[redacted]
Fax: (408) 746-3890
167 Commercial Street
Sunnyvale, CA 94086

July 16, 2009

# System Quotation

| Solar System Owner | Solar System Size |
|---|---|
| [redacted] | 4,200 Watts DC Solar Electric System<br>3,740 Watts AC Solar Electric System |

**Complete Turn-Key System Cost to Include the Following Items:** **$31,664.09**

| | | |
|---|---|---|
| **Module** | | |
| HIP-210NKHA5 | Sanyo 210 W HIT Power 210N | 20 |
| **Inverter** | | |
| SB 4000US | SMA 4000US Watt 240v | 1 |
| **Racking** | | |
| | Roof Mount SolaRak | |
| **Equipment** | | |
| | Misc Electrical Equipment | |
| | Solar Permit | |
| **Labor** | | |
| | Design and Engineering | |
| | General Labor | |
| | REC Sales Tax | |
| **Warranty** | | |
| | 10 Year Install Warranty | |

| | |
|---|---|
| **Grand Total** | **$31,664.09** |
| Rebate* | $6,735.00 |
| **Total To REC** | **$24,929.09** |
| Amex Savings | $144.50 |
| Member Savings | $289.00 |
| Federal Tax Credit | $7,478.73 |
| **Net System Cost** | **$17,016.87** |

GENERAL DISCLAIMER: All quotations are valid for (30) days from the date of the quotation unless a reduction of rebate occurs within the 30 day period. Design, permitting, installation, utility interconnection and rebate paperwork as detailed in the "General Contract for Services" is included in quoted system cost. The total price paid to Contractor is listed as "Total to REC Solar." "Net System Cost" is realized after tax returns are filed and related tax credits are applied by the IRS.

TAX/FINANCIAL DISCLAIMER: The tax information on this page is intended for discussion purposes only and should not be construed as tax advice. All applicable federal tax credits are estimates. Actual tax credits will be based on customer's financial situation. Customers applying for the commercial tax credit should consult with a tax professional to determine eligibility. We recommend that you contact an accountant or tax attorney for any specific financial advice.

*Incentive amounts an estimate only and will be verified by REC Solar Engineer prior to system installation.

REC SOLAR

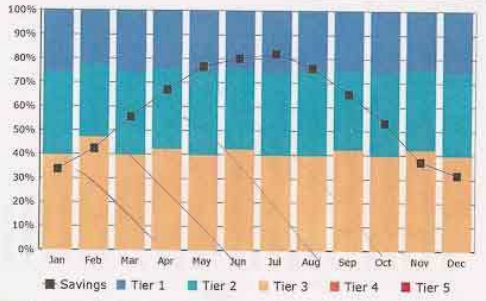
# System Performance Analysis Using Net Energy Metering

[redacted]

**Site Location:** [redacted]
**System Size:** 4,200 Watts DC
**Tilt Angle:** 4 in 12 (19 Deg)
**Mounting Azimuth:** 237 - 258 (West South-West)
**Proposed Tariff:** [redacted]b Schedule E-1 Residential
All - Total

| | |
|---|---|
| Tier 1 usage | 0.09093 |
| Tier 2 usage 100%-200% | 0.12415 |
| Tier 3 usage Over 200% c | 0.16616 |

| Total Energy Bill Offset |
|---|
| 58.50% |
| **Total kWh Offset** |
| 49.75% |




**Baseline kWh per Day**
All 10.0

| | Current Usage (kWh) | Solar Production (kWh) | Current Utility Charges | Estimated Utility Charges with Solar |
|---|---|---|---|---|
| January | 885 | 225 | $110.71 | $73.32 |
| February | 885 | 292 | $114.22 | $65.71 |
| March | 885 | 409 | $110.71 | $48.92 |
| April | 885 | 508 | $111.88 | $36.84 |
| May | 885 | 602 | $110.71 | $25.73 |
| June | 885 | 641 | $111.88 | $22.19 |
| July | 885 | 669 | $110.71 | $19.64 |
| August | 885 | 597 | $110.71 | $26.19 |
| September | 885 | 493 | $111.88 | $38.70 |
| October | 885 | 386 | $110.71 | $51.65 |
| November | 885 | 251 | $111.88 | $70.17 |
| December | 885 | 211 | $110.71 | $75.65 |
| | **10620** | **5283** | **$1,336.69** | **$554.71** |

**Annual Solar Production (kWh)** 5,283
Conservative calculation using 25 yr. Solar chart data, panel, and inverter specifications

**Estimated 1st year Electric Bill Savings** $782
Estimated by calculating your past electricity usage and the amount we will offset from your bill

**Cost per kWh of Solar Electricity** $0.15
Calculated by dividing cost of system and expected power generation

**Credit Given by Utility for Electricity** $0.15
Value of Actual kWh Produced by Solar Electric System

**Payback** 14.6 Years
(Payback assuming 6.0% rate escalation in savings calculation)

# Financial Analysis

## Cost of Power:

Annual Residential Rate Escalation: **6.0%**

| | Current | Year 10 | Year 25 |
|---|---|---|---|
| Average Utility Cost per kWh: | $0.15 | $0.25 | $0.61 |
| Fixed Price per kWh of Solar Power: | $0.15 | $0.15 | $0.15 |
| Solar Saving per kWh: | $0.00 | $0.10 | $0.46 |


## Financial Return:

| | 1st Year | Year 5 | Year 10 |
|---|---|---|---|
| True return based on electricity bill paid with After-Tax Dollars: | $782 | $987 | $1321 |
| Return on Investment post-tax: | 4.48% | 5.66% | 7.57% |
| Equivalent Investment Yield with Pre-Tax Dollars: | $1114 | $1407 | $1883 |
| Return on Investment pre-tax: | 6.39% | 8.06% | 10.79% |

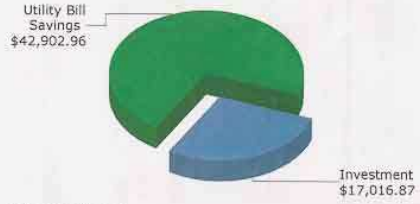
## Cost Summary:

| | |
|---|---|
| Grand Total | $31,664.09 |
| Rebate* | 6,735.00 |
| Total To REC | $24,929.09 |
| Amex Savings | 144.50 |
| Member Savings | 289.00 |
| Federal Tax Credit | 7,478.73 |
| Net System Cost | $17,016.87 |

**First Year Home Value Appreciation:** $15,639.60
*$1 in energy savings = $20 in resale value

### Cost/Benefit Analysis

Over Lifetime of System




Definitions:

**Average Utility Cost per kWh:** Average cost of utility power offset by solar electricity

**Fixed Price of Solar Power:** The net cost of the system divided by the lifetime production of the system. the production includes 0.50% per year loss of output due to aging.

[redacted]

# Solar Electric Power System

## ENVIRONMENTAL REVIEW

**Name:** [redacted] **Date:** [redacted]

**System Description:** 4,200 DC Watt, Utility Interactive Photovoltaic System

This sheet quantifies some of the environmental benefits that your system will provide by replacing electricity made from the burning of fuels.

| | | |
|---|---|---|
| **LIFETIME KWH PRODUCTION**<br>The amount of electricity your solar electric system will produce over its 25-year lifetime. | **Line a** | **124,445** |
| **BARRELS OF OIL OFFSET BY YOUR SYSTEM**<br>The number of barrels of oil required to generate the same amount of electricity that your system will produce in its 25-year lifetime. | **= a x 0.00203** | **253** |
| **CAR MILES NOT DRIVEN**<br>Using electricity generated from fossil fuels and driving cars are the two personal activities that have the most significant environmental impact. | **= a x 1.7755** | **220,952** |
| **ACID RAIN EMISSIONS REDUCTION, lbs**<br>Generating electricity from fossil fuels also releases Sulfur Oxides and Nitrogen Oxides, primary causes of acid rain, into the air. Acid rain damages lakes, streams, trees and forest soils. | **= a x 0.0075** | **933** |
| **SMOG EMISSIONS REDUCTION, lbs**<br>Nitrogen Oxides are a key contributor to the formation of ground level ozone, a major component of smog. Ozone irritates the eyes, and aggravates respiratory problems. It is our most widespread and intractable urban air pollution problem. | **= a x 0.0036** | **448** |
| **GREENHOUSE GAS REDUCTION, lbs**<br>Carbon dioxide, along with other 'greenhouse gases', causes global warming. This results in increased rainfall and violent storms, decreased snow and ice cover, and rising sea levels. | **= a x 1.42** | **176,712** |
| **NUMBER OF MATURE TREES PLANTED**<br>Trees remove carbon dioxide from the atmosphere, and many scientists advocate tree planting as a way to offset carbon dioxide emissions into the atmosphere. | **= a x 0.0034** | **423** |

System Performance - The cost savings values presented were developed using the best available "real world" factors that influence system performance. However any particular installation performance cannot be guaranteed to match performance measures stated and may vary. Data sources: Emissions data: US Environmental Protection Agency E-GRID 2000; Electricity mix and energy content: US DOE Energy Information Administration; Car miles and tree data: US EPA, Green Mountain Power.

California Solar Initiative

## Incentive Calculator - Current Standard PV

| | Proposed |
|---|---|
| **Site Specifications:** | |
| Project Name | [redacted] |
| ZIP Code | [redacted] |
| City | |
| Utility | PG&E |
| Customer Type | Residential |
| Incentive Type | EPBB |
| **PV System Specifications:** | |
| PV Module | Sanyo Electric Co. Ltd.:HIP-210NKHA5<br>210.0W STC, 194.9W PTC, 193.5W $PTC_{adj}$ [1] |
| Number of Modules | 20 |
| Mounting Method | >1" to 3" average standoff |
| DC Rating (kW STC) | 4.2000 |
| DC Rating (kW PTC) | 3.8980 |
| Inverter | SMA America:SB4000US (240V) |
| Number of Inverters | 1 |
| Inverter Efficiency (%) | 96.00 % |
| Shading | **Shading Derate Factors (%)** |
| January | 95 |
| February | 95 |
| March | 95 |
| April | 95 |
| May | 95 |
| June | 95 |
| July | 95 |
| August | 95 |
| September | 95 |
| October | 95 |
| November | 95 |
| December | 95 |
| Array Tilt (degrees) | 19 |
| Array Azimuth (degrees) | 237 **True North 0°** |
| Optimal Tilt (proposed azimuth) | 19 |
| Optimal Tilt (facing South) | 21 |
| **Results** | |
| Annual kWh | 5,643 (a) |
| at optimal tilt | 5,943 (b) |

| | |
|---|---|
| facing south at optimal tilt | 6,262 (c) |
| Summer Months | May-October |
| Summer kWh | 3,573 (e) |
| at optimal tilt | 3,761 (f) |
| facing south at optimal tilt | 3,819 (g) |
| **CEC-AC Rating** | **3.742 kW** |
| Design Correction[2] | 95.001% |
| Geographic Correction[3] | 97.206% |
| Installation Correction[4] | 99.267% |
| **Design Factor[5]** | **91.670%** |
| **CSI Rating[6]** | **3.430 kW** |
| **Incentive Rate** | **$1.55/Watt** |
| **Incentive[7]** | **$5,317** |
| Report Generated on | [redacted]/2009 [redacted] |

The CSI-EPBB calculator is a tool available to the public and participants of the CSI program, whose sole purpose i calculate an appropriate incentive level based on a reasonable expectation of performance for an individual system interpreted as a guarantee of system performance. Actual performance of an installed PV system is based on nume summarized in the CSI-EPBB calculator. For this reason, contractors, participating customers, and other interested determine an appropriate incentive when applying to the CSI incentive program. Additional uses for the calculator o are not endorsed or encouraged.

Notes:

1. **$PTC_{adj}$**: The adjusted PTC rating is calculated based on the installation method and panel specifications. See the Use calculation.
2. **Design Correction**: This is the ratio of the summer output of the proposed system (e) and the summer output of the su
3. **Geographic Correction**: This is the ratio of the annual output of the summer optimal south facing system at the propos optimal south facing system at the reference location (d).
4. **Installation Correction**: This is the ratio of the adjusted PTC rating and the unadjusted PTC rating.
5. **Design Factor**: This is the product of the Design Correction, Geographic Correction, and Installation Correction.
6. **CSI Rating**: This is the product of the Design Factor and the CEC-AC Rating.
7. **Incentive**: This is the total incentive for the proposed system. It is the product of the CSI Rating and the Incentive Rate. Please be aware that the final CSI incentive rate that is reserved for you will be determined by your CSI Program Adı application is approved, and may be lower than the current incentive rate shown in the CSI Statewide Trigger Point T subject to change based upon the configuration of the as-built system. (Per the CSI Handbook, no projects or app information has been submitted and approved in writing by the Program Administrator.)
8. As of 6/20/08, the CSI-EPBB calculator performs rounding as follows:
   - Estimated kWh production is rounded to the kWh
   - CEC-AC rating is rounded to the watt
   - CSI rating is rounded to the watt
   - Design factor is rounded to 5 significant digits
   - Incentive is rounded to the dollar

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E-mail CSI-EPBB@aesc-inc.com with questions or comments.

[redacted]

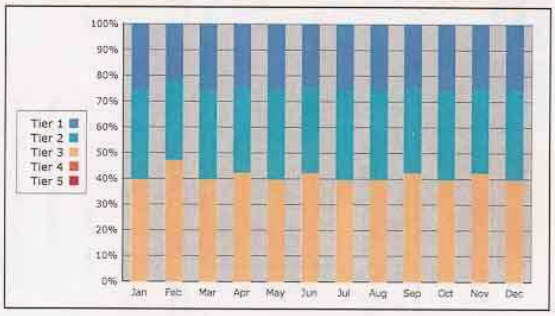
## Electrical Consumption Analysis for Current Rate Structure

**Site Location:** [redacted], Ca

**Utility Rate Structure**

[redacted] **Schedule E-1 Residential**

| | All - Total |
|---|---|
| **Tier 1 usage** | 0.09093 |
| **Tier 2 usage 100%-200% o** | 0.12415 |
| **Tier 3 usage Over 200% of** | 0.16616 |




**Baseline kWh per Day**

All 10.0

| | Current Usage (kWh) | Utility Charges Without Solar | Average Cost per kWh |
|---|---|---|---|
| January | 885 | $110.71 | $0.13 |
| February | 885 | $114.22 | $0.13 |
| March | 885 | $110.71 | $0.13 |
| April | 885 | $111.88 | $0.13 |
| May | 885 | $110.71 | $0.13 |
| June | 885 | $111.88 | $0.13 |
| July | 885 | $110.71 | $0.13 |
| August | 885 | $110.71 | $0.13 |
| September | 885 | $111.88 | $0.13 |
| October | 885 | $110.71 | $0.13 |
| November | 885 | $111.88 | $0.13 |
| December | 885 | $110.71 | $0.13 |

| | |
|---|---|
| **Annual kWh Usage** | **10,620** |
| **Average Cost per kWh** | **$0.13** |
| **Annual Utility Charges Without Solar** | **$1,337** |
| **Five year Electricity Cost from Utility Without Solar*** | **$7,535** |
| **Ten year Electricity Cost from Utility Without Solar*** | **$17,619** |

*Annual Residential Rate Escalation 6.0%, Based on an Independent Energy Rate Trend Study

This information is intended for discussion purposes only and should not be construed as tax or financial advice. We recommend that you contact an accountant or tax attorney for any specific financial advice.