

## ***Review and Analysis of LADWP Draft Guidelines for Solar Program***

The following is a review and analysis of the current draft guidelines (dated 02-06-06) of the LADWP Solar Program. LADWP has solicited comments on these guidelines, with a deadline of approximately April 14<sup>th</sup>. Neighborhood Councils can forward comments, through their respective liaisons. The following is my analysis of these draft guidelines in light of program history and other solar incentive programs in the State of California.

### **The Rebate Program Summary**

The LADWP solar rebate program reduces the purchase price of a PV system through a cash payment equal to about 1/3 the total cost. In FY04/05 the rebate amount was approximately \$2.60/Watt-STC.

The funds for the rebate program come from an approximate 1% set-aside of revenue from the Power Systems division of LADWP—that is, 1% of customers' electricity bill each month.

Residential and small commercial customers account for approximately 50% of this revenue, and therefore account for approximately 50% of the program budget. It is a reasonable question to ask, "Is it equitable that residential and small commercial customers be allocated 50% of the rebate funds each year?"

Starting in late 2002, the program received a large number of large rebate requests some in the \$1M class. Under circumstances that have never been explained, LADWP granted rebate confirmations totaling about 3X their budget authority. By February 2003 the program stopped processing applications and by June 24, 2003 stopped accepting applications altogether. LADWP received 522 applications during this time period and referred to this group of applications as a "waitlist".

In September 2004, a new set of guidelines and program funding were approved by the Board of Commissioners for FY04/05 (July 1, 2004 through June 30, 2005). These guidelines were developed in part through feedback from many stakeholders including Neighborhood Councils. For approximately the next 10 months, LADWP processed the waitlist. The guidelines included the creation of three system size categories (small, medium and large systems) and separate budget allocations for each. This was something that was recommended by several Neighborhood Councils (prior to the ratification of the MoU and election of liaisons) as a way to insure that residential and small commercial customer would get their "fair share" of rebate funds.

There was an abortive attempt by LADWP to get approval from their Board of Commissioners for an updated set of guidelines for FY05/06 (July 1, 2005 through June 30, 2006). These updated guidelines specifically omitted the allocation of funds by system size. The guidelines were forwarded to the LADWP Board without notification to the Neighborhood Councils, that is, with only "72 hour Brown Act" notification. As it turned out, the guidelines were withdrawn by GM Ron Deaton at that next Board Meeting at the request of several stakeholders, including the ASNC through its liaison to the LADWP under the MoU. LADWP then chose not engage the NCs or any other stakeholders in reviewing the guidelines.

Although the Rebate Program has been without guidelines since July 1, 2006, LADWP has apparently been spending program monies to work off the remaining "medium" and "large" applications that were still on the waitlist as of July 1, 2006. It is not clear why LADWP chose not to be bound by the old existing guidelines, and instead abandoned the allocation of rebate monies.

## **What the Proposed Guidelines Don't Cover**

The guidelines do not indicate what the budget is for FY06/07, nor do they indicate what the budget was for FY05/06 what has been spent to date. It also does not include what has been spent on LADWP's own PV projects for FY05/06.

Net Metering regulations are not [discussed. Net](#) metering covers terms and conditions of the "contract" that the department and purchasers of solar systems enter into. In specific, it covers how excess electricity generated by the customer will be accounted.

## **Los Angeles Manufacturing Credit**

The Los Angeles Manufacturing Credit (LAMC) is a program whereby PV modules "manufactured" in the City of Los Angeles qualify for an extra rebate (approximately 1/3 more than other PV modules). The goal of the program is to create jobs in the City.

It is clear that the LAMC PV products have a lower net cost for end users, and that that approximately 90% of the rebate requests submitted to LADWP to date have been based on LAMC PV modules.

What are not clear are what quantifiable benefits that the City has realized (e.g. jobs, business tax revenue) as a result of the LAMC program. No audit of the program has been made by LADWP (at least not been made public) to weigh the benefits against the extra cost of having a LAMC program.

There are other, more direct methods to incentivize job creation, such a payroll-based tax credits or similar incentives.

## **Renewable Attributes**

LADWP requires that customers cede 100% of the renewable attributes (green tags) to LADWP, although the rebate program pays for only approximately 1/3 of the typical PV system cost.

No similar ceding is required by either the CEC or the SGIP participants.

## **No Long-term Commitment to Rebate Program**

Section 1.0, Paragraph 4 of the guidelines would indicate that there is no long term commitment to the rebate program, despite the fact that each of our last three mayors and each of the last three General Managers of the LADWP have repeatedly made such a commitment. The number \$150M over 10 years is often quoted as the department's commitment.

## **Rebate Amount**

LADWP proposes to make the rebate amount based on an *estimate* of energy production over 20 years. In the one example offered in the guidelines, the rebate amount proposed would be \$3.32/Watt-CEC, compared with \$3.05/Watt-CEC.

A "Watt-CEC" is the power rating of a PV system that is used by the State's CEC and SGIP program and many of the MOU (municipally owned utilities) PV rebate programs.

An alternative to the "energy estimate" based incentive proposed by LADWP would be to mirror the CEC program which is the program applicable to the overwhelming majority of residential and small commercial rebate programs in the State.

## **Rebate Calculation**

LADWP proposes that the rebate be calculated using a web-based program called "PVWatts2" <http://mapserv2.nrel.gov/website/PVWATTSLITE/viewer.htm>. PVWatts2 is accessed through a browser interface (e.g. Internet Explorer). It also requires Java Virtual Machine installed and appropriate Internet Security set. Something on the order of 25% of Los Angeles citizens have internet access, but it is not clear, what fraction of those will be able to access PVWatt2.

PVWatts2 is a fairly difficult program to understand and use. It does not have a Windows look and feel. LADWP does not plan to offer any instructions or tutorial on how to use PVWatts2.

Based on the above information, it may be that less than 10% of Los Angeles citizens will be able to access PVwatts2 and some smaller fraction will be able to productively use it. If this is so, then one of the basic objectives of the program—broad availability—will not be met.

### **Other Ramifications of an Rebate based on an Energy Production Estimate**

LADWP also proposed that their staff will visit PV installations and verify that the system configuration conforms to the system specification in the application. It is not clear what the consequences will be if the two don't match up.

The applications will be much more complex and their review will be much more entailed than previously. Also there is the added burden of installation verification. LADWP is on record that no new staff will be added to the program to support the initial application review and later verification.

### **Double Dipping**

The LADWP rebate program will still allow “double dipping” —the ability to get a rebate on top of a rebate. Sections Section 2.4.2 and Section 2.6.1 appear to contradict themselves.

It is widely acknowledged that demand for rebates for projects that qualified for “double dipping” caused the LADWP rebate program enormous, unmet management difficulties in the past. As a consequence, the LADWP rebate program has not functioned in a normal fashion since February 2003.

It is not clear why LADWP would want to continue to allow double dipping under the proposed guidelines.

### **Spinning your Meter Backwards and Time of Use**

A key element to any customer owned generation system, is the deployment of a meter that can “spin backwards” and grant customers full retail credit for any electricity that they generate above and beyond their consumption.

Time of Use creates three rates: high peak (1pm to 5pm, M-F), low peak (10-1pm and 5pm to 8pm, M-F) and base (8pm to 10am, M-F and all day weekends). Compared with the flat rate of 10.5 ¢/kWh, the rates for high peak, low peak and base are 17.6¢, 12.0¢, and 7.0¢/kWh, respectively. ToU encourages customers to shift their usage into the weekday evenings and weekends.

The guidelines include a disclaimer that the simultaneous use of ToU and net metering will depend on LADWP's “ability to purchase, install and read meters capable of measuring electricity flow in both directions”. It is not clear why after four years of operation LADWP would be unable to procure these types of meters. It does not appear to be a problem for any other utility in the State of California.

### **Waitlists vs. Program Suspension**

It would appear that LADWP is now prepared to suspend the Program (Section 2.9) as an alternative to compiling a “wait list”.

### **Operating Life**

LADWP will require that an interconnection agreement be in force for the “operating life” of the PV system. “Operating life” has not been defined so it unclear what this means (Section 4.3).

## **Definition of System Size**

LADWP proposes to define “system size” to be the power capacity in Watts-STC. In specific, this rating will be used to define the size categories. All other rebate programs in the State of California use the Watts-CEC, which includes more realistic estimates of PV module and inverter performance. If LADWP chooses not to conform to the rest of the State, then it will be difficult to compare LADWP programs to others State-wide.

## **Project Completion Date**

The “project completion date” does not appear to be well-defined. Since there deadlines related to “project completion date” it is important that it be well-defined. One possibility is that the “project completion date” be the date that LA Dept. of Building and Safety approves the installation. (Section 5.5 first paragraph).

## **Maximizing Energy Production**

LADWP would like to insure that PV systems are not significantly shaded and they have included the stipulation that PC systems “must reduce shading of the system to no more than 10% between the hours of 9:00am and 3:00pm standard time and 10:00am and 4:0pm daylight savings time”. Since energy production is what is important here, it might be preferable to amend the stipulation to read “...to no more than 10% of the energy production between the hours of 9:00 am and 3:00 pm...” (Section 6.2)

## **Inverter Efficiency**

Section 5.4.4 indicates that the inverter efficiency rating be “the efficiency at  $\frac{3}{4}$  load”. It may be preferable for LADWP to conform to the State-wide CEC rating. The CEC has recently revised their inverter efficiency ratings and it is widely believed that their rating accurately reflect inverter operation in the field. Again, there appears to be no compelling reason for LADWP to create a unique requirement, separate from the rest of the State.