BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the Commission's Own Motion to Conduct a Comprehensive Examination of Investor Owned Electric Utilities' Residential Rate Structures, the Transition to Time Varying and Dynamic Rates, and Other Statutory Obligations	Rulemaking 12-06-013 (Filed June 21, 2012)

CENTER FOR ACCESSIBLE TECHNOLOGY AND THE GREENLINING INSTITUTE'S COMMENTS ON PARTIES' RATE DESIGN PROPOSALS

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I. INTRODUCTION

The Center for Accessible Technology (CforAT) and the Greenlining Institute (Greenlining) hereby submit these Comments on the Rate Design Proposals filed by parties on May 29, 2013.

As with the CforAT/Greenlining Rate Design Proposal, these comments focus on the need to ensure that essential supplies of electricity are affordable for residential customers. Many of the competing proposals would have serious impacts on the affordability of essential supplies of electricity, particularly for low income and low-usage customers. While the changes that would result in unaffordable electricity may be justified by parties by various rate design principles, the fundamental obligation of affordability cannot be superseded

II. RATE ELEMENTS

A. A Three Tiered Rate Structure Is Necessary to Achieve Affordability.

In our Rate Design Proposal, CforAT/Greenlining argued that the policy rationale for a tiered rate structure remains sound, even while recognizing that some changes to the current tiered rate structure may be appropriate. CforAT/Greenlining thus proposed that the fundamental residential rate structure in California should consist of at least three tiers with no customer charge, an affordable rate for the lowest tier, and significant differentials between the tiers; such a structure is necessary to guarantee affordability for essential uses for all customers. Other parties also supported retention of the tiered rate structure, with at least three tiers, for a variety of reasons.

The Utility Reform Network (TURN) recognizes that tiered rates support affordability for basic usage and, when combined with differentiated baseline levels for climate zones, tiers also

even out the average rates across regions, despite great differences in usage.[1] The Natural Resources Defense Council (NRDC) notes that customers with less overall usage are more likely to have end uses that cannot be shifted across time, so that time variant rates are not an effective way for these customers to reduce their bills.[2] The San Diego Consumers' Action Network (SDCAN) similarly points out that "higher-usage customers typically have load patterns that are more peaked relative to the load patterns of customers with lower usage, and that their loads are concentrated more during the summer hours and during the hour of system coincident peak."[3]

CforAT/Greenlining urges the Commission to retain a tiered rate structure as the default rate structure for residential customers. As we will demonstrate below, the tiered rate structure best advances the rate principle of affordability for essential energy uses, which should be a paramount concern. However, CforAT/Greenlining recognizes that the current tiered rate structure may be changed in some manners, both in resizing tiers and adjusting tier price ratios. The Commission should examine the necessity of such changes, while still ensuring affordability.

Both TURN and NRDC propose a default tier rate structure, with three each tier level based on 100% of the baseline usage[4] within a climate zone (i.e. Tier 1 includes usage up to 100% of baseline, Tier 2 includes usage between 100% and 200% of baseline, and Tier 3 includes all usage above 200% of baseline).[5] TURN points out that such a rate structure is

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[1] *See* Residential Rate Design Proposal of The Utility Reform Network in Response to the ALJ Ruling of 3/19/2013 ("TURN Rate Proposal"), pp. 11, 24-26

[2] *See* Rate Design Proposal of the Natural Resources Defense Council in Response to the Administrative Law Judges' Ruling Requesting Residential Rate Design Proposals ("NRDC Rate Proposal"), p. 11-12.

[3] San Diego Consumers' Action Network Residential Rate Design Proposal, ("SDCAN Rate Proposal"), p. 12.

[4] Currently baseline usage for all three utilities constitutes 55% of average usage, although Southern California Edison's baseline quantity will be adjusted to 53% of average usage.

[5] *See* TURN Rate Proposal, p. 4; NRDC Rate Proposal, p. 9. NRDC proposes that the tiered rates be default for "small" residential customers with peak demand of less than 7 kWh.

simple and much more easily understandable than the current variously sized tiers.[6] CforAT/Greenlining supports the use of evenly-sized tiers set at 100% of baseline, recognizing the simplicity and opportunity for improved customer understanding of such a model. As we will discuss below, at least three tiers are necessary to provide for affordability for essential uses.

Most importantly, the initial tier of baseline usage would cover most of the essential uses of a household, especially for lower-income households, who are more likely than other customers to keep a majority of their usage in this lower tier. This is demonstrated by usage data for Pacific Gas & Electric (PG&E) and Southern California Edison (SCE). Almost 64% of a PG&E CARE customers' average usage and almost 60% of a SCE CARE customers' average usage is currently captured by Tier 1.[7] These customers, as well as other customers with similar usage patterns of limited usage, can contain the majority of their usage within Tier 1 and thus keep their bills low. In order to preserve affordability and encourage customers to limit usage, this Tier 1 consumption should be kept as economical as possible. In order to keep the price for this initial tier affordable, there must be at least three tiers with substantial price ratios, as discussed below.

Efforts to limit usage allow customers to avoid higher bills by keeping consumption in the in the lowest-price tier. However, some households cannot avoid some amount of consumption in excess Tier 1 usage, even after eliminating any discretionary usage. This may be due to circumstances such as larger households, poor energy efficiency (often outside of the customer's control if the customer is not the property owner), or other factors that cannot be completely mitigated. For these customers, rates with at least three tiers still provide some opportunity for customers to control their energy bills, which would be lacking in a rate structure

[6] *See* TURN Rate Proposal, pp. 39-40.
[7] This data was contained in PG&E Data Response to Greenlining's First Set of Data Requests, Question 2, Attachment 1 and SCE Data Response to Greenlining's First Set of Data Requests, Question 2, Attachment.

with only two tiers. An interim tier, with an interim level of pricing, is necessary to provide such customers real choice and an opportunity to control their bills.

The Commission has recognized that large households have comparatively more usage than other households, and thus may be unable to keep their consumption levels completely within the lowest tier of usage. In order to address the impact of greater consumption on large households with moderate incomes, the Commission has adopted the Family Electric Rate Assistance program (FERA), which we can use as a proxy for all large households. The FERA program is available to households with three or more members whose household income is less than 250% of federal poverty levels. PG&E's FERA customers total average monthly usage in 2012 was 785 kWh, compared to 556 kWh for non-CARE, non-FERA customers. [8] SCE's FERA customers total average monthly usage in 2012 was 691 kWh, compared to 586 kWh for non-CARE, non-FERA customers.[9]

This illustrates that larger households are less likely to be able to contain their usage in only Tier 1, which is sized to provide for the essential uses of an average-sized household. For large households, their essential usage, which cannot be avoided, occupies the same space as other households' discretionary usage, which should be subject to conservation. An intermediate, moderately priced tier, as provided in a three-tiered rate structure, is necessary to provide large households the opportunity to reduce their usage and lower their bills. If there are only two tiers, all consumption that is not limited to Tier 1 will be charged at the highest permissible rate. In contrast, a three-tier structure allows for limits in the rates charged to

[8] This data was contained in PG&E Data Response to Greenlining's First Set of Data Requests, Question 2, Attachment 1.
[9] This data was contained in SCE Data Response to Greenlining's First Set of Data Requests, Question 2, Attachment.

households with moderate consumption, reserving the highest rate for the highest level of consumption, which generally corresponds to greater levels of discretionary usage.

B. A Significant Tier Differential Is Necessary to Maintain Affordability and Customer Choice.

CforAT/Greenlining recognize that many of the proposals include some rate increase for Tier 1, in order to provide some rate relief for consumers with usage in the upper tiers. However, in order to maintain affordability for customers who limit their consumption to a low or moderate amount of usage, there should be significant tier differentials, which provide meaningful differences in rates. Tier differentials that are too flat limit the effect of tiered rates both to promote affordability for essential usage, on the one end, and to encourage conservation or improved efficiency on the other end.[10]

Other parties also support significant tier differentials. SDCAN explains how flattened tier differentials mute the price signal that encourages conservation. As SDCAN points out:

> Regardless of whether users respond to marginal or average price, SDG&E should not ignore what their customers – and how customers – should be rewarded for their conservation efforts. Flatter rates with fewer tiers cannot do that effectively.[11]

CforAT/Greenlining agrees with this point. SDCAN also points out that with new Smart, energy management technologies, some customers may be afforded new means of responding to the price signals of a tiered rate structure.[12] These new opportunities support the conclusion that now is not the time to abandon tiers, or to constrain their effectiveness, when there are avenues to improve the impact of tiers in encouraging conservation and even load shifting. Additionally,

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[10] Some parties have noted that customers do not currently have a good understanding of tiered rates, which may limit their effectiveness in encouraging customers to take action. However, with the adoption of changes of some form to overall rate design policy comes an opportunity for improved customer education on the implications of a tiered rate structure.

[11] SDCAN Rate Proposal, p. 13.

[12] *See* SDCAN Rate Proposal, p. 5.

if the tiered rate structure goes through some changes, this will be an opportunity to improve the education provided to customers regarding tiers.

The tier ratios suggested proposed by NRDC for their default rate for smaller users are sized so that they could be effective in both providing affordability for essential uses and encouraging conservation. NRDC proposes pricing differentials of 1, 1.5 and 2 for three equally sized tiers.

TURN proposes the same tier break points, but with tier price ratios of 1, 1.3 and 1.6 for three equally sized tiers. Such limited tier differentials may raise rates too drastically for customers with the lowest level of usage, as demonstrated by TURN's Bill Impact Response on non-CARE customers.[13] This is especially true if these proposed rate differentials were applied to PG&E. For PG&E, the largest bill increases for non-CARE customers would be concentrated on the 35% of its non-CARE customers with the lowest usage – totaling 1,176,782 households – that would experience bill increases averaging 21.4%.[14] For SCE, the bill impacts from TURN's proposal are not quite as stark or as concentrated on the customers with the lowest usage. A small percentage (2.6%) of non-CARE customers with the absolute lowest levels of usage would benefit from the rates, given TURN's proposal to eliminate SCE's fixed charge. However, the 20.6% of non-CARE customers with the next lowest usage would still experience bill increases averaging 17.6%[15] These bill increases on the customers with the lowest usage are too drastic.

Neither NRDC, SDCAN nor CforAT/Greenlining provided Bill Impact modeling for their proposed rates. However, given their more steeply differentiated tier ratios, the bill impacts

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[13] It is difficult to isolate the impact of TURN's tier ratios on CARE customers, as TURN models the bill impacts with their proposed CARE discount providing a greater discount on the lower tiers.

[14] *See* TURN Rate Proposal Attachment A, bill impacts of TURN's first PG&E scenario, % impact by kWh, Non-Care.

[15] *See* TURN Rate Proposal Attachment A, bill impacts of TURN's first SCE scenario, % impact by usage bin (kWh), Non-Care.

on customers with the lowest levels of usage would not be as drastic as those demonstrated for TURN's rate model. CforAT/Greenlining urges the Commission to maintain a significant tier differential, providing for affordability, customer choice and conservation incentive.

C. A Two Tiered Rate Design, with Limited Differentials and a Fixed Charge, Hurts Lower Income Customers and Only Helps Higher Income Customers.

PG&E and SCE propose end state rate designs that include substantial customer charges and two tiers with a limited tier differential.[16] Such a rate design would not maintain affordability for essential uses. The bill impact of these rates, as reported in the Bill Impact Responses, demonstrates that such a rate design would result in substantial bill increases for low income and low usage customers, in direct opposition to the necessary principle of affordability for essential usage.

PG&E was the only party that provided Bill Impact Tables with results categorized by income ranges. The data from this table, analyzing PG&E's proposed non-TOU end state rate proposal is provided below. Again, PG&E's rate model consists of two tiers with a limited tier ratio and a fixed charge. The data demonstrates that a two tiered rate design with a customer charge will hurt customers with lower incomes and generally only benefit customers with higher incomes. The correlation of bill impact to income is very strong. Among non-CARE customers, the customers with the lowest incomes would see significant bill increases of 8% (less than $30,000/yr income) and 7% ($30,000-$60,000/yr income).[17] Non-CARE customers with incomes in the middle ranges see only small bill decreases of 2% and 3%. Only those non-CARE customers with the largest incomes, above $100,000/yr, would see significant bill decreases of 11%. This data shows that the rate model proposed by the utilities – two tiers with a

[16] PG&E proposes an end state tier differential of 1 to 1.15. PG&E models its end state bill impacts with a customer charge of $10.00/month. SCE proposes an end state tier differential of 1 to 1.2. SCE models its end state bill impacts with a customer charge of $5.00/month.
[17] *See* PG&E Bill Impact Response, p. 29

customer charge – will hurt non-CARE customer with lower incomes and only significantly help customers with higher incomes.

Bill Impact of PG&E Non-TOU End State Proposal by Income Ranges

Non-CARE Customers

Income Range	0-30K	30K-60K	60K-75K	75K-100K	100K-500K
Avg. % Bill Impact	8%	7%	-2%	-3%	-11%

CARE Customers

Income Range	0-30K	30K-60K	60K-75K	75K-100K	100K-500K
Avg. % Bill Impact	56%	47%	37%	47%	32%

All Customers

Income Range	0-30K	30K-60K	60K-75K	75K-100K	100K-500K
Avg. % Bill Impact	34%	17%	2%	0%	-10%

The bill impacts of this two tiered rate design on PG&E's CARE customers is even more stark, with a massive 56% bill increase on the CARE customers with the lowest incomes. The two-tiered rate would result in huge bill impacts across all CARE customers. Much of this bill impact is also due to PG&E proposals regarding the CARE program, which would result in a large reduction in the level of the discount. However, a substantial portion of this of the bill increase is also due to the effect of the large customer charge and the two closely aligned tiers.

A two tiered rate structure with a customer charge does not allow for provide affordability for essential usage, and a customer's ability to keep their bills low by limiting usage would be substantially undermined. A transition to such a rate structure would focus bill increases on those customers who are least able to absorb them, as well as those that have relatively minimal loads. Meanwhile, only customers with the highest incomes and highest loads on the system would experience significant bill decreases. The Commission must not accept such a rate structure as a model for the future.

D. Fixed Customer Charges Do Not Advance Rate Design Principles.

Most parties' rate proposals do not include fixed charges, whether the party proposes a tiered rate structure or a time-variant rate structure. CforAT/Greenlining, the Division of Ratepayer Advocates, TURN, SDCAN, Consumer Federation of California, NRDC, the Sierra Club, the Environmental Defense Fund, the Joint Solar Parties and Distributed Energy Consumer Advocates all set out proposals that do not contain fixed charges or specifically oppose the use of fixed charges.[18] In reviewing these proposals, it is clear that nearly all of the parties seeking to support various policy goals and rate design principles through residential rate structure found that any beneficial outcomes that they sought to advance – whether it be affordability of basic usage, encouragement of conservation and energy efficiency, reduction of peak demand, encouragement of economically efficient decision-making – would be best accomplished by fully volumetric rate design models – in either a tiered or time variant rate structure.

As previously established by CforAT/Greenlining, a rate design model that contains customer charges does not promote affordability for basic use, and would generally result in a bill increase for customers with the lowest usage. These bill impacts are impossible to avoid by adjusting consumption, reducing usage, or time-shifting usage. They do not promote customer choice, because the customer can take no action that would avoid the fixed charge. Thus, customer charges are inconsistent with rate principle 6: "Rates should be stable and understandable and provide customer choice." The impact of customer charges in raising bills for the smallest users has been demonstrated in both scholarly studies and in Commission proceedings, as we demonstrated in our rate proposal filing.[19]

[18] Distributed Energy Consumer Advocates' proposal contains an avoidable demand charge.
[19] *See* CforAT/Greenlining Rate Design Proposal, pp. 32-33.

Nor do fixed charges promote conservation. The Commission has previously noted that "[b]ecause a fixed customer charge cannot be avoided by a customer's reducing usage or being more energy efficient, the customer charge offers no conservation price signal."[20] Many parties also share this view, and thus utilize volumetric rates as their means of encouraging efficiency, conservation and/or peak load reduction. Not only do they dampen price signals by reducing bills of customers who consume more energy and increasing bills of customers who consume less energy, customer charges are also structurally anti-conservationist because they lower upper volumetric rates and act as an incentive to allow those customers whose usage is already in the higher tiers to consume relatively more energy at a lower cost. As noted by a number of parties, this reduction in volumetric rates due to fixed charges reduces the incentive for customers to make investments in energy efficiency, demand response, or distributed generation.[21] Thus, customer charges violate rate principle number 5: "Rates should encourage conservation and energy efficiency."

Customers seem to understand that fixed charges limit their opportunity to lower their bills and dampen their incentive to improve energy efficiency. During the course of this proceeding, the three electric utilities funded a Customer Research Survey and Report ("IOU Customer Survey"). CforAT/Greenlining has many concerns about the validity of the IOU Customer Survey's finding and is hesitant to accept them. In any case, there are very few findings that are clear and unequivocal. However, there were two fairly two clear and assertive findings.

First is the importance of bill savings to customers. When asked to name the top three important factors when choosing rates, 66% of respondent cited a rate that would help them save

[20] *See* D.11-05-047, at p. 33.
[21] *See* NRDC Rate Proposal, p. 31, SDCAN Rate Proposal, p. 7, Rate Design Proposal of the Solar Energy Industries Association and the Vote Solar Initiative, p. 13.

money on their bills.[22] No other factor was cited by even a third of respondents. Clearly, customers want the cheapest rate, but they also want a rate that will give them the opportunity to save money on their bills.

The second clear and unequivocal finding of the survey was that customers do not like fixed charges. When asked for their selection of the single most important rate design factor, the presence of a monthly service fee was by far the most important rate design factor for customers, cited by 20.6% of customers.[23] None of the other rate design factors (price per kWh, tiered rate structure, or TOU rate structure, etc.) was cited by more than 14.1% of customers as being most important.

Moreover, by far the most drastic change in the customers' preference of rates occurred when a monthly service fee was changed from zero – which was preferred by an overwhelming majority of customers – to $15.00, which was viewed negatively by an overwhelming majority of customers.[24] The change in preference that occurred when a substantial fixed charge was introduced was much greater than the change of preference occurring when other rate factors – such as flat price per kWh, tiered price per kWh, or TOU price per kWh – were increased.[25]

Perhaps because the customers understand that fixed charges eliminate an opportunity to "help them save money on their bills," customers clearly have negative feelings towards customer charges. Fixed charges eliminate customer choice. Moreover, as discussed below, fixed charges are not understandable by customers as reflecting fixed costs.

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[22] *See* Rate Design Reform Proposal of PG&E ("PG&E Rate Proposal"), p. 67, citing IOU Customer Survey (included as Appendix A.1), p. 13
[23] *See* IOU Customer Survey, p. 18.
[24] *See* IOU Customer Survey, p. 19.
[25] *See* IOU Customer Survey, pp. 19-22.

E. The Cost-Causation Principle Does Not Support Customer Charges.

Only four parties' rate proposals – PG&E, SCE, San Diego Gas & Electric (SDG&E) and California Large Energy Consumers Association (CLECA) – include fixed customer charges. All of these parties justify customer charges as reflecting cost-causation. However, this principle does not really support the customer charges that the IOUs and CLECA propose, and it is not sufficient justification for such charges. This is because the issue of cost of service is just one of many competing principles of rate design, and no party is truly supporting a rate design system that fully reflects cost of service. A rate design that truly reflects cost of service would have to look at time of use, load, generation, transmission and multiple other factors that vary for each and every customer. The complexity of any effort to accurately reflect the cost of serving an individual customer ensures that any rate design cannot prioritize this element over the numerous other competing rate design principles.

The other justification for customer charges is as a mechanism to capture fixed costs. Yet various parties recognize that customer charges cannot truly and accurately reflect fixed costs, for a number of reasons. TURN points out that there is much dispute as to what truly constitutes a fixed cost.[26] TURN also points out that the evaluation of fixed costs into a single, undifferentiated customer charge does not measure the costs of meeting various levels of demand and peak coincidence.[27] Additionally, even "fixed" costs differ among different residential customers. The customer charges proposed by the IOUs and CLECA do not recognize that multi-family homes have much lower fixed costs than single-family homes.[28] Nor do they

[26] *See* TURN Rate Proposal, pp. 71-73.
[27] *See* TURN Rate Proposal, p. 75.
[28] *See* TURN Rate Proposal, p. 75

recognize that fixed costs for customers in densely populated areas are much lower than for customers in sparsely populated areas.[29]

Besides those examples, there are likely many other instances where cost-causation and "fixed" costs are not accurately captured by any customer charge. Customer charges then must be understood to be fairly arbitrary values assigned as a proxy mechanism for collecting some portion of a utility's fixed costs. The only party that avoids a completely arbitrary valuation of fixed costs and makes any effort to connect their proposed customer charge to what they perceive as the actual value of fixed costs is SDG&E, which proposes an end state customer charge of $38.42. Although the validity of all of SDG&E's claimed fixed costs are subject to substantial dispute, it is the only customer charge proposal that is not completely arbitrary. However, a customer charge of almost $40.00 is completely untenable.

Given that most of the proposed customer charges are determined in so arbitrary a manner, as a proxy mechanism for collecting fixed costs, there is little advantage of using fixed charges relative to the use of minimum bills, or the use of fully volumetric rates. The parties that support the use of customer charges argue that observance of stricter cost-causation leads to more efficient customer reaction to the cost-based price model.[30] However, such efficient customer modification of their energy usage is extremely unlikely when the rates are still clearly very arbitrarily determined. Moreover, in other parts of their filings, mostly to argue against tiered rates, these parties argue that customers react to average rates, not marginal rates.[31] Thus, these parties argue, in making usage decisions, customers will fail to recognize the price signal of a tiered step in rates with increasing usage, but these same customers will recognize the

[29] *See* NRDC Rate Proposal, p. 32.
[30] *See* PG&E Rate Proposal, p. 15, Residential Rate Design Proposal of the California Large Energy Consumers Association ("CLECA Rate Proposal"), p. 9.
[31] *See* PG&E Rate Proposal, p. 52, CLECA Rate Proposal, p. 13.

unclear price signal of a customer charge, which is not tied to any additional action on their part besides continuing to take service. One party even argues that the use of cost-based customer charges will lead to better customer understanding of cost-based TOU rates.[32] It is difficult to envision how this is so.

The principle of rates reflecting cost causation provides little support for customer charges. This is especially so as numerous scholarly studies and the Commission have determined that customer charges have a negative effect on conservation. Customer charges simply do not lead to efficient customer decisions.

Each party that supports a customer charge as reflecting cost of service principles also supports other rate design elements that undercut efforts to accurately reflect the cost of service, down to the fundamental proposal of each IOU to promote TOU rate design on an opt-in only basis. Part of the reason the IOUs give in support of opt-in rather than default or even mandatory TOU is the need to avoid customer backlash. However, TOU is the closest system potentially available to reflect cost of service, if designed with that as a priority (in reality, even the proposals for TOU do not prioritize accurate cost of service in setting rates, but rather efforts to encourage load shifting and other behavioral changes by customers). At the same time, the limited customer feedback available to the parties shows clearly that customers dislike fixed customer charges, yet the same IOUs who recognize that some forms of TOU would be unacceptable to customers are prepared to impose customer charges notwithstanding the feedback received.

F. TOU Rates

A number of parties have proposed to establish TOU rates on an opt-in basis, while expressing intent to actively recruit customers into such programs. In order to assist in recruiting

[32] *See* Residential Rate Design Proposal of SCE, p. 16.

customers, they propose efforts to create what they have termed a "virtuous cycle" to move as many customers as possible into TOU rates, essentially by increasing the cost of the remaining default tiered rate system, and thus raising rates for those who remain with tiers.

To some extent, this is a natural result of opt-in only rates, particularly if they are structured so as to entice customers by allowing them to avoid bill increases. If only "winners" select TOU rates, than the total revenue collected from those who opt in will necessarily be less than the revenue that would have been collected if these customers had remained in the default (tiered) rate structure. To the extent that the opt-in customers pay lower total bills under TOU because they are structural winners (that is, without changing their actual usage patterns at all, their bill totals are less under a TOU structure than they would have been in a tiered rate structure), this reduces revenue without affecting loads or any other aspect of the system that could lead to lower overall system costs. To the extent that opt-in customers receive lower total bills because they change their behavior, for example by shifting consumption from peak periods to off-peak periods, their changed behavior will likely reduce system costs to some extent, but it is unlikely that the reduction in system costs will match, dollar for dollar, the lost revenue.

To the extent that system costs are not reduced, or are reduced by less than the loss of revenue created when "winners" migrate to TOU rates, the revenue shortfall must come from other consumers. If the revenue is to be collected specifically from residential customers rather than a broad customer base, the only place to make up the shortfall is from those customers who remain on tiers. Indeed, this ratchet effect of increasing rates on customers who remain on tiers in order to "entice" them onto TOU rates is expressly the mechanism intended to power the so-

called "virtual cycle." Some parties propose letting this pressure develop naturally[33] while others propose to deliberately enhance it.

What no party expressly recognizes is that this so-called "virtuous cycle" puts unreasonable pressure on those who are least able to shift their behavior so as to become a "winner" on TOU rates. Those vulnerable customers, as identified in CforAT/Greenlining's rate proposal,[34] who are unable to reduce consumption during peak periods, particularly those that are home-bound and need to maintain constant temperatures, could see extremely high bills if they move to TOU rates. But the "virtuous cycle" would force bill increases on the same customers if they remain on tiered rates. This sets up the most vulnerable customers as damned-if-they-do and damned-if-they-don't, and essentially ensures that this group will pay more in any circumstance.

Because the goal of TOU rates is not to harm structural losers and vulnerable customers, but rather to shift load as consumed by customers who have the capability to shift, proposals that move high-usage customers into TOU rates in order to foster load shifting may serve this purpose better than pure opt-in with an expected "virtuous cycle" result. The proposal set out by NRDC to move customers who consume larger amounts of energy into a TOU rate (while letting them opt back into tiers if they so choose, and also allowing lower-usage customers to opt into TOU)[35] may be more effective at changing consumption patterns while leaving more room for customers on tiered rates to retain bill stability.

However, CforAT/Greenlining are not persuaded by any of the proposals offered by parties that TOU rates will generate strong behavioral changes from residential customers.

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[33] *See e.g.* TURN Rate Design Proposal at p. 11.
[34] *See* CforAT/Greenlining Rate Design Proposal at pp. 44-47.
[35] *See* NRDC Rate Design Proposal at pp. 12-14. CforAT/Greenlining do not purport to address whether the proposed cut-off of 7 kWh is appropriate, but merely recognizes that large customers, however defined, have greater opportunities to shift load in a manner that implicates overall system costs.

Overall, it may be more beneficial to focus on overall conservation and efficiency efforts, including options that utilize new technology such as interruptible thermostats, AC cycling, other forms of Auto Demand Response, and third party energy management opportunities to address consumption patterns by residential customers. Using such strategies, customers (particularly those with higher levels of consumption and resources of either time or up-front financial investment to spend on energy strategy) could potentially be "enticed" to participate by providing them with assistance in obtaining and utilizing such technological options, rather than through pure rate levels that would then require active monitoring and behavior change. Adoption of enabling technology would also reduce concerns about "customer fatigue" that might result in gradually decreasing responsiveness by customers as active energy management becomes tedious.

To some extent, this option appears consistent with the considerations currently under review by the Commission in A.12-12-016 et al, in which it is evaluating the results of SDG&E and SCE's 2012 Demand Response programs, as evaluated by Commission Staff in a report issued in May of 2013. Among other items, this review found that changes in load were most substantive among customers who both opted in and used enabling technology.[36]

In any form, adoption of TOU rates has not proven to achieve substantial load reductions or modifications of customer behavior. While they might be used to reflect cost-of-service principles, as discussed above, TOU proponents have not used cost of service as the guiding principle in developing their proposals. Thus, it is unclear what rate design principles would

[36] The Commission also found for PTR that customers defaulted into the program were less likely to decrease load than those who opted in, and recommended that PTR should be revised to an opt-in program to decrease free-ridership. This recommendation should not automatically carry over to other TOU options, since PTR is, by definition, a carrot-only program with no adverse bill impacts for customers who do not change their behavior. For TOU rates that would result in bill increases for customers who fail to modify their behavior, the free-ridership concerns of PTR are not directly relevant. D.13-07-003

actually be supported by TOU. At the same time, TOU rates create the risk of potentially severe impacts on affordability for the most vulnerable customers, particularly if the rates are set in order to achieve the so-called "virtuous cycle" for its own sake.

Indeed, the only Bill Impact Response of opt-in TOU rates that specifically looked at impacts on customers categorized by their income levels, PG&E's Bill Impact Response, demonstrates decidedly negative impacts on lower income customers. PG&E's proposed opt-in TOU resulted in bill increases of 10% on the lowest income non-CARE customers, with annual incomes below $30,000, and bill increases of 9% on non-CARE customers with annual income between $30,000 and $60,000.[37] The non-CARE customers with the highest annual incomes, above $100,000 were the only group receiving significant bill decreases, of 13%, resulting from the opt-in TOU rate.[38]

The impact of PG&E's proposed opt-in TOU rate on lower income CARE customers is even more stark, although much of the impact is likely due to PG&E's proposal to effectively lower the CARE discount. The lowest income CARE customers experience bill increases of 38% resulting from the opt-in TOU rate.[39]

Thus, as demonstrated by PG&E's proposal, utilizing a "virtuous cycle" to lure customers to opt-in TOU rates leaves lower income customers with a lose-lose proposition. Either they choose opt-in TOU rates, and see their bills increase, or they remain in a tiered rate structure, with their bills increases due to the need to cover the revenue shortfall from the attractively design opt-in TOU rate.

Rather than pursing enrollment in TOU as an end in and of itself, to the extent that the Commission is determined to include TOU rates in any future of rate design options, it must

[37] *See* PG&E Bill Impact Response, p. 29.
[38] *See* PG&E Bill Impact Response, p. 29.
[39] *See* PG&E Bill Impact Response, p. 29.

establish a system that does not have a punitive result for those who have the least ability to change behavior and benefit from TOU (and thus remain on tiered rates) as well as the least ability to absorb rate increases.

G. High Usage Surcharge

Since the parties submitted their rate design proposals, each of the IOUs were required (and other parties were permitted) to provide more detailed bill impact analysis, as initially requested in an emailed ruling from the ALJ on June 13. These reviews confirm what CforAT/Greenlining asserted in their rate design proposal: each of the IOUs' proposed rate designs would result in the most substantial bill reduction for those customers who use the most energy, and those customers would see substantial bill savings despite extreme consumption levels.

SCE provides a breakdown of bill impacts based on average monthly kWh consumption, with the highest category consisting of those customers who consume over 1500 kWh.[40] This represents 2.4% of the utility's customer base, or just over 100,000 customers out of 4.2 million. In the analysis of end-state, non-TOU rates, this small group of customers would save over $130 per month, or over $1500 per year, under the proposed new rate structure, with even greater savings under SCE's proposed TOU options. While no breakdown is provided, the bill savings would be incrementally higher for those who consume more (even within this group of large consumers), so that the limited numbers of customers who consume at 400% or 600% of average would receive even greater bill reductions than this already-substantial average.

PG&E's analysis also shows that the customers with the highest monthly consumption (and highest load) will see the most substantial bill reductions under its proposal.[41] PG&E does

[40] *See* SCE Bill Impact Analysis at p. A-18.
[41] *See* PG&E Bill Impact Response at p. 17.

not provide a granular breakdown of the customers with the highest consumption, setting its final break at customers who will receive a greater than 20% bill reduction based on its proposal. This group's average consumption is 1157 kWh per month, the highest provided in PG&E's breakdown, and it includes 11% of PG&E's customer base. The average savings for this group is over $88 per month, or over $1000 per year. Again, if more granular data were provided, it would be clear that customers with increasing consumption levels within this group would realize ever greater savings, while representing a smaller portion of the customer base.

Finally, SDG&E's data, while difficult to interpret, reveals the same outcome. Looking only at the impacts of the substantial basic service fee proposed by SDG&E, the five-stage proposal to implement only this rate element would result in substantial bill reductions for those customers who consume the most electricity.[42] In the first step alone, the 7591 customers (out of over 1 million customers, totally 0.7% of the customer base) who consume an average of 2919 kWh per month would see a bill reduction of $50 per month, or $600 per year. In the second step, SDB&E breaks out 949 customers who consume an extraordinary average of 6515 kWh per month, and who would receive an average bill reduction of $90 per month, or over $1000 per year. It is not entirely clear, but this appears to be on top of the savings identified in the first step. Continuing through the steps, this tiny group of the highest-consumer customers would save another average $90 per month in Step 3, another $89 per month in Step 4, and a final average of $73 in Step 5. At the same time, in each of these steps, the customers with the lowest levels of consumption see bill increases.

Thus, the bill impact data confirms that the IOUs' proposals would undermine any conservation incentive for those customers whose consumption patterns are the most extreme, notwithstanding the fact that these customers are likely to have many opportunities for

[42] *See* SDG&E's Appendix to ALJ Response at pp. 21-25.

conservation and increased efficiency. This is not the set of middle-class consumers who simply have slightly larger houses or larger families and thus inevitable consume slightly more than average levels of electricity. These are the homes that consume electricity at the level of strip malls.

In order to promote conservation and avoid signaling to this small group of consumers with extremely high consumption levels that their behavior is appropriate, the high-usage surcharge, to be set at 400% and increased at 600% of average consumption, as set out in CforAT/Greenlining's initial proposal (together with targeted outreach to these customers to modify their behavior) should be adopted.

III. AFFORDABILITY FOR VULNERABLE POPULATIONS

A. The CARE Discount at Current Levels Barely Provides for Affordability.

As set forth at length in CforAT/Greenlining's rate proposal filing, the CARE program is a vital affordability mechanism, and must be maintained at current levels, for whichever rate design emerges as a default rate. As demonstrated by data that showed more than 10% of PG&E's and SCE's CARE population in long-term arrears, as well as the detailed accounts collected from struggling individuals and the CBOs that work with them, even under the current CARE structure, many low-income customers struggle to pay for essential supplies of energy, and for some, electricity is already unaffordable.

Some parties call for the CARE discount to be adjusted from its present levels down to the statutory floor of 20%.[43] However, given the evidence that the present CARE discount barely achieves affordability for a large portion of the CARE population (and may fail to provide affordability for some), such a reduction in CARE is untenable. As demonstrated in the discussion of tiered rates above, CARE customers generally maintain their usage in the lowest

[43] *See* PG&E, p. 31, SCE, p. 50.

tiers. Thus, any flattening of the tiered rate structure, increase in the rate of lower tiers, or institution of a customer charge will already increase bills for most CARE customers. Adding another bill increase in the form of a reduction in the CARE discount would fundamentally reduce affordability and drive more CARE customers into long-term arrearages and disconnections.[44]

CforAT/Greenlining would potentially support modifications to CARE that would provide a greater subsidy level for essential supplies of energy, and a reduced subsidy for higher levels of consumption, such as proposed by TURN.[45] Such an adjustment in the CARE discount can focus more assistance for essential usage. However, the average effective level of the CARE discount must not diminish from present levels. CforAT/Greenlining also suggested modifications that would provide a higher level of support for customers with lower income to direct more assistance to customers with the fewest resources.[46] Again, the average effective level of the CARE discount must not diminish. Additionally, any proposal that would substitute an alternative form of service for the existing rate reduction would not be appropriate.

In addition to the necessary support from CARE and FERA, CforAT/Greenlining strongly support additional forms of assistance for low-income customers in order to help them increase energy efficiency and/or enhance conservation efforts. However, the long-standing low- income Energy Savings Assistance Program (ESAP) Program, which is intended to serve this very function,[47] amply illustrates that such goals are easier to articulate than to implement.

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[44] CforAT/Greenlining continue to believe that any fundamental change to rate design should be accompanied by adoption of an Arrearage Management Program, giving customers an opportunity for a fresh start. *See* CforAT/Greenlining Rate Design Proposal at pp. 65-71.
[45] *See* TURN Rate Design Proposal at pp. 51-53.
[46] TURN also noted this option and recommended that it be explored further by the Commission, while also noting the complicating fact that cost of living varies greatly within California and within each utility's service area. *See* TURN Rate Design Proposal at pp. 53-56.
[47] The Commission describes ESAP as follows: "The Energy Savings Assistance Program provides no-cost weatherization services to low-income households who meet the CARE income guidelines. Services provided

As evidenced in the most recent ESA decision,[48] such efforts rely on detailed analysis of potential efficiency measures to determine benefits, substantial efforts to identify and enroll customers then schedule them for installation of measures, evaluation and coordination with property owners for customers who are renters, separate evaluations of how to address energy consumption in multifamily units as compared to single-family homes, and other logistical and policy issues that are not easily resolved.

While the value of ESAP is real, the benefits in the form of bill reductions for participating customers can be modest, and more difficult to capture due to the complexities involved. For these reasons, there should be no reduction in the level of subsidy for CARE or FERA based on alternative efforts to support conservation/efficiency by CARE customers. Any such efforts that may be initiated beyond the efforts currently in place through the ESA program should be as a supplement, not a substitute, for CARE.

B. FERA Customers Also Struggle with Affordability.

The CARE program must remain the means by which low income households are provided affordable prices for basic energy use. However, there remains a population needy of assistance that is not covered by the CARE program. Large households with moderate income – those who are eligible for the FERA program – also experience problems with affordability. This is demonstrated by arrearage data for PG&E and SCE FERA customers.

Overall, FERA customers actually have higher rates of short-term arrearages (31-60 days in arrears) than CARE customers and similar rates of long-term arrearages (91+ days in Arrears).

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include attic insulation, energy efficient refrigerators, energy efficient furnaces, weatherstripping, caulking, low-flow showerheads, water heater blankets, and door and building envelope repairs which reduce air infiltration." http://www.cpuc.ca.gov/PUC/energy/Low+Income/liee.htm

[48] D.12-08-044.

PG&E: Percentage of FERA Customers in Arrears, Annual Average of Each Month

	Percentage of FERA population 31-60 days in Arrears	Percentage of FERA population 91+ days in Arrears
2011	20.0%	8.9%
2012	18.4%	10.3%

SCE: Percentage of FERA Customers in Arrears, Annual Average of Each Month

	Percentage of FERA population 31-60 days in Arrears	Percentage of FERA population 91+ days in Arrears
2011	21.0%	9.3%
2012	22.2%	9.9%

FERA customers' issues with affordability are likely driven both by their moderate income, as well as their relatively greater levels of energy usage. PG&E's FERA customers total average monthly usage in 2012 was 785 kWh, compared to 556 kWh for non-CARE, non-FERA customers.[49] SCE's FERA customers total average monthly usage in 2012 was 691 kWh, compared to 586 kWh for non-CARE, non-FERA customers.[50] As the Commission has recognized, this greater usage is generally not due to discretionary usage, but rather essential usage:

> The record establishes that the average electricity use of households with three or more occupants is higher than the average usage of smaller households that are similar in other respects, with usage typically exceeding 130% of baseline quantities year-round and with higher use in peak summer months. Large households are unlikely to be able to conserve as much as other households as a means of maintaining affordable energy bills.[51]

[49] This data was contained in PG&E Data Response to Greenlining's First Set of Data Requests, Question 2, Attachment 1.
[50] This data was contained in SCE Data Response to Greenlining's First Set of Data Requests, Question 2, Attachment.
[51] D.04-02-057, p. 51. *See also* Findings of Fact 15, 16.

The Commission created the FERA program in response to the fact that larger households can incur unavoidably higher usage levels of leading to unaffordable bills.[52]

The FERA program must continue to provide assistance for large, moderate income households. Currently, the FERA program provides Tier 3 energy usage (between 130% and 200% of baseline) at Tier 2 prices. A comparable discount must continue for FERA customers as part of a tiered rate structure. If the tier sizes shift, the FERA discount structure should also shift. For example, if a model rate structure with three equally sized tiers based on the baseline quantities is adopted, then FERA should continue to provide a discount in the mid-level tier, such as discounting usage for eligible households in the new Tier 2 down to Tier 1 prices.

FERA households are likely to exhibit unavoidably greater usage in a time variant rate structure as well. If a default time variant rate structure is adopted, FERA customers should be provided with some level of discount. Alternatively, FERA customers should be exempted from default time variant pricing.

[52] *See* D.04-02-057, Finding of Fact 18. "Lower-middle income large households served by PG&E, SCE, and SDG&E have a need for electric rate relief in order to ensure the affordability of their reasonable energy needs."

IV. CONCLUSION

CforAT/Greenlining urges the Commission to adopt a model rate design that protects affordability for essential uses. Such a rate design must contain no fixed charges, and must be a substantially differentiated tiered rate structure with at least three tiers. A high usage surcharge would also contribute to affordability. The Commission must also ensure that the CARE program and the FERA provide the same level of discount, if not more, that they currently provide.

Respectfully submitted,

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