

## Example-determine if contract energy rate is below or above market under Energy Trust criteria

2/3/2009

### Steps to Analysis

1. Identify contract energy rate, cents/kWh. If rate or escalation vary in different years, create more complex analysis.
2. Identify Enter contract escalation rate per year, %. If rate or escalation vary in different years, create more complex analysis.
3. Identify utility rate schedule and voltage level of meter that will be connected to PV system  
Go to Price Summary for PGE or Pacific Power on the internet. Search for utility, and then search on web site for price summary.
4. Select kWh charges including adjustments. Add 3% for public purpose charge and 1.5% for taxes.  
Does not include charges based on demand (per kW charges).
5. Calculate net present value over 20 years of the at market rate with 2% escalation
6. Calculate the net present value over 20 years of the contracted energy rate with the contracted escalation rate
7. Check net present value difference. Positive value indicates PPA offer is above market, and the incentive will not be reduced.  
Negative value indicates the PPA rate is below market, and the incentive will be reduced by amount shown.

### Fixed Inputs (cannot be changed)

NPV discount rate 8.00% Energy Trust assumed rate  
Escalation rate 2.00% Energy Trust baseline

|                                      |  |
|--------------------------------------|--|
| <b>1. Contracted energy rate</b>     | <b>6.9000</b> cents/kWh  |
| <b>2. Contracted rate escalation</b> | <b>3.00%</b> per year for 20 years   |
| <b>3. Electricity Rate Schedule</b>  | <b>PGE 83-S</b> Identify rate schedule, including voltage level of meter that connects to PV system.<br>Price summary value 6.7200 cents/kWh X 1.03 X 1.015 = 7.0254 cents/kWh<br>(note that starting value comes from the January 13, 2009 PGE Price Summary, check for update) |
| <b>4. At-market energy rate</b>      | <b>7.0254</b> cents/kWh  |

### 5. and 6. Net present value (NPV) of contracted energy rate, and at-market energy rate, with corresponding escalation.

| Years 1-10                      | 1      | 2      | 3      | 4       | 5       | 6       | 7       | 8       | 9       | 10      |
|---------------------------------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| Contract energy rate, cents/kWh | 6.9000 | 7.1070 | 7.3202 | 7.5398  | 7.7660  | 7.9990  | 8.2390  | 8.4861  | 8.7407  | 9.0029  |
| At-market energy rate           | 7.0254 | 7.1659 | 7.3093 | 7.4554  | 7.6045  | 7.7566  | 7.9118  | 8.0700  | 8.2314  | 8.3960  |
| Years 11-20                     | 11     | 12     | 13     | 14      | 15      | 16      | 17      | 18      | 19      | 20      |
| Contract energy rate, cents/kWh | 9.2730 | 9.5512 | 9.8378 | 10.1329 | 10.4369 | 10.7500 | 11.0725 | 11.4046 | 11.7468 | 12.0992 |
| At-market energy rate           | 8.5640 | 8.7352 | 8.9099 | 9.0881  | 9.2699  | 9.4553  | 9.6444  | 9.8373  | 10.0340 | 10.2347 |

|                                     |                  |
|-------------------------------------|------------------|
| <b>5. NPV contract energy rate</b>  | <b>\$0.84525</b> |
| <b>6. NPV at-market energy rate</b> | <b>\$0.79761</b> |
| <b>7. NPV Difference</b>            | <b>\$0.04764</b> |

Positive value indicates PPA offer is above market, and system is eligible for incentives.  
Negative value indicates the PPA rate is below market, and system is not eligible for