

# City of Pasadena

This page outlines solar financing mechanisms, incentives, permitting process, and interconnection information for the City of Pasadena and the utility that serves its territory, Pasadena Water and Power.

To skip directly to each section please use these hyperlinks:

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## Contact Information

Pasadena Water and Power (PWP)  
Pasadena Solar Initiative (PSI)  
150 South Los Robles Avenue  
Pasadena, CA 91101  
(626) 744-6970  
[www.PWPweb.com/solar](http://www.PWPweb.com/solar)

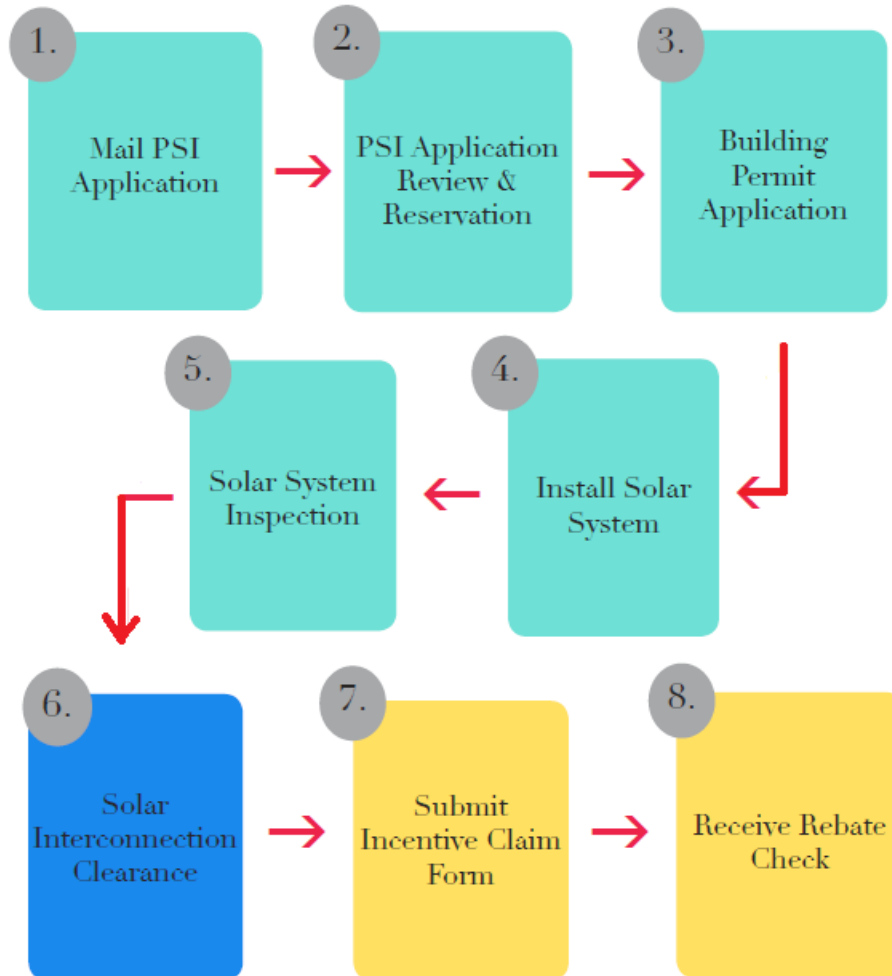
### Hours:

Monday - Thursday 7:30AM - 5:30PM

Every other Friday: 7:30AM – 4:30PM ([View the City's work schedule](#))

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# OVERALL SOLAR PROCESS: Pasadena



## Find an Installer

- Qualified contractors are your key to getting the most productive solar energy system for your home or business.
  - Typically solar installers will:
    - Locate financing programs to fit your needs
    - Apply for rebates and incentives on your behalf
    - Apply for local permits
    - Install your PV system
    - Arrange for your PV system to be interconnected to your utility's power grid

- **California Solar Statistics provides a searchable/sortable list of Installers, Contractors, and Sellers by area who can help you in the process of going solar:**
  - <http://californiasolarstatistics.com/search/contractor/>
  - Important Notes:
    - Costs are measured on a per watt basis
    - It is important to remember that cost is not the only factor involved in system installation.
    - **It is highly recommended to contact *a minimum of three installers* to compare costs, system sizing, and services offered before signing a contract.**

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## Financing Programs Available in Pasadena

- **Federal Solar Incentives**
  - Residential Renewable Energy Tax Credit
    - A taxpayer may claim a credit of 30% of qualified expenditures for a solar system that serves a residence located in the United States that is owned and used as a residence by the taxpayer.
      - [http://www.dsireusa.org/incentives/incentive.cfm?Incentive\\_Code=US37F&re=1&ee=1](http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=US37F&re=1&ee=1)
  - Business Energy Investment Tax Credit (ITC)
    - This federal tax credit is equal to 30% of expenditures on a solar system, with no maximum credit.
      - [http://www.dsireusa.org/incentives/incentive.cfm?Incentive\\_Code=US02F&re=1&ee=1](http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=US02F&re=1&ee=1)
- **Third Party Ownership**
  - Solar Power Purchase Agreements
    - A Solar Power Purchase Agreement is a financial arrangement in which a third-party developer owns, operates, and maintains the photovoltaic system, and a customer agrees to site the system on its property and purchase the system's electricity output for an agreed-upon rate. This financial arrangement allows the customer to avoid upfront installation costs and usually have lower electricity costs.
  - Solar Leases

- Solar Leases are similar to Power Purchase Agreements in that a third party pays for and owns the system, but with this financing mechanism a customer pays a fixed monthly fee that is not tied to actual energy output. The customer is responsible for system performance, operations and maintenance.
  - For more information: [www.energycenter.org/index.php/incentive-programs/california-solar-initiative/csi-latest-news/2167-why-pay-to-install-solar](http://www.energycenter.org/index.php/incentive-programs/california-solar-initiative/csi-latest-news/2167-why-pay-to-install-solar)
- **Secured Financing**
  - Home Equity Lines of Credit (HELOCs) and Home Equity Loans (HELs)
    - HELOCs are forms of revolving credit in which a home serves as collateral. A HEL is a loan that has a fixed rate and term and also uses a home as collateral. The major difference between these two types of financing mechanisms is that HELOCs are similar to a credit card – you can withdraw money as needed and pay back the debt indefinitely – whereas an HEL gives you a one-time lump sum of cash that is paid off over a fixed amount of time. These types of loans are typically available through banks.
      - Home Equity Lines of Credit: [www.federalreserve.gov/pubs/equity/equity\\_english.htm](http://www.federalreserve.gov/pubs/equity/equity_english.htm)
      - Home Equity Loans: <http://www.federalreserve.gov/pubs/bulletin/1998/199804lead.pdf>
  - FHA 203(k) Rehabilitation Loans
    - The Federal Housing Administration (FHA) administers various single family mortgage insurance programs. These programs operate through FHA-approved lending institutions which submit applications to have the property appraised and have the buyer's credit approved. These lenders fund the mortgage loans giving a line of credit to the property owner to make property upgrades, such as solar PV installations.
      - For more information: [http://portal.hud.gov/hudportal/HUD?src=/program\\_offices/housing/sfh/203k/2033k/203kabou](http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/sfh/203k/2033k/203kabou)
  - HUD Title 1 PowerSaver Loans (Secured or Unsecured)
    - The PowerSaver program insures loans to finance small or moderate improvements to a home, such as a solar energy upgrade. Loans up to \$25,000 will be given to single family homeowners specifically targeting residential energy efficiency and renewable energy improvements.
      - For more information: [www1.eere.energy.gov/wip/solutioncenter/financialproducts/PowerSaver.html](http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/PowerSaver.html)
- **Unsecured Financing**

- Fannie Mae Energy Loan
  - Fannie Mae offers a direct, non-recourse consumer loan program that will finance up to \$20,000 in energy improvements without putting a lien on your home. Energy Loan is a simple interest, fixed rate loan with longer terms available than typical bank financing.
    - For more information: [www.energyloan.net/index.php](http://www.energyloan.net/index.php)
- Clean Energy Upgrade Financing Program - ABX1 14
  - ABX1 14 authorizes the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) to administer a Clean Energy Upgrade Financing Program using up to \$25 million to finance the installation of distributed generation renewable energy sources, electric vehicle charging infrastructure, or energy or water efficiency improvements on homes or small commercial properties.
    - [http://www.treasurer.ca.gov/caeatfa/abx1\\_14/index.asp](http://www.treasurer.ca.gov/caeatfa/abx1_14/index.asp)

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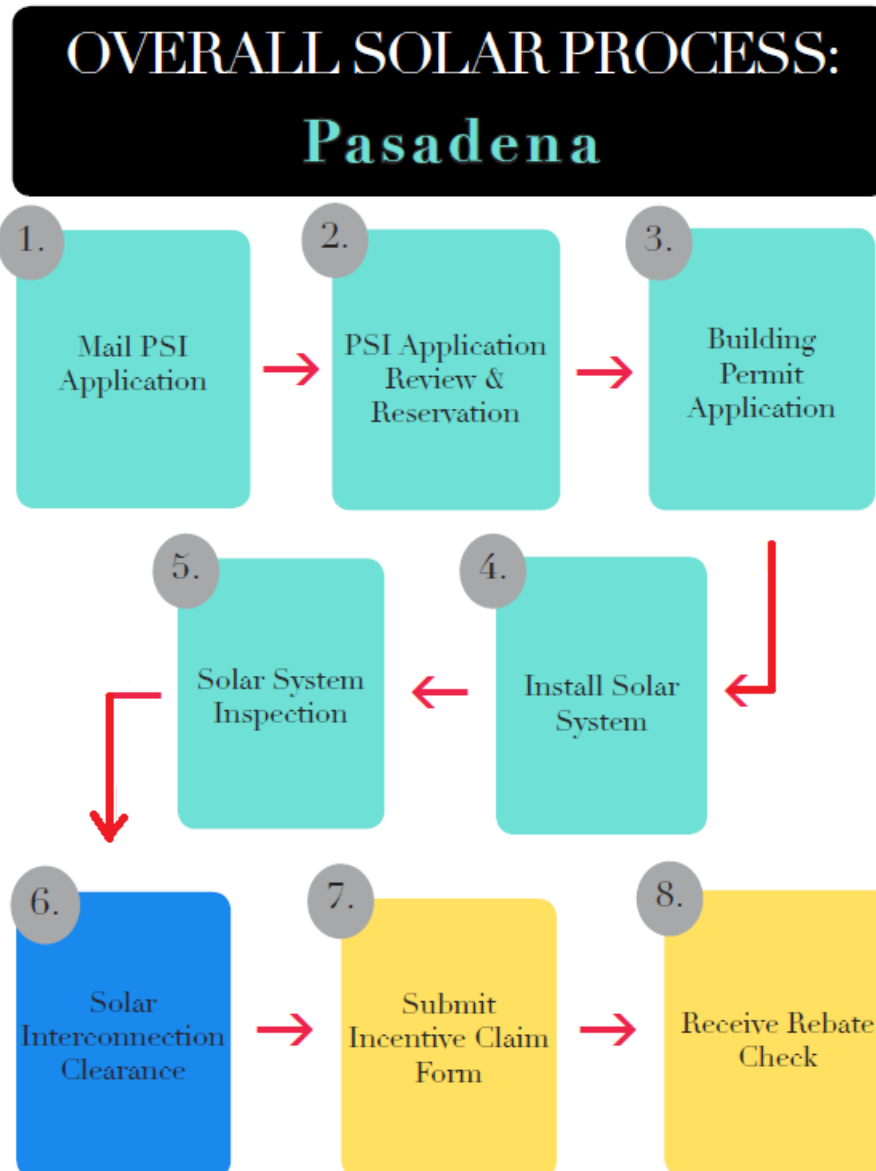
## Solar Process Information

- **Federal Solar Incentives**
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    - A taxpayer may claim a credit of 30% of qualified expenditures for a solar system that serves a residence located in the United States that is owned and used as a residence by the taxpayer.
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***\*NOTE: Pasadena's Solar Process has the incentive, permitting, and interconnection processes integrated throughout the Pasadena Solar Initiative rebate process. See below for the entire process.***

- **Pasadena Solar Initiative (PSI) Incentive Program**  
[www.cityofpasadena.net/solar](http://www.cityofpasadena.net/solar)

- **Program Administrator – Pasadena Water and Power**
  - Phone: (626) 744-6970
  - Email: [solar@cityofpasadena.net](mailto:solar@cityofpasadena.net)
- **Step-by-Step Process of Going Solar in Pasadena**
  - <http://www.PWPweb.com/solar/psiAppInstructions.asp>



- **STEP 1: MAIL PSI APPLICATION REQUEST FORM AND REQUIRED DOCUMENTS TO PWP:**
  1. [PSI Application Request Form](#) signed by both the installer and customer
    - Note: You can fill in this form at your computer desktop, save it and print.
    - Mail to:

(a) Pasadena Water and Power

i. *Attn: Pasadena Solar Initiative*  
150 S. Los Robles Ave. Suite 200  
Pasadena, CA 91101

2. Single Line Diagram:

- Provide a complete set of electrical drawings showing the electrical relationship and descriptions of the significant electrical components such as: PV modules, inverters, electrical service, DC disconnects, AC disconnects, utility meter, performance meter, junction boxes, wiring specs, the primary switchgear, secondary switchboard, protective relays, transformers, generators, circuit breakers, with operating voltages, capacities, and protective functions of the Generating Facility, the Customer's loads, and the interconnection with PWP's Distribution System.
  - Note: If final drawings are not available at the time of application, submit two complete sets of conceptual drawings providing the minimum necessary attributes of the solar PV system Design. For a list of the necessary attributes, [click here](#).

3. Copy of the site drawing

- Show the physical relationship of the significant electrical components of the Generating Facility such as modules, inverters, transformers, and control panels, the Customer's loads and the interconnection with PWP's Distribution System. Diagram must show the approximate location of all major electric components including solar modules, inverters, electric output meters, combiner boxes, and the A.C. manually operated disconnect devices on the site plans.
  - For a sample site plan drawing, [click here](#).

4. Completed report from the [California Solar Initiative's EPBB Incentive Calculator](#).

- If you have questions about completing this requirement for installations in Pasadena, read the instructions [here](#).

5. [Shading Analysis Report](#)

- This is generated with the use of a solar assessment tool such as the "Solar Pathfinder," "Solmetric SunEye" or any equivalent technology. For systems up to 10 kW CEC-AC, A shading analysis must be done for each separate solar array by placing the instrument at the center of where the array will be located and taking a reading.
  - For more information about proper shading input requirements, please refer to Section 7 in the [CSI Incentive Calculator User Guide](#).

6. Two (2) original copies of the [Interconnection Agreement and Net Metering Agreement](#) (customer must wet sign both copies).

7. The [Net Metering and Surplus Compensation](#) enrollment form.

- More information on compensation for your system's net surplus electricity can be found [here](#).
- 8. Copy of the signed contract between Customer and Installer.
  - For commercial, non-profit and government institutions, a signed letter on company letterhead clearly stating the name of the selected solar vendor is sufficient while the contract is being processed.
- 9. Letter of approval from the Home Owners Association's Board of Directors (if applicable.)

○ **STEP 2: PWP APPLICATION APPROVAL AND RESERVATION**

- Pasadena Water and Power staff will review the application package and verify required documents for completeness and accuracy. PWP's Engineering Department will evaluate application package free of charge and approve or reject the installation.
- When the application is approved, a PWP Approval and Reservation Letter will be sent by PWP to customer. **The installer will be also notified via fax or email. The installer (or customer) must bring this letter when applying for a building permit to the City's Department of Planning and Development.**
- Once PWP approves the application, a rebate amount will be reserved for a limited time. To claim your rebate, your solar installation must be completed within 9 months of the application approval for existing facilities, and within 18 months for new construction.
- If the application is not approved, PWP will contact installer or customer and discuss necessary corrections to the application or supporting documents.

○ **STEP 3: BUILDING PERMIT APPLICATION**

- **Contact Information**

City of Pasadena  
Planning Department  
175 North Garfield Avenue  
Pasadena, CA 91101  
(626) 744-4009

[www.ci.pasadena.ca.us/permitcenter/](http://www.ci.pasadena.ca.us/permitcenter/)

- **Hours**

Monday - Thursday 8:30AM - 4:30PM  
Friday: 8:30AM – 12:00PM

- For a step-by-step process of how to obtain a building permit, please visit the following link:
  - [http://www.ci.pasadena.ca.us/PermitCenter/Permit\\_Information/](http://www.ci.pasadena.ca.us/PermitCenter/Permit_Information/)



## 1. The Plan Check Process

- The primary purpose of the plan check process is to verify that buildings and structures will be constructed in compliance with all Federal, State, and City laws and ordinances. This is required of the majority of property owners and contractors. For a list of projects necessitating a plan check please click here:

i. <http://www.ci.pasadena.ca.us/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=6442459168>

## 2. How to Prepare for the Plan Check Process

- Make certain you bring all required documents ([Plan Check Submittal Requirements](#) list) and a list of all your questions. Required documents depend upon the nature of your project.

## 3. What to Expect

- First, state your project description to our receptionist who will suggest the correct application to fill out and direct you to the appropriate counter.
- If your project meets our over-the-counter thresholds, you will present your documents/plans to a Building Plans Examiner, at our Triad Counter who will review the material you have presented.
- Depending on the complexity of your project and the completeness of your plans and adherence to code, the Plans Examiner may be able to process your permit over-the-counter.
- If your plans are approved over-the-counter, you will be directed to our permit processing counter where our staff will process your permit application, collect the permit fees due, and issue your permit. If your plans are more complex, you will need to submit them for a behind-the-counter review.

## 4. Submitting Your Plan

- Complete the Building Permit application form.
  - i. To speed up the process, you may wish to print out a copy and bring it with you completed to the Permit Center when you are ready to submit your plans:
    - Building Permit Application:  
<http://www.ci.pasadena.ca.us/WorkArea/DownloadAsset.aspx?id=6442458653>
- Bring your plans with you
  - i. If your project requires plans, please bring them to the counter when you apply for a permit. If you are a contractor, you must be certain to have the proper license to obtain a permit. If you are a home or property owner and plan to do the work yourself, you do not need a contractor's license.
  - ii. A plan review fee will be collected at the time of submittal. If you would like an estimate prior to submittal, you may fill out our Fee Estimate Worksheet, fax it to us at (626)744-3979
    - [Fee Estimate Worksheet](#)

## 5. Determining the Right Plans to Submit

- Two copies of the Site Plan and a copy of PWP Approval Letter are required. Site Plans are reviewed by Plan Review Engineer from Building and Fire. One copy of the Site Plan is given to the applicant and the other copy remains on file in the City of Pasadena.
- Upon submittal our Development Processing Coordinator (DPC) will review your application to determine if you have the essential documents to begin the plan check process. The DPC will request any additional information that is necessary to begin the routing of plans for your project. We require a complete submittal before we begin the plan check process.
- If you have any questions about the requirements, please call the department requesting the information at (626)744-4200.

## 6. Plan Review

- Simple projects that meet our over-the-counter thresholds can be reviewed over the counter in as little as 10 to 20 minutes. If your plan is complex, such that it must be submitted for review, you may expect this process to take approximately two to four weeks.

## 7. Plan Review Status

- If your plans are approved, the DPC will notify you by phone or postcard. You may then speak with our permit processing staff to determine fees due.
- If your plans are not approved, you will be notified by that department and you will be asked to make the necessary revisions and resubmit them for approval. If you had an over-the-counter review, you may request to have your plans reviewed over-the-counter once again. If your plans were submitted for a review they must be submitted for behind-the-counter review once again (but it should take less time).

## 8. Building Permit Issued

- Our Permit Processing staff will issue you a permit based upon whether you are a contractor or property owner.
  - i. Contractors:
    - Contractors must present a valid contractor license and a current [City of Pasadena business license](#) (you may apply for one at our permit processing counter or at Municipal Services). You must also carry the appropriate workmen's compensation insurance. Finally, the permit processing staff will check that you are an authorized individual to use the contractor license you have presented. The information you provide will be verified through the [California Contractors State License Board](#).
  - ii. Property Owners
    - Property owners applying for permits to do the work themselves can obtain a permit without the same requirements for contractors.

○ **STEP 4: INSTALL SOLAR SYSTEM**

- As part of the installation process, the solar installer typically handles the permitting process required by the city.
- Installers must be familiar with PWP's rules and regulations for electrical design and installation ([Regulation 21](#)) and Distributed Generation Interconnection Requirements ([Regulation 23](#)) including metering requirements
- Once you receive your permit, you may work on the project. Depending upon the complexity of your project while building, remodeling, or improving, you will need to call the Building Inspector to inspect your work as you complete various stages of your project.

○ **STEP 5: SOLAR SYSTEM INSPECTION**

- When the solar installation is complete, a building inspector from the City's Department of Planning and Development will verify that the system conforms to building and safety codes.
- Inspection Requests
  - Inspection requests can be made at (626) 744-4200 24 hours in advance of the day you wish to have an inspector on your job site. Our cut off is 12 noon the day prior to the day you want the inspection. If you call in after 12 noon, your inspection will be scheduled the day after the next day. When you make your request, please have your activity number available, as this will expedite the scheduling process. We also need the type of inspection you are requesting as well as a contact person and telephone number.
- After the solar system passes inspection, the solar system must remain in the off position. Turning the solar system on before the standard utility meter is replaced with a solar meter may cause billing errors and additional charges on the customer's electric bill.
- Please note the PV system will not be allowed to interconnect to the grid until [PWP's Interconnection Agreement and Net Metering Agreement](#) is fully executed (signed) by both customer and the City of Pasadena AND customer has received written authorization to operate the system from PWP.

○ **STEP 6: SUBMIT INCENTIVE CLAIM FORM**

- After the solar system has been signed off by the building inspector, the installer (or customer) submits the Incentive Payment Claim Form (IC) to PWP with the following supporting documents to complete the solar incentive rebate process:
  1. [Incentive Payment Claim Form](#)
  2. Copy of the Building Final Inspection Sign-off
  3. Copy of Permit fees receipt
  4. Copy of Energy Efficiency Audit Report
  5. Copy of the itemized final sales invoice

6. Completed original copy of [PSI Payment Assignment Form](#) (if applicable)

○ **STEP 7: SOLAR INTERCONNECTION CLEARANCE**

- PWP personnel will inspect, test and verify that the system was installed as designed and specified in the original application and the equipment functions properly.
- After all required documents in Step 6 have been submitted, Pasadena Water and Power will replace old utility meter with a new Net Meter capable of spinning and recording net energy in both directions. As soon as new utility meter is installed, PWP will send Letter of Interconnection authorizing customer to turn the solar system on.
- For detailed information on interconnection guidelines, please go to the [Interconnection Information section](#) in this document.

○ **STEP 8: RECEIVE REBATE CHECK**

- Customer will receive a rebate check within 2-3 weeks after submitting all the required PSI program documents.

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## Permitting Process Information

*\*NOTE: The City of Pasadena's Permitting Process is integrated throughout the Pasadena Solar Initiative rebate process. Please read through the entire [Solar Process Information](#) section to find information on obtaining a permit for your solar system.*

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# Pasadena Water and Power Interconnection Process

Pasadena Water and Power is the local utility for the City of Pasadena. Upon installation of your solar system and completion of your building permit inspection from the City of Pasadena's Planning Department, Pasadena Water and Power will complete installation of your meter and your system will be ready for use.

## Contact Information

Pasadena Water and Power (PWP)  
150 South Los Robles Avenue  
Pasadena, CA 91101  
(626) 744-6970

[www.PWPweb.com/solar](http://www.PWPweb.com/solar)

[www.PWPweb.com/selfgeneration](http://www.PWPweb.com/selfgeneration)

## Interconnection Process

### Interconnection Process Flow Chart

***\*NOTE: Pasadena Water and Power's Interconnection Process is integrated throughout the Pasadena Solar Initiative rebate process. Please read through the entire [Solar Process Information](#) section to find information on interconnecting your solar system.***

- After all documentation has been completed in the Incentive Claim Process described in [“STEP 7: SOLAR INTERCONNECTION CLEARANCE”](#) in the Solar Process Information section above, Pasadena Water and Power will replace the old utility meter with a new Net Meter capable of spinning and recording net energy in both directions.
  - Review PWP meter requirements [here](#).
- As soon as new utility meter is installed, PWP will send Letter of Interconnection authorizing the customer to turn the solar system on.

## Additional Interconnection Information

The parallel operation of a solar PV system requires interconnection with Pasadena Water and Power's distribution system. Electric Regulation 23 is the guidelines that describe the interconnection, operating and metering requirements for generation facilities to be connected to PEP's distribution system. In addition, customers must comply with Pasadena's Regulation 21 rules, regulations, and policies for electrical design, installation, upgrades, equipment maintenance, and safety electric service.

- [PWP's Regulation 23 \(corresponds to CPUC Rule 21\)](#)
- [PWP's Regulation 21 \(corresponds to CPUC Rule 1\)](#)

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