

# Commercial Solar Electric - Proposed Incentive Redesign

March 16, 2005

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## Summary

Staff is implementing a redesigned commercial solar electric incentive to support all net-metered systems ranging in size up to 25 kW DC. The proposed incentive structure is a two-tiered buy-down incentive, with green tags for all system sizes being shared by participant and Energy Trust. This new prescriptive incentive would replace the current commercial incentive offering.

## Background

The current commercial solar electric incentive is \$2.25/Watt DC, up to \$15,000, with Energy Trust owning all green tags for 10 years. The incentive cap was lowered from \$35,000 to \$15,000 in February 2004 in order to better manage our spending after the incentive budget became over-committed for Pacific Power customers. The \$15,000 cap has resulted in commercial systems no larger than 9 kW DC, with an average commercial system size of only 4.4 kW.

Solar trade allies have indicated that there is a market for larger net-metered commercial systems, and have requested an incentive structure to support it. Larger commercial systems are attractive to Energy Trust for several reasons. 1) They represent a relatively untapped market. 2) Economies of scale can be gained on larger installations, lowering Energy Trust's per-kWh acquisition cost. 3) Solar's market transformation and success as distributed generation will require business investments in solar, and larger systems are more appropriate for many businesses. 4) More activity may be generated in the urban PGE territory where the density of businesses is higher.

## Design Considerations

In developing the incentive structure, we were guided by the following considerations:

1. Encourage larger net metered systems for businesses.
2. Support the emerging green tag market consistent with the Trust's green tag policy.
3. Offer an incentive that is simple to calculate and communicate.
4. Be technology neutral.
5. Incorporate some pay-based, performance elements, if possible, while including up-front buy-downs.

We also considered trade allies' suggestions to offer an incentive for systems up to 30 kW DC, knowing that they will normally produce less than the 25 kW AC net metering limit. However, Pacific Power expressed some concerns about such systems peaking above the net metering limit in some circumstances. In order not to actively encourage such systems,

we propose to cap our incentive at 25 kW DC. Utilities may, at their discretion, allow systems around 30 kW, but our standard incentive would remain capped at \$35,000.

## Proposal

Buy-down incentive amount:

First 10 kW: \$2.00/Watt

Next 15 kW: \$1.00/Watt

Green tag ownership for participants based on system size:

0 Watts - 10,000 Watts: 2 years

10,001 Watts – 15,000 Watts = 3 years

15,001 Watts – 25,000 Watts = 4 years

Examples:

System size	Installed cost	Buy-down incentive	Participant green tags	Green tag revenue*	Combined incentive	% of above market cost <sup>+</sup>
5 kW	\$35,000	\$10,000	2 years	\$600	\$10,600	100%
15 kW	\$97,500	\$25,000	3 years	\$1,800	\$26,800	87%
25 kW	\$150,000	\$35,000	4 years	\$3,000	\$38,000	87%

\* Green tag revenue assumes annual generation of 1,300 kWh per kW installed, at a purchase price of \$0.05/kWh.

<sup>+</sup> Percent of above market cost represents the combined incentives as shown, and has been adjusted for tax benefits, present value of future incentives, and risk of performance degradation over time.

Years of green tag ownership were calculated according to the share of above market cost provided by the Energy Trust incentive, and based on a 20-year operating life. The participant would retain or sell green tags in the first years of operation, with tag ownership for the remainder of the 20 years reverting to Energy Trust. Owners of all system sizes would have the opportunity to sell green tags, which may encourage them to maintain their systems in good working condition.

Based on project data and input from contractors, we assumed that installed cost for the largest systems would be approximately \$1 per Watt less than for the smallest systems. We also assumed that businesses would be able to claim 90% of federal and state tax benefits, since not all businesses pay enough taxes to take full credits and depreciation.

Under this structure, the Energy Trust incentive ranges from \$2.00/Watt for smallest systems to \$1.40/Watt for the largest systems.

## Impact

Staff expects the new incentive structure to increase the rate of commercial installations. We propose to limit funding of commercial systems to roughly 1/3 of the remaining incentive budget as of March 1, 2005. For new commercial installations for the rest of the year, this translates into at least \$200,000 for PacifiCorp and \$165,000 for PGE.

We plan to monitor the rate of new commitments for both residential and commercial systems, and reallocate money from residential to commercial as appropriate. Incentives will continue to be approved on a first come first served basis until the funds are exhausted.

### **Committee and Public Review**

Staff requested comments on this proposal from the solar trade allies on March 9, and now seeks input from the RAC on March 16, 2005. The proposed incentive may be adjusted based on feedback received. Unless serious concerns are raised, it will be implemented shortly after the RAC meeting.