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.

SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) NOTICE OF EX PARTE COMMUNICATION

JANET S. COMBS
FADIA KHOURY

Attorneys for SOUTHERN CALIFORNIA EDISON COMPANY

2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California  91770
Telephone:  (626) 302-6008
Facsimile:  (626) 302-6693
E-mail:  Fadia.Khoury@sce.com

Dated:  March 24, 2015
SOUTHERN CALIFORNIA EDISON COMPANY’S (U 338-E) NOTICE OF EX PARTE COMMUNICATION

Pursuant to Rule 8.4 of the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), Southern California Edison Company (SCE) hereby gives notice of the following ex parte communication.

On Friday, March 20, 2015, Mr. Russell Garwacki, Director of Pricing Design and Research at SCE gave an oral presentation entitled, “Do Steeply Tiered Rates Promote Conservation? An Analysis Using Aggregate Data” at a panel of the 20th Annual POWER Conference on Energy Research and Policy at the University of California, Berkeley (held at the Joseph Wood Krutch Theater, Clark Kerr Campus, 2601 Warring Street, Berkeley, CA 94720).

The following Commission Advisors attended the conference: Mr. Sean Simon (Advisor to Commissioner Randolph), Mr. Scott Murtishaw (Advisor to President Picker), and Ms. Jennifer Kalafut (Advisor to Commissioner Peterman).

Mr. Garwacki delivered oral remarks about a presentation appended hereto as Attachment A, which summarizes a paper Mr. Garwacki also submitted (Attachment B), both of which were made available to conference attendees. Mr. Garwacki’s presentation lasted approximately twenty-five minutes.
To receive a copy of this *ex parte* notice, please contact:

Fadia Rafeedie Khoury  
G.O.1, Room 346N  
2244 Walnut Grove Avenue  
Rosemead, CA  91770  
fadia.khoury@sce.com  
Telephone: (626) 302-6008

Respectfully submitted,

JANET S. COMBS  
FADIA KHOURY

/s/ Fadia Khoury  
By: Fadia Khoury

Attorneys for  
SOUTHERN CALIFORNIA EDISON COMPANY  

2244 Walnut Grove Avenue  
Post Office Box 800  
Rosemead, California  91770  
Telephone:  (626) 302-6008  
Facsimile:  (626) 302-6693  
E-mail:  Fadia.Khoury@sce.com

March 24, 2015
Attachment A

Do Steeply Tiered Rates Promote Conservation?

Some Analyses using Aggregate Data
Do Steeply Tiered Rates Promote Conservation?  
Some Analyses using Aggregate Data

POWER Conference

Russell.Garwacki@sce.com
Pricing Design & Research - SCE

March 20, 2015
Conservation in California

Residential Electricity Use per Capita 1963-2009

- Appliance and Building Standards are a major success story in California since the 1970’s.
- Trend line seems to be different since early 2000’s
- Could part of the difference be due to pricing policies adopted in 2001 as a result of the electric energy crisis?

Source: Post by Lucas Davis, Energy Institute at Haas website
How Does Tier Pricing Affect Conservation?

• Historical studies use two basic premises

1. Marginal Price drives response

2. Elasticity - Most studies conclude that electricity has a very low elasticity somewhat differentiated by usage level
Impact of More Tiers - Steeper Tiers?

- More tiers → less understandable price information
- Response to Average Price versus Marginal Price (Borenstein, Ito)
- More elasticity assumptions because of more blocks (Faruqui)
- Proportionally more discretionary usage over time due to increased appliance efficiency
- What does it all mean at the aggregate level?
Aggregate Level Approach Used Here

- Neighboring utilities comparison
  - Quasi-experimental approach
  - Similar geographic, weather characteristics and time frame
  - Similar policy requirements
  - Different pricing structures

- Two approaches
  - Ratio comparison:
    - Year-to-year changes in usage vs. pricing
  - Regression:
    - Energy consumption as a function of average price, tier structure, other
Identifying Neighboring Utilities

- Aggregate usage data from EIA and SCE internal data
- Historical rate schedules from utilities

<table>
<thead>
<tr>
<th>SCE’s service territories</th>
<th>Neighboring Utilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles County</td>
<td>LADWP</td>
</tr>
<tr>
<td>Central &amp; North Orange County</td>
<td>Anaheim</td>
</tr>
<tr>
<td>Ontario, Foothill, Redlands district</td>
<td>Riverside</td>
</tr>
<tr>
<td>Monrovia</td>
<td>Pasadena</td>
</tr>
</tbody>
</table>
Pricing Overview  
– SCE vs. Anaheim

• Tier Prices

![Anaheim Pricing Schedule](image1)

![SCE Pricing Schedule](image2)

• Average Price

![Average c/kWh at 600kWh Monthly Usage](image3)
Average Annual Usage – SCE vs. Anaheim

- Total annual usage/number of customers
- Almost parallel trend

Year over year variations depend not only on price changes but possibly on other factors.

Method controls for weather, economic conditions, state policies, that should be similar for both utilities.
Comparison Year over Year Variations

- Growth = \( \frac{Usage_t}{Usage_{t-1}} \)  \( t_0 = \) year 2000

- Growth ratio = \( \frac{Growth_{SCE}}{Growth_{Anaheim}} \)

- Slope is not statistically significant \( \rightarrow \approx 0 \)

- Slope of Trend \( \approx 0 \rightarrow \) no difference in year over year growth in the compared areas

- Removal of 2001 ratio flattens slope but still insignificantly positive
## Regression Analysis

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Average Monthly Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanatory Variable</strong></td>
<td><strong>Parameter Estimate</strong></td>
</tr>
<tr>
<td>Intercept</td>
<td>456.20</td>
</tr>
<tr>
<td>Central Orange</td>
<td>112.82</td>
</tr>
<tr>
<td>North Orange</td>
<td>149.93</td>
</tr>
<tr>
<td>Average Price Indicator</td>
<td>-10.72</td>
</tr>
<tr>
<td>in c/kWh</td>
<td></td>
</tr>
<tr>
<td>Max Tier Rate/Min Tier</td>
<td>28.78</td>
</tr>
<tr>
<td>Rate</td>
<td></td>
</tr>
<tr>
<td>Annual Cooling Degree</td>
<td>0.07</td>
</tr>
<tr>
<td>Days</td>
<td></td>
</tr>
<tr>
<td>Trend</td>
<td>4.32</td>
</tr>
<tr>
<td>Year 2001</td>
<td>-30.57</td>
</tr>
</tbody>
</table>

All variables significant at 5% significance level

Adjusted R-square 0.9246

- **Anaheim’s monthly usage**
- **SCE customers consume more energy**
- **Average price increases, usage decreases**
- **Tier differential increases, usage increases**
- **Hotter days, usage increases**
- **Usage increases over time**
- **Usage decreased in crisis year**
Some Conclusions

• No difference in aggregate usage after more than a decade of differences in pricing structure

• Price signal is perceived through average price

• Aggregate response to very high tiered rate ratios results in increased consumption
Do Steeply Tiered Rates Promote Conservation?

An Analysis using Aggregate Data

Russell Garwacki

Southern California Edison

In the past few years, interest has been renewed in the famed Rosenfeld curve, which shows that the per capita consumption of electricity in California has stayed relatively flat in the last forty years while consumption has increased for the rest of the nation. Rosenfeld attributed some of that difference in behavior to the progressive energy efficiency policies that California initiated. However that gap has been decreasing in the more recent period, even though there have been pricing policies enacted to encourage conservation. This paper explores whether we can observe that conservation effect of these price policies at the aggregate level.

Inclining Block Rates (IBR) for commodities such as electricity, water and natural gas, whereby higher usage blocks are charged higher rate are postulated by conventional wisdom as promoting conservation in the residential sector. After the energy crisis in 2001, IBRs with multiple tiers have become a matter of fact for the three large electric Investor Owned Utilities in California with very high terminal tier prices at times.

In the electricity industry, discussion of the conservation effect of IBR usually comes down to a discussion of price elasticity and quite a few studies have estimated the price elasticity of electricity starting from the atomic level of an individual household. This elasticity is generally found to be negative and fairly small. Price elasticity is traditionally estimated by examining the change in usage as a response to a change in prices, often a marginal price. The theory is that as the marginal price of the more elastic usage in the upper tier becomes higher, then overall usage decreases, producing the conservation effect. Faruqui (2008) and the Brattle Group constructed a model which derives conservation estimates by applying different price and income elasticities to different blocks of usage at the household level and then summing up to the aggregate level.

Faruqui (2014) produced estimates for California utilities, which showed a variety of conservation impacts depending upon the assumed model of consumer behavior towards the price structure.

---

1 Co-authored with Kiphan Kan, Tram Camba and Steve Verdon.
2 In his 2013 paper, Arik Levinson argued that 90% of the gap could have been explained by factors other than energy efficiency efficiencies. In 2008, Sudarshan and Sweeney had already acknowledged that half of the gap may be not be explained by energy efficiency policies, they also recognized that price is a factor that is significantly determined by policy. Levinson’s paper got some press in the Wall Street Journal, Forbes and the Sacramento Bee, which led to various online posts including one by Lucas Davis (2013).
3 In his 2009 paper, Rosenfeld recognized that factors identified by Sudarshan and Sweeney do explain a portion of the difference.
4 See literature survey of EPRI (2008), Faruqui and Sergici (2010), also Atamturk et al. (2012)
5 Faruqui provided testimony commissioned by the three large IOUs in R.12-06-013, the Residential Rate OIR (RROIR), at the California Public Utilities Commission in 2014.
As described above, analyses concerning the conservation effect of IBRs are largely dependent on the elasticity assumptions concerning individuals at certain levels of consumption. Studies that conclude that IBRs produce conservation impacts have as their underlying assumption that customers with lower consumption have less discretionary usage and therefore, lower demand elasticity. While there is evidence to suggest that appliance efficiency gains have increased the amount of discretionary usage available to all customers, there are few studies based on empirical aggregate data to gauge the overall population response, especially when comparing the conservation impact of differing tier structures.

More recently, Borenstein (2009) has advanced the notion that consumers may not necessarily respond to marginal price but to expected marginal price. Following on Borenstein’s theory, Ito (2014) has shown evidence that consumers respond to average prices rather than marginal prices when billed under non-linear pricing plans. Ito’s empirical analysis used data from some 40,000 individual monthly household data from 1999 to 2007 in cities that straddle Southern California Edison’s (SCE) and San Diego Gas & Electric’s (SDG&E) shared service border.

As Ito pointed out, response to average rather than marginal price would have implications for the claim that high marginal rates promote conservation. Utilities function in a framework of revenue requirement; with a given revenue requirement, when rates are set higher on the upper tiers, they must be set lower in the remaining tiers. As a result, since average price increases relatively more for some consumers than for others, the aggregate result can be ambiguous. To show the possible perverse result, Ito used his estimated elasticity in a hypothetical demand function and calculated the changes in aggregate consumption in the two cases where: (i) customers respond to average price; and (ii) customers respond instead to marginal price. By comparing the two cases, he concluded that if consumers respond to average price, nonlinear IBR pricing may not reduce aggregate consumption as intended.

Using Aggregate Data to Examine Effects of Inclining Block Rates

Following Ito’s work that compared neighboring utilities, SCE observed aggregate energy usage data between itself and some of its neighboring utilities while examining differences in their pricing structures. Some municipal utilities, such as the Los Angeles Department of Water and Power (LADWP), Anaheim Public Utilities (Anaheim) (Figure 1), Riverside Public Utilities (Riverside) and Pasadena Water and Power (Pasadena) (Figure 2) constitute effective control groups for Southern California Edison (SCE) since they are located in areas that are surrounded or bordered by SCE’s service territory. The residential customers served by these separate utilities can be presumed to face very similar broad climate and economic conditions yet they have experienced somewhat different rate levels and tiered pricing structures through time. SCE examined aggregate energy consumption from the years 2000-2013, including the period beginning in 2001 when the energy crisis changed the pricing structure for SCE in a major way.

---

For comparison with LADWP, we consider the whole county of Los Angeles that is served by SCE. As counterpart to Anaheim, the SCE service districts of Fullerton (North Orange) and Santa Ana (Central Orange) are taken into account.

Similarly, the SCE district of Monrovia is assessed alongside Pasadena and Riverside is matched up with the portion of SCE’s Ontario, Foothill and Redlands districts that are within the boundaries of the Riverside County.
Pricing

Rate information was obtained directly from LADWP, Anaheim and Riverside.

In 2000, both SCE and Anaheim had a basic two-tier IBR structure with a smaller difference between the first and second tier than that which exists for SCE today. In 2001, SCE adopted a 5-tier rate schedule while Anaheim’s rate structure remained the same (see Figure 3). Starting in 2006, the highest tier for SCE customers was twice that of its lowest tier and of the highest tier for Anaheim customers.

Figure 3: Pricing Schedules of Anaheim and SCE in 2000 through 2013

Sources: Anaheim and SCE Historical Rate Schedules

This tiered rate structure translates into the following average prices for a typical usage of 600kWh per month.

Figure 4: Average cents/kWh for 600kWh monthly usage from 2000 through 2013 for SCE and Anaheim

SCE did not have a Tier 5 in the years 2003-2006 and 2013.
From 2000 to 2008, LADWP had a flat residential rate. Tier rates and different zone allocations were only introduced in 2008.

Figure 5: Pricing Schedules of LADWP and SCE in 2000 through 2013

Source: LADWP

Similarly, the pricing structure of Riverside is depicted below. Riverside has much higher customer charges and a reliability charge based on the amperage of the electric panel since 2008.

Figure 6: Pricing Schedules of Riverside and SCE in 2000 through 2013

Source: Riverside Historical Rate Schedules

Usage

LADWP, Anaheim, Riverside and Pasadena’s average annual residential usage was reported to the U.S. Energy Information Administration (EIA). We extracted the equivalent numbers for SCE’s areas that surround those municipalities. For comparison with LADWP, we isolated the usage of our residential customers located in the Los Angeles County. With Anaheim, we separated out the usage of our customers in our North Orange and Central Orange service regions. Similarly, for comparison with Riverside, we extracted the usage of our residential customers in the Ontario, Foothill and Redlands districts that are within the county of Riverside (see Figure 2 above). For the comparison with Pasadena, we isolated the customers in the SCE service district of Monrovia (see Figure 2 above). By comparing
neighboring areas that are subject to different price structures, we take advantage of a setup that fits the definition of a quasi-experimental approach, in the sense that some factors external to the ‘experiment’ are controlled. Here, the differences in price structures constitute natural experiments. Figure 7 shows the respective annual consumptions of LADWP residential customers and their SCE counterparts in the Los Angeles County. Figure 8 reveals that Anaheim customers consume on average slightly less energy than their comparison counterparts in SCE, while the change from year over year consumption displays an almost parallel pattern, despite the differences in price structure. Figure 9 shows the equivalent consumptions for the Riverside and Pasadena comparisons.
Figure 9: Average annual usage of Riverside and Pasadena with counterpart SCE customers

Sources: EIA and SCE internal data

Analysis

Using this aggregate data, our approach is two-pronged. First, we compare the year over year consumption growth rates of residential customers from SCE’s delineated service territory subsets to the corresponding control groups for the years 2000 to 2013. Second, we use a simple regression analysis to assess the impacts of average rates and tiered rate differentials on residential usage.

Comparison of Usage Growth Rates

Table 1 shows the actual growth ratios and predicted growth ratios from a basic linear regression model, which is equivalent to establishing the linear trend on the graphical representation in Figure 10. The dependent variable is the ratio SCE year over year energy Growth/LADWP corresponding Growth. The independent variable is a yearly trend variable. While the graph shows an upward trend, the slope is statistically insignificant or equivalent to zero.\(^8\) Figure 11 shows similar results for SCE comparable areas to Anaheim. The residential usage growth rate of SCE with respect to the corresponding rate of LADWP and Anaheim does not seem to vary much with time, despite the fluctuating gap in marginal prices between the utilities over the period of interest (Figure 3 above).

\(^8\) Removing 2001 results in a nearly flat relationship (not shown).
Table 1: Regression results of SCE Growth/LADWP Growth vs. Time

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.298339476</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>0.086339287</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.003279222</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.097470585</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>0.009810147</td>
<td>0.009810147</td>
<td>1.039480127</td>
<td>0.329842615</td>
</tr>
<tr>
<td>Residual</td>
<td>11</td>
<td>0.103813059</td>
<td>0.009437551</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>0.113623206</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
<th>Lower 95.0%</th>
<th>Upper 95.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.94048084</td>
<td>0.057156317</td>
<td>16.454539</td>
<td>0.814680636</td>
<td>1.066281045</td>
<td>0.814680636</td>
<td>1.066281045</td>
</tr>
<tr>
<td>time</td>
<td>0.007341792</td>
<td>0.007201019</td>
<td>1.019548982</td>
<td></td>
<td></td>
<td>-0.008507544</td>
<td>0.023191128</td>
</tr>
</tbody>
</table>

RESIDUAL OUTPUT

<table>
<thead>
<tr>
<th>Observation</th>
<th>Predicted Ratio</th>
<th>Residuals</th>
<th>Percentile</th>
<th>Gratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.949722612</td>
<td>-0.21458175</td>
<td>3.846153846</td>
<td>0.733464457</td>
</tr>
<tr>
<td>2</td>
<td>0.955164423</td>
<td>0.054104345</td>
<td>11.53846154</td>
<td>0.958334383</td>
</tr>
<tr>
<td>3</td>
<td>0.962506215</td>
<td>0.044480154</td>
<td>19.23076923</td>
<td>0.96568453</td>
</tr>
<tr>
<td>4</td>
<td>0.969848007</td>
<td>-0.011513624</td>
<td>26.92070892</td>
<td>0.997471464</td>
</tr>
<tr>
<td>5</td>
<td>0.977189798</td>
<td>0.223441197</td>
<td>34.6158462</td>
<td>0.997511119</td>
</tr>
<tr>
<td>6</td>
<td>0.984513595</td>
<td>-0.01846136</td>
<td>42.30769231</td>
<td>1.001422958</td>
</tr>
<tr>
<td>7</td>
<td>0.991873382</td>
<td>0.01166958</td>
<td>50</td>
<td>1.00394034</td>
</tr>
<tr>
<td>8</td>
<td>0.999215373</td>
<td>0.002207794</td>
<td>57.69230769</td>
<td>1.004231036</td>
</tr>
<tr>
<td>9</td>
<td>1.006569695</td>
<td>-0.00235928</td>
<td>65.38461538</td>
<td>1.00691902</td>
</tr>
<tr>
<td>10</td>
<td>1.013809756</td>
<td>-0.00697976</td>
<td>73.07692308</td>
<td>1.00698636</td>
</tr>
<tr>
<td>11</td>
<td>1.021240548</td>
<td>-0.01750884</td>
<td>80.76923077</td>
<td>1.009268768</td>
</tr>
<tr>
<td>12</td>
<td>1.02858234</td>
<td>-0.01904812</td>
<td>88.46158462</td>
<td>1.009487527</td>
</tr>
<tr>
<td>13</td>
<td>1.035924131</td>
<td>-0.038412942</td>
<td>96.1584615</td>
<td>1.200530995</td>
</tr>
</tbody>
</table>

PROBABILITY OUTPUT

Figure 10: Linear regression model of SCE Growth/LADWP Growth vs. Time

\[ y = 0.0073x + 0.9405 \]
The ratios of growth rates oscillates around 1, which means that usage changes at approximately the same rate year after year across the utilities. The estimated slope, though positive, is not significant which means that there is no meaningful divergence of the usage patterns between all the areas considered. If SCE’s highly tiered rates had a conservation effect, we would expect the slope to decrease over time and tend to below 1. It is interesting to consider that the slopes tend to be positive instead, indicating that if there is the germ of a trend, it points to SCE’s usage increasing slightly more rapidly than the municipalities’ and doing so despite SCE’s highly tiered rates.

Figure 12 shows similar results for ratios of equivalent SCE growth rates to Riverside and Pasadena growth rates. In these cases, the estimated slopes are very close to zero in absolute terms and the linear trend sits squarely on the value 1, meaning that those municipalities’ usage tend to vary in tandem with SCE’s.

This analysis would suggest that aggregate usage does not seem to be responsive to steep inclining block rates and that there is no conservation resulting from them.
Regression Analysis on Price Variables

In our second approach, SCE performed a regression analysis modeling the average monthly usage for each of the years spanning 2000-2013, using data for Anaheim and SCE’s nearby North and Orange County service centers. Among other factors, SCE attempted to test the hypothesis that average annual usage depends on the average price faced by the consumers and the effects of the tiered rate structure, represented by the ratio of the highest tiered rate to the lowest tiered rate. To sidestep the circularity of having usage as the dependent variable and total revenue divided by usage as the average price regressor, we built average price indicators for both SCE and Anaheim by calculating the annual bill for a customer who always consumes 600 kWh per month; the average price is then obtained by dividing the annual bill by 7,200 kWh. We chose a monthly usage of 600 kWh because that is close to the usage of the average residential customer. The price calculation takes into account the appropriate baseline allocation and tier rates for both utilities. Figure 4 above charts both price indicators for SCE and Anaheim. Weather also tends to have a big influence on consumption but in this context, the area examined is subject to the same general weather variations. We also include a time trend to capture such effects as a changing mix of end-uses, energy efficiency improvement and rising price levels. The year 2001 stands out because of the energy crisis that affected the whole state of California and a dummy variable for that year is included.

The results of the analysis confirm the negative influence of average price on usage. In the three areas examined, an increase of the average price by 1 cent tends to decrease the average monthly usage by 10.7 kWh, other factors being held constant. However, when the gap between the rates in the top tier and the bottom tier widens, usually due to a relatively higher increase in the top tier rate, usage seems to increase with it. As Ito and Borenstein (2014) indicated, when tiered rates are steeply inclined, the more expensive kilowatt-hours are offset by relatively less expensive kilowatt-hours since average rate for the entire class is determined by revenue requirement. Therefore, the usage of some (lower usage) segments in the class may increase while usage for the remaining higher usage customers may decrease. SCE’s analysis attempts to discern the aggregate impact of the countervailing effects.

The results also show the significant positive influence of hot weather, the dampening effect of the energy crisis of 2001, and a slight increasing time trend which may indicate a rising cost of living and the possibility that the use of more and bigger electricity end-uses tends to trump any energy efficiency savings made over time.
Table 2: Results of Regression Analysis

### Regression Model

| Variable | Label | Parameter Estimate | Standard Error | t Value | Probability > | Probability
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>Intercept</td>
<td>456.20</td>
<td>22.86</td>
<td>19.96</td>
<td>&lt;.0001</td>
<td></td>
</tr>
</tbody>
</table>
| C_Orange | Central Orange | 112.82 | 14.63 | 7.71 | <.0001 | 1 if Central Orange, 0 else
| N_Orange | North Orange | 149.93 | 14.63 | 10.25 | <.0001 | 1 if North Orange, 0 else
| price | Average Price Indicator in c/kWh | -10.72 | 2.48 | -4.33 | 0.0001 | Sum of monthly bills for usage of 1,000 kWh/12,000
| tier_ratio | Max Tier Rate/Min Tier Rate | 28.78 | 9.34 | 3.08 | 0.0043 |
| CLDD | Annual Cooling Degree Days | 0.07 | 0.01 | 6.79 | <.0001 |
| t | Trend | 4.32 | 1.11 | 3.9 | 0.0005 | 1 for year 2000, 2 for year 2001…
| y01 | Year 2001 | -30.57 | 9.20 | -3.32 | 0.0023 | 1 if year 2001, 0 else

### Average Monthly Usage for Year: Total Annual Usage/Number of Customers/12

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F Value</th>
<th>Probability &gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>7</td>
<td>8296.11</td>
<td>1179.44</td>
<td>67.59</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Error</td>
<td>31</td>
<td>5409.78</td>
<td>174.51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>38</td>
<td>8797.89</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Root Mean Square Error: 13.21019
R-Square: 0.9385
Adjusted R-Square: 0.9246
Coefficient of Variation: 2.31493

### Analysis of Variance

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F Value</th>
<th>Probability &gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>7</td>
<td>8296.11</td>
<td>1179.44</td>
<td>67.59</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Error</td>
<td>31</td>
<td>5409.78</td>
<td>174.51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>38</td>
<td>8797.89</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Root Mean Square Error: 13.21019
R-Square: 0.9385
Adjusted R-Square: 0.9246
Coefficient of Variation: 2.31493
Results

All these results point to the fact that although aggregate usage is significantly affected by changes in average price in the expected negative direction, it may have a counterintuitive positive relationship to the degree of tiered price structure. Whether we have flat rates or tiered rates and whether the rate differential between the tiers is smaller or larger, the usage patterns seem to parallel each other in neighboring areas, indicating that their variations are influenced more heavily by factors other than the tiered price differential of IBRs.

Advocates of high marginal tier rates tout them as necessary incentives for conservation. However, as Ito (2014) and Faruqui (2014) pointed out, consumers do not necessarily tend to respond to marginal prices in cases of non-linear pricing, mainly because the information cost of acquiring the understanding is high and because it is difficult for consumers to get a sense of cumulative usage in a billing period. Moreover, the estimated response to average price or elasticity seems to be very low. In his own estimation, Ito (2014) pegged the elasticity at around -0.1. Earlier estimates of price elasticities calculated with changes in marginal price did not yield very high values. As an example, the often cited study of Reiss and White (2005) gives a range between -.08 and -0.1 for California households depending on whether they have air conditioning or electric space heating. With low elasticities, it would take big increases in prices to start seeing decrease in usage. Also for IBR to have an effect, as Ito (2014), Faruqui (2008, 2014), Kahn and Wolak (2013) noted, customers have to be well informed and well educated about the pricing scheme and real time data should be more accessible. So far, the discussion has focused mainly on the household or customer level, but it is important to determine how this behavior translates to the macro level. Through his work, Ito offered a simulation. The goal of this analysis was to bridge the gap between simulation and empirical research, to examine whether historical aggregate data for SCE and its neighboring utilities support the claim of the conservation effect of highly tiered rates. The results indicate that while the small impact of average prices on total consumption are reproduced at the aggregate level in these analyses, SCE’s analysis indicates that a relaxation of the existing steep tiered rate structures will not harm California’s conservation objectives and could in fact reduce overall residential energy consumption.

---

9 In the statistical sense, at the 5% significance level.
References

http://www.cpuc.ca.gov/puc/emergingissues


http://theenergycollective.com/lucasdavis/257756/deconstructing-rosenfeld-curve


Faruqui, A. 2014. Testimony commissioned by the three large California IOUs in R.12-06-013, the Residential Rate OIR (RROIR), at the California Public Utilities Commission.


http://www.energy.ca.gov/commissioners/rosenfeld_docs/INNOVATIONS_Fall_2009_Rosenfeld-Poskanzer.pdf

http://web.stanford.edu/group/peec/cgi-bin/docs/modeling/research/Deconstructing%20the%20Rosenfeld%20Curve.pdf

U. S. Energy Information Administration 
http://www.eia.gov/electricity/sales_revenue_price
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.

R.12-06-013
(Filed June 21, 2012)

CERTIFICATE OF SERVICE

I hereby certify that, pursuant to the Commission’s Rules of Practice and Procedure, I have this day served a true copy of SOUTHERN CALIFORNIA EDISON COMPANY’S (U 338-3) NOTICE OF EX PARTE COMMUNICATION on all parties identified on the attached service list(s) R.12-06-013. Service was effected by one or more means indicated below:

☒ Transmitting the copies via e-mail to all parties who have provided an e-mail address.

☒ Placing the copies in sealed envelopes and causing such envelopes to be delivered by hand or by overnight courier to the offices of the Commissioner(s) or other addressee(s).

ALJ Jeanne McKinney
505 Van Ness Avenue
San Francisco, CA 94102

ALJ Julie Halligan
505 Van Ness Avenue
San Francisco, CA 94102

☒ Placing copies in properly addressed sealed envelopes and depositing such copies in the United States mail with first-class postage prepaid to all parties for those listed on the attached non-email list.

☐ Directing Prographics to place the copies in properly addressed sealed envelopes and to deposit such envelopes in the United States mail with first-class postage prepaid to all parties.

Executed on this Tuesday, March 24, 2015, at Rosemead, California.
/s/ Christina A. Males

Christina A. Males
Project Analyst
SOUTHERN CALIFORNIA EDISON COMPANY

2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770
## Parties

<table>
<thead>
<tr>
<th>Name</th>
<th>Email Only</th>
<th>Address</th>
<th>For:</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRAD HEAVNER</td>
<td>CALIFORNIA SOLAR ENERGY INDUSTRIES ASSN.</td>
<td>EMAIL ONLY, CA 00000</td>
<td>FOR: CALIFORNIA SOLAR ENERGY INDUSTRIES ASSOCIATION (CALSEIA)</td>
</tr>
<tr>
<td>ELIZABETH KELLY</td>
<td>EMAIL ONLY</td>
<td>EMAIL ONLY, CA 00000</td>
<td>FOR: MARIN ENERGY ENERGY</td>
</tr>
<tr>
<td>MARGIE GARDNER</td>
<td>CAL. ENERGY EFFICIENCY INDUSTRY COUNCIL</td>
<td>EMAIL ONLY, CA 00000</td>
<td>FOR: CALIFORNIA ENERGY EFFICIENCY INDUSTRY COUNCIL</td>
</tr>
<tr>
<td>SACHU CONSTANTINE</td>
<td>CENTER FOR SUSTAINABLE ENERGY</td>
<td>EMAIL ONLY, CA 00000</td>
<td>FOR: THE GREENLINING INSTITUTE</td>
</tr>
<tr>
<td>STEPHANIE C. CHEN</td>
<td>THE GREENLINING INSTITUTE</td>
<td>EMAIL ONLY, CA 00000</td>
<td></td>
</tr>
<tr>
<td>FADIA KHOURY</td>
<td>SOUTHERN CALIFORNIA EDISON COMPANY</td>
<td>EMAIL ONLY, CA 00000</td>
<td></td>
</tr>
<tr>
<td>NORA SHERIFF</td>
<td>ATTORNEY</td>
<td>EMAIL ONLY, CA 00000</td>
<td></td>
</tr>
<tr>
<td>SCOTT BLAISING</td>
<td>BRAUN BLAISING MCLAUGHLIN P.C.</td>
<td>EMAIL ONLY</td>
<td></td>
</tr>
<tr>
<td>STEPHANIE C. CHEN</td>
<td>LAT. BUS. CHAMBER OF GREATER L.A.</td>
<td>634 S. SPRING STREET, STE 600</td>
<td></td>
</tr>
<tr>
<td>STEPHANIE C. CHEN</td>
<td>THE GREENLINING INSTITUTE</td>
<td>EMAIL ONLY, CA 00000</td>
<td></td>
</tr>
<tr>
<td>SCOTT BLAISING</td>
<td>BRAUN BLAISING MCLAUGHLIN P.C.</td>
<td>EMAIL ONLY, CA 00000</td>
<td></td>
</tr>
<tr>
<td>STEPHANIE C. CHEN</td>
<td>LAT. BUS. CHAMBER OF GREATER L.A.</td>
<td>634 S. SPRING STREET, STE 600</td>
<td></td>
</tr>
<tr>
<td>STEPHANIE C. CHEN</td>
<td>THE GREENLINING INSTITUTE</td>
<td>EMAIL ONLY, CA 00000</td>
<td></td>
</tr>
<tr>
<td>SCOTT BLAISING</td>
<td>BRAUN BLAISING MCLAUGHLIN P.C.</td>
<td>EMAIL ONLY</td>
<td></td>
</tr>
<tr>
<td>STEPHANIE C. CHEN</td>
<td>LAT. BUS. CHAMBER OF GREATER L.A.</td>
<td>634 S. SPRING STREET, STE 600</td>
<td></td>
</tr>
<tr>
<td>STEPHANIE C. CHEN</td>
<td>THE GREENLINING INSTITUTE</td>
<td>EMAIL ONLY, CA 00000</td>
<td></td>
</tr>
</tbody>
</table>

---

**CALIFORNIA PUBLIC UTILITIES COMMISSION**

**Service Lists**

**PROCEEDING: R1206013 - CPUC - OIR TO CONDUC**

**FILER: CPUC**

**LIST NAME: LIST**

**LAST CHANGED: MARCH 20, 2015**

[Download the Comma-delimited File](https://cpuc.ca.gov/service_lists/R1206013_80447.html)

[About Comma-delimited Files](#)

[Back to Service Lists Index](#)
DANIEL W. DOUGLASS
ATTORNEY
DOUGLASS & LIDDELL
21700 OXNARD ST., STE. 1030
WOODLAND HILLS, CA 91367
FOR: WESTERN POWER TRADING
FORUM/ALLIANCE FOR RETAIL ENERGY
MARKETS/DIRECT ACCESSS CUSTOMER COALITION
DONALD C. LIDDELL
DOUGLASS & LIDDELL
2928 2ND AVENUE
SAN DIEGO, CA 92103
FOR: CALIFORNIA ENERGY STORAGE ALLIANCE (CESA)
MICHAEL SHAMES
SAN DIEGO CONSUMERS' ACTION NETWORK
6975 CAMINO AMERO
SAN DIEGO, CA 92111
FOR: SAN DIEGO CONSUMERS' ACTION NETWORK (UCAN)
MARK E. WHITLOCK, JR.
EXE. DIR.
ECUMENICAL CTR. FOR BLACK CHURCH STUDIES
46 MAXWELL ST
IRVINE, CA 92618
FOR: ECUMENICAL CENTER FOR BLACK CHURCH STUDIES (JT. PARTY)
FAITH BAUTISTA
PRESIDENT / CEO
NATIONAL ASIAN AMERICAN COALITION
15 SOUTHGATE AVE., STE. 200
DALY CITY, CA 94015
FOR: NATIONAL ASIAN AMERICAN COALITION
GREGORY HEIDEN
CALIF PUBLIC UTILITIES COMMISSION
LEGAL DIVISION
ROOM 5039
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3214
FOR: ORA
SHERYL CARTER
NATURAL RESOURCES DEFENSE COUNCIL
111 SUTTER ST., 20TH FLOOR
SAN FRANCISCO, CA 94104-4540
FOR: NATURAL RESOURCES DEFENSE COUNCIL
JAMIE FINE
SR. ECONOMIST
ENVIRONMENTAL DEFENSE FUND
123 MISSION ST., 28TH FLOOR
SAN FRANCISCO, CA 94105
FOR: ENVIRONMENTAL DEFENSE FUND
JEANNE ARMSTRONG
ATTORNEY AT LAW
GOODIN, MACBRIDE, SQUERI, DAY & LAMPREY
505 SANSOME STREET, SUITE 900
SAN FRANCISCO, CA 94111
FOR: SOLAR ENERGY INDUSTRIES ASSOCIATION

NGUYEN QUAN
MG - REGULATORY AFFAIRS
GOLDEN STATE WATER CO. - ELECTRIC OP.
630 EAST FOOTHILL BOULEVARD
SAN DIMAS, CA 91773
FOR: GOLDEN STATE WATER COMPANY
DONALD KELLY
EXE. DIR.
UTILITY CONSUMERS' ACTION NETWORK
3405 KENYON STREET, SUITE 401
SAN DIEGO, CA 92110
FOR: UTILITY CONSUMERS' ACTION NETWORK (UCAN)
THOMAS R. BRILL
SR COUNSEL & DIRECTOR
SAN DIEGO GAS & ELECTRIC COMPANY
8330 CENTURY PARK CT., CP32E
SAN DIEGO, CA 92123-1530
FOR: SAN DIEGO GAS & ELECTRIC COMPANY (SDG&E)
CATHY ZHANG
EXECUTIVE DIRECTOR
CHINESE AM. INSTITUTE FOR EMPOWERMENT
15 SOUTHGATE AVE., STE. 200
DALY CITY, CA 94015
FOR: CHINESE AMERICAN INSTITUTE FOR EMPOWERMENT (JT. PARTY)
JAMIE MAULDIN
ADAMS BROADWELL JOSEPH & CARDOZO, PC
601 GATEWAY BLVD., STE. 1000
SOUTH SAN FRANCISCO, CA 94080
FOR: COALITION OF CALIFORNIA UTILITY EMPLOYEES (CCUE)
HAYLEY GOODSON
STAFF ATTORNEY
THE UTILITY REFORM NETWORK
785 MARKET ST., STE. 1400
SAN FRANCISCO, CA 94103
FOR: TURN
CHRISTOPHER J. WARNER
PACIFIC GAS AND ELECTRIC COMPANY
77 BEALE STREET, MC B30A, RM 3145
SAN FRANCISCO, CA 94105
FOR: PACIFIC GAS AND ELECTRIC COMPANY
BRIAN CRAGG
ATTORNEY
GOODIN, MACBRIDE, SQUERI, DAY & LAMPREY
505 SANSOME STREET, SUITE 900
SAN FRANCISCO, CA 94111
FOR: INDEPENDENT ENERGY PRODUCERS ASSOCIATION
VIDHYA PRABHAKARAN
DAVIS WRIGHT & TREMAINE LLP
505 MONTGOMERY STREET, SUITE 800
SAN FRANCISCO, CA 94111
FOR: CALIFORNIA PACIFIC ELECTRIC COMPANY, LLC
NICK PAPPAS
OFFICE OF ASSEMBLYMAN NATHAN FLETCHER
EMAIL ONLY
EMAIL ONLY, CA 00000
ROGER LEVY
LEY ASSOCIATES
EMAIL ONLY
EMAIL ONLY, CA 00000

SEPHRA A. NINOW, J.D.
REGULATORY AFFAIRS MGR.
CENTER FOR SUSTAINABLE ENERGY
EMAIL ONLY
EMAIL ONLY, CA 00000
SHERIDAN J. PAUKER
WILSON SONSINI GOODRICH & ROSATI
EMAIL ONLY
EMAIL ON LY, CA 00000

TIMOTHY TREADWELL
CENTER FOR SUSTAINABLE ENERGY
EMAIL ONLY
EMAIL ONLY, CA 00000
WALKER WRIGHT
SUNRUN INC.
EMAIL ONLY
EMAIL ONLY, CA 00000

TERRY CLAPHAM
CENTER FOR SUSTAINABLE ENERGY
EMAIL ONLY
EMAIL ONLY, CA 00000-0000
SUSAN GELLER
SENIOR RESEARCH ASSOCIATE
RESOURCE INSIGHT
5 WATER STREET
ARLINGTON, MA 02476

MICHAEL PANFIL
ENVIRONMENTAL DEFENSE FUND
257 PARK AVENUE SOUTH, FLOOR 16
NEW YORK, NY 10010
ANDREW GAY
CARLSON CAPITAL L.P.
712 FIFTH AVE., 25 TH FLOOR
NEW YORK, NY 10019

PAUL D. HERNANDEZ
CENTER FOR SUSTAINABLE ENERGY
EMAIL ONLY
EMAIL ONLY, CA 00000
SEAN P. BEATTY
DIRECTOR - WEST REGULATORY AFFAIRS
NRG WEST
EMAIL ONLY
EMAIL ONLY, CA 00000

SHALINI SWAROOP
REGULATORY COUNSEL
MARIN CLEAN ENERGY
EMAIL ONLY
EMAIL ONLY, CA 00000

STEPHEN GEORGE
NEXANT
EMAIL ONLY
EMAIL ONLY, CA 00000

WALKER WRIGHT
SUNRUN, INC.
EMAIL ONLY
EMAIL ONLY, CA 00000

DAVID MARCUS
EMAIL ONLY
EMAIL ONLY, CA 00000-0000

BENJAMIN AIRTH
CENTER FOR SUSTAINABLE ENERGY
EMAIL ONLY
EMAIL ONLY, CA 00000-0000

KAREN TERRANOVA
ALCANTAR & KAHN
EMAIL ONLY
EMAIL ONLY, CA 00000-0000

NANCY BROCKWAY
NNBROCKWAY & ASSOCIATES
10 ALLEN STREET
BOSTON, MA 02131
PAUL CHERNICK
RESOURCE INSIGHT
5 WATER ST.
ARLINGTON, MA 02476

ABRAM SILVERMAN
ASSIST. GEN. COUNSEL - REGULATORY
NRG ENERGY, INC.
211 CARNEGIE CENTER DRIVE
PRINCETON, NJ 08540
FOR: NRG HOME
PATRICK JOBIN
CREDIT SUISSE SECURITIES (USA) LLC
ONE MADISON AVENUE
NEW YORK, NY 10010

JAMES (JIM) VON RIESEMANN
MIZUHO SECURITIES USA, INC.
320 PARK AVENUE, 12TH FLOOR
NEW YORK, NY 10022
GREGORY REISS                             HUGH WYNNE
MILLENNIUM MANAGEMENT LLC                 SANFORD C. BERNSTEIN & CO.
666 FIFTH AVENUE, 8TH FLOOR               1345 AVENUE OF THE AMERICAS, 15TH FLR
NEW YORK, NY  10103                       NEW YORK, NY  10105
DAN DELUREY                               PAUL M. PIETSCH
DEMAND RESPONSE AND SMART GRID COALITION  RESEARCH COORDINATOR
1301 CONNECTICUT AVE., NW, STE. 350       DRSG COALITION
WASHINGTON, DC  20036                     1301 CONNECTICUT AVE., NW, STE. 350
FOR: DEMAND RESPONSE AND SMART GRID       WASHINGTON, DC  20036
COALITION
RUTH HUPART                               BARRY FRIEDMAN
SOLAR ELECTRIC POWER ASSOCIATION          KEYES, FOX & WIEDMAN, LLP
1220 19TH STREET, NW, STE. 800            9179 W. MARYLAND PL
WASHINGTON, DC  20036                     LAKEWOOD, CO  80232-5289
RICK GILLIAM                              ANADELIA CHAVARRIA
VOTE SOLAR                                EDISON INTERNATIONAL
1120 PEARL STREET                         2244 WALNUT GROVE AVENUE
BOULDER, CO  80302                        ROSEMEAD, CA  91770
BELINDA DELA CRUZ                          CASE ADMINISTRATION
EDISON INTERNATIONAL                      SOUTHERN CALIFORNIA EDISON COMPANY
1224 WALNUT GROVE AVENUE                   2244 WALNUT GROVE AVENUE
WASHINGTON, DC  20036                     ROSEMEAD, CA  91770
FELICIA WILLIAMS                           MORGAN LEE
SENIOR MANAGER, INVESTOR RELATIONS         U-T SAN DIEGO
EDISON INTERNATIONAL                      350 CAMINO DE LA REINA
2244 WALNUT FROVE, GO1 ROOM 445            SAN DIEGO, CA  92108
ROSEMEAD, CA  91770                        CENTRAL FILES
SPENCER EDMISTON                           SDG&E/SOCALGAS
CORPORATE FINANCIAL PLANNING               8330 CENTURY PARK COURT, CP31-E
EDISON INTERNATIONAL                      SAN DIEGO, CA  92123
2244 WALNUT GROVE AVENUE                   FARINA PARIKH
ROSEMEAD, CA  91770                        REGULATORY AFFAIRS
DAVID CROYLE                              SAN DIEGO GAS & ELECTRIC COMPANY
UCAN                                      8330 CENTURY PARK COURT, CP32
3405 KENYON STREET, STE. 401               SANDiego, CA  92123
SAN DIEGO, CA  92110                       CYNTHIA FANG
JAMIE K. YORK                              SAN DIEGO GAS & ELECTRIC COMPANY
REGULATORY CASE ADMIN.                     8330 CENTURY PARK COURT, CP32E
SAN DIEGO GAS & ELECTRIC COMPANY           SAN DIEGO, CA  92123-1530
8330 CENTURY PARK CT, CP32D                STEVE RAHON
SAN DIEGO, CA  92123                       DIR., TARIFF & REGULATORY ACCTS
CHARLES R. MANZUK                          SAN DIEGO GAS & ELECTRIC COMPANY (902)
DIR. - RATES & REVENUE REQUIREMENTS        8330 CENTURY PARK COURT, CP32C
SAN DIEGO GAS & ELECTRIC COMPANY           SAN DIEGO, CA  92123-1548
8330 CENTURY PARK CT, CP32D
SAN DIEGO, CA  92123-1530                  JANETTE OLKO
DANA GOLAN                                 ELECTRIC UTILITY DIVISION MANAGER
SAN DIEGO GAS & ELECTRIC COMPANY           CITY OF MORENO VALLEY
8306 CENTURY PARK CT., CP421               14325 FREDERICK ST., STE. 9
SAN DIEGO, CA  92123-1530                  MORENO VALLEY, CA  92552
WILLIAM FULLER                             AARON J. LEWIS
CALIF. REGULATORY AFFAIRS                   COUNSEL
SAN DIEGO GAS & ELECTRIC COMPANY           NATIONAL ASIAN AMERICAN COALITION
8330 CENTURY PARK COURT, 32CH               15 SOUTHGATE AVE., STE. 200
SAN DIEGO, CA  92123-1548                   DALY CITY, CA  94015
MONA TIERNER-LLOYD                         EDWARD G. CAZALET
SR. DIR., WESTERN REGULATORY AFFAIRS       CALIF. REGULATORY AFFAIRS
ENERNOC, INC.                              SAN DIEGO GAS & ELECTRIC COMPANY
PO BOX 378                                 8330 CENTURY PARK COURT, CP32
CAYUCOS, CA  93430                          SANDiego, CA  92123-1548
ROBERT GNAIZDA                             JANETTE OLKO
http://cpuc.ca.gov/service_lists/R1206013_80447.htm 3/24/2015
OF COUNSEL
15 SOUTHGATE AVE., STE. 200
DALY CITY, CA  94015
SUE MARA
CONSULTANT
RTO ADVISORS, LLC
164 SPRINGDALE WAY
REDWOOD CITY, CA  94062
SHAIBYA DALAL
REGULATORY ANALYST
SAN FRANCISCO PUBLIC UTILITIES COMM.
525 GOLDEN GATE AVE., 7TH FLOOR
SAN FRANCISCO, CA  94102
MARCEL HAWIGER
STAFF ATTORNEY
THE UTILITY REFORM NETWORK
785 MARKET ST., STE. 1400
SAN FRANCISCO, CA  94103
MICHAEL PERRY
FREEMAN SULLIVAN & CO.
101 MONTGOMERY ST., 15TH FLOOR
SAN FRANCISCO, CA  94104
SAM HOLMBERG
FREEMAN SULLIVAN & CO.
101 MONTGOMERY ST., 15TH FLOOR
SAN FRANCISCO, CA  94104
CATHERINE TARASOVA
PACIFIC GAS & ELECTRIC COMPANY
77 BEALE ST., RM. 1053, MC B10A
SAN FRANCISCO, CA  94105
MARGOT EVERETT
SENIOR DIRECTOR
PACIFIC GAS & ELECTRIC COMPANY
77 BEALE ST., B10B
SAN FRANCISCO, CA  94105
RENEE C. SAMSON
DIR. - REGULATORY RATE & PROCEEDINGS
PACIFIC GAS AND ELECTRIC COMPANY
77 BEALE ST., RM. 941, MC B9A
SAN FRANCISCO, CA  94105
NICOLE JOHNSON
REGULATORY ATTORNEY
CONSUMER FEDERATION OF CALIFORNIA
150 POST ST., STE. 442
SAN FRANCISCO, CA  94108
CASSANDRA SWEET
REPORTER
DOW JONES NEWSWIRES
201 CALIFORNIA ST.
SAN FRANCISCO, CA  94111
BRIAN ORION
LAWYERS FOR CLEAN ENERGY
656A CLAYTON STREET
SAN FRANCISCO, CA  94117
STEVE HAERTLE
PACIFIC GAS & ELECTRIC COMPANY
77 BEALE STREET, ROOM 967, MC B9A
SAN FRANCISCO, CA  94120
ANDY SCHWARTZ
SOLARCITY
TEMIX, INC.
101 FIRST STREET
LOS ALTOS HILLS, CA  94022
MARC D. JOSEPH
ADAMS BROADWELL JOSEPH & CARDOZO
601 GATEWAY BLVD., SUITE 1000
SOUTH SAN FRANCISCO, CA  94080
ADAM GERZA
SULLIVAN SOLAR POWER OF CALIFORNIA, INC.
169 11TH STREET
SAN FRANCISCO, CA  94103
MERRIAN BORGESON
SR. SCIENTIST, ENERGY PROGRAM
NATURAL RESOURCES DEFENSE COUNCIL
111 SUTTER ST., 20TH FL.
SAN FRANCISCO, CA  94104
MICHAEL SULLIVAN
FREEMAN SULLIVAN & CO.
101 MONTGOMERY ST., 15TH FLOOR
SAN FRANCISCO, CA  94104
ALISON SEEL
ASSOCIATE ATTORNEY
SIERRA CLUB
85 SECOND STREET, 2ND FLOOR
SAN FRANCISCO, CA  94105
CHARLES R. MIDDLEKAUFF
PACIFIC GAS AND ELECTRIC COMPANY
LAW DEPT.
77 BEALE STREET, B30A / PO BOX 7442
SAN FRANCISCO, CA  94105
MATTHEW VESPA
SR. ATTORNEY
SIERRA CLUB
85 SECOND ST., 2ND FL
SAN FRANCISCO, CA  94105
MARC KOLB
SOLARCITY
444 DE HARO STREET, SUITE 100
SAN FRANCISCO, CA  94107
DARYL MICHALIK
3435 CESAR CHAVEZ ST., NO. 208
SAN FRANCISCO, CA  94110
STEVEN MOSS
ENVIRONMENTAL DEFENSE FUND
2325 THIRD STREET, STE. 344
SAN FRANCISCO, CA  94114
CALIFORNIA ENERGY MARKETS
425 DIVISADERO ST STE 303
SAN FRANCISCO, CA  94117-2242
STEPHEN M. BARRAGER
BAKER STREET PUBLISHING, LLC
2703 BRODERICK STREET
SAN FRANCISCO, CA  94123
DANIEL CHIA
DIR.
SACRAMENTO, CA 95814
NICOLE WRIGHT
BRAUN BLAISING MCLAUGHLIN & SMITH
915 L STREET, SUITE 1270
SACRAMENTO, CA 95814

RONALD LIEBERT
ATTORNEY AT LAW
ELLISON, SCHNEIDER & HARRIS
2600 CAPITOL AVENUE, SUITE 400
SACRAMENTO, CA 95816
FOR: CALIFORNIA MANUFACTURERS & TECHNOLOGY ASSN
RACHEL GOLD
LARGE-SCALE SOLAR ASSOCIATION
2501 PORTOLA WAY
SACRAMENTO, CA 95818

CALIFORNIA PACIFIC ELECTRIC COMPANY, LLC
933 ELOISE AVENUE
SOUTH LAKE TAHOE, CA 96150
CATHIE ALLEN
REGULATORY AFFAIRS MGR.
PACIFICORP
825 NE MULTNOMAH ST., STE 2000
PORTLAND, OR 97232

State Service

MATTHEW TISDALE
CALIFORNIA PUBLIC UTILITIES COMMISSION
EMAIL ONLY
EMAIL ONLY, CA 00000

PATRICK DOHERTY
CALIFORNIA PUBLIC UTILITIES COMMISSION
EMAIL O NLY
EMAIL ONLY, CA 00000

RAVNEET KAUR
REGULATORY ANALYST
CPUC - PUBLIC ADVISOR'S OFFICE
EMAIL ONLY
EMAIL ONLY, CA 00000

SHANNON O'ROURKE
CALIFORNIA PUBLIC UTILITIES COMMISSION
ENERGY
EMAIL ONLY
EMAIL ONLY, CA 00000

TORY FRANCISCO
CALIFORNIA PUBLIC UTILITIES COMMISSION
ENERGY DIVISION - RESIDENTIAL PROGRAMS
EMAIL ONLY
EMAIL ONLY, CA 00000

Zaida C. Amaya
CALIFORNIA PUBLIC UTILITIES COMMISSION
ENERGY DIVISION - RESIDENTIAL PROGRAMS
EMAIL ONLY
EMAIL ONLY, CA 00000

AVA N. TRAN

http://cpuc.ca.gov/service_lists/R1206013_80447.htm
3/24/2015
AREA 4-A
505 VAN NESS AVENUE
SAN FRANCISCO, CA  94102-3214
ZHEN ZHANG
CALIF PUBLIC UTILITIES COMMISSION
EXECUTIVE DIVISION
ROOM 5102
505 VAN NESS AVENUE
SAN FRANCISCO, CA  94102-3214
PATRICK SAXTON
ADVISOR TO COMM. ANDREW MCALLISTER
CALIFORNIA ENERGY COMMISSION
1516 NINTH ST., MS-37
SACRAMENTO, CA  95814

AREA
505 VAN NESS AVENUE
SAN FRANCISCO, CA  94102-3214
LYNN MARSHALL
CALIFORNIA ENERGY COMMISSION
1516 9TH STREET, MS-20
SACRAMENTO, CA  95814

TOP OF PAGE
BACK TO INDEX OF SERVICE LISTS
LEN CANTY
CHAIRMAN BLACK ECONOMIC COUNCIL
484 LAKE PARK AVE., SUITE 338
OAKLAND CA 94610