

**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)

**OPENING BRIEF OF THE
CALIFORNIA SOLAR ENERGY INDUSTRIES ASSOCIATION**

Brad Heavner
Policy Director
California Solar Energy Industries Assoc.
555 5th St. #300-S
Santa Rosa, California 95401
Telephone: (415) 325-2683
Email: brad@calseia.org

January 5, 2015

TABLE OF CONTENTS

1. Introduction and Summary of Recommendations	1
2. Background	2
3. Impact Considerations of Rate Design Proposals	4
A. The Proposed Rate Design Changes Would Harm Existing Solar Investments and the Solar Market.....	4
B. IOU Criticisms of CALSEIA’s Analysis Have No Merit.....	10
I. Customer Payback Is the Appropriate Metric for Measuring Customer Impact	10
II. PPA Customers Would Not Be Immune from Negative Impacts	10
III. PG&E’s LCOE Analysis Is Flawed.....	11
C. Solar Economics for Low Usage Customers Are Not Improved Enough by IOU Proposals to Create a Significant Market for This Segment	13
4. Tiered Rate Reforms	14
A. Proposed Rate Design Changes	14
B. Baseline Quantities	15
5. Fixed Charge or Minimum Bill	16
6. Opt-in TOU Rates and Opt-In TOU Pilots	17
A. Opt-In TOU Rate Proposals	17
B. Opt-in TOU Pilot Proposals	17
7. Default TOU Rates and Default TOU Pilot Proposals	17
8. Schedule, Implementation and Coordination of Rate Changes.....	18
9. Conclusion.....	19

**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)

**OPENING BRIEF OF THE
CALIFORNIA SOLAR ENERGY INDUSTRIES ASSOCIATION**

Pursuant to Rule 13.11 of the Rules of Practice and Procedure of the California Public Utilities Commission (Commission), the California Solar Energy Industries Association (CALSEIA) submits this opening brief on proposed changes to residential rate design.

1. Introduction and Summary of Recommendations

Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E) each filed rate design change proposals in this proceeding. Each of these investor-owned utilities (IOUs) has proposed changing residential rate structure to a two-tiered system with a 20% differential between the tiers and a fixed charge set at the statutory maximum. Their main objectives are to reduce bills for high-usage customers and to recover fixed costs via fixed charges.

CALSEIA remains strongly opposed to any fixed charges, because fixed charges work directly against the universal desire to use less centrally generated electricity. They dampen price signals intended to increase conservation and self-generation and weaken programs intended to positively influence customer behavior. Although AB 327 of 2013 reaffirmed the Commission's

authority to adopt and expand fixed charges, it did not direct the Commission to do so.¹ The Commission should reject utility proposals to adopt or expand fixed charges.

CALSEIA recognizes that there is a state policy interest in reducing the electric bills of high-usage customers, but urges the Commission to balance that objective with the interest in diversifying the state's energy sources and decarbonizing the electric system. Utilities do not need to practically abandon the long-standing tiered rate structure in order to reduce the portion of costs assessed to customers with high levels of consumption. The Commission should adopt a tier differential between the current differential and the differential proposed by the IOUs.

CALSEIA proposes to gradually narrow the tiers to a 1.75 to 1 differential.

Perhaps most importantly, changes to rate structure should be implemented more gradually than the utilities propose. The sharply tiered rate structure that has been in place for 13 years should not be reversed in four years. The Commission should direct the IOUs to transition to the end state rate structures resulting from the proceeding over a six-year period between 2015 and 2020.

The scope of the proceeding also includes the question of whether to make time-of-use (TOU) rates the default for residential customers. On this topic, CALSEIA agrees with and supports the analysis and recommendations of Vote Solar.

2. Background

The Commission created a steeply tiered residential rate structure in 2001 with D.01-05-064. In the opening paragraphs, the Decision states, "These new rates must be implemented as soon as practicable to provide sufficient revenues for power and **to maximize conservation** this summer."² [emphasis added] The decision further states, "Section 739.7 requires the

¹ Public Utilities Code section 739.9.

² D.01-05-064 at 2.

Commission to maintain ‘an appropriate inverted rate structure’ for residential rates, an approach we believe appropriately encourages customers to conserve because rates increase as customers use more energy ... This approach, we believe, will encourage customers to conserve energy as directed by Section 747.5.”³ It is important to note that this decision came after the decisions from the mid-1990s approving rate structures with smaller tier differentials, decisions that the IOUs have referenced repeatedly in this proceeding. Thus, the Commission understood that its earlier decisions did not sufficiently incent conservation, and instituted a more sharply tiered rate structure to increase conservation.

AB 1X of 2001 capped the rates for the lower tiers. In 2009, SB 695 eased those caps, but only slightly. The caps were intended to protect low-income customers from rate increases and to encourage the IOUs to contain their costs. However, the IOUs were unable to contain their costs, and this led to dramatic increases in bills for high-usage customers.

This elicited responses from the Commission and the Legislature. In 2012, the Commission opened this proceeding to explore the positions of parties on “preferable residential rate design to be implemented when statutory restrictions are lifted.”⁴ Then the Legislature passed AB 327 in 2013, which removed the caps on the lower tiers. As a result of that legislation, the Commission changed the categorization of the proceeding to ratesetting⁵ and directed the IOUs to submit proposals for changes to residential rate structure.⁶

The record of this proceeding supports a need to continue protecting low-income customers and having price signals that encourage conservation and self-generation, as well as

³ *Id.* at 10.

⁴ CPUC, “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,” June 21, 2012.

⁵ CPUC, “Amended Scoping Memo and Ruling of Assigned Commissioner,” January 6, 2014.

⁶ CPUC, “Assigned Commissioner’s Ruling Requiring Utilities to Submit Phase 1 Rate Change Proposals,” February 13, 2014.

maintaining the basic structure of residential rates that has been in place for the past 13 years. The IOU proposals would lower bills for high-usage customers without sufficiently balancing that objective with the need to protect low-income customers and the need for price signals that influence customer behavior. CALSEIA's proposed compromise rate structure better strikes that balance.⁷

3. Impact Considerations of Rate Design Proposals

The rate design proposals submitted by the IOUs would result in a large reduction in the solar market. Increasing the capital recovery period would reduce the pool of customers who are willing to make investments in on-site generation. Additionally, extending capital recovery periods for current solar customers would likely lead to a vocal backlash that would put a chill on the market. Although rates are never guaranteed, the existence of a tiered rate structure has been a conscious price signal that the state has given to customers. For customers who have responded to policies that encouraged them to make investments, the state has an obligation not to make changes abruptly.

A. The Proposed Rate Design Changes Would Harm Existing Solar Investments and the Solar Market

CALSEIA measured the capital recovery period for each of the IOU proposals for customers with different levels of consumption and with systems that offset different proportions of usage. In rebuttal testimony, SCE states that modeling the bill impacts on customers with solar systems offsetting 50% of on-site load is most appropriate because the results of a 2013 SCE study showed the average offset was 51%.⁸ For simplicity, we therefore summarize the results of our analysis using the results of the 50% offset scenario. As shown in CALSEIA's testimony, the results for 75% and 100% offset systems are very similar.

⁷ See CALSEIA Testimony (CALSEIA Exhibit 106) at 5.

⁸ SCE Rebuttal (SCE Exhibit 106) at 107, lines 11-14.

Capital recovery periods are 9.2 years to 10.8 years for customers with 750 kWh or more of gross monthly consumption. They are even longer for customers with smaller usage, as shown below in Section 3-C. This compares to capital recovery periods of 5.6 years to 8.1 years under current rate structure. For most customers who are viable candidates for solar given their consumption levels, the IOU proposals lengthen capital recovery periods by 42%-70%.

Table 1. Increase in Capital Recovery Periods from IOU Proposals for Solar Systems that Offset 50% of Customer Load²

Utility	Average Monthly Usage (kWh)	IOU Proposed Rates	Current Rate Structure	Percentage Increase
PG&E	750	10.8	7.2	50%
	1000	10.7	6.4	67%
	1250	10.5	6.2	69%
	1500	10.4	6.1	70%
SCE	750	10.2	8.1	26%
	1000	10.1	7.1	42%
	1250	9.9	6.8	46%
	1500	9.8	6.6	48%
SDG&E	750	9.8	6.7	46%
	1000	9.4	5.9	59%
	1250	9.3	5.7	63%
	1500	9.2	5.6	64%

It is unquestionable that longer capital recovery periods reduce the number of people who are willing to tie up tens of thousands of dollars in meeting their electricity needs. Mr. Gerza’s professional experience after speaking face to face with thousands of potential customers and speaking with professionals at other solar companies is that capital recovery periods of nine years or more are too long to motivate enough customers to constitute a mainstream market. This is also supported by the research of the National Renewable Energy Laboratory in Sierra Club

² This table is reformatted using numbers from Tables A-1 to A-3 in Mr. Gerza’s testimony (CALSEIA Exhibit 106).

Exhibit 105. Figure 3 of that exhibit shows a sharp drop in customer adoption with capital recovery periods at and above 9 years.¹⁰

The impact of the IOU rate design change proposals on existing solar investments is also excessive. Monthly bill savings would be reduced by 26%-40% for most customers, as shown in Table 2. Customers know that electricity rates should always be expected to change, but they have an expectation that the basic structure of rates will evolve only slowly. Fundamental changes to underlying rate design must be measured and gradual, with consideration of the impacts on all types of existing customers. Abrupt change would create a massive black eye for the statewide solar industry and for state policy makers. Thirty percent of the value of people's investments simply cannot be taken away without expecting a backlash. This would lead prospective solar customers to lose confidence that future changes will be reasonable and gradual. The Commission must consider the potential of this decision to damage the household economies of existing solar customers and the damage to the market that could result.

¹⁰ Sierra Club Exhibit 105 at 42.

Table 2. Change in Monthly Bill Savings from Existing Solar Investments Under IOU Rate Proposals¹¹

	Average Monthly Usage (kWh)	Full Offset System	75% kWh Offset System	50% kWh Offset System
PG&E	750	-12%	-19%	-30%
	1000	-22%	-30%	-38%
	1250	-26%	-34%	-40%
	1500	-29%	-36%	-40%
SCE	750	0%	-7%	-17%
	1000	-10%	-18%	-26%
	1250	-15%	-22%	-29%
	1500	-18%	-25%	-30%
SDG&E	750	-14%	-20%	-29%
	1000	-21%	-28%	-35%
	1250	-25%	-31%	-36%
	1500	-28%	-33%	-36%

SCE’s NEM bill impact tables confirm that the majority of NEM customers would be worse off under proposed rate design changes.

- From 2014 to 2015, 75% of NEM customers would experience bill increases.
- From 2015 to 2016, 74% of NEM customers would experience bill increases.
- From 2016 to 2017, 85% of NEM customers would experience bill increases.
- From 2017 to 2018, 95% of NEM customers would experience bill increases.¹²

PG&E’s NEM bill impacts appear to mix revenue requirements between August 2014 rates and the 2015 proposed rates, but looking at the last two years of the proposed transition, 84% of NEM customers would see a bill increase between 2016 and 2017 and 81% of NEM customers would see a bill increase between 2017 and 2018. SDG&E’s response to the Assigned

¹¹ This is a reproduction of Table 2 from CALSEIA’s testimony at p. 11 (CALSEIA Exhibit 106).

¹² SCE Supplemental Testimony, Appendix D (SCE Exhibit 103). Note that the top rows of each chart in this appendix are mischaracterized, claiming there is a bill decrease when actually it is a bill increase.

Commissioner's Ruling question asking for bill impacts to net energy metering (NEM) customers excluded NEM credits from the NEM bill impact calculations.¹³ An analysis of NEM customers that factors out net metering is meaningless, and we therefore do not have comparable numbers for SDG&E.

SCE states that an increase in capital recovery period from 6.8 years to 9.9 years "is not terribly significant."¹⁴ This blatant disrespect for their own customers demonstrates that SCE is completely out of touch with the motivations of people who invest in solar electric generating facilities. After a customer has tied up tens of thousands of dollars of personal money, having the recovery of the initial outlay stretched out by 45% is a gross disruption of the customer's investment.

SCE further states, "the payout period assessments of other parties reflect some extension of the forecast payback periods based on the IOU proposals. However, none of these projections come significantly close to the 20-year payback period."¹⁵ This implies that it is an attractive investment for any customer to install solar if there is a marginally positive return within 20 years. Again, this is so far out of touch with customer experience that it is extremely unreasonable. Customers do not tie up money only to break even over a time period that approaches the useful life of the asset.

PG&E claims that longer capital recovery periods would not harm the solar market because capital recovery periods have been longer in the past and some customers still installed solar systems. PG&E states that the 6,500 solar installations in 2007 when the average payback was almost 16 years is evidence that customers in 2018 will be willing to accept longer payback times. This logic is flawed in two ways. First, PG&E anticipates 38,474 residential installations

¹³ Testimony of Cynthia Fang (SDG&E Exhibit 107), Attachment I at 11-12.

¹⁴ SCE Rebuttal (SCE Exhibit 106) at 108.

¹⁵ *Id.* at 106.

for 2014.¹⁶ The 2007 total of 6,500 installations pales in comparison to current installations. It would be a market failure and a waste of ratepayer investment to allow installations to return to levels preceding the California Solar Initiative. Second, many customers who installed solar in 2007 were early adopters who were motivated by reasons beyond economic return. By definition, early adopters adopt early, then they have adopted and are not candidates for adoption in the future. The 2007 adoption rate is not at all informative for predicting the adoption rate in 2018.

SDG&E dismisses any consideration of the impact of proposed rate design changes on existing solar investments with a faulty interpretation of the Commission's March 2014 decision on the NEM transition period, D.14-03-041. In rebuttal testimony, SDG&E states, "The 20 year transition period was set after consideration of the potential impacts on a NEM customer's payback period of the rate reforms that are being considered in this proceeding as well as the potential impact of those residential rate reforms on a residential NEM customer's solar economics."¹⁷ This statement implies that the length of the transition period was determined, at least in part, by estimating the impacts of potential rate changes. This is factually inaccurate. Rather, the Commission decided it was not possible to base the transition period on customer payback, given the uncertainties involved with forthcoming rate design change proposals. They rejected the utilities' estimates of customer payback due to "concerns about the accuracy of those estimates."¹⁸ The Commission set the transition period "based on a conservative estimate of the equipment's expected life."¹⁹ In sum, the Commission did not decide to accept the utilities'

¹⁶ PG&E Rebuttal (PG&E Exhibit 109) at 2-40.

¹⁷ SDG&E Rebuttal (SDG&E Exhibit 106) at CY-13, lines 3-6.

¹⁸ D.14-03-041 at 18.

¹⁹ *Id.* at 20.

payback estimates and add a buffer for the uncertainty of future rate design changes. Rather, it concluded such an approach was not reliable and took an entirely different approach.

B. IOU Criticisms of CALSEIA’s Analysis Have No Merit

In their testimony, the IOUs tried but failed to discredit CALSEIA’s customer impact analysis. The following subsections address their criticisms of our analysis.

I. Customer Payback Is the Appropriate Metric for Measuring Customer Impact

PG&E’s witness on solar PV economics, Dan Halperin, began his testimony saying, “Customer ‘pay-back’ is not the best measure of the health of the solar market or the marketability of solar PV systems to customers.”²⁰ Yet elsewhere in his testimony, when asked “How would the proposed rate design changes affect the value of net energy metered facilities,” Mr. Halperin’s response used customer payback as the measuring stick, saying, “The average customer payback periods for customers installing new solar NEM facilities will increase slightly.”²¹ During cross examination, Mr. Halperin acknowledged that changes that negatively impact the payback period for host-owned systems also negatively impact PPA customers.²²

Similarly, SCE’s rate design witness, Russ Garwacki, expressed opposition to CALSEIA’s use of payback analysis only to conclude, “Nevertheless, SCE recognizes that payback period can provide directional information on customer adoption of solar.”²³

II. PPA Customers Would Not Be Immune from Negative Impacts

The IOUs have stated repeatedly in this proceeding that since many customers install solar via power purchase agreements or leases that include no upfront investment and a monthly

²⁰ PG&E Rebuttal (PG&E Exhibit 109) at 2-35.

²¹ PG&E Rate Design Reform Proposal (PG&E Exhibit 101- Part 2) at D-32.

²² Transcript (PG&E, Dan Halperin) at 1267 line 23 - 1268 line 2.

²³ SCE rebuttal (SCE Exhibit 106) at 107.

bill savings from the start, their payback is effectively zero. Their argument implies that these customers would be immune to any rate design changes.

This is plainly false. For existing customers who have offset part but not all of their usage, the increase in lower tier rates would increase their monthly costs that include bill payments and PPA payments. This would put customers who have marginal savings under current rate structure underwater. For potential future customers, solar companies would be able to offer cash savings to a smaller universe of customers if the economics of solar are negatively changed. If changes are significant, only customers with perfect installation conditions and load profiles will qualify for a lease with no upfront investment.

III. PG&E's LCOE Analysis Is Flawed

In rebuttal testimony, PG&E claims, “the number of residential customers for whom rooftop solar makes economic sense would actually increase as a result of PG&E’s residential rate proposal.” This is an incorrect statement supported by analysis that is deeply flawed.

Firstly, PG&E used unrealistic cost reduction projections. In rebuttal testimony, as revised during direct examination of Mr. Halperin,²⁴ PG&E states their assumption: “Starting with the CSI installation data, we forecast the cost of solar using a similar assumption to what CALSEIA used (i.e., cost of solar will decline 6 percent per year).”²⁵ CALSEIA’s assumption was that the cost of solar would decline 5 percent per year between 2014 and 2018. CALSEIA made no representation as to potential cost reductions after 2018. PG&E made no justification for its assumption that costs could be reduced at a steady rate for an additional 9 years beyond 2018. Mr. Halperin admitted during cross-examination that, “At some point the cost of solar may

²⁴ Transcript (PG&E, Dan Halperin) at 1252-1253.

²⁵ PG&E Rebuttal (PG&E Exhibit 109) at 2-38.

stop decreasing and may potentially increase.”²⁶ He stated that PG&E expects that will not happen over the next 10 years, but offered no evidence to support that statement.

Further, the 6 percent annual reduction that PG&E states in testimony is not a true statement of the numbers they used. The actual numbers used are contained in CALSEIA Exhibit 103, “PG&E Response to Data Request on Levelized Cost of Energy Calculations.”

- From 2014 to 2027, excluding 2017 when the federal tax credit changes, PG&E assumes an average annual cost reduction of 7.2 percent.
- Looking only at the period after the change in federal tax credit, 2018 to 2027, they assume a 7.3 percent annual reduction.
- For 2017, PG&E assumes a cost increase of 7.9 percent, despite the tax credit changing from 30 percent to 10 percent of installed cost for third-party-owned systems. Factoring out the tax credit change, this amounts to a cost reduction of 12.1 percent. This is nowhere near “a similar assumption to what CALSEIA used.”

In addition, PG&E’s stated results from the levelized cost of energy modeling tool cannot be recreated using the inputs they provided. When CALSEIA uses the CSI Individual Installation Tool using PG&E’s inputs, the model produces results with higher LCOE values than those in Figure 2-7 of PG&E’s rebuttal testimony, as revised by PG&E Exhibit 113. Mr. Halperin could not offer a possible explanation for the difference.²⁷

PG&E did have one legitimate criticism of CALSEIA’s analysis, noting, “The minimum charge is included in the customer’s monthly bill prior to installation of solar, even when the

²⁶ Transcript (PG&E, Dan Halperin) at 1271, lines 9-10.

²⁷ Transcript (PG&E, Dan Halperin) at 1271 line 15 - 1272 line 8.

customer's monthly bill is above the minimum charge."²⁸ Mr. Gerza corrected for this error in Exhibits 105 and 106. The vast majority of results were unaffected by this correction because this only affects full offset systems and the smallest of 75% offset systems. As SCE points out, very few of those systems have been installed,²⁹ and even for those systems the change in capital recovery periods in the corrected analysis was negligible.

C. Solar Economics for Low Usage Customers Are Not Improved Enough by IOU Proposals to Create a Significant Market for This Segment

The improved solar economics for low-usage customers that comes from flattening rate tiers does not greatly expand the potential solar market for two reasons: a) the capital recovery period is still too long for the average customer; and b) a minority of low-usage customers live in single-family housing and have non-CARE rates.

Each of the IOUs argue that the proposed lower tier rate increases provide strong enough price signals to expand the solar market. SCE states, "it is likely that as bills of low- and medium-usage customers increase, they may consider DG options as a method of managing their bills,"³⁰ yet they have conducted no analysis to indicate such a development is likely.³¹ PG&E states, "the number of residential customers for whom rooftop solar makes economic sense would actually increase as a result of PG&E's residential rate proposal."³² However, the analysis backing up that statement is so flawed that it is meaningless, as documented above in the LCOE subsection (Section 3-B-III). SDG&E states, "SDG&E's proposal increases the conservation for nearly 70% of SDG&E's residential sales."³³

²⁸ PG&E Rebuttal (PG&E Exhibit 109) at 2-44 lines 14-16.

²⁹ SCE Rebuttal (SCE Exhibit 106) at 107, lines 11-14.

³⁰ SCE Supplemental Testimony (SCE Exhibit 103) at 8, lines 9-10.

³¹ Transcript (SCE, Andrea Horwatt) at 3002, lines 22-28.

³² PG&E Rebuttal (PG&E Exhibit 109) at p. 2-36 line 22 - p. 2-37 line 1.

³³ Rebuttal Testimony of Chris Yunker (SDG&E Exhibit 106) at CY-6, lines 4-5.

These claims are not true. Customers with average usage of 250 kWh per month or 500 kWh per month who consider 50% offset solar systems in 2018 will have capital recovery periods of 10.8-12.9 years under the IOU rate proposals.³⁴ This is far longer than most people are willing to wait get back to the breakeven point on an investment.

Also, a majority of low-usage customers are apartment dwellers and/or CARE customers. In absence of a viable community solar program, most residents of multifamily housing are not able to install rooftop solar to offset their energy use. Customers who receive subsidized rates in the CARE program do not have high enough electricity costs for it to make sense for them to offset those costs with investments in onsite generation. Therefore, the pool of potential solar customers is limited to residents of single-family housing on non-CARE rates.

4. Tiered Rate Reforms

A. Proposed Rate Design Changes

After thousands of face to face conversations with potential solar customers, Mr. Gerza concludes, “Tiered rates have been a cornerstone of the decision making process for customers to make their homes and businesses more energy efficient and to invest in distributed generation.”³⁵ Although most customers cannot keep the numbers straight, as the utilities have repeatedly stated in this proceeding, it is the experience of solar solutions providers that many customers know they are in the more expensive tiers and this motivates them to take action. Further, when a customer reviews an analysis of the financial impacts of a solar installation, the benefits of getting out of the more expensive tiers is unmistakable.

³⁴ CALSEIA Testimony (CALSEIA Exhibit 106), Appendix A.

³⁵ *Id.* at 3, lines 13-15.

NRDC witness Paul Chernick presented an excellent description of the theory and the benefits of tiered rates in his testimony.³⁶ CALSEIA strongly supports his analysis.

SCE data on customer responses to energy efficiency and solar programs demonstrates that tiered rates are effective at sending price signals that influence customer behavior. In its supplemental testimony, Figure 5-1 on participation in the Summer Discount Plan and Figure 5-2 on solar adoption clearly point to the fact that customers in the higher rate tiers have disproportionately adopted energy efficiency and self-generation.³⁷ Price signals work.

Notwithstanding all of the above, CALSEIA recognizes that there is a strong interest by the Commission and many parties to reduce the bills of high usage customers. Our testimony included a proposal to gradually narrow the tiers to a 1.75 to 1 differential by 2020. We maintain that going as far as the utilities propose, a 20% differential in 2018, is too drastic for the state to maintain its commitment to changing rate structure only gradually.

The utilities each acknowledged that they are only proposing a two-tiered rate design because of statutory limitations. They would prefer completely flat rates. The Commission must explicitly reject this rate design approach and acknowledge the benefit of tiered rates. The Legislature clearly decided there is a benefit to tiered rates, given the direction in Public Utilities Code section 739.9 (c), and the record of this proceeding supports that understanding. The Commission must include in its findings that tiered rates encourage conservation and self-generation.

B. Baseline Quantities

CALSEIA has not taken a position on baseline quantities.

³⁶ NRDC Exhibit 101, "Direct Testimony of Paul Chernick on Behalf of the Natural Resources Defense Council," September 15, 2014.

³⁷ SCE Supplemental Testimony (SCE Exhibit 103) at 8-9.

5. Fixed Charge or Minimum Bill

Three of the Commission's rate design principles in this proceeding are in conflict with regard to fixed charges. The utilities point to the principle of cost causation to argue for recovering fixed costs with fixed charges. However, a separate principle states the objective of setting rates based on marginal cost of service. There is no place for fixed charges in marginal cost ratemaking, as explained thoroughly in the testimony and cross-examination of Office of Ratepayer Advocates witness Chris Danforth.³⁸ A third principle is that rates should encourage conservation and energy efficiency. Any fixed charge clearly violates this principle.

Beyond the rate design principles established in this proceeding, Public Utilities Code section 739.9 (e)(2) requires that any fixed charge "Not unreasonably impair incentives for conservation and energy efficiency." The utilities did not measure the conservation impacts of the fixed charge independent of other elements of their rate design change proposals, and thus cannot attest to whether the extent to which their fixed charge proposals impair conservation is reasonable.

In the long run, nearly all utility costs vary with usage, with the exception of poles, some of the costs associated with billing, and equipment of minimum size in a service connection. Given that those costs are a small portion of total utility spending, it is reasonable to recover the costs through volumetric rates. Whether rate structure is tiered or flat, volumetric rates send a price signal to conserve energy. Since fixed charges inevitably impair conservation, it is the responsibility of the entity proposing fixed charges to demonstrate that the extent of impairment is not unreasonable.

³⁸ Office of Ratepayer Advocates Opening Testimony (ORA Exhibit 101), Chapter 2; and Transcript at 3183-3262.

The State has long-standing policies for the expansion of zero net energy buildings, including targets that all new residential construction be zero net energy by 2020.³⁹ The rate structure adopted in this proceeding will be an important influence on the ability of residential construction in 2020 to comply with state policy. Fixed charges and minimum bills are obstacles for zero net energy buildings. Adopting fixed charges or minimum bills in this proceeding would impair the state's ability to meet its zero energy buildings targets.

Because there is a reasonable alternative to assessing fixed charges, and because fixed charges by their very nature impair conservation, and because fixed charges impair the state's zero energy buildings policy, and because the utilities in this proceeding did not even measure the extent to which the proposed fixed charges impair conservation, it is therefore unreasonable to impair conservation and energy efficiency at all with fixed charges. The Commission in this proceeding should not increase fixed charges or minimum bills beyond the current levels at which they have already been established by the separate utilities.

6. Opt-in TOU Rates and Opt-In TOU Pilots

A. Opt-In TOU Rate Proposals

CALSEIA supports the testimony and recommendations of Vote Solar in this proceeding. The current TOU schedules should be maintained as options among a menu of TOU rate options for the reasons set forth by Vote Solar in its testimony.

B. Opt-in TOU Pilot Proposals

CALSEIA has not taken a position on TOU pilots.

7. Default TOU Rates and Default TOU Pilot Proposals

CALSEIA does not have a position on whether TOU rates should be the default for residential customers.

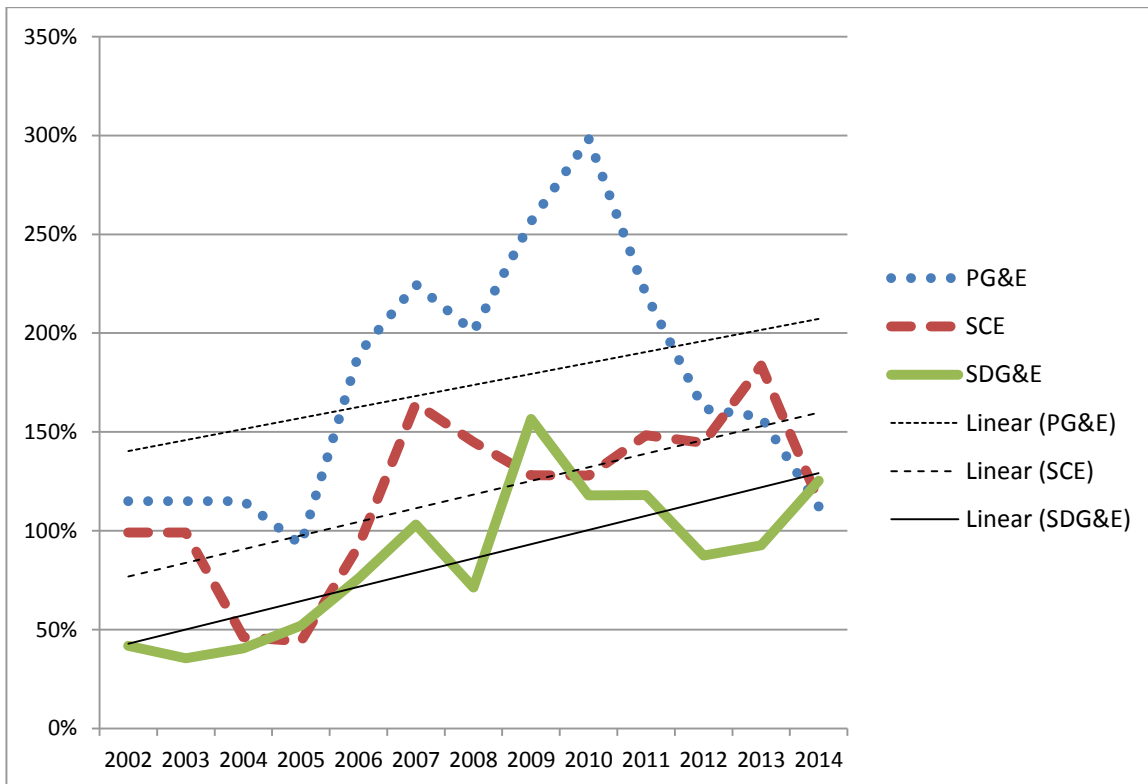
³⁹ CPUC, "California Long Term Energy Efficiency Strategic Plan," September 2008 at 6.

8. Schedule, Implementation and Coordination of Rate Changes

The Commission should make the transition to flatter rates over six years rather than the four-year transition proposed by the utilities.

Steeply tiered rates have been a fixture of California residential electricity rates for more than 13 years. Steep tiers were first created by D.01-05-064, with a 100% tier differential between the top and bottom tiers. Data in the Staff Report⁴⁰ demonstrates that tier differential has generally increased gradually since then for SCE and SDG&E. For PG&E, it peaked in 2010 when that utility's revenue requirement spiked and has come down since then, but has stayed above 93% throughout the past 13 years and the trend line reflects an overall increase since 2002.

Figure 1. Differential Between Top and Bottom Tiers Over Time



⁴⁰ CPUC, "Staff Proposal for Residential Rate Reform in Compliance with R.12-06-013 and Assembly Bill 327," January 3, 2014 at 8.

The Commission should not be compelled to undo in four years what has been in place and has been generally deepening for 13 years. As long as planned changes are heading in the direction of flattening the rate tiers, it will be providing the relief desired by parties advocating a reduction in tier differential. During the transition period, the tier differential will continue to work as it has to encourage conservation. It is not the case that the differential is without benefit and the Commission needs to achieve relief as quickly as possible. Rather, should the Commission decide to reverse the trend of the past 13 years, it can allow the state to continue experiencing the declining yet very real benefits of conservation price signals throughout the transition period.

The Commission should take special caution to allow the solar market to ease past the 2017 change to the federal tax credit. The Investment Tax Credit will change on January 1, 2017 from 30% to 10% of installed cost for commercial system owners and from 30% to zero for residential owners. If 2017 rate changes significantly erode solar value, the combination of the two impacts could waste the momentum that has been created by historical rate structure and by the California Solar Initiative. The efficiencies and cost reductions that have come at great expense to ratepayers should not be put at risk in order to make rate design changes more quickly than necessary. The Commission can set the course to 2020, knowing it is addressing a structural issue without causing undue harm along the way.

9. Conclusion

For the reasons stated, the Commission should direct the utilities to modify their rate design change proposals as described above.

/

/

/

/

/

Respectfully submitted this January 5, 2015 at Santa Rosa, California,

By: /s/ Brad Heavner
Brad Heavner

Brad Heavner
Policy Director
California Solar Energy Industries Association
555 5th St. #300-S
Santa Rosa, California 95401
Telephone: (415) 328-2683
Email: brad@calseia.org