015**
**(DOLLARS IN MILLIONS)**

| Line No. | Item | Amount |
|---|---|---|
| 1 | Operating Revenue | $1,082 |
| 2 | Operating Expenses | 908 |
| 3 | Net Operating Income | $174 |
| 4 | Weighted Average Rate Base | $7,225 |
| 5 | Rate of Return* | 7.79% |

*Authorized Cost of Capital

# ATTACHMENT C.5

*Notice to State, Cities, and Counties*

State of California
Attorney General's Office
P.O. Box 944255
Sacramento, CA 94244-2550

Naval Facilities Engineering Command
Navy Rate Intervention
1314 Harwood Street SE
Washing Navy Yard, DC 20374

City of Carlsbad
Attn. City Attorney
1200 Carlsbad Village Drive
Carlsbad, CA 92008-19589

City of Chula Vista
Attn. City Attorney
276 Fourth Ave
Chula Vista, Ca 91910-2631

City of Dana Point
Attn. City Attorney
33282 Golden Lantern
Dana Point, CA 92629

City of Del Mar
Attn. City Clerk
1050 Camino Del Mar
Del Mar, CA 92014

City of Encinitas
Attn. City Attorney
505 S. Vulcan Ave.
Encinitas, CA 92024

City of Escondido
Attn. City Attorney
201 N. Broadway
Escondido, CA 92025

City of Imperial Beach
Attn. City Clerk
825 Imperial Beach Blvd
Imperial Beach, CA 92032

City of Laguna Beach
Attn. City Clerk
505 Forest Ave
Laguna Beach, CA 92651

State of California
Attn. Director Dept of General Services
PO Box 989052
West Sacramento, CA 95798-9052

Alpine County
Attn. County Clerk
99 Water Street, P.O. Box 158
Markleeville, CA 96120

City of Carlsbad
Attn. Office of the County Clerk
1200 Carlsbad Village Drive
Carlsbad, CA 92008-19589

City of Coronado
Attn. Office of the City Clerk
1825 Strand Way
Coronado, CA 92118

City of Dana Point
Attn. City Clerk
33282 Golden Lantern
Dana Point, CA 92629

City of El Cajon
Attn. City Clerk
200 Civic Way
El Cajon, CA 92020

City of Encinitas
Attn. City Clerk
505 S. Vulcan Ave.
Encinitas, CA 92024

City of Fallbrook
Chamber of Commerce
Attn. City Clerk
111 S. Main Avenue
Fallbrook, CA 92028

City of Imperial Beach
Attn. City Attorney
825 Imperial Beach Blvd
Imperial Beach, CA 92032

City of Laguna Beach
Attn. City Attorney
505 Forest Ave
Laguna Beach, CA 92651

United States Government
General Services Administration
300 N. Los Angeles
Los Angeles, CA 90012

Borrego Springs Chamber of Commerce Attn. City Clerk
786 Palm Canyon Dr
PO Box 420
Borrego Springs CA 92004-0420

City of Chula Vista
Attn: Office of the City Clerk
276 Fourth Avenue
Chula Vista, California 91910-2631

City of Coronado
Attn. City Attorney
1825 Strand Way
Coronado, CA 92118

City of Del Mar
Attn. City Attorney
1050 Camino Del Mar
Del Mar, CA 92014

City of El Cajon
Attn. City Attorney
200 Civic Way
El Cajon, CA 92020

City of Escondido
Attn. City Clerk
201 N. Broadway
Escondido, CA 92025

City of Fallbrook
Chamber of Commerce
Attn. City Attorney
111 S. Main Avenue
Fallbrook, CA 92028

Julian Chamber of Commerce
P.O. Box 1866
2129 Main Street
Julian, CA

City of Laguna Niguel
Attn. City Attorney
30111 Crown Valley Parkway
Laguna Niguel, California 92677

City of Laguna Niguel
Attn. City Clerk
30111 Crown Valley Parkway
Laguna Niguel, California 92677

City of Lakeside
Attn. City Clerk
9924 Vine Street
Lakeside CA 92040

City of La Mesa
Attn. City Attorney
8130 Allison Avenue
La Mesa, CA 91941

City of La Mesa
Attn. City Clerk
8130 Allison Avenue
La Mesa, CA 91941

City of Lemon Grove
Attn. City Clerk
3232 Main St.
Lemon Grove, CA 92045

City of Lemon Grove
Attn. City Attorney
3232 Main St.
Lemon Grove, CA 92045

City of Mission Viejo
Attn: City Clerk
200 Civic Center
Mission Viejo, CA 92691

City of Mission Viejo
Attn: City Attorney
200 Civic Center
Mission Viejo, CA 92691

City of National City
Attn. City Clerk
1243 National City Blvd
National City, CA 92050

City of National City
Attn. City Attorney
1243 National City Blvd
National City, CA 92050

City of Oceanside
Attn. City Clerk
300 N. Coast Highway
Oceanside, CA 92054-2885

City of Oceanside
Attn. City Attorney
300 N. Coast Highway
Oceanside, CA 92054-2885

County of Orange
Attn. County Counsel
P.O. Box 1379
Santa Ana, CA 92702

County of Orange
Attn. County Clerk
12 Civic Center Plaza, Room 101
Santa Ana, CA 92701

City of Poway
Attn. City Clerk
P.O. Box 789
Poway, CA 92064

City of Poway
Attn. City Attorney
P.O. Box 789
Poway, CA 92064

City of Ramona
Attn. City Clerk
960 Main Street
Ramona, CA 92065

City of Ramona
Attn. City Attorney
960 Main Street
Ramona, CA 92065

City of Rancho San Diego - Jamul
Attn. City Clerk
3855 Avocado Blvd.
Suite 230
La Mesa, CA 91941

City of San Clemente
Attn. City Clerk
100 Avenida Presidio
San Clemente, CA 92672

City of San Clemente
Attn. City Attorney
100 Avenida Presidio
San Clemente, CA 92672

City of San Diego
Attn. Mayor
202 C Street, 11th Floor
San Diego, CA 92101

County of San Diego
Attn. County Clerk
P.O. Box 121750
San Diego, CA 92101

City of San Diego
Attn. City Attorney
1200 Third Ave.
Suite 1620
San Diego, CA 92101

County of San Diego
Attn. County Counsel
1600 Pacific Hwy
San Diego, CA 92101

City of San Diego
Attn. City Clerk
202 C Street, 2nd Floor
San Diego, CA 92101

City of San Marcos
Attn. City Clerk
1 Civic Center Dr.
San Marcos, CA 92069

City of San Marcos
Attn. City Attorney
1 Civic Center Dr.
San Marcos, CA 92069

City of Santee
Attn. City Clerk
10601 Magnolia Avenue
Santee, CA 92071

City of Santee
Attn. City Attorney
10601 Magnolia Avenue
Santee, CA 92071

City of Solana Beach
Attn. City Attorney
635 S. Highway 101
Solana Beach, CA 92075

Spring Valley Chamber of Commerce
Attn. City Clerk
3322 Sweetwater Springs Blvd, Ste. 202
Spring Valley, CA 91977-3142

Valley Center Chamber of Commerce
Attn. City Clerk
P.O. Box 8
Valley Center, CA 92082

City of Vista
Attn. City Attorney
200 Civic Center Drive, Bldg. K
Vista, CA 92084

City of Vista
Attn. City Clerk
200 Civic Center Drive
Vista, CA 92084

City of Aliso Viejo
12 Journey
Aliso Viejo, CA 92656

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

| | |
|---|---|
| Order Instituting Rulemaking to Develop a Successor to Existing Net Energy Metering Tariffs Pursuant to Public Utilities Code Section 2827.1, and to Address Other Issues Related to Net Energy Metering. | Rulemaking 14-07-002<br>(Filed July 10, 2014) |

# SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E) NOTICE OF AVAILABILITY OF PROPOSAL FOR SUCCESSOR NET ENERGY METERING TARIFF

AIMEE M. SMITH
8330 Century Park Court, CP32
San Diego, California 92123
Telephone: (858) 654-1644
Facsimile: (858) 654-1586
amsmith@semprautilities.com

Attorney for
SAN DIEGO GAS & ELECTRIC COMPANY

August 3, 2015

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

| | |
|---|---|
| Order Instituting Rulemaking to Develop a Successor to Existing Net Energy Metering Tariffs Pursuant to Public Utilities Code Section 2827.1, and to Address Other Issues Related to Net Energy Metering. | Rulemaking 14-07-002 (Filed July 10, 2014) |

**SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E)**
**NOTICE OF AVAILABILITY OF PROPOSAL**
**FOR SUCCESSOR NET ENERGY METERING TARIFF**

Pursuant to Rule 1.9(d) of the Rules of Practice and Procedure of the California Public Utilities Commission (the "Commission"), San Diego Gas & Electric Company ("SDG&E") hereby provides notice that it has electronically filed with the Commission's docket office its **SAN DIEGO GAS & ELECTRIC COMPANY PROPOSAL FOR SUCCESSOR NET ENERGY METERING TARIFF** ("NEM Proposal").

The NEM Proposal filing is available on SDG&E's website at the following link: http://www.sdge.com/regulatory-filing/15276/proposal-install-solar-facilities-disadvantaged-communities. The NEM Proposal filing may also be obtained by contacting:

Hannon Rasool
Regulatory Case Manager
San Diego Gas & Electric Company
8330 Century Park Court, CP32D
San Diego, California 92123
Telephone: (858) 654-1185
Facsimile: (858) 654-1788
HRasool@semprautilities.com

Respectfully submitted this 3rd day of August, 2015.

/s/ *Aimee M. Smith*
AIMEE M. SMITH
8330 Century Park Court, CP32
San Diego, CA 92123
Telephone: (858) 654-1644
Facsimile: (858) 654-1586
E-mail: amsmith@semprautilities.com
Attorney for
SAN DIEGO GAS & ELECTRIC COMPANY