## City of Pomona Municipal Facilities Solar Photovoltaic Feasibility Study





Pomona, CA March 13, 2012





## City of Pomona Solar Feasibility Study

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## **Background**

The City of Pomona, CA requested an assessment of the economic and technical feasibility of installing solar photovoltaic (PV) arrays at its City facilities. This solar PV feasibility study is one part of a more comprehensive assessment currently being prepared for the City that will consist of a comprehensive greenhouse gas emissions inventory for the City and a Green Plan that will detail projects and initiatives that the City can implement to reduce its GHG emissions, green its operations, and save money. With the cost of solar PV installations becoming increasingly affordable and the abundance of solar resources in the region, solar PV presents an attractive option for the City of Pomona to reduce its Scope 2 GHG emissions, reduce the City's reliance on third party electricity providers, and create new jobs in the local economy based around solar PV services.

This feasibility study consists of:

- Technical feasibility evaluation to determine suitability of facility rooftops and City park locations for different solar PV applications
- Cost data research to find current market prices for those technologies best suited for the specific site constraints
- Economic feasibility evaluation to determine the net cost of ownership of the PV array based on avoided electricity costs and any local, state, or federal incentives available

## **Technical Feasibility Evaluation**

URS evaluated the following City-owned properties and facilities for the installation of solar PV arrays:

- City Hall & Council Chambers
- Pomona Library
- Transit Station
- City Yard
- Water Yard
- Cesar Chavez Park
- Hamilton Park
- John F. Kennedy Park
- Kellogg Park
- Kiwanis Park
- Martin Luther King Jr. Park
- Memorial Park
- Powers Park

- Ganesha Park
- Philadelphia Park
- Washington Park
- Garfield Park
- Lincoln Park
- Montvue Park
- Pomona Jaycee Park
- Westmont Park
- Adobe Palomares
- Palomares Park
- Ralph Welch Park
- Willie White Park

The initial screening of these sites consisted of a review of existing site constraints that would severely limit the installation of a solar PV array, including limited availability of appropriate space and high shading from nearby trees or buildings. URS relied upon images and data provided by Google Earth to

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perform this initial assessment. Based on the results of the initial screening, URS identified seven sites that would be potential candidates for the installation of solar PV arrays.

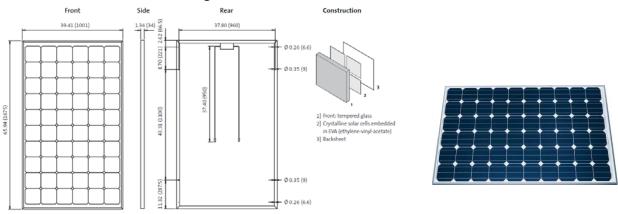
Four of the five facilities in the original list were excluded due to site constraints. The City Yard and the Water Yard were both excluded due to limited roof space because of existing HVAC rooftop units and the shading issues that those rooftop units would present. The other parks on the list were excluded because of limited or inappropriate area for locating a solar PV array.

With the seven selected locations URS conducted a more detailed evaluation, including appropriate equipment and mounting options, estimates of total installed capacity, and preliminary array layouts. We have selected a standard industry 240W crystalline panel from SolarWorld with average cell efficiency for the purpose of this analysis (see Exhibit 1). Each of the seven sites is included below along with preliminary specifications for the PV installation.

The seven candidate sites are:

| City Hall & Council Chambers   | Pomona Library                 |
|--------------------------------|--------------------------------|
| Roof Mount (TPO)               | Roof Mount (TPO)               |
| 525 SolarWorld 240 Watt panels | 620 SolarWorld 240 Watt panels |
| 117,600 W dc                   | 148,800 W dc                   |
| 180 degree azimuth             | 180 degree azimuth             |
| 5 degree tilt                  | 5 degree tilt                  |
| Transit Station                | Kiwanis Park                   |
| Roof Mount (Spanish Tile)      | Roof Mount (TPO)               |
| 40 SolarWorld 240 Watt panels  | 33 SolarWorld 240 Watt panels  |
| 19,200 W dc                    | 9,600 W dc                     |
| 180 degree azimuth             | 153 degree azimuth             |
| 20 degree tilt                 | 5 degree tilt                  |
| Ralph Welch Park               | John F. Kennedy Park           |
| Roof Mount (TPO)               | Carport                        |
| 50 SolarWorld 240 Watt panels  | 150 SolarWorld 240 Watt panels |
| 14,400 W dc                    | 108,000 W dc                   |
| 230 degree azimuth             | 168 degree azimuth             |
| 5 degree tilt                  | 5 degree tilt                  |
| Pomona Jaycee Park             |                                |
| Roof Mount (TPO)               |                                |
| 30 SolarWorld 240 Watt panels  |                                |
| 10,560 W dc                    |                                |
| 242 degree azimuth             |                                |
| 5 degree tilt                  |                                |





## Figure 1 – SolarWorld 240 Watt Module

## **Cost Data Research**

Figure 2 is a summary of the estimated installation costs of the PV arrays at the different City of Pomona facilities. Costs are given in US Dollars per Watt (DC) and include all necessary costs to install a fully functional PV array. The cost estimates were developed using installation cost data from publicly available sources for similarly sized projects throughout California and from solar PV bidder pricing data for similarly sized projects for which URS recently reviewed RFP responses. For any onsite energy storage using batteries, an additional cost of \$1.00/Wdc can be assumed.

Figure 2 – System Installed Costs

| System Type          | Applicable Site(s)           | Installed Costs (\$/Wdc) |
|----------------------|------------------------------|--------------------------|
| Roof mounted Jarge   | City Hall & Council Chambers | \$4.25                   |
| Roof mounted - large | Pomona Library               | 34.23                    |
|                      | Transit Station              |                          |
| Roof mounted - small | Ralph Welch Park             | \$4.75                   |
|                      | Pomona Joyce Park            | 34.73                    |
|                      | Kiwanis Park                 |                          |
| Carport              | John F. Kennedy Park         | \$6.00                   |



## **Available Incentives**

### **Virtual Net Metering**

PU Code 2830 authorizes all "local governments" in California to generate energy on one account (primary account) and provide a bill credit to a "Benefiting Account" so long as both facilities are owned or operated by the same local government. Bill credits are calculated by multiplying the Generating Account's time-of-use (TOU) energy component of the generation electricity rate by the amount of energy exported to the grid during the corresponding time period. These bill credits can then be applied to offset generation costs at the customer's other retail service accounts at different facilities. Customer may select one or more accounts (known as "Benefiting Accounts") to which the bill credits will be applied.

### **Business Energy Investment Tax Credit**

The business energy investment tax credit (ITC) program, authorized under 26 USC 48 (section 48), reduces federal income taxes by offering a 30 percent tax credit to owners or long-term lessees for qualified solar installations, as well as wind, geothermal, biomass and other types of renewable energy. The tax credit is equal to 30 percent of the total project expenditures, including all equipment costs, direct costs and indirect costs. For solar PV projects, there is no maximum credit per project. On October 3, 2008, the Energy Improvement and Extension Act extended the energy ITC for solar projects that are installed and commissioned before the end of 2016.

Before December 31, 2011, recipients of the ITC had the option to take a cash grant in lieu of a tax credit through a program referred to as Section 1603 grants. With the expiration of 1603, the ITC program reverted to a tax credit-only program, meaning that only tax paying entities with sufficient taxable profits could take advantage of the incentive.

Tax-exempt entities such as state and local governments and agencies, schools, colleges, and charitable organizations are not eligible to receive ITC benefits. A project that is owned and operated by an eligible third party and is hosted by a tax-exempt entity and/or sells electricity to a tax-exempt entity can qualify for the ITC. Because of this, many solar projects involving tax-exempt entities are structured as public-private partnerships to capture the full value of the ITC.

If the ITC is transferred to the tax equity investor under a partnership flip or inverted lease structure, then the tax equity investor must be in the partnership before the project is placed in service. A sale-leaseback structure must be put in place within three months after the project is placed in service.

#### Modified Accelerated Cost-Recovery System (MACRS)

The IRS has specific rules covering how a tax-paying entity can depreciate its business equipment and count that depreciation as a tax write-off. Under the Modified Accelerated Cost-Recovery System (MACRS), the full value of a qualifying solar PV system can be depreciated over a period of five years even though its useful life is closer to 20-25 years. This allows the solar project developer to monetize



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those tax benefits sooner, increasing the overall value of the project. For 2012, a "bonus" depreciation clause allows solar project developers to depreciate 50% of the equipment's value in the first year and the remainder over the course of the next four years. As with the ITC, tax-exempt entities are not eligible to receive accelerated depreciation benefits.

#### **California Solar Initiative**

The California Solar Initiative PBI is a state-level solar incentive program that pays a set price for every kWh of electricity that a qualifying system produces every month for five years. The current PBI funding level for Non-Residential Government is \$0.139/kWh (as of 1/29/12). Current funding levels can be found by following this link--<a href="http://www.csi-trigger.com/">http://www.csi-trigger.com/</a>



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## Figure 3 – Current Incentive Levels under California Solar Initiative

#### Last updated 1/29/2012

The California Solar Initiative (CSI) Trigger Tracker shows how many CSI megawatts (MW) worth of rebates are available in the current incentive step level. The CSI Trigger Tracker gives an indication of whether incentive levels are expected to drop imminently by showing "MW Under Review". When the "MW Under Review" exceeds the "MW Remaining", the row is bolded. When this occurs, it is likely that any new applications will receive the next (i.e. lower) incentive step level. By comparing "MW Under Review" with "MW Remaining", users can make their own estimates of when the incentives are going to decline to the next step level. The CSI Program will be offered until the Program Administrator territory megawatt targets have been reached or until the allocated incentive budget for each Program Administrator territory has been spent, whichever occurs first.

| Administrator | Customer<br>Class * | Current<br>Step | Initial MW<br>in Step | Unused MW from<br>Previous Steps | Revised Total<br>MW in Step | Issued Conditional<br>Reservation Letters<br>(MW) | MW<br>Remaining | MW Under<br>Review  |
|---------------|---------------------|-----------------|-----------------------|----------------------------------|-----------------------------|---|-----------------|---------------------|
|               | Residential         | 9               | 41.10                 | 1.05                             | 42.15                       | 14.25   | 27.90           | 0.91                |
| PGE           | Non-Residential     | 9               | 83.40                 | 0.02                             | 83.42                       | 0.60  | 82.82           | 134.17 <sup>1</sup> |
|               | Residential         | 7               | 32.60                 | 1.09                             | 33.69                       | 21.55   | 12.15           | 0.79                |
| SCE           | Non-Residential     | 8               | 77.10                 | 26.83                            | 103.93                      | 53.92   | 50.01           | 5.67                |
| COSE          | Residential         | 9               | 9.70                  | 0.74                             | 10.44                       | 5.91  | 4.53            | 0.83                |
| CCSE          | Non-Residential     | 8               | 17.30                 | 6.95                             | 24.25                       | 9.56  | 14.68           | 4.84                |

<sup>1.</sup> At this time, PG&E has received enough Non-Residential applications that are currently under review to meet our Step 8 and 9 capacities. New Non-Residential reservations are likely to receive Step 10 incentive rates. Please be aware that the incentive rate is not determined until a project is approved for a reservation.

Incentive MW Available by Step, by Program Administrator and Customer Class

#### CSI Step table: CSI Rebate Levels by Incentive Step and Rebate Type

|      | EPBB Payments (per Watt) |             | PBI Payments (per kWh) |                           |                        |                        |                           |
|------|--------------------------|-------------|------------------------|---------------------------|------------------------|------------------------|---------------------------|
|      | Statewide                |             | Non-Re                 | esidential                |                        | Non-Res                | sidential                 |
| Step | MW in Step               | Residential | Commercial             | Government/<br>Non-Profit | Residential            | Commercial             | Government/<br>Non-Profit |
| 1    | 50                       | n/a         | n/a                    | n/a                       | n/a                    | n/a                    | n/a                       |
| 2    | 70                       | \$2.50      | \$2.50                 | \$3.25                    | \$0.39                 | \$0.39                 | \$0.50                    |
| 3    | 100                      | \$2.20      | \$2.20                 | \$2.95                    | \$0.34                 | \$0.34                 | \$0.46                    |
| 4    | 130                      | \$1.90      | \$1.90                 | \$2.65                    | \$0.26                 | \$0.26                 | \$0.37                    |
| 5    | 160                      | \$1.55      | \$1.55                 | \$2.30                    | \$0.22                 | \$0.22                 | \$0.32                    |
| 6    | 190                      | \$1.10      | \$1.10                 | \$1.85                    | \$0.15                 | \$0.15                 | \$0.26                    |
| 7    | 215                      | \$0.65      | \$0.65                 | \$1.40                    | \$0.09                 | \$0.09                 | \$0.19                    |
| 8**  | 250                      | \$0.35      | \$0.35                 | \$1.10                    | \$0.05 (a)/\$0.044 (b) | \$0.05 (a)/\$0.044 (b) | \$0.15 (a)/\$0.139 (b)    |
| 9**  | 285                      | \$0.25      | \$0.25                 | \$0.90                    | \$0.03 (a)/\$0.032 (b) | \$0.03 (a)/\$0.032 (b) | \$0.12 (a)/\$0.114 (b)    |
| 10** | 350                      | \$0.20      | \$0.20                 | \$0.70                    | \$0.025                | \$0.025                | \$0.088                   |

<sup>\*</sup>The non-residential customer class includes commercial, private, government, and non-profit participants.

Please be aware that the final CSI incentive rate that is reserved for you will be determined by your CSI Program Administrator at the time your reservation request (RR) application is approved, and may be lower than the current incentive rate shown in the CSI Statewide Trigger Point Tracker. Please note that final incentive amounts are subject to change based upon the configuration of the as-built system. (Per the CSI Handbook, no projects or applications are reserved CSI funding until all required information has been submitted and approved in writing by the Program Administrator.)

For more information about the California Solar Initiative, visit <a href="mailto:soSolarCalifornia.ca.gov">soSolarCalifornia.ca.gov</a>.

Figure 4 – Contact Information for California Solar Initiative Program Administrator for SCE

Southern California Edison (SCE)
Website: www.sce.com/csi/

E-mail Address: CSIGroup@sce.com

Contact Person: California Solar Initiative Program Administrator

Phone

866-584-7436 (technical)

800-799-4177 (general) Fax: 626-302-3967

## **Mailing Address:**

SCE Customer Solar & Self-Generation Attn: CSI Program Administrator Southern California Edison P.O. Box 800 Rosemead, CA 91770-0800

<sup>\*\*</sup>Per Senate Bill 585, PBI payments have been revised to reflect a 4% discount rate which creates new PBI rates for Steps 8, 9, & 10. Steps 8a and 9a are the original CSI incentive rates, while 8b and 9b are the revised rates. In compliance with the Final Decision released by the California Public Utilities Commission, these new incentive rates are effective 12/2/2011.



## **Applicable Business Models**

#### Model #1: Build, Own, and Operate

Under this option, the City would contract with an EPC (Engineering, Procurement and Construction) firm to design, build and commission the solar PV array. The City would be responsible for paying all upfront costs associated with the site definition, permitting, due diligence, drainage/hydrology assessments, geotechnical surveys, economic modeling, system design & engineering, procurement, construction, and commissioning. Once commissioned, the City would assume responsibility for operation and maintenance of the PV array. Electricity generated by the system would be consumed locally by City facilities and any excess electricity would be sent to the electricity grid via SCE Net Metering rules. The City would own all RECs generated by the PV system. Under this scenario, the City would not be eligible for the ITC or accelerated depreciation tax incentives.

## Advantages:

- Control of all aspects of the project development process from beginning to end
- Develop in-house expertise in solar PV system operations and maintenance
- Ability to offset electricity consumption
- Revenue stream associated with RECs
- Demonstrate compliance with renewable energy targets

## **Disadvantages:**

- Responsible for high upfront equipment and installation costs
- Responsible for ongoing operations and maintenance costs
- Not able to take advantage of federal tax incentives
- Responsible for inverter and other major equipment replacement costs over system's life
- Solar PV operations not part of City core competencies or mission

### Model #2: Power Purchase Agreement

Under this option, the City would allow a solar project developer to build, own, and operate the solar PV array on City property and would sign a power-purchase agreement (PPA) to purchase all or part of the electricity generated by the system. A PPA is a contractual agreement whereby the project owner agrees to sell electricity to the purchaser at a fixed price per kWh over an extended contract term (usually 20-25 years). PPAs can include annual rate escalations where the price per kWh increases by a predetermined percentage every year. A PPA can also include clauses related to a site license agreement between the host and the developer for the use of property to develop the project and provisions related to the ownership of RECs. The main drivers of PPA pricing are:

- Total installed generation capacity
- Cost of equipment and installation

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- Availability of tax credits and rebates
- Value of RECs

## **Advantages:**

- No upfront equipment or installation costs
- No ongoing operations or maintenance costs
- Third party developer can take advantage of federal tax incentives and pass savings on through reduced PPA price/kWh
- Developer is responsible for all major replacements
- Lock in fixed electricity price over term of PPA contract and hedge against electricity price volatility

## Disadvantages:

- Solar PV array must be located near significant consumer of electricity
- Involves complicated contract negotiations and potentially high legal and administrative costs
- Requires three-party (minimum) negotiations between project owner(s), electricity buyer, and electric utility regarding grid tie-in, offtake agreement and net metering.
- Does not develop in-house solar PV expertise



Figure 5: Sample Terms of Executed Power Purchase Agreements (PPAs) <sup>1</sup>

| Government Level  | State   | County  | City   |
|-------------------|---|---|--|
| Name              | Caltrans District 10 Solar Project                              | Boulder County Solar Project  | Denver Airport Solar Project   |
| Location          | Stockton, California  | Boulder County  | Denver, Colorado   |
| Customer          | California Department of<br>Transportation                      | Boulder County  | Denver International Airport   |
| Utility           | Pacific Gas & Electric  | Xcel Energy   | Xcel Energy  |
| Size (DC)         | 248 kW  | 615 kW  | 2,000 kW   |
| Annual Production | 347,407 kWh   | 869,100 kWh   | 3,000,000 kWh  |
| Туре              | 123 kW rooftop, 125 kW carport                                  | 570 kW rooftop, 45 kW ground  | Ground-mount, single-axis tracking   |
| Location          | Maintenance Warehouse<br>Maintenance Shop<br>Parking Lot Canopy | Recycling Center Courthouse Clerk and Recorder Addiction Recovery Center Justice Center Walden Ponds (ground-mount) Sundquist | Ground of the Denver International<br>Airport  |
| Area              | 22,200 sq ft  | 8 county buildings  | 7.5 acres  |
| Developer         | Sun Edison, LLC   | Bella Energy  | World Water & Solar Technologies   |
| Owner             | Sun Edison, LLC   | Rockwell Financial  | MMA Renewable Ventures   |
| PPA Terms         | 20 years, 5.5% discount from utility rates                      | 20 years, fixed-price 6.5 ¢/kWh<br>for first 7 years, renegotiate price<br>and buyout option at beginning<br>of year 8        | 25 years, fixed-price 6 ¢/kWh for first 5 years, buyout option at beginning of year 6 or price increases to 10.5 ¢/kWh |
| Status            | Completed September 2007  | Completed January 2009  | Completed August 2008  |
| Contact           | Patrick McCoy<br>(916) 375-5988<br>patrick.mccoy@dgs.ca.gov     | Ann Livington<br>(303) 441-3517<br>alivingston@bouldercounty.org  | Woods Allee<br>(303) 342-2632<br>woods.allee@flydenver.com   |

## **Model #3: Provide Site License Agreement Only**

Under this business model, the City would provide roof space or land to a solar project developer via a Site License Agreement for the development of a solar PV system. The developer would negotiate a contract with the utility directly to offtake all of the electricity produced by the PV system (the City would not contract to purchase any electricity directly from the PV system). Either the solar developer or any tax equity partner(s) involved in the project would receive payment from the utility for the electricity generated along with all tax benefits, rebates and RECs generated by the project. The developer and the tax equity partner(s) would be allowed to structure their business model however they see fit to maximize the value of the project, assuming compliance with all applicable regulations. The City would initiate the project via a Request for Proposal (RFP) and negotiate the necessary Site

 $<sup>^{1} \ \</sup>underline{\text{http://www.nrel.gov/docs/fy10osti/46668.pdf}}. \ \text{Accessed on March 1, 2012}.$ 

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License Agreement (SLA) with the developer for an annual fee. A percentage of the RECs generated by the project could be included in the City's compensation for the SLA.

### Advantages:

- No upfront equipment or installation costs
- No ongoing operations or maintenance costs
- Flexibility to use the SRECs as a revenue stream (sell on market) or use them to comply with state-mandated renewable energy targets
- Substantial reduction in legal/transaction costs due to avoided involvement with PPA, net metering and utility offtake agreement negotiations
- Ability to gain public relations benefits of high-visibility solar project with minimal costs

### **Disadvantages:**

- No direct financial benefits associated with solar electricity
- Opportunity cost of potentially using the licensed land for other purposes during the life of the license agreement

## **Economic Feasibility Evaluation**

URS used the National Renewable Energy Laboratory (NREL) System Advisor Model (SAM) (Version 2010.11.9) to estimate total annual electricity production from the five conceived solar PV arrays. The SAM software uses the PV system's size, components and orientation specifications along with details about the site's latitude, elevation and typical climate to produce annual electricity output projections.

For the SAM modeling, the following assumptions were used:

Location: Los Angeles, CA

Latitude: 33.9°
 Longitude -118.4°
 Elevation: 32.0 m

• Array tilt: 5° (20° for Transit Station)

Azimuth: VariesDC to AC Derate Factor: 0.77



Figure 6 show the total annual electricity output of the different PV arrays over the course of one year.

25000 20000 Pomona Library 15000 -City Hall & Council Chambers John F. Kennedy Park 10000 Transit Station -Ralph Welch Park 5000 - Pomona Joyce Park — Kiwanis Park January February March April August September October November December

Figure 6 -Total Monthly kWh Output for Seven Candidate Locations

## **Financial Analysis**

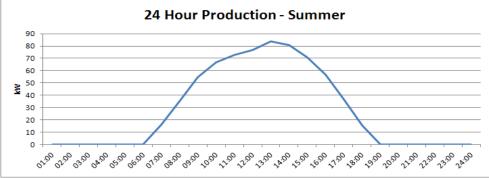
The annual kWh production modeling data was used to estimate the total financial value of the arrays based on the cost of avoided electricity using the relevant rate schedules, the value of reduced monthly demand charge, and the value of the California Solar Initiative Performance-Based Incentive (PBI). The City of Pomona's electricity provider is Southern California Edison (SCE). Several City facilities have Time-of-Use (TOU) electricity rate structures. With a TOU rate, the cost of electricity is highest during on-peak summer hours (Noon to 6PM Monday-Friday, June-September). The total annual kWh consumption savings was calculated by comparing the PV array's hourly production model to the TOU rate schedule and then aggregating the total value of all electricity produced throughout the year. The demand charge savings was calculated by multiplying the estimated monthly reduction in peak demand by the appropriate \$/kW demand charge. The financial analysis assumes no financing charges.



## **City Hall and Council Chambers**

| Facility                              | City Hall & Council<br>Chambers |
|---------------------------------------|---------------------------------|
| Rate Schedule                         | TOU-PA-5                        |
| Annual Rate Escalation                | 2%                              |
| Total kWh (2010)                      | 1,632,819                       |
| PV System Size (Wdc)                  | 117,600                         |
| \$/Wdc Cost                           | \$4.25                          |
| Annual O&M rate (\$/Wdc)              | \$0.016                         |
| O&M Escalation                        | 3.5%                            |
| Inverter Replacement (\$/Wdc - Yr 15) | \$0.30                          |
| PBI Value (\$/kWh)                    | \$0.139                         |
| TREC Value (\$/MWh)                   | \$30.00                         |
| Year 1 PV System Production           | 158,360                         |
| Year 1 kWh Offset Savings             | \$16,239                        |
| Estimated Peak Demand Reduction (kW)  | 45                              |
| Annual Savings (Demand Charge)        | \$2,799                         |
| Estimated System Cost                 | \$499,800                       |
| PBI Value (5 Years)                   | \$108,965                       |
| TREC Value (20 Years)                 | \$90,635                        |
| Total Annual Savings                  | \$19,038                        |
| Annual O&M Costs                      | \$1,882                         |
| Simple Payback (Years)                | 18.4                            |
| Discount Rate                         | 5%                              |
| NPV                                   | -\$127,819                      |
| Effective Electricity Price (\$/kWh)  | \$0.129                         |



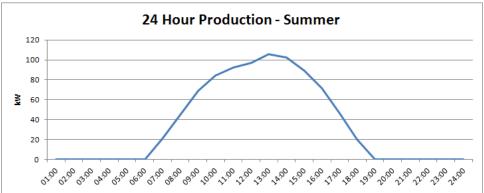




## **Pomona Library**

| Facility                              | Pomona Library |
|---------------------------------------|----------------|
| Rate Schedule                         | GS-2, B        |
| Annual Rate Escalation                | 2%             |
| Total kWh (2010)                      | 402,477        |
| PV System Size (Wdc)                  | 148,800        |
| \$/Wdc Cost                           | \$4.25         |
| Annual O&M rate (\$/Wdc)              | \$0.016        |
| O&M Escalation                        | 3.5%           |
| Inverter Replacement (\$/Wdc - Yr 15) | \$0.30         |
| PBI Value (\$/kWh)                    | \$0.139        |
| TREC Value (\$/MWh)                   | \$30.00        |
| Year 1 PV System Production           | 200,374        |
| Year 1 kWh Offset Savings             | \$27,126       |
| Estimated Peak Demand Reduction (kW)  | 70             |
| Annual Savings (Demand Charge)        | \$10,147       |
| Estimated System Cost                 | \$632,400      |
| PBI Value (5 Years)                   | \$137,874      |
| TREC Value (20 Years)                 | \$114,682      |
| Total Annual Savings                  | \$37,273       |
| Annual O&M Costs                      | \$2,381        |
| Simple Payback (Years)                | 12.9           |
| Discount Rate                         | 5%             |
| NPV                                   | \$14,764       |
| Effective Electricity Price (\$/kWh)  | \$0.129        |



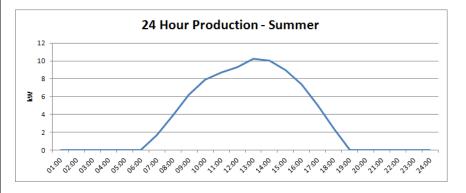




## Ralph Welch Park

| Facility                              | Ralph Welsh Park |
|---------------------------------------|------------------|
| Rate Schedule                         | GS-2             |
| Annual Rate Escalation                | 2%               |
| Total kWh (2010)                      | 107,840          |
| PV System Size (Wdc)                  | 14,400           |
| \$/Wdc Cost                           | \$4.75           |
| Annual O&M rate (\$/Wdc)              | \$0.016          |
| O&M Escalation                        | 3.5%             |
| Inverter Replacement (\$/Wdc - Yr 15) | \$0.30           |
| PBI Value (\$/kWh)                    | \$0.139          |
| TREC Value (\$/MWh)                   | \$30.00          |
| Year 1 PV System Production           | 19,215           |
| Year 1 kWh Offset Savings             | \$2,611          |
| Estimated Peak Demand Reduction (kW)  | 5                |
| Annual Savings (Demand Charge)        | \$725            |
| Estimated System Cost                 | \$68,400         |
| PBI Value (5 Years)                   | \$13,222         |
| TREC Value (20 Years)                 | \$10,997         |
| Total Annual Savings                  | \$3,336          |
| Annual O&M Costs                      | \$230            |
| Simple Payback (Years)                | 15.6             |
| Discount Rate                         | 5%               |
| NPV                                   | -\$9,224         |
| Effective Electricity Price (\$/kWh)  | \$0.150          |



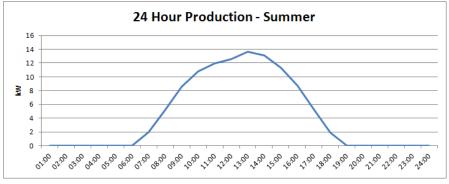




## **Transit Center**

| Facility                              | Transit Station |
|---------------------------------------|-----------------|
| Rate Schedule                         | GS-2 (Non-TOU)  |
| Annual Rate Escalation                | 2%              |
| Total kWh (2010)                      | Unknown         |
| PV System Size (Wdc)                  | 19,200          |
| \$/Wdc Cost                           | \$4.75          |
| Annual O&M rate (\$/Wdc)              | \$0.016         |
| O&M Escalation                        | 3.5%            |
| Inverter Replacement (\$/Wdc - Yr 15) | \$0.30          |
| PBI Value (\$/kWh)                    | \$0.139         |
| TREC Value (\$/MWh)                   | \$30.00         |
| Year 1 PV System Production           | 27,841          |
| Year 1 kWh Offset Savings             | \$2,442         |
| Estimated Peak Demand Reduction (kW)  | 8               |
| Annual Savings (Demand Charge)        | \$1,389         |
| Estimated System Cost                 | \$91,200        |
| PBI Value (5 Years)                   | \$19,157        |
| TREC Value (20 Years)                 | \$15,934        |
| Total Annual Savings                  | \$3,831         |
| Annual O&M Costs                      | \$307           |
| Simple Payback (Years)                | 17.0            |
| Discount Rate                         | 5%              |
| NPV                                   | -\$18,527       |
| Effective Electricity Price (\$/kWh)  | \$0.133         |



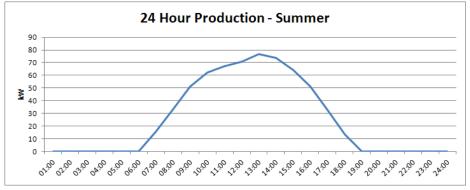




## JFK Park

| Facility                              | JFK Park   |
|---------------------------------------|------------|
| Rate Schedule                         | GS-1       |
| Annual Rate Escalation                | 2%         |
| Total kWh (2010)                      | 35,000     |
| PV System Size (Wdc)                  | 108,000    |
| \$/Wdc Cost                           | \$6.00     |
| Annual O&M rate (\$/Wdc)              | \$0.016    |
| O&M Escalation                        | 3.5%       |
| Inverter Replacement (\$/Wdc - Yr 15) | \$0.30     |
| PBI Value (\$/kWh)                    | \$0.139    |
| TREC Value (\$/MWh)                   | \$30.00    |
| Year 1 PV System Production           | 145,095    |
| Year 1 kWh Offset Savings             | \$23,138   |
| Estimated Peak Demand Reduction (kW)  | 35         |
| Annual Savings (Demand Charge)        | \$0        |
| Estimated System Cost                 | \$648,000  |
| PBI Value (5 Years)                   | \$99,838   |
| TREC Value (20 Years)                 | \$83,043   |
| Total Annual Savings                  | \$23,138   |
| Annual O&M Costs                      | \$1,728    |
| Simple Payback (Years)                | 21.1       |
| Discount Rate                         | 5%         |
| NPV                                   | -\$222,002 |
| Effective Electricity Price (\$/kWh)  | \$0.197    |



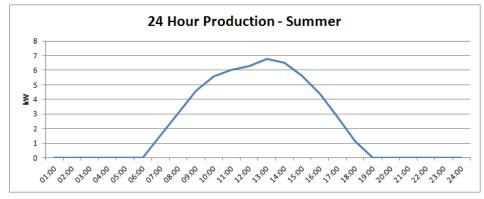




## **Kiwanis Park**

| Facility                              | Kiwanis Park |
|---------------------------------------|--------------|
| Rate Schedule                         | GS-1         |
| Annual Rate Escalation                | 2%           |
| Total kWh (2010)                      | 32,649       |
| PV System Size (Wdc)                  | 9,600        |
| \$/Wdc Cost                           | \$4.75       |
| Annual O&M rate (\$/Wdc)              | \$0.016      |
| O&M Escalation                        | 3.5%         |
| Inverter Replacement (\$/Wdc - Yr 15) | \$0.30       |
| PBI Value (\$/kWh)                    | \$0.139      |
| TREC Value (\$/MWh)                   | \$30.00      |
| Year 1 PV System Production           | 12,830       |
| Year 1 kWh Offset Savings             | \$2,047      |
| Estimated Peak Demand Reduction (kW)  | 4            |
| Annual Savings (Demand Charge)        | \$0          |
| Estimated System Cost                 | \$45,600     |
| PBI Value (5 Years)                   | \$8,828      |
| TREC Value (20 Years)                 | \$7,343      |
| Total Annual Savings                  | \$2,047      |
| Annual O&M Costs                      | \$154        |
| Simple Payback (Years)                | 17.0         |
| Discount Rate                         | 5%           |
| NPV                                   | -\$8,501     |
| Effective Electricity Price (\$/kWh)  | \$0.150      |



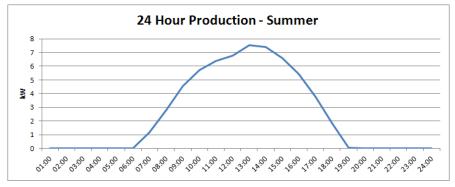




## **Jaycee Park**

| Facility                              | Jaycee Park    |
|---------------------------------------|----------------|
| Rate Schedule                         | GS-2 (Non-TOU) |
| Annual Rate Escalation                | 2%             |
| Total kWh (2010)                      | 56,280         |
| PV System Size (Wdc)                  | 10,560         |
| \$/Wdc Cost                           | \$4.75         |
| Annual O&M rate (\$/Wdc)              | \$0.016        |
| O&M Escalation                        | 3.5%           |
| Inverter Replacement (\$/Wdc - Yr 15) | \$0.30         |
| PBI Value (\$/kWh)                    | \$0.139        |
| TREC Value (\$/MWh)                   | \$30.00        |
| Year 1 PV System Production           | 14,004         |
| Year 1 kWh Offset Savings             | \$1,237        |
| Estimated Peak Demand Reduction (kW)  | 5              |
| Annual Savings (Demand Charge)        | \$868          |
| Estimated System Cost                 | \$50,160       |
| PBI Value (5 Years)                   | \$9,636        |
| TREC Value (20 Years)                 | \$8,015        |
| Total Annual Savings                  | \$2,105        |
| Annual O&M Costs                      | \$169          |
| Simple Payback (Years)                | 17.6           |
| Discount Rate                         | 5%             |
| NPV                                   | -\$11,404      |
| Effective Electricity Price (\$/kWh)  | \$0.151        |







## **Summary**

The results of the financial analysis were compiled and summarized in the table below.

| Facility           | Simple Payback<br>(Years) | Net Present Value (20 Years @ 5%) | Effective Electricity Price (\$/kWh) |
|--------------------|---------------------------|-----------------------------------|--------------------------------------|
| Pomona Library     | 12.9                      | \$14,764                          | \$0.129                              |
| Ralph Welch Park   | 15.6                      | -\$9,224                          | \$0.15                               |
| Kiwanis Park       | 17.0                      | -\$8,501                          | \$0.15                               |
| Transit Center     | 17.0                      | -\$18,527                         | \$0.133                              |
| Pomona Jaycee Park | 17.6                      | -\$11,404                         | \$0.151                              |
| City Hall          | 18.4                      | -\$127,819                        | \$0.129                              |
| Kennedy Park       | 21.1                      | -\$222,002                        | \$0.197                              |

Based on this analysis, the best site for a solar PV installation is a roof-mounted array at the Pomona Library due to the combination of a time-of-use rate schedule (GS-2, TOU Option B) and a large, flat, relatively unshaded roof space. See Figure 7 for a detailed breakdown of the economic model for the Pomona Library assessment. Nearby trees may need to be trimmed to optimize solar PV production. A more detailed feasibility study of this site, including a site visit, shading analysis, roof age and warranty assessment, structural assessment, and an interconnection review, is recommended before proceeding.

Due to the City's tax-exempt status, the federal tax incentives available for solar PV projects would not be available to the City under a business model scenario in which the City owns and operates the system. The City may want to explore the possibility of contracting with a developer to own and operate the system. The developer would be able to redeem the tax benefits which would increase the economic viability of the project. Under a public-private partnership business model, the City could either sign a long-term PPA with the developer to buy the electricity at a fixed rate for 20-25 years or could lease the system from the developer.



Figure 7 – Pro Forma Financial Model for Pomona Library 148.8 kW dc Array

| Facility                              | Pomona Library |
|---------------------------------------|----------------|
| Rate Schedule                         | GS-2, B        |
| Annual Rate Escalation                | 2%             |
| Total kWh (2010)                      | 402,477        |
| PV System Size (Wdc)                  | 148,800        |
| \$/Wdc Cost                           | \$4.25         |
| Annual O&M rate (\$/Wdc)              | \$0.016        |
| O&M Escalation                        | 3.5%           |
| Inverter Replacement (\$/Wdc - Yr 15) | \$0.30         |
| PBI Value (\$/kWh)                    | \$0.139        |
| TREC Value (\$/MWh)                   | \$30.00        |
| Year 1 PV System Production           | 200,374        |
| Year 1 kWh Offset Savings             | \$27,126       |
| Estimated Peak Demand Reduction (kW)  | 10-Mar         |
| Annual Savings (Demand Charge)        | \$10,147       |
| Estimated System Cost                 | \$632,400      |
| PBI Value (5 Years)                   | \$137,874      |
| TREC Value (20 Years)                 | \$114,682      |
| Total Annual Savings                  | \$37,273       |
| Annual O&M Costs                      | \$2,381        |
| Simple Payback (Years)                | 12.9           |
| Discount Rate                         | 5%             |
| NPV                                   | \$14,764       |
| Effective Electricity Price (\$/kWh)  | \$0.129        |

SUMMER (June-September Weekdays)

| On Peak (Noon-6PM )                  | \$0.20  |
|--------------------------------------|---------|
| Mid-Peak (8AM - Noon, 6PM-11PM)      | \$0.14  |
| Off-Peak (11 PM - 8 AM)              | \$0.11  |
| Peak Demand Charge (Assumes On-Peak) | \$12.08 |

WINTER (June-September Weekdays)

| Mid-Peak (8AM - 9PM)   | \$0.13  |
|------------------------|---------|
| Off-Peak (9 PM - 8 AM) | \$0.10  |
| Peak Demand Charge     | \$12.08 |

System Degradation 0.50%

|                                      | Year 1  | Year 2  | Year 3  | Year 4  | Year 5  | Year 6  | Year 7  | Year 8  | Year 9  | Year 10 |
|--------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| kWh Produced                         | 200,374 | 199,372 | 198,375 | 197,383 | 196,397 | 195,415 | 194,437 | 193,465 | 192,498 | 191,535 |
| Avoided Electricity + Demand Savings | 37,273  | 37,829  | 38,392  | 38,964  | 39,545  | 40,134  | 40,732  | 41,339  | 41,955  | 42,580  |
| PBI                                  | 27,852  | 27,713  | 27,574  | 27,436  | 27,299  |         |         |         |         |         |
| TREC                                 | 6,011   | 5,981   | 5,951   | 5,922   | 5,892   | 5,862   | 5,833   | 5,804   | 5,775   | 5,746   |
| O&M                                  | 2,381   | 2,464   | 2,550   | 2,640   | 2,732   | 2,828   | 2,927   | 3,029   | 3,135   | 3,245   |
| Inverter (annualized)                | 2,232   | 2,232   | 2,232   | 2,232   | 2,232   | 2,232   | 2,232   | 2,232   | 2,232   | 2,232   |
| Total Savings                        | 66,524  | 66,827  | 67,135  | 67,451  | 67,772  | 40,937  | 41,407  | 41,882  | 42,363  | 42,849  |

|                                      | Year 11 | Year 12 | Year 13 | Year 14 | Year 15 | Year 16 | Year 17 | Year 18 | Year 19 | Year 20 | Total       |
|--------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|
| kWh Produced                         | 190,578 | 189,625 | 188,677 | 187,733 | 186,795 | 185,861 | 184,931 | 184,007 | 183,087 | 182,171 | 3,822,717   |
| Avoided Electricity + Demand Savings | 43,215  | 43,859  | 44,512  | 45,175  | 45,848  | 46,532  | 47,225  | 47,929  | 48,643  | 49,367  | \$861,049   |
| PBI                                  |         |         |         |         |         |         |         |         |         |         | \$137,874   |
| TREC                                 | 5,717   | 5,689   | 5,660   | 5,632   | 5,604   | 5,576   | 5,548   | 5,520   | 5,493   | 5,465   | \$114,682   |
| 0&M                                  | 3,358   | 3,476   | 3,598   | 3,723   | 3,854   | 3,989   | 4,128   | 4,273   | 4,422   | 4,577   | \$67,328    |
| Inverter (annualized)                | 2,232   | 2,232   | 2,232   | 2,232   | 2,232   | 2,232   | 2,232   | 2,232   | 2,232   | 2,232   | \$44,640    |
| Total Savings                        | 43,342  | 43,839  | 44,343  | 44,852  | 45,366  | 45,887  | 46,413  | 46,944  | 47,481  | 48,023  | \$1,001,636 |



## Appendix 1: Applicable Southern California Edison (SCE) Rate Schedules

GS-1

GS-2

GS-2 Time-of-Use (Option B)

TOU-PA-5



## Southern California Edison Rosemead, California (U 338-E)

Revised Cal. PUC Sheet No. 49363-E Cancelling Revised Cal. PUC Sheet No. 48320-E\*\*

## Schedule GS-1 GENERAL SERVICE NON-DEMAND

Sheet 1

#### **APPLICABILITY**

Applicable to single- and three-phase general service including lighting and power, except that the customer whose monthly maximum demand, in the opinion of SCE, is expected to exceed 20 kW or has exceeded 20 kW in any three months during the preceding 12 months is ineligible for service under this Schedule. Effective with the date of ineligibility of any customer served under this Schedule, the customer's account shall be transferred to Schedule GS-2 or another applicable rate schedule. This Schedule is subject to meter availability.

#### **TERRITORY**

Within the entire territory served.

#### **RATES**

|                                   |                 |                            |                       |                    | Delive | ery Service | )                          |                    |                            | Gen                | eration <sup>9</sup>           | ľ   |
|-----------------------------------|-----------------|----------------------------|-----------------------|--------------------|--------|-------------|----------------------------|--------------------|----------------------------|--------------------|--------------------------------|-----|
|                                   |                 | Trans <sup>1</sup>         | Distrbtn <sup>2</sup> | NSGC <sup>3</sup>  | NDC⁴   | PPPC⁵       | DWRBC <sup>6</sup>         | PUCRF'             | Total <sup>8</sup>         | URG**              | DWREC <sup>10</sup>            | (T) |
| -                                 | ummer<br>Winter | 0.00883 (I)<br>0.00883 (I) | 0.03406<br>0.03406    | 0.00240<br>0.00240 |        |             | 0.00513 (I)<br>0.00513 (I) | 0.00024<br>0.00024 | 0.06436 (I)<br>0.06436 (I) | 0.12942<br>0.07036 | (0.00593) (R)<br>(0.00593) (R) |     |
| Customer Charge - \$/Meter/Day    |                 |                            | 0.733                 |                    |        |             |                            |                    | 0.733                      |                    |                                |     |
| Three Phase Service - \$/Day      |                 |                            | 0.032                 |                    |        |             |                            |                    | 0.032                      |                    |                                |     |
| Voltage Discount, Energy - \$/kWh |                 |                            |                       |                    |        |             |                            |                    |                            |                    |                                |     |
| From 2 kV to                      | 50 kV           | 0.00000                    | (0.00047)             |                    |        |             |                            |                    | (0.00047)                  | (0.00217)          |                                |     |
| Above 50 kV but below:            | 220 kV          | 0.00000                    | (0.01474)             |                    |        |             |                            |                    | (0.01474)                  | (0.00484)          |                                |     |
| At:                               | 220 kV          | 0.00000                    | (0.01492)             |                    |        |             |                            |                    | (0.01492)                  | (0.00490)          |                                |     |
| California Alternate Rates for    |                 |                            |                       |                    |        |             |                            |                    |                            | 1                  |                                |     |
| Energy Discount - %               |                 |                            | 100.00*               |                    |        |             |                            |                    | 100.00*                    | 1                  |                                |     |

- \* Represents 100% of the discount percentage as shown in the applicable Special Condition of this Schedule.
- \*\* The ongoing Competition Transition Charge (CTC) of \$0.00781 per kWh is recovered in the URG component of Generation.
- Trans = Transmission and the Transmission Owners Tariff Charge Adjustments (TOTCA) which are FERC approved. The TOTCA represents the Transmission Revenue Balancing Account Adjustment (TRBAA) of \$(0.00072) per kWh, Reliability Services Balancing Account Adjustment (R) (RSBAA) of \$0.00003 per kWh, and Transmission Access Charge Balancing Account Adjustment (TACBAA) of \$(\$0.00038) per kWh. (R)
- 2 Distrbtn = Distribution
- 3 NSGC = New System Generation Charge
- 4 NDC = Nuclear Decommissioning Charge
- 5 PPPC = Public Purpose Programs Charge (includes California Alternate Rates for Energy Surcharge where applicable.)
- 6 DWRBC = Department of Water Resources (DWR) Bond Charge. The DWR Bond Charge is not applicable to exempt Bundled Service and Direct Access Customers, as defined in and pursuant to D.02-10-063, D.02-02-051, and D.02-12-082.
- 7 PUCRF = The PUC Reimbursement Fee is described in Schedule RF-E.
- 8 Total = Total Delivery Service rates are applicable to Bundled Service, Direct Access (DA) and Community Choice Aggregation Service (CCA Service) Customers, except DA and CCA Service Customers are not subject to the DWRBC rate component of this Schedule but instead pay the DWRBC as provided by Schedule DA-CRS or Schedule CCA-CRS.
- 9 Generation = The Generation rates are applicable only to Bundled Service Customers.
- 10 DWREC = Department of Water Resources (DWR) Energy Credit For more information on the DWR Energy Credit, see the Billing Calculation (N)
  Special Condition of this Schedule. (N)

(Continued)

| (To be inserted by utility) | Issued by      | (To be inserted by Cal. PUC) |
|-----------------------------|----------------|------------------------------|
| Advice 2648-E-A             | Akbar Jazayeri | Date Filed Dec 27, 2011      |
| Decision                    | Vice President | Effective                    |
| 1C13                        |                | Resolution                   |

Revised Cal. PUC Sheet No. 43070-E Cancelling Revised Cal. PUC Sheet No. 39881-E

## Schedule GS-1 GENERAL SERVICE NON-DEMAND (Continued)

Sheet 2

## **SPECIAL CONDITIONS**

Summer and Winter Seasons are defined as follows:

The summer season shall commence at 12:00 a.m. on June 1 and continue until 12:00 a.m. on October 1 of each year. The winter season shall commence at 12:00 a.m. on October 1 of each year and continue until 12:00 a.m. on June 1 of the following year. A prorata computation will be made for seasonal billing purposes.

(C) (C)

- 2. Voltage: Service will be supplied at one standard voltage.
- 3. Three-Phase Service: Where SCE provides three-phase service, the billing will be increased by the amount shown in the Rates section, above.
- 4. Voltage Discount: Bundled Service, CCA Service, and Direct Access customers will have the Distribution rate component of the applicable Delivery Service charges reduced by the corresponding Voltage Discount amount for service metered and delivered at the applicable voltage level as shown in the Rates section above. In addition, Bundled Service Customers will have the Utility Retained Generation (URG) rate component of the applicable Generation charges reduced by the corresponding Voltage Discount amount for service metered and delivered at the applicable voltage level as shown in the Rates section.
- 5. Temporary Discontinuance of Service: Where the use of energy is seasonal or intermittent, no adjustments will be made for a temporary discontinuance of service. Any customer prior to resuming service within twelve months after such service was discontinued will be required to pay all charges which would have been billed if service had not been discontinued.
- 6. Customer-Owned Electrical Generating Facilities:
  - a. For customers not eligible for service under Schedule NEM, Net Energy Metering, and where customer-owned electrical generating facilities are used to meet a part or all of the customer's electrical requirements, service shall be provided concurrently under the terms and conditions of Schedule S and this Schedule. Parallel operation of such generating facilities with SCE's electrical system is permitted. A generation interconnection agreement is required for such operation.
  - b. Customer-owned electrical generating facilities used solely for auxiliary, emergency, or standby purposes (auxiliary/emergency generating facilities) to serve the customer's load during a period when SCE's service is unavailable and when such load is isolated from the service of SCE are not subject to Schedule S. However, that upon approval by SCE, momentary parallel operation may be permitted to allow the customer to test the auxiliary/emergency generating facilities. A Momentary Parallel Generation Contract is required for this type of service.
  - c. For customers of record on Schedule GS-1-PG as of April 30, 1996, who are transferred by SCE to a combination of Schedule GS-1 and Schedule S, and are not eligible for service under Schedule NEM, Net Energy Metering, the Energy Charges for such parallel generation customers shall be determined using kWh of Net Energy as defined and set forth below:

(Continued)

| (To be inserted by utility) | Issued by             | (To be inserted by Cal. PUC) |
|-----------------------------|-----------------------|------------------------------|
| Advice 2168-E               | <u>Akbar Jazayeri</u> | Date Filed Oct 12, 2007      |
| Decision                    | Vice President        | Effective Jun 1, 2008        |
| 2C14                        |                       | Resolution                   |

Revised Cal. PUC Sheet No. 49364-E Cancelling Revised Cal. PUC Sheet No. 48540-E

## Schedule GS-1 GENERAL SERVICE NON-DEMAND (Continued)

Sheet 3

## SPECIAL CONDITIONS (Continued)

- Customer-Owned Electrical Generating Facilities: (Continued)
   c. (Continued)
  - (1) Net Energy: Net Energy is  $E_S$  minus  $E_F$ , where  $E_S$  is energy supplied by SCE, and  $E_F$  is energy generated by the customer and fed back into SCE's system at such times as customer generation exceeds customer requirements. Only if Net Energy is positive shall Net Energy charges be applied at the rates specified above except that the Customer Charge will be applied in any case. If the calculation of Net Energy yields a negative result, all such negative Net Energy shall be considered Net Energy transmitted and shall be treated as stated in Section (2), below. The components of Net Energy,  $E_S$  and  $E_F$ , shall be separately recorded unless SCE and customer agree that energy fed back,  $E_F$ , is negligible or zero, and so specify by waiver in the generation interconnection agreement.
  - (2) Net Energy Transmitted: Net Energy transmitted occurs when the cumulative value of E<sub>F</sub> exceeds the cumulative value of E<sub>S</sub> during an entire billing period and is the amount by which the energy generated by the customer and fed back into SCE's system exceeds the energy supplied by SCE over an entire billing period. Such Net Energy transmitted will be purchased by SCE at a rate for payment equal to SCE's applicable standard offer energy payment rate filed with the Commission. A new rate for payment shall be effective for Net Energy transmitted on and after the effective date of each such filing.
  - (3) Billing: Payment by SCE to the customer for Net Energy transmitted shall be included as a component of the customer's bill for service rendered under this tariff.
- 7. CARE Discount: Customers who meet the definition of a Group Living Facility, Agricultural Employee Housing, or Migrant Farm Worker Housing Center as defined in the Preliminary Statement, Part O, Section 3., may qualify for a 25.9% discount off of their bill prior to application of the PUC Reimbursement Fee and any applicable user fees, taxes, and late payment charges. Customers eligible for the CARE Discount will not be required to pay the CARE Surcharge, as set forth in Preliminary Statement, Part O, Section 4 and are not subject to the DWRBC rate component of the Total charges for Delivery Service. An Application and Eligibility Declaration, as defined in the Preliminary Statement, Part O, Section 3, is required for service under this Special Condition. Eligible customers shall be billed on this Schedule commencing no later than one billing period after receipt and approval of the customer's application by SCE. Customers may be rebilled on the applicable rate schedule for periods in which they do not meet the eligibility requirements for the CARE discount as defined in the Preliminary Statement, Part O, Section 3.

(Continued)

| (To be inserted by utility) |          |  |  |  |
|-----------------------------|----------|--|--|--|
| Advice                      | 2648-E-A |  |  |  |
| Decision                    |          |  |  |  |
| 3C11                        |          |  |  |  |

Issued by <u>Akbar Jazayeri</u> <u>Vice President</u>

| (To be inserted by Cal. PUC) |              |  |  |
|------------------------------|--------------|--|--|
| Date Filed                   | Dec 27, 2011 |  |  |
| Effective                    |              |  |  |
| Resolution                   |              |  |  |

Revised Cal. PUC Sheet No. 49365-E Cancelling Revised Cal. PUC Sheet No. 42463-E

# Schedule GS-1 GENERAL SERVICE NON-DEMAND (Continued)

Sheet 4

### SPECIAL CONDITIONS (Continued)

- 8. Installation of Demand Meters: Where a customer's usage exceeds an average of 4,500 kWh per month in the preceding 12-month period, SCE may, at its sole option, install a demand meter on the account at SCE's expense.
- 9. Billing Calculation: A customer's bill is calculated according to the rates and conditions above.

The charges listed in the Rates section are calculated by multiplying the Total Delivery (T) Service rates and the Generation rates, when applicable, by the billing determinants (e.g., per kilowatt [kW], kilowatthour [kWh], etc.).

(D) (N)

(N)

As of January 1, 2012, all generation supplied to Bundled Service Customers is provided by SCE. The DWR Energy Credit provided to Bundled Service Customers is determined by multiplying the DWR Energy Credit rate component by the customer's total kWhs.

(Continued)

| (To be inserted by utility) |          |  |  |  |  |  |  |
|-----------------------------|----------|--|--|--|--|--|--|
| Advice                      | 2648-E-A |  |  |  |  |  |  |
| Decision                    |          |  |  |  |  |  |  |

4C13

Issued by Akbar Jazayeri Vice President (To be inserted by Cal. PUC)
Date Filed Dec 27, 2011
Effective
Resolution

Revised Cal. PUC Sheet No. 49366-E Cancelling Revised Cal. PUC Sheet No. 47394-E

# Schedule GS-1 GENERAL SERVICE NON-DEMAND (Continued)

Sheet 5

SPECIAL CONDITIONS (Continued)

9. Billing Calculation: (Continued

(D)

a. Bundled Service Customers receive Delivery Service and Generation service from SCE. The customer's bill is the sum of the charges for Delivery Service and Generation service determined, as described in this Special Condition, and subject to applicable discounts or adjustments provided under SCE's tariff schedules.

(T) | (T)

- b. Direct Access Customers receive Delivery Service from SCE and purchase energy from an Energy Service Provider. The customer's bill is the sum of the charges for Delivery Service determined as described in this Special Condition except that the DWRBC rate component is subtracted from the Total Delivery Service rates before the billing determinants are multiplied by such resulting Total rates; plus the applicable charges as shown in Schedule DA-CRS and subject to applicable discounts or adjustments provided under SCE's tariff schedules.
- c. CCA Service Customers receive Delivery Service from SCE and purchase energy from their Community Choice Aggregator (CCA). SCE will read the meters and present the bill for both Delivery and Generation Services to the CCA Service Customer. The customer's bill is the sum of the charges for Delivery Service as displayed in this Rate Schedule and Generation charges determined by the CCA plus the applicable charges as shown in Schedule CCA-CRS, and subject to applicable discounts or adjustments provided under SCE's tariff schedules.
- Customers with Service Metered and Delivered at Voltages above 50 kV (Sub-transmission customers) Included in Rotating Outages.

Sub-transmission customers, except for those customers exempt from rotating outages, are to be included in controlled, rotating outages when required by the California Independent System Operator (CAISO). To the extent feasible, SCE will coordinate rotating outages applicable to Sub-transmission customers who are fossil fuel producers and pipeline operators and users to minimize disruption to public health and safety. SCE shall not include a Sub-transmission customer in an applicable rotating outage group if the customer's inclusion would jeopardize electric system integrity. Sub-transmission customers who are not exempt from rotating outages, and seek such exemption, may submit an Optional Binding Mandatory Curtailment (OBMC) Plan to SCE in accordance with Schedule OBMC. If SCE approves a customer's OBMC Plan, the customer will become exempt from rotating outages and will be subject to the terms and conditions of Schedule OBMC and its associated contract.

Non-exempt Sub-transmission customers shall be required to drop their entire electrical load during applicable rotating outages by either (1) implementing the load reduction on their own initiative, in accordance with subsection a, below; or (2) having SCE implement the load reduction through remote-controlled load drop equipment (control equipment) in accordance with subsection b, below. A Sub-transmission customer shall normally be subject to the provisions of subsection a. If SCE approves a customer's request to have SCE implement the load reduction or if the customer does not comply with prior required load reductions, as specified in subsection c, the customer will be subject to the provisions of subsection b.

(To be inserted by utility)

Advice 2648-E-A

Decision

Issued by

(To be inserted by Cal. PUC)

Akbar Jazayeri

Vice President

Effective

(Continued)

Resolution

5C13

Revised Cal. PUC Sheet No. 47395-E Cancelling Revised Cal. PUC Sheet No. 38329-E\*

## Schedule GS-1 GENERAL SERVICE NON-DEMAND (Continued)

Sheet 6

(T)

## SPECIAL CONDITIONS (Continued)

- 10. Customers with Service Metered and Delivered at Voltages above 50 kV (Sub-transmission customers) Included in Rotating Outages. (Continued)
  - a. Customer-Implemented Load Reduction. (Continued)
    - (i) Notification of Required Load Reduction. At the direction of the CAISO, SCE shall notify each Sub-transmission customer in an affected rotating outage group to drop its entire load. Within 30 minutes of such notification, the customer must drop its entire load. The customer shall not return the dropped load to service until 90 minutes after SCE sent the notification to the customer to drop its load, unless SCE notifies the customer that it may return its load to service prior to the expiration of the 90 minutes.
    - (ii) Method of Notification. SCE will notify Sub-transmission customers who are required to implement their own load reduction via telephone, by either an automated calling system or a manual call to a business telephone number or cellular phone number designated by the customer. The designated telephone number will be used for the sole purpose of receiving SCE's rotating outage notification and must be available to receive the notification at all times. When SCE sends the notification to the designated telephone number the customer is responsible for dropping its entire load in accordance with subsection a. (i), above. The customer is responsible for informing SCE, in writing, of the telephone number and contact name for purposes of receiving the notification of a rotating outage.
    - (iii) Excess Energy Charges. If a Sub-transmission customer fails to drop its entire load within 30 minutes of notification by SCE, and/or fails to maintain the entire load drop until 90 minutes after the time notification was sent to the customer, unless SCE otherwise notified the customer that it may return its load to service earlier in accordance with subsection a. (i) above, SCE shall assess Excess Energy Charges of \$6 per kWh for all kWh usage in excess of the Authorized Residual Ancillary Load. Such charges will be based on the total kWh usage during the applicable rotating outage penalty period, less the product of Authorized Residual Ancillary Load in kW and the applicable rotating outage penalty period in hours. Excess Energy Charges will be determined and applied by SCE subsequent to the Sub-transmission customer's regularly scheduled meter read date following the applicable rotating outage.
    - (iv) Authorized Residual Ancillary Load. Authorized Residual Ancillary Load is load that is deemed to be equivalent to five percent of the Sub-transmission customer's prior billing month's recorded Maximum Demand. This minimum load level is used as a proxy to allow for no-load transformer losses and/or load attributed to minimum grid parallel operation for generators connected under Rule 21.

(Continued)

| (To be inserted by utility) | Issued by             | (To be inserted by Cal. PUC) |
|-----------------------------|-----------------------|------------------------------|
| Advice 2500-E               | <u>Akbar Jazayeri</u> | Date Filed Aug 12, 2010      |
| Decision                    | Vice President        | Effective Sep 11, 2010       |
| 6C13                        |                       | Resolution                   |

Revised Cal. PUC Sheet No. 38330-E Cancelling Revised Cal. PUC Sheet No. 33794-E\*

## Schedule GS-1 GENERAL SERVICE NON-DEMAND (Continued)

Sheet 7

## SPECIAL CONDITIONS (Continued)

- Customers with Service Metered and Delivered at Voltages above 50 kV (Sub-transmission customers) Included in Rotating Outages. (Continued)
  - b. SCE-Implemented Load Reduction.

Non-exempt Sub-transmission customers may request, in writing, to have SCE drop the customer's entire load during all applicable rotating outages using SCE's remote-controlled load drop equipment (control equipment). If SCE agrees to such arrangement, SCE will implement the load drop by using one of the following methods:

- (i) Control Equipment Installed. For a Sub-transmission customer whose load can be dropped by SCE's existing control equipment, SCE will implement the load drop during a rotating outage applicable to the customer. The customer will not be subject to the Notification and Excess Energy Charge provisions set forth in subsection a, above.
- (ii) Control Equipment Pending Installation. For a Sub-transmission customer whose load can not be dropped by SCE's existing control equipment, the customer must request the installation of such equipment at the customer's expense in accordance with SCE's Rule 2, Section H, Added Facilities. Pending the installation of the control equipment, the customer will be responsible for dropping load in accordance with the provisions of subsection a, above, including the Notification and Excess Energy Charge provisions.
- c. Non-compliance: A non-exempt Sub-transmission customer subject to subsection a, above, who fails to drop load during three rotating outages in a three year period to a demand level of 20% or less of the customer's prior billing month's recorded Maximum Demand averaged over the applicable rotating outage period, is not in compliance with this tariff. The three year period shall commence with the first failure to drop load as specified in this subsection. A customer not in compliance with this condition will be placed at the top of the Sub-transmission customer rotating outage group list and will be expected to comply with subsequent applicable rotating outages. In addition, the customer must select one of the two options below within fifteen days after receiving written notice of non-compliance from SCE. A customer failing to make a selection within the specified time frame will be subject to subsection c. (ii) below.
  - (i) Subject to Schedule OBMC: The customer shall submit an OBMC Plan, in accordance with Schedule OBMC, within 30 calendar days of receiving written notice of non-compliance from SCE. Pending the submittal of the OBMC Plan by the customer and pending the review and acceptance of the OBMC Plan by SCE, the customer will remain responsible for dropping load in accordance with the provisions of subsection a, above, including the Notification and Excess Energy charge provisions. If the customer fails to submit an OBMC Plan within 30 days of receiving notice of non-compliance from SCE, or if the customer's OBMC Plan is not approved by SCE, or if the customer fails to meet the requirements of Schedule OBMC once the OBMC Plan is approved, the customer shall be subject subsection c. (ii), below.

(Continued)

| (To be inserted by utility) |                      |  |  |  |  |  |  |
|-----------------------------|----------------------|--|--|--|--|--|--|
| Advice                      | 1886-E               |  |  |  |  |  |  |
| Decision                    | 05-03-006            |  |  |  |  |  |  |
| 7C22                        | 05-03-022, 05-04-025 |  |  |  |  |  |  |

Issued by
<u>John R. Fielder</u>
Senior Vice President

(To be inserted by Cal. PUC)
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Effective Apr 14, 2005
Resolution

Revised Cal. PUC Sheet No. 47396-E Cancelling Revised Cal. PUC Sheet No. 38331-E

## Schedule GS-1 GENERAL SERVICE NON-DEMAND (Continued)

Sheet 8

### SPECIAL CONDITIONS (Continued)

- 10. Customers with Service Metered and Delivered at Voltages above 50 kV (Sub-transmission customers) Included in Rotating Outages. (Continued)
  - c. Non-compliance: (Continued)
    - (ii) Installation of Control Equipment. The customer shall be subject to the installation of control equipment at the customer's expense in accordance with SCE's Rule 2, Section H, Added Facilities, if such equipment is not currently installed. If such switching capability is installed, SCE will drop the customer's load for all applicable subsequent rotating outages in accordance with the provisions of subsection b, above. Pending the installation of control equipment, the customer will remain responsible for dropping load in accordance with the provisions of subsection a, above, including the Notification and Excess Energy Charge provisions.
  - d. Net-Generators

Sub-transmission customers who are also net-generators are normally exempt from rotating outages, but they must be net suppliers of power to the grid during all rotating outages. For the purpose of this Special Condition, a net-generator is an SCE customer who operates an electric generating facility as part of its industrial or commercial process, and the generating facility normally produces more electrical power than is consumed in the industrial or commercial process, with the excess power supplied to the grid. Sub-transmission customers whose primary business purpose is to generate power are not included in this Special Condition.

- (i) Notification of Rotating Outages. SCE will notify sub-transmission customers who are net-generators of all rotating outages applicable to customers within SCE's service territory. Within 30 minutes of notification, the customer must ensure it is a net supplier of power to the grid throughout the entire rotating outage period. Failure to do so will result in the customer losing its exemption from rotating outages, and the customer will be subject to Excess Energy Charges, as provided below.
- (ii) Excess Energy Charges. Net generators who are not net suppliers to the grid during each rotating outage period will be subject to Excess Energy Charges of \$6 per kWh for all kWh usage in excess of the Authorized Residual Ancillary Load. Such charges will be based on the total kWh usage during a rotating outage penalty period, less the product of Authorized Residual Ancillary Load in kW and the applicable rotating outage period hours. Excess Energy Charges will be determined and applied by SCE subsequent to the customer's regularly scheduled meter read date following the applicable rotating outage. Excess Energy Charges shall not apply during periods of verifiable scheduled generator maintenance or if the customer's generator suffers a verifiable forced outage. The scheduled maintenance must be approved in advance by either the CAISO or SCE, but approval may not be unreasonably withheld.

(Continued)

| (To be inserted by utility) | Issued by             | (To be inserted by Cal. PUC) |
|-----------------------------|-----------------------|------------------------------|
| Advice 2500-E               | <u>Akbar Jazayeri</u> | Date Filed Aug 12, 2010      |
| Decision                    | Vice President        | Effective Sep 11, 2010       |
| 8C11                        |                       | Resolution                   |



<u>Schedule GS-2</u> GENERAL SERVICE - DEMAND

Cancelling

Revised

Revised

Sheet 1

Cal. PUC Sheet No. 45654-E

45275-E

Cal. PUC Sheet No.

#### **APPLICABILITY**

Applicable to single- and three-phase general service including lighting and power customers whose monthly Maximum Demand registers, or in the opinion of SCE is expected to register, above 20 kW and below 200 kW. The customer whose monthly Maximum Demand, in the opinion of SCE, is expected to reach 200 kW or has reached 200 kW for any three months during the preceding 12 months is ineligible for service under this Schedule. Effective with the date of ineligibility, the customer?s account shall be transferred to Schedule TOU-GS-3. Further, any customer served under this Schedule whose monthly Maximum Demand has registered 20 kW or less for 12 consecutive months is eligible for service under another applicable rate schedule. This Schedule is subject to meter availability.

(T)

A customer who makes a permanent change in operating conditions that SCE, in its sole opinion, anticipates will reduce the customer?s demand to 20 kW or less, may transfer to another applicable rate schedule before completing 12 consecutive months at the reduced demand levels. Such customer shall be required to sign the Permanent Change in Operating Conditions Declaration, Form 14-548.

(T) (D) (N)

Option R of this Schedule is available to customers with demands greater than 20 kW and who install, own, or operate solar, wind, fuel cells, or other eligible onsite Renewable Distributed Generation Technologies as defined by the California Solar Initiative (CSI) or the Self-Generation Incentive Program (SGIP). Eligible systems must have a net renewable generating capacity equal to or greater than 15 percent of the customer?s annual peak demand, as recorded over the previous 12-months. For generating systems that have received incentives through either CSI or the SGIP, the renewable generating capacity shall be the net generator output value, net of inverter losses, established in the customer?s Generating Facility Interconnection Agreement required in Rule 21. All other applicants must provide net generator output values, net of inverter losses based on the methodology for establishing such values described in the CSI or if applicable the SGIP handbooks. Participation on this rate option is limited to a cumulative installed distributed generation output capacity of 150 MW for all eligible rate groups.

(N)

#### **TERRITORY**

Within the entire territory served.

(L)

(Continued)

(To be inserted by utility)
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Decision 09-08-028

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Resolution

1C34



Southern California Edison
Rosemead, California (U 338-E)

Revised Cal. PUC Sheet No. 46616-E Cancelling Revised Cal. PUC Sheet No. 46271-E

## <u>Schedule GS-2</u> <u>GENERAL SERVICE - DEMAND</u>

Sheet 2

(Continued)

## **RATES**

| ľ   |                    | Delivery Service      |                   |                  |                   |                    |         | Generation <sup>9</sup> |                  |         |
|---|--------------------|-----------------------|-------------------|------------------|-------------------|--------------------|---------|-------------------------|------------------|---------|
| ľ   | Trans <sup>1</sup> | Distrbtn <sup>2</sup> | NSGC <sup>3</sup> | NDC <sup>4</sup> | PPPC <sup>5</sup> | DWRBC <sup>6</sup> | PUCRF'  | Total <sup>8</sup>      | URG**            | DWR     |
| Non TOU                                   |                    |                       |                   |                  |                   |                    |         |                         | •                |         |
| Energy Charge - \$/kWh/Meter/Month        |                    |                       |                   |                  |                   |                    |         |                         |                  |         |
| Summer                                    | 0.00028            | 0.00357 (I)           | 0.00140 (I)       | 0.00064 (I)      |                   | 0.00515            | 0.00024 |                         | 0.07702 (R)      | 0.03763 |
| Winter                                    | 0.00028            | 0.00357 (I)           | 0.00140 (I)       | 0.00064 (I)      | 0.01070 (1)       | 0.00515            | 0.00024 | 0.02198 (1)             | 0.05848 (R)      | 0.03763 |
| Customer Charge - \$/Meter/Month          |                    | 133.19 (I)            |                   |                  |                   |                    |         | 133.19 (I)              |                  |         |
| Facilities Related Demand Charge - \$/kW  | 2.38 (I)           | 9.70 (I)              |                   |                  |                   |                    |         | 12.08 (I)               |                  |         |
| Summer Time Related Demand Charge - \$/kW |                    | 0.00                  |                   |                  |                   |                    |         | 0.00                    | 19.26 (R)        |         |
| Single Phase Service - \$/Month           |                    | (11.85) (R)           |                   |                  |                   |                    |         | (11.85) (R)             | 17.20 (11)       |         |
| Voltage Discount, Demand - \$/kW          |                    | (11.00) (11)          |                   |                  |                   |                    |         | (11.00) (10)            |                  |         |
| Facilities Related                        |                    |                       |                   |                  |                   |                    |         |                         |                  |         |
| From 2 kV to 50 kV                        | 0.00               | (0.14)                |                   |                  |                   |                    |         | (0.14)                  |                  |         |
| Above 50 kV but below 220 kV              | 0.00               | (4.28)                |                   |                  |                   |                    |         | (4.28)                  |                  |         |
| At 220 kV                                 | 0.00               | (9.07)                |                   |                  |                   |                    |         | (9.07)                  |                  |         |
| Time Related                              | 0.00               | 0.00                  |                   |                  |                   |                    |         | 0.00                    | (0.57)           |         |
| From 2 kV to 50 kV                        | 0.00               | 0.00                  |                   |                  |                   |                    |         | 0.00                    | (0.56)           |         |
| Above 50 kV but below 220 kV<br>At 220 kV | 0.00               | 0.00                  |                   |                  |                   |                    |         | 0.00                    | (1.55)<br>(1.57) |         |
| Voltage Discount, Energy - \$/kWh         | 0.00               | 0.00                  |                   |                  |                   |                    |         | 0.00                    | (1.57)           |         |
| From 2 kV to 50 kV                        | 0.00000            | 0.00000               |                   |                  |                   |                    |         | 0.00000                 | (0.00140)        |         |
| Above 50 kV but below 220 kV              | 0.00000            | 0.00000               |                   |                  |                   |                    |         | 0.00000                 | (0.00311)        |         |
| At 220 kV                                 | 0.00000            | 0.00000               |                   |                  |                   |                    |         | 0.00000                 | (0.00315)        |         |
| California Alternate Rates for            |                    |                       |                   |                  |                   |                    |         |                         |                  |         |
| Energy Discount - %                       |                    | 100.00*               |                   |                  |                   |                    |         | 100.00*                 |                  |         |
| Bill Limiter - %                          |                    | 20.89*                |                   |                  |                   |                    |         | 20.89*                  | 79.11*           |         |

(Continued)

(To be inserted by utility) Advice 2446-E

Decision 10-02-019

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Effective \_ Resolution

Mar 1, 2010



Southern California Edison Rosemead, California (U 338-E)

Revised Cancelling Revised

Cal. PUC Sheet No. 46617-E Cal. PUC Sheet No.

Sheet 3

46272-E

Schedule GS-2 **GENERAL SERVICE - DEMAND** 

(Continued)

**RATES** (Continued)

| ı   |                    |                       |                   | Delivery Se      | ervice            |                    |                    |                     | Genera           | ation <sup>9</sup> |
|---|--------------------|-----------------------|-------------------|------------------|-------------------|--------------------|--------------------|---------------------|------------------|--------------------|
| ľ   | Trans <sup>1</sup> | Distrbtn <sup>2</sup> | NSGC <sup>3</sup> | NDC <sup>4</sup> | PPPC <sup>5</sup> | DWRBC <sup>6</sup> | PUCRF <sup>7</sup> | Total <sup>8</sup>  | URG**            | DWR                |
| TOU Pricing - Option A  |                    |                       | •                 |                  |                   | •                  |                    | •                   |                  |                    |
| Energy Charge - \$/kWh/Meter/Month<br>Summer Season - On-Peak       | 0.00028            | 0.00357 (I)           | 0.00140 (I)       | 0.00064 (I)      | 0.01070 (I)       | 0.00515            | 0.00024            | 0.02198 (I)         | 0.41035 (R)      | 0.03763            |
| Mid-Peak  | 0.00028            | 0.00357 (I)           | 0.00140 (I)       | 0.00064 (I)      | 0.01070 (I)       | 0.00515            | 0.00024            | 0.02198 (I)         | 0.14486 (R)      | 0.03763            |
| Off-Peak  | 0.00028            | 0.00357 (I)           | 0.00140 (I)       | 0.00064 (I)      | 0.01070 (I)       | 0.00515            | 0.00024            | 0.02198 (I)         | 0.04543 (R)      | 0.03763            |
| Winter Season - Mid-Peak  | 0.00028            | 0.00357 (I)           |                   | 0.00064 (I)      |                   | 0.00515            | 0.00024            | 0.02198 (I)         | 0.07430 (R)      | 0.03763            |
| Off-Peak  | 0.00028            | 0.00357 (I)           | 0.00140 (I)       | 0.00064 (I)      | 0.01070 (I)       | 0.00515            | 0.00024            | 0.02198 (I)         | 0.04172 (R)      | 0.03763            |
| Customer Charge - \$/Meter/Month                                    |                    | 133.19 (I)            |                   |                  |                   |                    |                    | 133.19 (I)          |                  |                    |
| Facilities Related Demand Charge - \$/kW                            | 2.38 (I)           | 9.70 (I)              |                   |                  |                   |                    |                    | 12.08 (I)           |                  |                    |
| 3   |                    |                       |                   |                  |                   |                    |                    |                     |                  |                    |
| Single Phase Service - \$/Month<br>Voltage Discount, Demand - \$/kW |                    | (11.85) (R)           |                   |                  |                   |                    |                    | (11.85) (R)         |                  |                    |
| Facilities Related<br>From 2 kV to 50 kV                            | 0.00               | (0.14)                |                   |                  |                   |                    |                    | (0.14)              |                  |                    |
| Above 50 kV but below 220 kV  | 0.00               | (4.28)                |                   |                  |                   |                    |                    | (4.28)              |                  |                    |
| At 220 kV   | 0.00               | (9.07)                |                   |                  |                   |                    |                    | (9.07)              |                  |                    |
| Voltage Discount, Energy - \$/kWh                                   | 0.00000            | 0.00000               |                   |                  |                   |                    |                    | 0.00000             | (0.00140)        |                    |
| From 2 kV to 50 kV<br>Above 50 kV but below 220 kV                  | 0.00000            | 0.00000               |                   |                  |                   |                    |                    | 0.00000             | (0.00140)        |                    |
| At 220 kV   | 0.00000            | 0.00000               |                   |                  |                   |                    |                    | 0.00000             | (0.00315)        |                    |
| California Alternate Rates for<br>Energy Discount - %               |                    | 100.00*               |                   |                  |                   |                    |                    | 100.00*             |                  |                    |
| Bill Limiter - %  |                    | 20.89*                |                   |                  |                   |                    |                    | 20.89*              | 79.11*           |                    |
| TOU Option Meter Charge - \$/Meter/Month<br>RTEM                    |                    | 93.49 (I)             |                   |                  |                   |                    |                    | 93.49 (I)           |                  |                    |
|   |                    | 75.47 (1)             |                   |                  |                   |                    |                    | 75.47 (1)           |                  |                    |
| TOU Pricing - Option B  |                    |                       |                   |                  |                   |                    |                    |                     |                  |                    |
| Energy Charge - \$/kWh/Meter/Month<br>Summer Season - On-Peak       | 0.00028            | 0.00357 (I)           | 0.00140 (I)       | 0.00064 (I)      | 0.01070 (I)       | 0.00515            | 0.00024            | 0.02198 (I)         | 0.13758 (R)      | 0.03763            |
| Mid-Peak  | 0.00028            | 0.00357 (I)           | 0.00140 (I)       | 0.00064 (I)      | 0.01070 (I)       | 0.00515            | 0.00024            | 0.02198 (I)         | 0.07805 (R)      | 0.03763            |
| Off-Peak  | 0.00028            | 0.00357 (I)           | 0.00140 (I)       | 0.00064 (I)      | 0.01070 (I)       | 0.00515            | 0.00024            | 0.02198 (I)         | 0.04543 (R)      | 0.03763            |
| Winter Season - Mid-Peak  | 0.00028            | 0.00357 (I)           |                   | 0.00064 (I)      |                   | 0.00515            | 0.00024            | 0.02198 (I)         |                  | 0.03763            |
| Off-Peak  | 0.00028            | 0.00357 (I)           | 0.00140 (I)       | 0.00064 (I)      | 0.01070 (I)       | 0.00515            | 0.00024            | 0.02198 (I)         | 0.04172 (R)      | 0.03763            |
| Customer Charge - \$/Meter/Month                                    |                    | 133.19 (I)            |                   |                  |                   |                    |                    | 133.19 (I)          |                  |                    |
| Facilities Related Demand Charge - \$/kW                            | 2.38 (I)           | 9.70 (I)              |                   |                  |                   |                    |                    | 12.08 (I)           |                  |                    |
| Time Related Demand Charge -  |                    |                       |                   |                  |                   |                    |                    |                     |                  |                    |
| Filme Related Demand Charge -<br>Summer Season - \$/kW              |                    |                       |                   |                  |                   |                    |                    |                     |                  |                    |
| On-Peak   |                    | 0.00                  |                   |                  |                   |                    |                    | 0.00                | 16.88 (R)        |                    |
| Mid-Peak Single Phase Service - \$/Month                            |                    | 0.00<br>(11.85) (R)   |                   |                  |                   |                    |                    | 0.00<br>(11.85) (R) | 5.16 (R)         |                    |
| Voltage Discount, Demand - \$/kW                                    |                    | (11.03) (11)          |                   |                  |                   |                    |                    | (11.03) (11)        |                  |                    |
| Facilities Related  | 0.00               | (0.14)                |                   |                  |                   |                    |                    | (0.14)              |                  |                    |
| From 2 kV to 50 kV<br>Above 50 kV but below 220 kV                  | 0.00               | (0.14)<br>(4.28)      |                   |                  |                   |                    |                    | (0.14)<br>(4.28)    |                  |                    |
| At 220 kV   | 0.00               | (9.07)                |                   |                  |                   |                    |                    | (9.07)              |                  |                    |
| Time Related  | 0.00               | 0.00                  |                   |                  |                   |                    |                    | 0.00                | (0 E4)           |                    |
| From 2 kV to 50 kV<br>Above 50 kV but below 220 kV                  | 0.00               | 0.00<br>0.00          |                   |                  |                   |                    |                    | 0.00                | (0.56)<br>(1.55) |                    |
| At 220 kV   | 0.00               | 0.00                  |                   |                  |                   |                    |                    | 0.00                | (1.57)           |                    |
| Voltage Discount, Energy - \$/kWh<br>From 2 kV to 50 kV             | 0.00000            | 0.00000               |                   |                  |                   |                    |                    | 0.00000             | (0.00140)        |                    |
| Above 50 kV but below 220 kV  | 0.00000            | 0.00000               |                   |                  |                   |                    |                    | 0.00000             | (0.00140)        |                    |
| At 220 kV   | 0.00000            | 0.00000               |                   |                  |                   |                    |                    | 0.00000             | (0.00315)        |                    |
| California Alternate Rates for<br>Energy Discount - %               |                    | 100.00*               |                   |                  |                   |                    |                    | 100.00*             |                  |                    |
| Sill Limiter - %  |                    | 20.89*                |                   |                  |                   |                    |                    | 20.89*              | 79.11*           |                    |
| FOU Option Meter Charge - \$/Meter/Month                            |                    | 02.40.7\              |                   |                  |                   |                    |                    | 02.40.70            |                  |                    |
| RTEM  |                    | 93.49 (I)             |                   |                  |                   |                    |                    | 93.49 (I)           |                  |                    |
|   |                    |                       |                   |                  |                   |                    |                    |                     |                  |                    |
|   |                    |                       |                   |                  |                   |                    |                    |                     |                  |                    |
|   |                    |                       |                   |                  |                   |                    |                    |                     |                  |                    |
|   |                    |                       |                   |                  |                   |                    |                    |                     |                  |                    |
|   |                    |                       |                   |                  |                   |                    |                    |                     |                  |                    |

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2446-E Advice

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Southern California Edison Rosemead, California (U 338-E)

Revised Cancelling Revised

Cal. PUC Sheet No. 46618-E Cal. PUC Sheet No. 46273-E

## Schedule GS-2 GENERAL SERVICE - DEMAND

(Continued)

Sheet 4

RATES (Continued)

| Г   | Delivery Service                                   |   |   |   |                            |                               | Generation <sup>9</sup>       |   |                            |                               |
|---|--|---|---|---|----------------------------|-------------------------------|-------------------------------|---|----------------------------|-------------------------------|
| TOU Pricing - Option R  | Trans'   | Distrbtn <sup>2</sup>                     | NSGC³                                     | NDC*                                      | PPPC°                      | DWRBC°                        | PUCRF'                        | Total°                                    | URG**                      | DWR                           |
| Energy Charge - \$/kWh/Meter/Day<br>Summer - On-Peak<br>Mid-Peak<br>Off-Peak  | 0.00028<br>0.00028<br>0.00028                      | 0.02317 (I)<br>0.02317 (I)<br>0.02317 (I) | 0.00140 (I)<br>0.00140 (I)<br>0.00140 (I) | 0.00064 (I)<br>0.00064 (I)<br>0.00064 (I) | 0.01070 (I)<br>0.01070 (I) | 0.00515<br>0.00515<br>0.00515 | 0.00024<br>0.00024<br>0.00024 | 0.04158 (I)<br>0.04158 (I)<br>0.04158 (I) | 0.41035 (R)<br>0.14486 (R) | 0.03763<br>0.03763<br>0.03763 |
| Winter - Mid-Peak<br>Off-Peak   | 0.00028<br>0.00028                                 | 0.02317 (I)<br>0.02317 (I)                | 0.00140 (I)<br>0.00140 (I)                | 0.00064 (I)<br>0.00064 (I)                |                            | 0.00515<br>0.00515            | 0.00024<br>0.00024            | 0.04158 (I)<br>0.04158 (I)                | 0.07430 (R)<br>0.04172 (R) | 0.03763<br>0.03763            |
| Customer Charge - \$/Meter/Month  |  | 133.19 (I)                                |   |   |                            |                               |                               | 133.19 (I)                                |                            |                               |
| Facilities Related Demand Charge - \$/kW  | 2.38 (I)   | 3.56 (I)                                  |   |   |                            |                               |                               | 5.94 (I)                                  |                            |                               |
| Single Phase Service - \$/Month   |  | (11.85) (R)                               |   |   |                            |                               |                               | (11.85) (R)                               |                            |                               |
| Voltage Discount, Facilities Related Demand - From 2 kV to 50 kV Above 50 kV but below 220 kV At 220 kV Voltage Discount, Energy - \$/kWh From 2 kV to 50 kV Above 50 kV but below 220 kV | \$/kW<br>0.00<br>0.00<br>0.00<br>0.0000<br>0.00000 | (0.07) (I)<br>(2.14) (I)<br>(3.50) (I)    |   |   |                            |                               |                               | (0.07) (I)<br>(2.14) (I)<br>(3.50) (I)    | (0.00140)<br>(0.00311)     |                               |
| At 220 kV   | 0.00000  | 400.004                                   |   |   |                            |                               |                               | 100.004                                   | (0.00315)                  |                               |
| CARE Energy Discount - %  |  | 100.00*                                   |   |   |                            |                               |                               | 100.00*                                   |                            |                               |
| Bill Limiter (GS-1 to GS-2) - %   |  | 20.89*                                    |   |   |                            |                               |                               | 20.89*                                    | 79.11*                     |                               |
| TOU Option Meter Charge - \$/month  |  | 93.49 (I)                                 |   |   |                            |                               |                               | 93.49 (I)                                 |                            |                               |

- Represents 100% of the discount percentage as shown in the applicable Special Condition of this Schedule.
- \*\* The ongoing Competition Transition Charge (CTC) of \$0.00606 per kWh is recovered in the URG component of Generation.
- 1 Trans = Transmission and the Transmission Owners Tariff Charge Adjustments (TOTCA) which are FERC approved. The TOTCA represents the Transmission Revenue Balancing Account Adjustment (TRBAA) of \$(0.00055) per kWh, Reliability Services Balancing Account Adjustment (RSBAA) of \$(0.00005) per kWh, and Transmission Access Charge Balancing Account Adjustment (TACBAA) of \$0.00088 per kWh.
- 2 Distrbtn = Distribution
- 3 NSGC = New System Generation Charge
- NDC = Nuclear Decommissioning Charge
- PPPC = Public Purpose Programs Charge (includes California Alternate Rates for Energy Surcharge where applicable.)
- DWRBC = Department of Water Resources (DWR) Bond Charge. The DWR Bond Charge is not applicable to exempt Bundled Service and Direct Access Customers, as defined in and pursuant to D.02-10-063, D.02-02-051, and D.02-12-082.
- PUCRF = The PUC Reimbursement Fee is described in Schedule RF-E.
- 8 Total = Total Delivery Service rates are applicable to Bundled Service, Direct Access (DA) and Community Choice Aggregation Service (CCA Service) Customers, except DA and CCA Service Customers are not subject to the DWRBC rate component of this Schedule but instead pay the DWRBC as provided by Schedule DA-CRS or Schedule CCA-CRS.
- Gen = Generation The Gen rates are applicable only to Bundled Service Customers. When calculating the Energy Charge, the Gen portion is calculated as described in the Billing Calculation Special Condition of this Schedule.

(Continued)

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4C11



<u>Schedule GS-2</u> GENERAL SERVICE - DEMAND

Cancelling

Revised

Revised

Sheet 5

Cal. PUC Sheet No. 45658-E

Cal. PUC Sheet No. 43071-E

(T)

(Continued)

## **SPECIAL CONDITIONS**

1. Time periods are defined as follows:

On-Peak: Noon to 6:00 p.m. summer weekdays except holidays

Mid-Peak: 8:00 a.m. to Noon and 6:00 p.m. to 11:00 p.m. summer

weekdays except holidays

8:00 a.m. to 9:00 p.m. winter weekdays except holidays

Off-Peak: All other hours.

Holidays are New Year's Day (January 1), Washington's Birthday (third Monday in February), Memorial Day (last Monday in May), Independence Day (July 4), Labor Day (first Monday in September), Veterans Day (November 11), Thanksgiving Day (fourth Thursday in November), and Christmas (December 25).

When any holiday listed above falls on Sunday, the following Monday will be recognized as an off-peak period. No change will be made for holidays falling on Saturday.

The summer season shall commence at 12:00 a.m. on June 1 and continue until 12:00 a.m. on October 1 of each year. The winter season shall commence at 12:00 a.m. on October 1 of each year and continue until 12:00 a.m. on June 1 of the following year. A pro rata computation will be made for seasonal billing purposes.

2. RTEM Metering: Customers may elect a Real Time Energy Metering (RTEM) meter and shall pay the monthly charges, as indicated in the Rates section of this Schedule.

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Customers who received an IDR meter under Schedule CC-DSF and who are paying the applicable related meter charges under that Schedule are not subject to the TOU Option Meter Charge indicated in the Rates section of this Schedule.

3. Voltage: Service will be supplied at one standard voltage.

(Continued)

| (To be ins | erted by utility) | Issued by             | (To be inser | ted by Cal. PUC) |
|------------|-------------------|-----------------------|--------------|------------------|
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Cal. PUC Sheet No. Cal. PUC Sheet No.

45659-E 42075-E\* 42076-E

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# Schedule GS-2 GENERAL SERVICE - DEMAND

Sheet 6

(Continued)

# SPECIAL CONDITIONS (Continued)

- 4. Billing Demand: The Billing Demand shall be the kilowatts of Maximum Demand, determined to the nearest kW. The Demand Charge shall include the following billing components. The Time Related Component shall be for the kilowatts of Maximum Demand recorded during (or established for) the relevant TOU period for the monthly billing period. The Facilities Related Component shall be for the kilowatts of Maximum Demand recorded during (or established for) the monthly billing period. However, when SCE determines the customer's meter will record little or no energy use for extended periods of time or when the customer's meter has not recorded a Maximum Demand in the preceding eleven months, the Facilities Related Component of the Demand Charge may be established at 50 percent of the customer's connected load.
- 5. Maximum Demand: The maximum demand in any month shall be the measured maximum average kilowatt input, indicated or recorded by SCE metering, during any 15-minute metered (T) interval in the month, but, where applicable, shall not be less than the diversified resistance welder load computed in accordance with the section designated Welder Service in Rule 2. Where the demand is intermittent or subject to violent fluctuations, a 5-minute interval may be used.
- 6. Single-Phase Service: Where SCE provides single-phase service, the billing will be reduced by the amount shown in the Rates section, above.
- 7. Voltage Discount: Bundled Service and Direct Access Customers will have the Distribution rate component of the applicable Delivery Service charges reduced by the corresponding Voltage Discount amount for service metered and delivered at the applicable voltage level as shown in the Rates section above. In addition, Bundled Service Customers will have the Utility Retained Generating (URG) rate component of the applicable Generation charges reduced by the corresponding Voltage Discount amount for service metered and delivered at the applicable voltage level as shown in the Rates section.
- 8. Temporary Discontinuance of Service: Where the use of energy is seasonal or intermittent, no adjustments will be made for a temporary discontinuance of service. Any customer resuming service within twelve months after such service was discontinued will be required to pay all charges which would have been billed if service had not been discontinued.

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(Continued)

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# Schedule GS-2 GENERAL SERVICE - DEMAND

Sheet 7

(Continued)

# SPECIAL CONDITIONS (Continued)

- 9. Customer-Owned Electrical Generating Facilities:
  - a. Where customer-owned electrical generating facilities are used to meet a part or all of the customer's electrical requirements, service shall be provided concurrently under the terms and conditions of Schedule S and this Schedule. Parallel operation of such generating facilities with SCE?s electrical system is permitted. A generation interconnection agreement is required for such operation.
  - Customer-owned electrical generating facilities used solely for auxiliary, emergency, or standby purposes (auxiliary/emergency generating facilities) to serve the customer's load during a period when SCE's service is unavailable and when such load is isolated from the service of SCE are not subject to Schedule S. However, upon approval by SCE, momentary parallel operation may be permitted to allow the customer to test the auxiliary/emergency generating facilities. A Momentary Parallel Generation Contract is required for this type of service.
- 10. CARE Discount: Customers who meet the definition of a Group Living Facility, Agricultural Employee Housing, or Migrant Farm Worker Housing Center as defined in the Preliminary Statement, Part O, Section 3., may qualify for a 24.8% discount off of their bill prior to application of the PUC Reimbursement Fee and any applicable user fees, taxes, and late payment charges. Customers eligible for the CARE Discount will not be required to pay the CARE Surcharge, as set forth in Preliminary Statement, Part O, Section 4 and are not subject to the DWRBC rate component of the Total charges for Delivery Service. An Application and Eligibility Declaration, as defined in the Preliminary Statement, Part O, Section 3., is required for service under this Special Condition. Eligible customers shall be billed on this Schedule commencing no later than one billing period after receipt and approval of the customer's application by SCE. Customers may be rebilled on the applicable rate schedule for periods in which they do not meet the eligibility requirements for the CARE discount as defined in the Preliminary Statement, Part O, Section 3.

(Continued)

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Cal. PUC Sheet No. 45661-E

Cal. PUC Sheet No. 42464-E

Sheet 8

# <u>Schedule GS-2</u> GENERAL SERVICE - DEMAND

(Continued)

# SPECIAL CONDITIONS (Continued)

11. Bill Limiter: For customers transferred to Schedule GS-2 for the first time due to becoming ineligible for service under Schedule GS-1, the customer's total monthly bill for charges under Schedule GS-2, excluding the Public Utilities Reimbursement Fee, California Alternate Rates for Energy Surcharge, as set forth in Preliminary Statement, Part O, Section 5, and Power Factor Adjustment, shall for the first three years following transfer be limited to no more than the customer's comparable monthly bill for charges under Schedule GS-1 for the same period plus the following percentages:

| <u>Period</u> | <u>Percentages</u> |  |  |  |
|---------------|--------------------|--|--|--|
| 1st Year      | 10                 |  |  |  |
| 2nd Year      | 20                 |  |  |  |
| 3rd Year      | 30                 |  |  |  |

The Bill Limiter shall not apply commencing in the fourth year after the customer has transferred to Schedule GS-2. This Special Condition is applicable to customers purchasing Delivery and Generation services from SCE pursuant to this Schedule. Direct Access and CCA Service Customers and customers receiving Transitional Bundled Service are not eligible.

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 Billing Calculation: A customer?s bill is calculated according to the rates and conditions (T) above.

Except for the Energy Charge, the charges listed in the Rates section are calculated by multiplying the Total Delivery Service rates and the Generation rates, when applicable, by the billing determinants (e.g., per kilowatt [kW], kilowatthour [kWh], etc.),

The Energy Charge, however, is determined by multiplying the total kWhs by the Total Delivery Service per kWh rates to calculate the Delivery Service amount of the Charge. To calculate the Generation amount, SCE determines what portion of the total kWhs is supplied by the Utility Retained Generation (URG) and the Department of Water Resources (DWR). The kWhs supplied by the URG are multiplied by the URG per kWh rates and the kWhs supplied by the DWR are multiplied by the DWR per kWh rate and the two products are summed to arrive at the Generation amount. The Energy Charge is the sum of the Delivery Service amount and the Generation amount.

For each billing period, SCE determines the portion of total kWhs supplied by SCE?s URG and by the DWR. This determination is made by averaging the daily percentages of energy supplied to SCE?s Bundled Service Customers by SCE?s URG and by the DWR.

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(Continued)

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Sheet 9

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45662-E

42464-E

# Schedule GS-2 GENERAL SERVICE - DEMAND

(Continued)

# SPECIAL CONDITIONS (Continued)

- 12. Billing Calculation (Continued)
  - a. Bundled Service Customers receive Delivery Service from SCE and receive supply (Gen) service from both SCE?s URG and the DWR. The customer?s bill is the sum of the charges for Delivery Service and Gen determined, as described in this Special Condition, and subject to applicable discounts or adjustments provided under SCE?s tariff schedules.
  - b. Direct Access Customers receive Delivery Service from SCE and purchase energy from an Energy Service Provider. The customer?s bill is the sum of the charges for Delivery Service determined as described in this Special Condition except that the DWRBC rate component is subtracted from the Total Delivery Service rates before the billing determinants are multiplied by such resulting Total rates; plus the applicable charges as shown in Schedule DA-CRS and subject to applicable discounts or adjustments provided under SCE?s tariff schedules.
  - c. CCA Service Customers receive Delivery Service from SCE and purchase energy from their Community Choice Aggregator (CCA). SCE will read the meters and present the bill for both Delivery and Generation Services to the CCA Service Customer. The customer?s bill is the sum of the charges for Delivery Service as displayed in this Rate Schedule and Generation charges determined by the CCA plus the applicable charges as shown in Schedule CCA-CRS, and subject to applicable discounts or adjustments provided under SCE?s tariff schedules.

(Continued)

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Cal. PUC Sheet No. 45663-E Cal. PUC Sheet No. 42078-E

Schedule GS-2 GENERAL SERVICE - DEMAND Sheet 10 (T)

(Continued)

# SPECIAL CONDITIONS (Continued)

Customers with Service Metered and Delivered at Voltages above 50 kV (Sub-transmission (T) customers) Included in Rotating Outages.

Sub-transmission customers, except for those customers exempt from rotating outages, are to be included in controlled, rotating outages when required by the Independent System Operator (ISO) and/or SCE. To the extent feasible, SCE will coordinate rotating outages applicable to Sub-transmission customers who are fossil fuel producers and pipeline operators and users to minimize disruption to public health and safety. SCE shall not include a Sub-transmission customer in an applicable rotating outage group if the customer?s inclusion would jeopardize electric system integrity. Sub-transmission customers who are not exempt from rotating outages, and seek such exemption, may submit an Optional Binding Mandatory Curtailment (OBMC) Plan to SCE in accordance with Schedule OBMC. If SCE approves a customer?s OBMC Plan, the customer will become exempt from rotating outages and will be subject to the terms and conditions of Schedule OBMC and its associated contract.

Non-exempt Sub-transmission customers shall be required to drop their entire electrical load during applicable rotating outages by either (1) implementing the load reduction on their own initiative, in accordance with subsection a, below; or (2) having SCE implement the load reduction through remote-controlled load drop equipment (control equipment) in accordance with subsection b, below. A Sub-transmission customer shall normally be subject to the provisions of subsection a. If SCE approves a customer?s request to have SCE implement the load reduction or if the customer does not comply with prior required load reductions, as specified in subsection c, the customer will be subject to the provisions of subsection b.

- Customer-Implemented Load Reduction.
  - Notification of Required Load Reduction. At the direction of the ISO or when (T) (1) SCE otherwise determines there is a need for Rotating Outage, SCE shall notify each Sub-transmission customer in an affected rotating outage group to drop its entire load. Within 30 minutes of such notification, the customer must drop its entire load. The customer shall not return the dropped load to service until 90 minutes after SCE sent the notification to the customer to drop its load, unless SCE notifies the customer that it may return its load to service prior to the expiration of the 90 minutes.

(Continued)

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# Sheet 11 Schedule GS-2 (T) GENERAL SERVICE - DEMAND (Continued) SPECIAL CONDITIONS (Continued) 13. Customers with Service Metered and Delivered at Voltages above 50 kV (Sub-transmission (T) customers) Included in Rotating Outages. (Continued) Customer-Implemented Load Reduction. (Continued) a. (2)Method of Notification. SCE will notify Sub-transmission customers who (T)are required to implement their own load reduction via telephone, by either an automated calling system or a manual call to a business telephone number or cellular phone number designated by the customer. designated telephone number will be used for the sole purpose of receiving SCE?s rotating outage notification and must be available to receive the notification at all times. When SCE sends the notification to the designated telephone number the customer is responsible for dropping its entire load in accordance with subsection a. (1), above. The customer is responsible for (T) informing SCE, in writing, of the telephone number and contact name for purposes of receiving the notification of a rotating outage. (3) Excess Energy Charges. If a Sub-transmission customer fails to drop its (T)entire load within 30 minutes of notification by SCE, and/or fails to maintain the entire load drop until 90 minutes after the time notification was sent to the customer, unless SCE otherwise notified the customer that it may return its load to service earlier in accordance with subsection a. (1) above, SCE (T)shall assess Excess Energy Charges of \$6 per kWh for all kWh usage in excess of the Authorized Residual Ancillary Load. Such charges will be based on the total kWh usage during the applicable rotating outage penalty period, less the product of Authorized Residual Ancillary Load in kW and the applicable rotating outage penalty period in hours. Excess Energy Charges will be determined and applied by SCE subsequent to the Sub-transmission customer?s regularly scheduled meter read date following the applicable rotating outage. (4) Authorized Residual Ancillary Load. Authorized Residual Ancillary Load is (T) load that is deemed to be equivalent to five percent of the Sub-transmission customer?s prior billing month?s recorded Maximum Demand. This minimum load level is used as a proxy to allow for no-load transformer losses and/or load attributed to minimum grid parallel operation for generators connected under Rule 21. (Continued) (To be inserted by utility)

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<u>Schedule GS-2</u> GENERAL SERVICE - DEMAND

Cancelling

Sheet 12 (T)

Cal. PUC Sheet No. 45665-E

Cal. PUC Sheet No. 42080-E

Revised

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(Continued)

# SPECIAL CONDITIONS (Continued)

- 13. Customers with Service Metered and Delivered at Voltages above 50 kV (Sub-transmission customers) Included in Rotating Outages. (Continued)
  - b. SCE-Implemented Load Reduction.

Non-exempt Sub-transmission customers may request, in writing, to have SCE drop the customer?s entire load during all applicable rotating outages using SCE?s remote-controlled load drop equipment (control equipment). If SCE agrees to such arrangement, SCE will implement the load drop by using one of the following methods:

- (1) Control Equipment Installed. For a Sub-transmission customer whose load can be dropped by SCE?s existing control equipment, SCE will implement the load drop during a rotating outage applicable to the customer. The customer will not be subject to the Notification and Excess Energy Charge provisions set forth in subsection a, above.
- (2) Control Equipment Pending Installation. For a Sub-transmission customer (T) whose load can not be dropped by SCE?s existing control equipment, the customer must request the installation of such equipment at the customer?s expense in accordance with SCE?s Rule 2, Section H, Added Facilities. Pending the installation of the control equipment, the customer will be responsible for dropping load in accordance with the provisions of subsection a, above, including the Notification and Excess Energy Charge provisions.
- Non-compliance: A non-exempt Sub-transmission customer subject to subsection a, above, who fails to drop load during three rotating outages in a three year period to a demand level of 20% or less of the customer?s prior billing month?s recorded Maximum Demand averaged over the applicable rotating outage period, is not in compliance with this tariff. The three year period shall commence with the first failure to drop load as specified in this subsection. A customer not in compliance with this condition will be placed at the top of the Sub-transmission customer rotating outage group list and will be expected to comply with subsequent applicable rotating outages. In addition, the customer must select one of the two options below within fifteen days after receiving written notice of non-compliance from SCE. A customer failing to make a selection within the specified time frame will be subject to subsection c. (2) below.

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Schedule GS-2 GENERAL SERVICE - DEMAND Sheet 13 (N)

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(Continued)

# SPECIAL CONDITIONS (Continued)

- Customers with Service Metered and Delivered at Voltages above 50 kV (Sub-transmission customers) Included in Rotating Outages. (Continued)
  - Non-compliance (Continued) C.
    - (1) Subject to Schedule OBMC: The customer shall submit an OBMC Plan, in (L)(T) accordance with Schedule OBMC, within 30 calendar days of receiving written notice of non-compliance from SCE. Pending the submittal of the OBMC Plan by the customer and pending the review and acceptance of the OBMC Plan by SCE, the customer will remain responsible for dropping load in accordance with the provisions of subsection a, above, including the Notification and Excess Energy charge provisions. If the customer fails to submit an OBMC Plan within 30 days of receiving notice of non-compliance from SCE, or if the customer?s OBMC Plan is not approved by SCE, or if the customer fails to meet the requirements of Schedule OBMC once the OBMC Plan is approved, the customer shall be subject subsection c. (2), below.
    - (2) Installation of Control Equipment. The customer shall be subject to the (L)(T)installation of control equipment at the customer?s expense in accordance with SCE?s Rule 2, Section H, Added Facilities, if such equipment is not currently installed. If such switching capability is installed, SCE will drop the customer?s load for all applicable subsequent rotating outages in accordance with the provisions of subsection b, above. Pending the installation of control equipment, the customer will remain responsible for dropping load in accordance with the provisions of subsection a, above, including the Notification and Excess Energy Charge provisions. (L)

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# <u>Schedule GS-2</u> GENERAL SERVICE - DEMAND

Sheet 14 (T)

(Continued)

### SPECIAL CONDITION'S (Continued)

13. Customers with Service Metered and Delivered at Voltages above 50 kV (Sub-transmission customers) Included in Rotating Outages. (Continued)

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d. Net-Generators

Sub-transmission customers who are also net-generators are normally exempt from rotating outages, but they must be net suppliers of power to the grid during all rotating outages. For the purpose of this Special Condition, a net-generator is an SCE customer who operates an electric generating facility as part of its industrial or commercial process, and the generating facility normally produces more electrical power than is consumed in the industrial or commercial process, with the excess power supplied to the grid. Sub-transmission customers whose primary business purpose is to generate power are not included in this Special Condition.

- (1) Notification of Rotating Outages. SCE will notify sub-transmission customers who are net-generators of all rotating outages applicable to customers within SCE?s service territory. Within 30 minutes of notification, the customer must ensure it is a net supplier of power to the grid throughout the entire rotating outage period. Failure to do so will result in the customer losing its exemption from rotating outages, and the customer will be subject to Excess Energy Charges, as provided below.
- (2) Excess Energy Charges. Net generators who are not net suppliers to the grid during each rotating outage period will be subject to Excess Energy Charges of \$6 per kWh for all kWh usage in excess of the Authorized Residual Ancillary Load. Such charges will be based on the total kWh usage during a rotating outage penalty period, less the product of Authorized Residual Ancillary Load in kW and the applicable rotating outage period hours. Excess Energy Charges will be determined and applied by SCE subsequent to the customer?s regularly scheduled meter read date following the applicable rotating outage. Excess Energy Charges shall not apply during periods of verifiable scheduled generator maintenance or if the customer?s generator suffers a verifiable forced outage. The scheduled maintenance must be approved in advance by either the ISO or SCE, but approval may not be unreasonably withheld.

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# Rate Schedule TOU-PA-5



# SCE'S RATE SCHEDULE TOU-PA-5: TIME-OF-USE SAVINGS FOR AGRICULTURAL CUSTOMERS

Southern California Edison's (SCE) Time-of-Use Pumping Agricultural Rate Schedule (TOU-PA-5) is optional for customers who use 70% or more of their electricity for agricultural, water or sewage pumping purposes, but not for any other uses for which a domestic rate schedule is applicable. Rate Schedule TOU-PA-5 customers must have a Standard Industrial Classification (SIC) code of 1311, and a minimum of 35 horsepower (hp) or more of total connected load, or 35 kilowatts (kW) or more of maximum demand. A customer's maximum demand must not exceed 500 kW for any three months during the preceding twelve months, unless the customer is a large water pumping account where 70% or more of the water pumped is used for agricultural purposes.\*

# RATE SCHEDULE TOU-PA-5 CAN HELP YOU SAVE MONEY

If you already use sufficient energy during, or can move a large portion of your energy usage to, the lower-priced mid- and off-peak time periods to offset the rates of the higher-priced on-peak time period, Rate Schedule TOU-PA-5 may help you **lower your energy costs**.

\* If a customer's monthly maximum demand, in the opinion of SCE, is expected to exceed 500 kW or has exceeded 500 kW for any three months during the preceding 12 months, the customer would no longer be eligible for service under Schedule TOU-PA-5. Effective with the date of ineligibility, the customer's account would be transferred to Rate Schedule TOU-8, except in cases where the customer is a large individual water agency or other large water pumping account with 70% or more of the water pumped used for agricultural purposes. Such customers must take service on an agricultural-class rate schedule. Service under this rate schedule is subject to meter availability.

# **BASIC CHARGES**

Rate Schedule TOU-PA-5 basic charges are separated into these categories:

- A monthly Customer Charge that covers a portion of basic services, such as meter reading and customer billing;
- Energy Charges per kilowatt-hour (kWh) consumed that vary by season and time of day; and
- Demand Charges consisting of Time-Related Demand and Facilities-Related Demand charges.
  - o The Time-Related Demand Charge is applied only during SCE's summer season. This charge helps recover part of SCE's higher costs of providing transmission and distribution services during the high demand summer season. It is a per-kW charge applied to the greatest amount of registered demand in each summer season billing period.
  - o The Facilities-Related Demand Charge is also billed on a per-kW basis, yet it is in effect in each billing period throughout the year. It is applied to the greatest amount of registered demand in each billing period. This charge is necessary to recover costs for the installed transmission and distribution facilities required to serve your highest demand during the year.

The monthly minimum charge is calculated using the greater of the current billing period's registered demand or the highest registered demand in the preceding eleven months. The monthly Facilities-Related and Time-Related Demand Charges, as well as the generation Energy Charge, are discounted for service delivered and metered at a voltage level of 2 kV or above.

Friday

Saturday

Sunday

# Rate Schedule TOU-PA-5

### **Summer Season**

Begins at 12:00 a.m. on June 1, and continues until 12:00 a.m. on October 1.

### Winter Season

Begins at 12:00 a.m. on October 1, and continues until 12:00 a.m. on June 1.

| 8 a.m. – noon,<br>weekdays except holidays*                                  |        |         | Mid-Pe    | ak Energ  | y Rate |          |        |
|--|--------|---------|-----------|-----------|--------|----------|--------|
| Noon – 6 p.m.,<br>weekdays except holidays*                                  |        |         | On-Pea    | ık Energy | Rate   |          |        |
| 6 p.m. – 11 p.m.,<br>weekdays except holidays*                               |        |         | Mid-Pe    | ak Energ  | y Rate |          |        |
| 11 p.m. – 8 a.m., weekdays<br>and all day on weekends,<br>including holidays |        |         | Off-Pea   | ak Energy | / Rate |          |        |
|  | Monday | Tuesday | Wednesday | Thursday  | Friday | Saturday | Sunday |
| 8 a.m. – 6 p.m.,<br>weekdays except holidays*                                |        |         | Mid-Pe    | ak Energ  | y Rate |          |        |
| 6 p.m. – 8 a.m., weekdays<br>and all day on weekends,<br>including holidays  |        |         | Off-Pea   | ak Energy | / Rate |          |        |

Tuesday Wednesday Thursday

Monday

<sup>\*</sup>Holidays are New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, and Christmas. When any holiday falls on a Sunday, the following Monday will be recognized as a holiday. However, no change will be made for holidays falling on a Saturday.

### **ENERGY RATES**

The energy rates on Schedule TOU-PA-5 correspond to SCE's costs based on the time of day and the season service is provided. Times are divided into three "time-of-use" periods: **on-peak**, **mid-peak**, **and off-peak**. Energy and Time-Related Demand rates during the on-peak period are higher than rates in the mid-peak period, and substantially higher than rates in the off-peak period.

The more you can shift your power usage away from the highest-priced on-peak hours (noon to 6 p.m. summer weekdays, except holidays) to the lower-priced off-peak hours, the more money you can save.

# What's the Difference Between Demand and Energy Consumption?

Imagine using 10 100-watt light bulbs. The moment the 10 bulbs are turned on, they place a **demand** on the power system for 1,000 watts of electricity (10 bulbs x 100 watts each), or 1 kW. In this example, your meter would register 1 kW of demand. Whereas, if these bulbs are left on for 10 hours they will consume 10,000 watt-hours of energy, or 10 kWh, and your meter would register 10 kWh of **energy used**. By differentiating between them, SCE helps you minimize your energy costs.

# MORE WAYS TO STRETCH YOUR ENERGY DOLLARS

If you are eligible for Rate Schedule TOU-PA-5, you may also be eligible for some of SCE's other money-saving options. These include:

Interruptible rate options. Some offer lower energy and demand rates, while others offer a per-month credit, in exchange for complying with requests by SCE to interrupt power usage. These options are offered on a contract basis. Some are available only to

- existing customers who are increasing usage within certain parameters, or to customers new to SCE's service territory who have connected load of 50 hp or greater, or register a maximum demand of 50 kW or greater. There are penalties for failing to interrupt when notified of an interruption. Interruptible rate options can be applied to most agricultural pumping rate schedules.
- Rate Schedule TOU-PA-SOP, which is similar to Rate Schedule TOU-PA-5, may help you save money if you use sufficient energy during, or can move usage to, the lower priced offand super-off-peak periods to offset the higher priced on-peak period (see illustrations below).

# PROCURING POWER FROM ANOTHER ELECTRIC SERVICE PROVIDER

The right of retail customers to elect to procure power from electric service providers other than SCE was suspended by the California Public Utilities Commission on September 20, 2001. Customers currently receiving services from an electric service provider other than SCE (third-party provider, or Energy Service Provider [ESP]) will continue to be billed for the non-generation charges through the applicable SCE tariff, while their generation cost components will be billed according to the terms and charges agreed upon with their ESP.

### FOR MORE INFORMATION

SCE offers other programs to help you better manage your electricity costs, such as rebates, incentives, energy surveys and payment options. If you have questions about this rate schedule or other programs, please contact your SCE account representative, call (800) 655-4555, or visit us at www.sce.com.

Friday

Saturday

Sunday

# Rate Schedule TOU-PA-SOP Time-of-Use Periods

### **Summer Season**

Begins at 12:00 a.m. on July 1, and continues until 12:00 a.m. on October 1.

### Winter Season

Begins at 12:00 a.m. on October 1, and continues until 12:00 a.m. on July 1.

| 6 a.m. – 1 p.m., weekdays<br>6 a.m. – midnight, weekends,<br>including holidays* |        |         | Off-Pe    | ak Energ | y Rate   |          |        |
|--|--------|---------|-----------|----------|----------|----------|--------|
| 1 p.m. – 5 p.m., weekdays<br>except holidays*                                    |        |         | On-Pe     | ak Energ | y Rate   |          |        |
| 5 p.m. – midnight, every day,<br>including holidays*                             |        |         | Off-Pe    | ak Energ | y Rate   |          |        |
| Midnight – 6 a.m., every day, including holidays*                                |        | ;       | Super Off | -Peak En | ergy Rat | е        |        |
|  |        |         |           |          |          |          |        |
|  | Monday | Tuesday | Wednesday | Thursday | Friday   | Saturday | Sunday |
| 6 a.m. – midnight, every day,<br>including holidays*                             |        |         | Off-Pe    | ak Energ | y Rate   |          |        |
| Midnight – 6 a.m., every day, including holidays*                                |        | ;       | Super Off | -Peak En | ergy Rat | е        |        |

Tuesday Wednesday Thursday

Monday

NR-531-AG-1108

This rate sheet is meant to be an aid to understanding SCE's pricing schedules. It does not replace the CPUC-approved tariffs. Please refer to the individual rate schedule of interest for a complete listing of terms and conditions of service, which can be viewed online at www.sce.com.



<sup>\*</sup>Holidays are New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, and Christmas. When any holiday falls on a Sunday, the following Monday will be recognized as a holiday. However, no change will be made for holidays falling on a Saturday.