



**Lodi Electric Utility  
Solar Photovoltaic (PV)  
Program Guidebook**

**2017**

Have Questions? Contact us toll free (855) 516-2105

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## INTRODUCTION

This Lodi Electric Utility (LEU) Solar Program Guidebook has been created to help LEU customers navigate the procedural and permitting requirements for the installation of solar photovoltaic (PV) electric generation equipment of 1 MW or less within the City of Lodi. The Guidebook also provides important instructions for customers interested in participating in LEU's annual solar PV rebate program, offered by LEU to incentivize the installation of high-quality solar PV systems.

As you consider the installation of a solar PV system, it is recommended that you verify both current and anticipated future electric rates with LEU to accurately evaluate your potential savings. Please note that some electric charges on your bill are non-bypassable and are charged regardless of your power generation source. ***This Solar Program Guidebook is subject to revision and will be revised at such time the City Council adopts a successor to the Schedule NEM (Net Energy Metering Rider).***

## LEU PV PROGRAM

### Residential Solar Installations

Lodi Electric Utility – (Pre-approval Required)

All residential solar installations require pre-approval from LEU **prior to** applying for a City of Lodi building permit from the Community Development Department – Building and Safety Inspection Division.

To obtain pre-approval from LEU, you must file all required documents to LEU in accordance with the [PV System Submittal Checklist](#). Upon receipt of all items on the checklist, LEU will conduct a review of the proposed system size and analyze impact to the distribution system.

Contact: LEU Engineering (209) 333-6762 1331 S. Ham Lane, Lodi, CA 95242

Community Development Department – Building and Safety Inspection Division (Permit)

Contact: Building & Safety Inspection Division (209) 333-6714 221 West Pine Street, Lodi, CA 95241

To obtain a permit for a residential system, you must file an application and request inspection in compliance with the [Minor Residential Rooftop Photovoltaic \(PV\) Permit Procedure](#).

### Commercial Solar Installations

Lodi Electric Utility

Contact: LEU Engineering (209) 333-6762 1331 S. Ham Lane, Lodi, CA 95242

All customers shall file a complete [PV System Submittal Checklist](#) packet with LEU for review and approval.

Community Development Department – Building and Safety Inspection Division (Permit)

Contact: Building & Safety Inspection Division (209) 333-6714 221 West Pine Street, Lodi, CA 95241

File an application in compliance with the [Commercial permit application package](#)

### System Sizing

PV systems may be sized so that the amount of electricity produced by the system meets, but does not exceed the previous 12 months of electric energy usage at the site of installation. Customers may request their energy usage history from LEU by calling (209) 333-6719. LEU will review the previous 12 months of energy usage at the installation site to determine an average annual energy use for the site. If the

customer does not have 12 months of historical usage, LEU reserves the right to use all information available at the time and make a determination as to the maximum allowable size of the PV system.

PV system production will be based on the California Solar Initiative Expected Performance Based Buydown (EPBB) Calculator.

Go to [www.csi-epbb.com/default.aspx](http://www.csi-epbb.com/default.aspx) and enter system array data into EPBB calculator. Enter the following:

- Zip Code = (95240, 41, 42)
- Utility = PG&E
- Incentive Type = EPBB. An accurate EPBB Calculator for each array is required. **If the estimated annual kWh production of the system (as indicated on the EPBB results page) exceeds the average annual usage of the home/business, then the application will be rejected.**

### **Metering and Data Collection**

In accordance with LEU specifications, customers must install, own, and maintain a kilowatt-hour meter/meters capable of registering the bi-directional flow of electricity. The customer is responsible for all current application, permit inspection fees, and meter installation costs. Modifications to the service entrance must be approved by LEU. All service entrance and disconnects must be Electric Utility Service Equipment Requirements Committee (EUSERC) approved.

### **Electrical Interconnection Agreement**

All customers will be required to enter into an Electrical Interconnection Agreement with LEU prior to the system being energized. By signing the agreement, the customer acknowledges that connection and operation of the generating facility is subject to the terms and conditions set forth in the agreement and in City of Lodi's rates, standards, rules and regulations.

### **Schedule NEM (Net Energy Metering Rider)**

Per Ordinance No. 1853, availability of the [Schedule NEM \(Net Energy Metering Rider\)](#) is on a first come, first served basis and it will remain available until such time as the total eligible customer generator capacity equals 5 percent of the City of Lodi's aggregate customer annual peak demand.

Lodi Electric Utility staff will assign available Schedule NEM capacity, if sufficient capacity exists at the time, and in such order, as complete project applications are accepted for plan review. The Net Energy Metering Rider will be closed to new solar customers once the 5 percent capacity milestone is reached.

**Participation in the Solar Rebate Program does not, and shall not be construed in any way to; guarantee the applicability of Schedule NEM to any project.**

### **Renewable Energy Credits**

The customer agrees that the Renewable Energy Credits (RECs) generated by the system belong to LEU in accordance with the Net Energy Metering Rider (Schedule NEM) or any successor customer-generation tariff adopted by the City Council. LEU may use or sell the RECs at their discretion in accordance with all applicable laws, regulations, etc.

### **Selecting an Installer**

Systems must be installed by appropriately licensed contractors in accordance with rules and regulations adopted by the State of California Contractors State Licensing Board (CSLB) and City Building Codes.

LEU also recommends that the installer be registered with Go Solar California and meet their pre-screening criteria. LEU cannot provide contractor recommendations, but advises customers to obtain more than one contractor bid, references and contractor licensing status. Customers can search for solar installers, contractors and retailers at [www.gosolarcalifornia.ca.gov/](http://www.gosolarcalifornia.ca.gov/).

### **System Equipment**

All PV modules, inverters, and meters must be listed on the California Energy Commission's (CEC) Eligible Equipment List and must be new and not previously placed in service in any other location or for any other application. This list is continuously updated by the CEC. The current list for eligible equipment can be found at: [www.gosolarcalifornia.ca.gov/equipment](http://www.gosolarcalifornia.ca.gov/equipment).

*Modules:* Only PV modules listed at [www.gosolarcalifornia.org/equipment/pv\\_modules.php](http://www.gosolarcalifornia.org/equipment/pv_modules.php) will be considered eligible. All modules must be certified to UL 1703 by a Nationally Recognized Testing Laboratory (NRTL) to ensure safety and reliability.

*Inverters:* Only inverters listed at [www.gosolarcalifornia.org/equipment/inverters.php](http://www.gosolarcalifornia.org/equipment/inverters.php) will be considered eligible. All inverters must be certified to UL 1741 standards by a NRTL. Inverters must also meet IEEE 1547 interconnection standards to be approved as non-islanding (non-backfeeding) devices that automatically disconnect from the grid upon loss of utility voltage.

*Performance Meters:* All solar energy systems must be installed with a performance meter or an inverter with a built-in performance meter so that the customer can monitor and measure the system's performance and the quantity of electricity generated by the system. All meters must measure and display ongoing system kW output, as well as cumulative energy produced and retain production data during power outages. All performance meters must be easy to read and accessible to meter readers and LEU PV system inspectors. Customers may be required to provide cumulative production data from their performance meter on an annual basis.

*Ground-mounted systems:* If system is *not* roof mounted, the system must meet National Electric Safety Code (NEC) clearances and all property easements must be disclosed. Rebate applications must include a plot plan denoting system location in relation to existing electrical service and existing easements. Additionally, if trenching is required, installers are required to call for an Underground Service Alert (USA) to locate underground utilities 1-800-227-2600. If you don't "Call Before You Dig," you may disrupt service to an entire neighborhood, harm you and those around you and potentially result in fines and repair costs. Calling USA is free and helps prevent undesired consequences.

In all cases, systems must be installed in conformance with the manufacturer's specifications and all applicable electrical and building codes and standards and LEU standards and specifications. LEU reserves the right to reject a system from interconnection if it is deemed unsafe.

### **2017 SOLAR PHOTOVOLTAIC (PV) REBATE PROGRAM**

Contact us either by phone 1-855-516-2105 or by email: [rebate@esgroupllc.com](mailto:rebate@esgroupllc.com)

#### **California's Senate Bill 1**

Adopted in August 2006, Senate Bill 1 (SB1) established a statewide goal to add 3,000 MW of new solar PV systems to the state over ten years and created additional mandates for LEU and other publicly owned utilities. LEU's solar PV program has been designed to meet state requirements and is examined at the end of each year to ensure progress and program compliance. Per SB1 requirements, a solar PV rebate budget will be made available through 2017. In accordance with SB1, publicly-owned utilities can collect a separate surcharge to be used for solar rebates. LEU's Program is funded by the California Solar Surcharge (CSS) and the amount collected for CSS is \$0.00125 per kilowatt-hour assessed on each customer's utility bill.

## **Customer/Applicant and System Eligibility**

LEU's Solar Rebate Program is available to all eligible LEU customers. The applicant must be the electric utility customer of record at the location where the generating equipment will be located. Solar retailers/installers may provide application assistance. To be eligible for a rebate, the system must be owned by the customer and installed on the customer's side of the meter. Exceptions to customer ownership of the system include a leased system whereby the lease structure is set up as a financing mechanism for the system itself with lease payments identified accordingly. The LEU does not allow Power Purchase Agreements whereby vendors sell power from the solar PV system to an LEU customer within LEU's service territory.

*To be eligible for a rebate, the customer must submit a Rebate Application and receive a Rebate Reservation Confirmation letter from LEU prior to the beginning of installation and final interconnection authorization. **Rebates will not be paid retroactively for systems installed prior to receipt of a Rebate Reservation Confirmation letter.** Once the rebate reservation letter has been received, the customer will have 120 days to have the solar system properly permitted, installed and confirmed operational. If the rebate reservation expires prior to interconnection, funds will be released and the customer will be deemed ineligible for rebate funds.*

## **System Size**

The minimum system size requirement for LEU's Solar Rebate Program is 1 kW and the maximum system size is 1 MW.

## **Energy Efficiency**

Customers must complete an energy efficiency audit and submit the results with their rebate application.

### Residential

For residential installations, the customer must include the Residential Energy Efficiency Checklist or online home energy audit report with the rebate application. The online energy audit is available at <http://homeenergysaver.lbl.gov/consumer/>. It is recommended that the customer implement any efficiency measures prior to PV system installation.

### Commercial

For commercial sites, the customer must contact LEU to request an energy efficiency audit prior to PV system installation. An energy efficiency representative will visit the facility and make recommendations for possible energy efficiency opportunities. If the energy efficiency audit determines that there are opportunities for energy efficiency upgrades, LEU reserves the right to reduce the proposed output of the system to reduce the chances of the system overproducing in the future.

## **Warranty**

All rebated systems must have a minimum 10-year warranty provided in combination by the manufacturer and installer to protect the purchaser against defective workmanship, system or component breakdown, or degradation in electrical output of more than 15 percent from their originally rated electrical output during the 10-year period. The warranty must cover the PV modules and inverters, and provide for no-cost repair or replacement of the system or system components, including any associated labor during the warranty period.

## **Shading Analysis**

Shading conditions must be verified using a solar assessment tool (Solar Pathfinder or Solmetric report) and submitted with the rebate application. Monthly shading derate factors must be recorded for the system and entered into the EPBB calculator.

If it is determined during the performance post-inspection that shading obstructions exist, the contractor will be required to re-submit a corrected EPBB calculator, and the customer rebate will be adjusted accordingly.

### Site Inspections and System Verification

For all rebated systems, customers must agree to provide LEU, and/or third parties contracted by LEU with access to the site and any available data and information collected on the system. LEU will conduct a Final Performance Inspection to verify that the PV system is installed as represented in the application, is operational, interconnected and conforms to the eligibility criteria of LEU's Solar Program and the Interconnection Agreement. At LEU's discretion, the installer may be required to be present at the Final Performance Inspection. LEU reserves the right to disqualify installers from future program participation for failed inspections due to gross negligence, fraud, or uncorrected mechanical failures within not corrected within 60 days.

### Program Budget

**Table 1:** SB1 Rebate Budget

2017 Program Budget	Residential Rebate Budget	Commercial Rebate Budget
\$280,000	\$185,000	\$95,000

### Calculating Rebate Amount

All rebates will be calculated according to the expected performance of the system, called an Expected Performance Based Buydown Incentive (EPBB). Go to [www.csi-epbb.com/default.aspx](http://www.csi-epbb.com/default.aspx) and enter system array data into EPBB calculator. Enter the following:

- Zip Code = (95240, 41, 42)
- Utility = PG&E
- Incentive Type = EPBB. An accurate EPBB Calculator for each array is required. **If the estimated annual kWh production of the system (as indicated in the EPBB results page) exceeds the average annual usage of the home/business, then the application will be rejected.**

**Table 2:** 2017 SB1 Rebate Rate

Calendar Year (CY)	Start Date	End Date	\$/ W <sub>AC</sub>
2017	Jan 1, 2017	Dec 31, 2017	\$1.45

Eligible Rebate is determined by multiplying the EPBB CSI rating by 1000 and by the current rebate per AC watt (see table 2 above). **Rebates will NOT exceed 50% of the project cost, up to \$5,000 for residential installations and \$40,000 for each commercial installation.** The LEU 2017 Solar Rebate Program ends December 31, 2017.

### Application Process

Complete instructions, including a list of required attachments, are available on LEU's Solar PV Program Rebate Application. LEU will accept rebate applications from January 3, 2017 through January 31, 2017. If the total combined rebate applications do not exceed the 2017 Solar Rebate Program budget (Table 1),

LEU will approve applications that are complete and meet all program requirements and the application period will remain open until the entire 2017 program budget is fully allocated. **In the event applications received through the January 31, 2017 filing deadline exceed available funding, all eligible applications received will be entered into a lottery for selection on or about February 8, 2017.** If a lottery is required to select recipients for the rebates, the lottery will be conducted in public at a date and location which will be published and, at the time of the lottery the names of the recipients may be made public.

Customer is to submit a completed Solar PV 2017 Rebate Program Application, with all required attachments as provided in City of Lodi Solar PV 2017 Rebate Program Application Instructions. If the application is incomplete, LEU will contact the customer and request the missing information/documentation. **Failure to provide the requested information/documentation within five calendar days of request could result in disqualification for a rebate.** If selected for a rebate, customer will receive a rebate reservation letter. Projects must be installed and confirmed operational within 120 days from the date on the rebate reservation letter. Customer may request an extension if their completion date extends beyond this period. Requests for extension may be submitted by email to [rebate@esgroupplc.com](mailto:rebate@esgroupplc.com). Extensions are not guaranteed and LEU will make the determination on a case-by-case basis.

All residential solar installations require pre-approval from LEU prior to application for a City of Lodi building permit. A final approved building permit is required to qualify for the Solar PV Rebate Program. The customer must pay all current application, permit and inspection fees prior to scheduling the inspection. The PV System must pass all required City inspections.

When the system is operational, the customer must call 1-855-516-2105 to schedule a **Final Performance Inspection** of the system. This inspection verifies that the system has been installed in accordance with the inputs on the EPBB calculator, and that the system is performing (i.e. producing power) at the appropriate output levels. If the system is NOT installed as submitted, the contractor will be required to submit a corrected EPBB calculator. **If the system output is reduced as a result, the customer rebate will be adjusted down accordingly.**

Once the system has passed all required inspections, a copy of the final paid invoice must be provided to LEU to process the rebate.

#### **System Design Changes Affecting Rebate Amount**

Customers must inform LEU of any system design changes made after the initial application by submitting written notification. If the revised system is larger, the incremental rebate will be calculated and the rebate amount will be revised if funding is still available.

#### **Rebate Payment**

Rebate Payment will only be made to the customer. **LEU will process the rebate and send a check to the customer within 8 to 10 weeks of passing the final system performance inspection** and receipt of all required documents. Rebates will not be paid retroactively for systems installed prior to receipt of a Rebate Reservation letter. Rebate recipients are responsible for determining if their rebate is taxable by checking with a qualified tax advisor.