

ANAHEIM PUBLIC UTILITIES

Commercial Solar Energy Program Handbook (2009)

Solar Energy technology converts sunlight into electricity that can be used to power your business. Solar Energy systems are usually mounted on roofs; they are modular, easily expandable, create no noise or pollution and are reliable energy generators. An added benefit to solar energy systems is that they require low maintenance and have long service lives.

Anaheim Public Utilities offers financial incentives for those who install solar energy systems at businesses in Anaheim. The following program guidelines are available to assist those installing solar energy systems and were designed in compliance with [State of California Senate Bill 1 requirements](#).

How the Program Works

Getting Started

To get started, we recommend you understand the amount of energy you use and how you use it, and the projected costs of a solar energy system to meet your needs. Start by getting a free [Comprehensive Energy Audit](#) or [Small Business Energy Efficiency Survey](#) – this will help you understand how energy is used at your business, and manageable ways to reduce your consumption. Then go to the Anaheim Solar Map and the Clean Power Estimator to get an idea about the cost of solar energy on your business facility.

Help is Here!

Program Manager: 714.765.4182

[Comprehensive Energy Audit](#)

[Small Business Efficiency Survey](#)

[Anaheim Solar Map](#)

[Clean Power Estimator](#)

Finding an Installer

When you are ready, identify someone to install your solar energy system in compliance with the City of Anaheim's building requirements.

- The Program requires that your installer have a current A, B, C-10, or C-46 contractor's license. We have provided a few helpful links to assist you in finding a licensed solar energy installer in your area – please see the "Help is Here" box in this section.
- As part of the State of California goals to install 3,000 megawatts of solar energy throughout the State, optimum operations assurance is included in the SB-1 requirements. It is for this reason that performance monitoring and maintenance are recommended and required if they are economically reasonable.
 - Your quote must include a separate line item for a performance monitoring and maintenance five-year service contract (PMRS.) Most solar energy installers offer this service as part of their installation package. But if yours does not, we have provided a link for PMRS providers in the "Help is Here" box in this section.
 - If the cost of the PMRS is less than 1% of the total installed cost of the solar energy system, then the PMRS will be required.

Help is Here!

[California Energy Commission Solar Energy Installer Database](#)

[State of California License Board](#)

[Better Business Bureau](#)

[PMRS Providers](#)

- If the cost of the PMRS is greater than 1%, it will not be required. As an alternative, the installer will have to provide you with a recommended maintenance oversight plan that addresses at a minimum the following:
 1. Cleaning schedule for the array to remove dirt and dust buildup
 2. Periodic checking of electrical connections (for corrosion, etc.)
 3. Checking the inverter or instantaneous power, long-term energy output, and diagnosing and taking corrective action if production is significantly lower than expected
 4. Checking for tree/plant growth or other obstructions that are causing shading on the array and suggestions to minimize or eliminate the shading
- PMRS is required for any solar energy system that is funded under a Performance Based Incentive (PBI) structure.

Reserving Your Incentive

Once you have accepted a proposal, reserve your incentive with the City of Anaheim Public Utilities.

- Your installer will use the PowerClerk database to complete the reservation request. Please note: all Commercial solar energy systems > 30 kilowatts in rated AC power are funded under the PBI incentive structure. The following support documentation is require:
 1. **Signed** Reservation Request Form from the PowerClerk database
 2. Itemized cost proposal (detailing costs of modules, inverter(s), and labor) including separate line item quote for PMRS
 3. Solar potential analysis/shade study using a Solar Pathfinder or equivalent solar assessment tool
- Anaheim Public Utilities will send you a confirmation letter once your reservation has been approved.
- If you are interested in financing options, you may qualify for Anaheim’s Low-Interest Energy Efficiency Loan Program; please see the “Help is Here” box in this section for a link to the program.

Help is Here!

[PowerClerk](#)
[Low-Interest Energy Efficiency Loan Program](#)

Energy Efficiency Assessment at Project Location

Anaheim’s Commercial Solar Energy Program combines energy efficiency measures with solar energy in an effort to ensure proper sizing of solar energy, to assist you in getting the maximum benefit out of your solar energy system, and to contribute to Anaheim’s energy efficiency goals. The steps under the incentive program are as follows:

- For project sites with conditioned floor area less than 100,000 square feet:
 1. An energy efficiency audit is required. Anaheim Public Utilities conducts commercial audits as a service to our business customers – and there is no charge. There are two options available: the [Comprehensive Energy Audit](#) or the [Small Business Efficiency Survey](#).

Help is Here!

Business Efficiency Incentives Program
 Manager: **714.765.4259**

[Comprehensive Energy Audit](#)
[Small Business Efficiency Survey](#)
[Portfolio Manager](#)
[Finding a Commissioning Agent](#)

2. After you have received the results of your audit, the applicant will develop an Energy Efficiency Strategic Plan and submit a copy to the Program Manager when the funding payment application is submitted. The report shall include:
 - Results of the energy assessment audit
 - Energy efficiency measures recommended
 - Any measures that have been implemented or will be implemented
 - Date implementation was completed or projected date of completion
- For project sites with conditioned floor area equal to or greater than 100,000 square feet:
 1. You will conduct an energy performance rating, also called a “benchmark” rating, using [Portfolio Manager](#) from the Department of Energy. If you need assistance completing the rating, we are here to assist; simply contact the Business Efficiency Incentive Program Manager; please see the “Help is Here” box in this section.
 2. If your performance rating is less than 75, retrocommissioning on your facility will be required to begin no later than one year after the completion of the installation of the solar energy system. For assistance in finding a Commissioning Agent, visit the [California Commissioning Collaborative](#) website. Systems to be retrocommissioned include:
 - Heating, ventilation, and air conditioning systems and controls
 - Lighting systems and controls
 - Daylighting systems and controls
 - Domestic hot water systems and controls
 - Process equipment and appliances specific to hospital, restaurant, and hotel/motel, operations
 - Refrigeration in supermarket and refrigerated warehouses
 3. The applicant will submit a copy of a retrocommissioning and energy efficiency strategic plan to the Program Manager when the funding payment application is submitted.
 4. Exceptions:
 - Energy audits, benchmarking and retrocommissioning are not required for buildings that have complied with Title 24 requirements during the last 12 months prior to applying for solar energy incentives
 - Retrocommissioning is not required for existing facilities that have a current Energy Star label
 - Retrocommissioning is not required for applicants who receive funding under the PBI incentive structure of Anaheim’s Commercial Solar Energy Program

Design Requirements

When installing a solar energy system in the City of Anaheim, all systems must comply with Building Department codes and requirements. Design packages should include:

- 4 copies of site plans, roof plans, 1-line diagram (sized no smaller than 18” x 24”), and all appropriate equipment data sheets
- Compliance with Anaheim’s Interconnection Guidelines

Help is Here!

[Interconnection Guidelines](#)
[Building Department Plan Check Requirements](#)
[Fire Department Specifications and Requirements](#)
[Reference 1-Line Diagram](#)

- Compliance with Anaheim Building Department Plan Check
- Compliance with Anaheim Fire Department's Specifications and Requirements

Please note: all solar energy installations require a meter socket installed after the inverter (please see "Reference 1-Line Diagram"); Anaheim Public Utilities does not accept ringless sockets or panels. The meter for this socket will be installed, owned, and operated by Anaheim Public Utilities.

Plan Check/Permit

Plan Check/Permit

To further support your commitment to renewable energy, Anaheim Public Utilities offers a permit fee waiver for those installing solar energy systems in Anaheim; the fee waiver is issued after plan check and when you are issued a permit. Once your plans are completed:

- Take the 4 copies of the plans and design package directly to the Anaheim Public Utilities Engineering Division for interconnection approval (one copy of your plans will remain with Electrical Engineering.)
 - Submittal for interconnection approval requires a completed [Interconnection Application](#) signed by the property owner
 - Utilities plan check takes approximately 5 working days
 - After interconnection approval, you will receive an approval signature that you deliver to the Building Department with your plan set
- Next, take 3 copies of the plans and design package directly to the Building Department and submit them for plan check; Building Department plan check takes approximately 10-15 working days.

Help is Here!

Planning Services and Building Division:
714.765.5153

200 S. Anaheim Boulevard, Floor 1
Anaheim, CA 92805

Utilities Electrical Engineering:
714.765.4208

201 S. Anaheim Boulevard, Floor 7
Anaheim, CA 92805

[Interconnection Application](#)

Net Metering Agreement

Net metering is an additional benefit of being a solar energy generator. At your business facility, when the sun is shining you may generate more electricity than you need. At these times, the electricity flows through the Utility meter onto the electric grid, and at the end of the billing period you only pay for the net use of electricity at your facility. Net metering requires an agreement between you and the City of Anaheim. Once a permit has been issued, the City of Anaheim will generate an "Interconnection Agreement for Net Energy Metering" for your approval. A sample of an agreement is available here for **review only**.

Help is Here!

[Interconnection Agreement for Net
Energy Metering](#)

Inspection

Your inspection represents the final stage before you are ready to turn your solar energy system on at your Anaheim business facility. The following steps will assist you in getting your system approved to code and operating quickly. Please refer to the "Building Division Inspection Record" that you receive with your permit as a guide.

1. First contact the Fire Department at 714.765.5041 to schedule final inspection by the Fire Department.

2. After the Fire Department has approved and signed on the Inspection Record, contact the Inspection automated scheduling system 714.765.4626 to schedule final electrical inspection by the Building Department. The Electrical inspector will sign the Inspection Record under “Electrical Final” and “Building Final.”
 - The Electrical inspector will notify Anaheim Public Utilities within 24 hours to install your new meters.
3. Once the Anaheim Public Utilities receives notice that your meter is released, a new digital meter will be installed on the service, and a power production meter will be installed after the inverter. Your system is then ready for operation.

Help is Here!

Fire Department Final: **714.765.5041**

Electrical/Building Department Final:
714.765.4626

Program Manager: **714.765.4182**

The Program Manager will contact you about a convenient time for a verification check on the installation of your system. This is an in-field verification of your system panels, inverters, orientation, and shading and you can continue to operate your system. Please note, it is necessary to have the installer available to participate in the verification check.

Receiving Your Incentive Payment

Once your solar energy system is approved and operation, you are eligible to collect your incentive payment. Submit the following documentation to the Program Manager:

1. **Signed** “Commercial Solar Energy Program – Application.”
2. **Signed** “Letter of Assignment” if applicable.
3. Copy of final paid invoice (note: must reconcile with itemized proposal.)
4. Proof of PMRS or receipt of maintenance oversight plan.
5. Copy of warranties including the following information:
 - Size of System Installed (AC Watts)
 - Description of System
 - Address of where system is installed
 - Owner of System
 - Warranty information must include proof of 10 year or better warranty on modules
 - Warranty information must include proof of 10 year or better warranty on inverter
 - Warranty information must include 10 year or better warranty against breakdown or degradation in electrical performance of more than 10 percent of system’s rated electrical output from originally rated output
 - Date of when warranty goes into effect
 - Any exclusions
 - Contact and instructions for customer when they require warranty service
 - **Signature** of contractor providing the warranty

Help is Here!

Program Manager: **714.765.4182**

[Commercial Solar Energy Program -- Application](#)

If incentive is being assigned to the installer, retailer, or person/entity other than the homeowner, a W-9 **signed** by the person/entity receiving the incentive is required.

Anaheim Solar Map

Anaheim Public Utilities is happy to count you as one of our partners in increasing solar energy power in Anaheim. In our effort to support expansion of solar energy in our City, we have developed a web-accessible solar map for estimating solar electric potential on each rooftop in Anaheim. The website will also displays existing solar installations in the City of Anaheim as a way of showing how many homeowners and businesses support solar energy and have taken action toward improving Anaheim's clean energy efforts.

We would like to include information about your solar energy installation on the website! If you would like to participate, please complete the attached form and return it to the Solar Energy Program Manager:

Solar Energy Program
c/o Program Manager
201 S. Anaheim Boulevard
Suite 801
Anaheim, California 92805

Help is Here!

Program Manager: **714.765.4182**

[Solar Map Letter of Consent](#)

For More Information – Help is Here!

1. Call Anaheim Public Utilities at **714.765.4182** during regular business hours (8 a.m. – 5 p.m. Monday through Friday).
2. E-mail our Program Manager at dpredisik@anaheim.net