

# City of Los Angeles

This page outlines solar PV incentives, financing mechanisms, permitting process, and interconnection information for the City of Los Angeles and the utility that serves its territory, Los Angeles Department of Water and Power (LADWP).

To skip directly to each section please use these hyperlinks:

[Find an Installer](#) | [Financing](#) | [Incentives](#) | [Permitting](#) | [Interconnection](#)

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## Contact Information

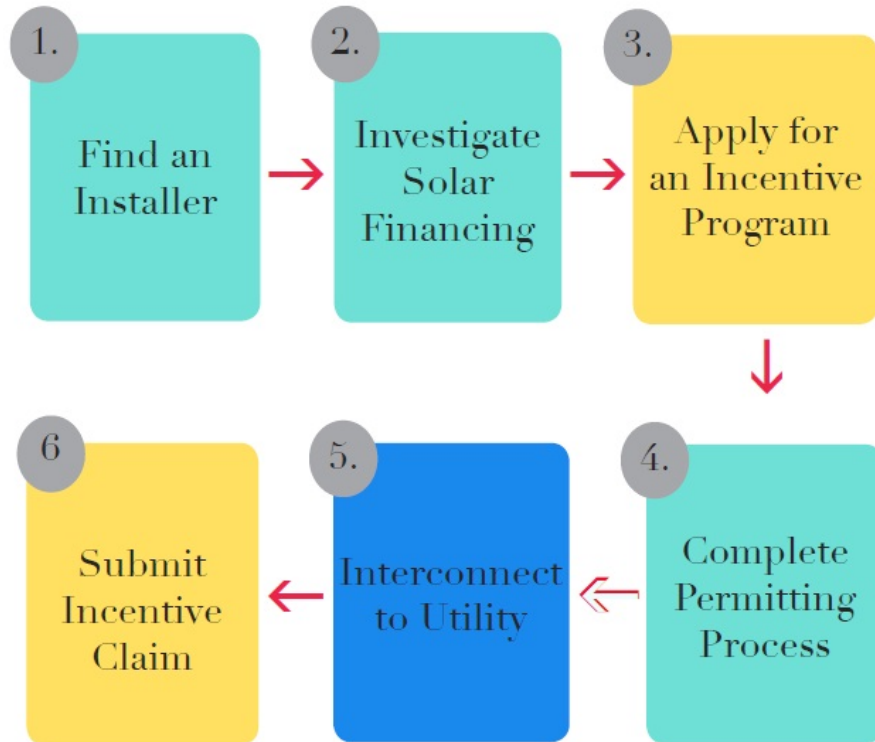
### City of Los Angeles Department of Building and Safety (LADBS)

- Website
  - [www.ladbs.org](http://www.ladbs.org)
- Phone:
  - Calls within the City of Los Angeles: dial 3-1-1
  - Calls outside of the City of Los Angeles: (213) 473-3231
- Hours:
  - M, Tu, Th, Fr: 7:30am – 4:30pm
  - W: 9:00am – 4:30pm
- Locations of LADBS Construction Service Centers:
  - <http://ladbs.org/LADBSWeb/locations.jsf>

### Los Angeles Department of Water and Power (LADWP) Utility

- Website
    - [www.ladwp.com/solar](http://www.ladwp.com/solar)
  - Phone
    - 1-800-DIAL-DWP (1-800-484-0433)
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## OVERALL SOLAR PROCESS:



### 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
- LADWP's [tips for finding a solar installer](#)
- 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 Information

**NOTE: None of the following financing programs is endorsed by LADWP. This list is to solely provide information on available financing mechanisms for solar installations.**

### 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 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 use and is responsible for system performance, operations and maintenance.
    - [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)

- **NOTE: Leasing agreements in the City of LA must be reviewed and deemed acceptable by the Los Angeles city attorney's office. A lease template must be submitted to [solar@ladwp.com](mailto:solar@ladwp.com) for review. Once a lease has been deemed acceptable, the contractor may use that same template for multiple installations.**

## **PACE Programs**

- o Commercial PACE
  - The Los Angeles County PACE program offers funding for nonresidential solar projects. Under this program property owners can negotiate project-specific financing terms with the investor(s) of their choice, and repay the cost of the upgrade over time through a voluntary contractual assessment on the property tax bill.
    - [https://commercial-pace.energyupgradeca.org/county/los\\_angeles/overview](https://commercial-pace.energyupgradeca.org/county/los_angeles/overview)

## **Secured Financing**

Secured financing is a loan in which the borrower pledges some asset as collateral. Typically for a solar installation this collateral is a home or building. The following secured loans are available in the SCRC region:

- o 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>
- o FHA 203(k) Rehabilitation Loans
  - The Federal Housing Administration (FHA), which is part of the U.S. Department of Housing and Urban Development (HUD), 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 which the HUD

insures, thereby giving a line of credit to the property owner to make property upgrades, such as solar PV installations.

- [http://portal.hud.gov/hudportal/HUD?src=/program\\_offices/housing/sfh/203k/203kabou](http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/sfh/203k/203kabou)

o 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. The PowerSaver pilot will provide lender insurance for secured and unsecured loans up to \$25,000 to single family homeowners specifically targeting residential energy efficiency and renewable energy improvements.
  - [www1.eere.energy.gov/wip/solutioncenter/financialproducts/PowerSaver.html](http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/PowerSaver.html)

### Unsecured Financing

Unsecured financing is a loan that is not backed by any collateral. Credit cards and personal loans are the most common examples of unsecured financing. Unsecured financing products available for energy upgrades include personal loans and contractor-sponsored products. However, unsecured financing does come with drawbacks: a good line of credit is typically required with no collateral and the interest rates tend to be higher than with secured loans. However, with some publicly-supported programs, the jurisdiction will pay the interest rate down to attract borrowers.

o 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.
  - [www.energyloan.net/index.php](http://www.energyloan.net/index.php)

o Los Angeles County Energy Loans

- As with the secured loan, Matadors Community Credit Union and Los Angeles County are offering low-interest loans for energy upgrades and renewable energy projects.
  - [https://energyupgradeca.org/county/los\\_angeles/about\\_local\\_financing](https://energyupgradeca.org/county/los_angeles/about_local_financing)

o 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)

- **Other Financing Mechanisms**

- o LADWP Feed-in Tariff (FIT)

- Under a feed-in tariff, eligible renewable electricity generators are paid for the generating renewable electricity and feeding it into the utility grid.

- **NOTE: This is a distinct program from the solar incentive program. One PV system may not participate in both programs. Excess energy produced by a net-metered PV system cannot be sold to LADWP through the upcoming FIT program.**

- o [www.ladwp.com/fit](http://www.ladwp.com/fit)

- o Community Solar

- Community solar is a way for multiple individuals to share in the benefits of a single solar installation by pooling resources to develop a community-scale solar energy project that provides the benefits of solar energy to a group or neighborhood.

- o <http://openneighborhoods.net/communitysolar>

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## Solar Process Information

- **Federal Solar Incentives**

- o 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=U37F&re=1&ee=1](http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=U37F&re=1&ee=1)

- o 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)

***\*NOTE: The City of Los Angeles' Solar Process has the incentive, permitting, and interconnection processes integrated throughout the LADWP Solar Incentive process. See below for the entire process.***

- **Los Angeles Department of Water and Power (LADWP) Solar Incentive Program**
    - [www.ladwp.com/solar](http://www.ladwp.com/solar)
  - **Program Administrator - LADWP**
    - Phone: (213) 367-4122
    - Email: [solar@ladwp.com](mailto:solar@ladwp.com)
  - **Solar Incentive Program Guidelines**
    - [Download guidelines here](#)
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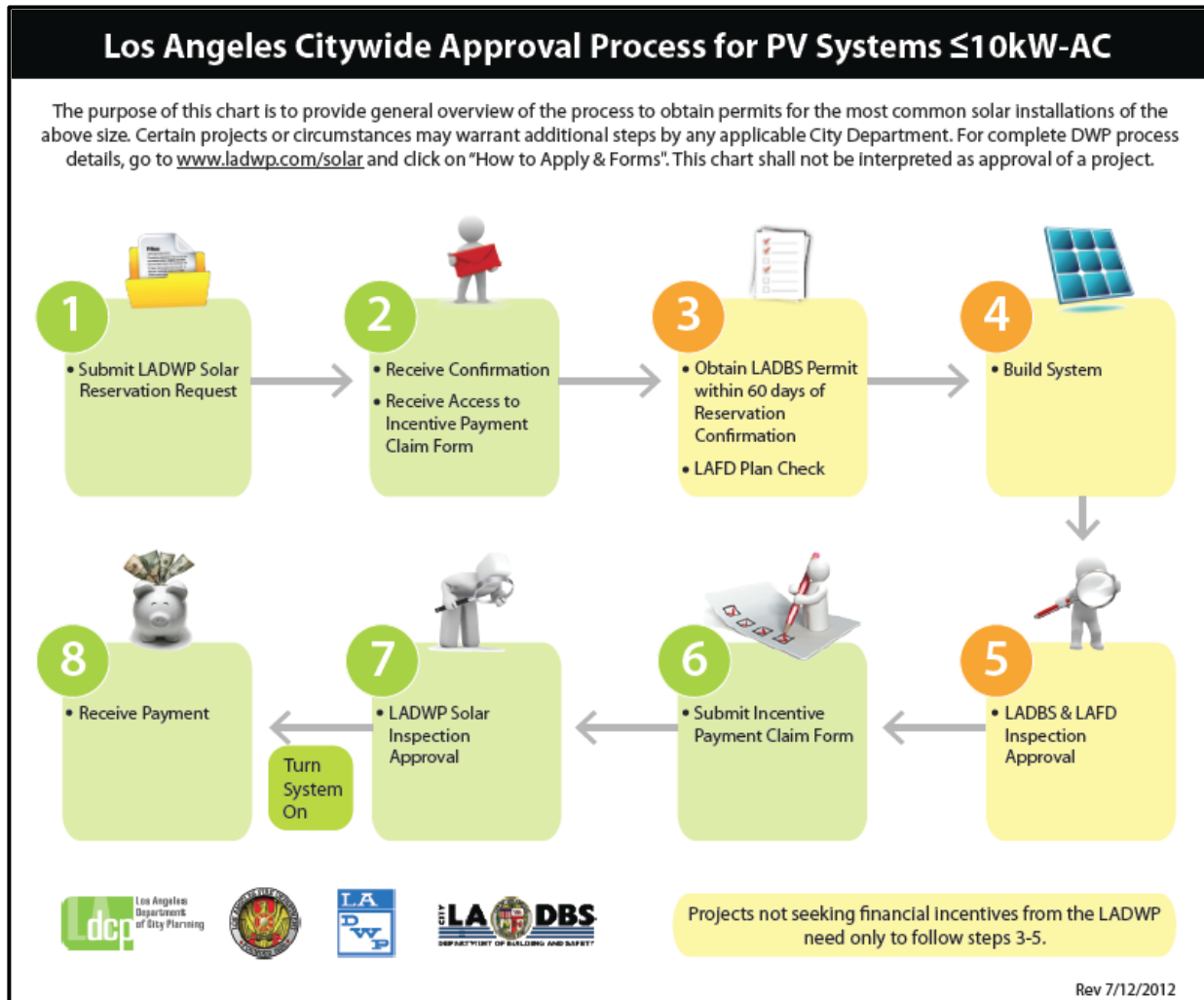
### **Step by Step Process of Getting a Solar Incentive Program rebate (Systems smaller than 10kW)**

- [How to Apply and Forms](#)
- [Small PV System \(<10kW\)](#)

**\*Projects not seeking financial incentives from LADWP need only follow Steps 3-5 below**

**PRIOR TO BEGINNING INCENTIVE PROCESS:**

- Customer and Contractor must complete the [Preliminary Review Questions](#)
  - If “yes” is answered to any questions, a pre-construction meeting with an LADWP Electric Service Representation (ESR) is necessary. The ESR will contact



the customer.

**STEP 1: SUBMIT LADWP SOLAR RESERVATION REQUEST**

- Rebate Reservations are submitted online via LADWP’s PowerClerk database:
  - PowerClerk: <https://ladwp.powerclerk.com>
    - Typically the installer will apply for the reservation on the customer’s behalf.
    - First time users must request a login through LADWP. For login information, [click here](#).



- To reserve funding, the following support documentation must be uploaded in PowerClerk:
  1. Signed Reservation Request Form (completed in PowerClerk)
  2. System purchase agreement(s) and/or installation contract(s)
  3. Most recent LADWP Electric Bill
  4. [Solar Inspection Agreement](#)
  5. [Electronic Document Authorization Form](#)
  6. [Energy Audit from Home Energy Saver Tool](#)
  7. [Residential Disclosure Agreement](#)
  8. [Preliminary Review Information Work Sheet](#)
  9. Copy of Ten Year Warranty
  10. \*For systems greater than 20kW-AC, a check for 0.5% of the anticipated incentive payment must be mailed to LADWP.

### STEP 2: RECEIVE CONFIRMATION

- If the Powerclerk Reservation Request is approved by the LADWP Solar Group, the Incentive Payment Claim Form (IP) will become available to the customer and/or contractor in PowerClerk, to be completed and submitted upon project completion.
  - The release of the IP form in Powerclerk is the official confirmation of a rebate reservation.

### STEP 3: OBTAIN LADBS PERMIT

- Contact Information:
  - City of Los Angeles Department of Building and Safety
    - Phone:
      - Calls within the City of Los Angeles: dial 3-1-1
      - Calls outside of the City of Los Angeles: (213) 473-3231
    - Permitting Website:
      - <http://ladbs.org/LADBSWeb/services-permit.jsf>
- **Permitting Process**
  - *Permit documentation must be sent to Solar Group within 60 days of Reservation Confirmation (documentation can be emailed to [solar@ladwp.com](mailto:solar@ladwp.com))*
  - Guidelines for Plan Check and Permit Requirements:
    - [http://ladbs.org/LADBSWeb/LADBS\\_Forms/InformationBulletins/IB-P-GI2011-027Photovoltaic.pdf](http://ladbs.org/LADBSWeb/LADBS_Forms/InformationBulletins/IB-P-GI2011-027Photovoltaic.pdf)

- Permits can be obtained in-person at Construction Services Centers in the City of Los Angeles: <http://ladbs.org/LADBSWeb/locations.jsf>
- LADBS Permit Forms: <http://ladbs.org/LADBSWeb/forms.jsf>

- **Building Permits:**

- A building permit is required for the structural support of all solar energy device installations with the exception of the following:
  - [http://ladbs.org/LADBSWeb/LADBS\\_Forms/PlanCheck/PC-STR.App01-BldgPermit.pdf](http://ladbs.org/LADBSWeb/LADBS_Forms/PlanCheck/PC-STR.App01-BldgPermit.pdf)
- A building permit is not required when all of the following requirements are met:
  1. Solar device is roof mounted and does not exceed the existing building height at the highest point,
  2. The solar energy device system weight does not exceed four pounds per square foot,
  3. The solar energy device is installed within 18" of the roof immediately below,
  4. The maximum concentrated load imposed by a solar energy device support onto the roof structure is a maximum of 60 pounds (0.18 kN); and
  5. For wood construction, the maximum spacing for supports of the solar energy devices shall be 48" on center, and shall be anchored to solid roof rafters or to solid blocking with a minimum of one 5/16" diameter lag screw embedded a minimum of 2 1/2" or as recommended by the manufacturer, whichever is more stringent. For other type of construction, the support shall be approved by the Department.

- **Building Plan Check**

- Structural support of solar energy devices requiring a building permit shall be submitted to building plan check for approval.
- NOTE: if your permit does not require a plan check, you can apply for an Express Permit.
  - The requirements for qualifying for an Express Solar Permit are listed [here](#) (page 4, #15).
  - The Express Permit Information Sheet (EPV) can be downloaded here: [http://ladbs.org/LADBSWeb/LADBS\\_Forms/PlanCheck/PV-Install-Wrksht.pdf](http://ladbs.org/LADBSWeb/LADBS_Forms/PlanCheck/PV-Install-Wrksht.pdf)
- If your project is more complex and does not qualify for an Express Permit, you will need to undergo a [Plan Check with LADBS](#).
- Complete plans shall be submitted showing dimensions and location of the supporting structure in relation to the property lines and any adjacent building.

- Substantiating design calculations are required for supporting member sizes, connection details, and design loads imposed on the roof or other support.
  - Where the solar panel/collector surface inhibits superimposed concentrated loads, the weight of the collector may replace part of the code required live load.
  - Regardless of the weight of the solar panel or collector, a minimum of one half of code required live load shall be used for design.
  - The wind load on the vertical projection of the collector shall be included in the analysis.
  - Provide a note on the plan, “No guardrails are required for installed solar energy devices pursuant to LAMC 91.1013.5.”
  - All roof penetrations shall be sealed using approved methods and products to prevent water leakage
- **Electrical Plan Check/ Electrical Permit**
    - Electrical Plan Check: Electrical plan check is required for all photovoltaic system installations.
      - [http://ladbs.org/LADBSWeb/LADBS\\_Forms/PlanCheck/PC-ELEC.APP.03\\_EPCAPP.pdf](http://ladbs.org/LADBSWeb/LADBS_Forms/PlanCheck/PC-ELEC.APP.03_EPCAPP.pdf)
    - Permits: An electrical permit is required for installation of solar photovoltaic systems.
      - [http://ladbs.org/LADBSWeb/LADBS\\_Forms/PlanCheck/PC-ELEC.App.02E-PermitR8.pdf](http://ladbs.org/LADBSWeb/LADBS_Forms/PlanCheck/PC-ELEC.App.02E-PermitR8.pdf)
      - Express Permits Exception: Plan check is not required if all of the conditions listed below are met:
        - The installation is in a one or two family dwelling.
        - A maximum of 2 strings are installed per inverter.
        - The total capacity of the photovoltaic system being installed is 10 KW or less.
        - No DC combiner box is installed (other than the box that is part of and is listed with the inverter).
        - System contains only inverters with isolation transformers.
        - No GFCI or AFCI over current devices are installed in the Alternate Current (AC) output of the inverter.
        - 7. Modules shall be roof mounted crystalline or multi-crystalline material.
        - AC Power system shall be 120/240 volts single phase.
        - The minimum service panel size shall meet one of the following:

1. 100 amps for systems with a maximum 20 amperes dedicated AC branch circuit, or
  2. 150 amps for systems having a maximum 30 (or two 15) amperes dedicated AC branch circuit(s), or
  3. 200 amps for systems having a maximum 40 (or two 20) amperes dedicated AC branch circuit(s).
- The rating of service panel shall not exceed 225 amperes.
  - No AC modules, storage batteries, hybrid systems, or micro-inverters are installed.
- **If these conditions are met, the applicant is required to complete [Form E](#) and [Form EPV](#) and submit them to the Express Permit Counter.**
  - Permit for Photovoltaic Systems which do not require an Electrical Plan Check (Express Permits):
    - Prior to permit issuance, the Express Permit Counter staff shall refer all permit applications for photovoltaic systems to the Los Angeles Fire Department (LAFD) for approval. In addition, the Express Permit Counter staff shall initialize the permit application for photovoltaic system(s); create a clearance summary sheet for Zoning Approval, and direct customers to the Zoning counter to obtain clearance approval.
- **Fire Department and Zoning Approval/Clearances**
    - Fire Department (LAFD) Approval:
      - An approval from LAFD is required for all permits pertaining to solar photovoltaic systems. LAFD's installation guidelines are available at [http://lafd.org/prevention/pdf/forms/solar\\_pwr\\_req.pdf](http://lafd.org/prevention/pdf/forms/solar_pwr_req.pdf)
    - Zoning Clearance(s): Approval from the Zoning counter, by means of a clearance, is required for all Express permits and electrical plan check applications pertaining to solar energy devices.
      - The Zoning Counter staff shall determine if the site is within a Specific Plan, HPOZ, ICO, CRA, or if it involves a historical monument (i.e. CEQA review) and refer customers to the appropriate agency by creating the required clearances, if clearance approval is required.
      - Once all the clearances are approved by the appropriate agency, the Zoning Plan Check Counter staff shall approve the zoning clearance in PCIS and direct customers to the Express Permit Counter (for Express permits) or to the Electrical Plan Check counter (for electrical plan check applications) to complete the process.

#### **STEP 4: BUILD SOLAR PV SYSTEM**

- Upon receipt of a solar permit, you can begin installing your solar PV system

#### **STEP 5: LADBS AND LAFD INSPECTIONS**

- Building Inspection
  - Upon completion of PV system installation customer/contractor will contact Building and Safety for final inspection
    - Phone numbers:
      - Calling from within Los Angeles County: dial 311
      - Calling from outside Los Angeles County: (213) 473-3231
      - Please call 24-48 hours in advance to get your inspection scheduled
    - For larger systems (typically over 10kW and any time there is a service panel upgrade) there will be an ESR (electric service representative) inspection. That inspector will inspect the installation to ensure compliance with our electric service rules.

#### **STEP 6: SUBMIT INCENTIVE PAYMENT CLAIM FORM**

- After final inspection approvals, customer can access and submit an Incentive Payment Claim Form in PowerClerk.
  - Customer will submit the following documents to LADWP via PowerClerk:
    1. Approved copy of the final B&S permit
    2. Copy of the itemized final sales invoice showing the actual cost of the solar PV system and a zero balance due.
    3. A copy of the utility bill, if the installation location was a new facility without electrical service when the reservation request was submitted

#### **STEP 7: LADWP SOLAR INSPECTION**

- After the LADWP Solar Group verifies this Incentive Claim Form information, a solar inspection request is issued to a Solar Inspector.
  - Solar inspections are triggered by the submission of the Incentive Payment Claim. Once the Incentive Payment Claim is reviewed and determined to be complete, the solar incentive team will issue a request to the inspection team and an inspector will make contact with the customer.
- The Solar Inspector schedules appointment and visits customer's site to verify system size, tilt, orientation, shading used for incentive payment calculation and inspects for substandard items. The inspector also ensures that the equipment listed in PowerClerk

also matches what is actually installed. Finally the inspector performs an anti-islanding test.

- Solar Inspector will install net meter and remove lock.
  - For smaller systems, the net meter is not set until the solar inspector visits the site.
  - For larger systems that require meter build ups (typically at customer stations) the meter may actually be built and set prior to a solar inspection. However, the system is not activated yet.
  - Substandard items are noted and referred to customer/contractor for correction, and then a re-inspection will need to be rescheduled.
  - **NOTE: The system should not be turned on before this step.**
- Final approval of solar installation is submitted to Solar Group by inspector.
  - **Customer can turn on system at this point.**

#### **STEP 8: RECEIVE PAYMENT**

- Solar Group reviews final documentation and mails Incentive Check to customer.
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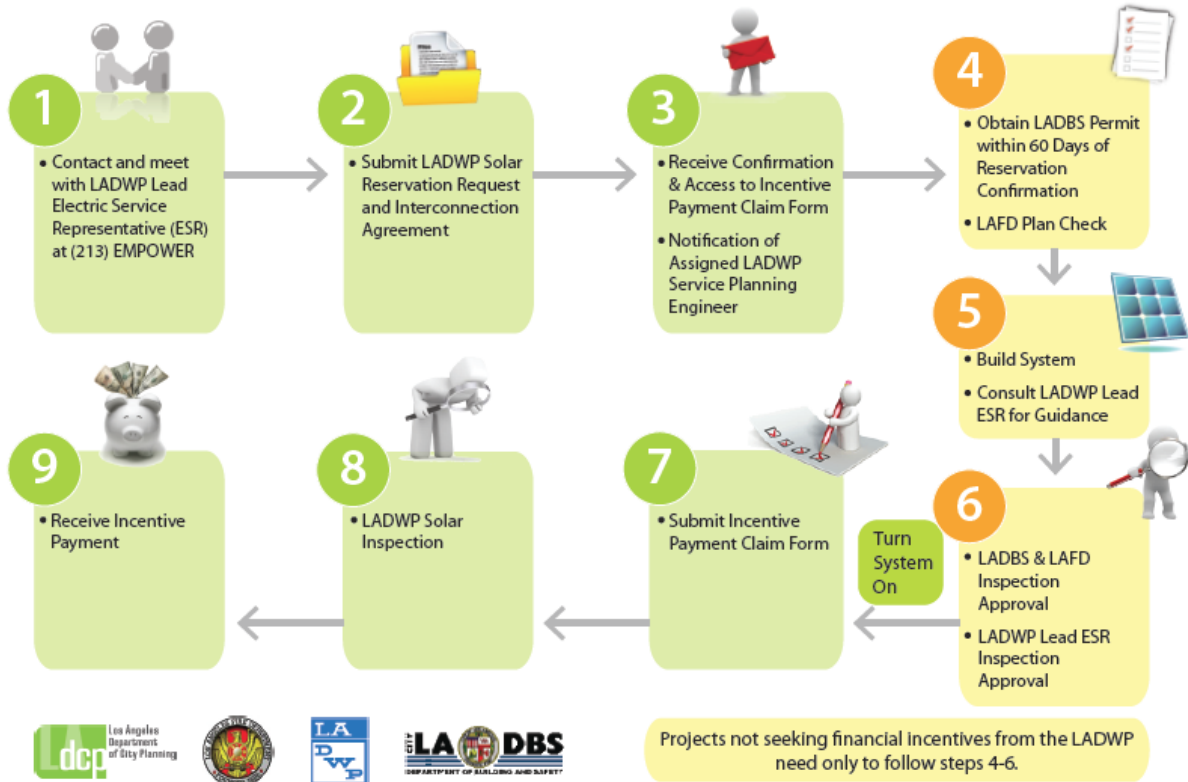
#### **Step by Step Process of Getting a Solar Incentive Program rebate (Systems larger than 10kW)**

- [How to Apply and Forms](#)
- [Large PV System \(>10kW\)](#)

***\*Projects not seeking financial incentives from LADWP need only follow Steps 4-6 below***

## Los Angeles Citywide Approval Process for PV Systems >10kW-AC & <1 MW-AC

The purpose of this chart is to provide general overview of the process to obtain permits for the most common solar installations of the above size. Certain projects or circumstances may warrant additional steps by any applicable City Department. For complete DWP process details, go to [www.ladwp.com/solar](http://www.ladwp.com/solar) and click on "How to Apply & Forms". This chart shall not be interpreted as approval of a project.



### STEP 1: CONTACT AND MEET WITH LADWP ELECTRICAL SERVICE REPRESENTATIVE (ESR)

- ESRs can be contacted at (213)-EMPOWER or (213) 367-6937

### STEP 2: SUBMIT LADWP SOLAR RESERVATION REQUEST AND INTERCONNECTION AGREEMENT

- Rebate Reservations are submitted online via LADWP's PowerClerk database:
  - PowerClerk: <https://ladwp.powerclerk.com>
    - Typically the installer will apply for the reservation on the customer's behalf.
    - First time users must request a login through LADWP. For login information, [click here](#).
  - To reserve funding, the following support documentation must be uploaded in PowerClerk:

1. Signed Reservation Request Form (completed in PowerClerk)
2. System purchase agreement(s) and/or installation contract(s)
3. Most recent LADWP Electric Bill
4. [Solar Inspection Agreement](#)
5. [Electronic Document Authorization Form](#)
6. [Energy Audit from Home Energy Saver Tool](#)
7. [Residential Disclosure Agreement](#)
8. [Preliminary Review Information Work Sheet](#)
9. Copy of Ten Year Warranty
10. Interconnection Agreement (systems over 10kW)
  - i. Call 213-367-2726 for a copy
11. \*For systems greater than 20kW-AC, a check for 0.5% of the anticipated incentive payment must be mailed to LADWP.

### STEP 3: RECEIVE CONFIRMATION

- If the Powerclerk Reservation is approved by the LADWP Solar Group, the Incentive Payment Claim Form (IP) will become available to the customer and/or contractor in PowerClerk, to be completed and submitted upon project completion.
  - The release of the IP form in Powerclerk is the official confirmation of a rebate reservation.
- An LADWP ESR will be assigned to this project at this point.

### STEP 4: OBTAIN LADBS PERMIT

- Contact Information:
  - City of Los Angeles Department of Building and Safety
    - Phone:
      - Calls within the City of Los Angeles: dial 3-1-1
      - Calls outside of the City of Los Angeles: (213) 473-3231
    - Permitting Website:
      - <http://ladbs.org/LADBSWeb/services-permit.jsf>
- **Permitting Process**
  - *Permit documentation must be sent to Solar Group within 60 days of Reservation Confirmation (documentation can be emailed to [solar@ladwp.com](mailto:solar@ladwp.com))*
  - Guidelines for Plan Check and Permit Requirements:
    - [http://ladbs.org/LADBSWeb/LADBS\\_Forms/InformationBulletins/IB-P-GI2011-027Photovoltaic.pdf](http://ladbs.org/LADBSWeb/LADBS_Forms/InformationBulletins/IB-P-GI2011-027Photovoltaic.pdf)



- Permits can be obtained in-person at Construction Services Centers in the City of Los Angeles: <http://ladbs.org/LADBSWeb/locations.jsf>
- LADBS Permit Forms: <http://ladbs.org/LADBSWeb/forms.jsf>

- **Building Permits:**

- A building permit is required for the structural support of all solar energy device installations with the exception of the following:
  - [http://ladbs.org/LADBSWeb/LADBS\\_Forms/PlanCheck/PC-STR.App01-BldgPermit.pdf](http://ladbs.org/LADBSWeb/LADBS_Forms/PlanCheck/PC-STR.App01-BldgPermit.pdf)
- A building permit is not required when all of the following requirements are met:
  1. Solar device is roof mounted and does not exceed the existing building height at the highest point,
  2. The solar energy device system weight does not exceed four pounds per square foot,
  3. The solar energy device is installed within 18" of the roof immediately below,
  4. The maximum concentrated load imposed by a solar energy device support onto the roof structure is a maximum of 60 pounds (0.18 kN); and
  5. For wood construction, the maximum spacing for supports of the solar energy devices shall be 48" on center, and shall be anchored to solid roof rafters or to solid blocking with a minimum of one 5/16" diameter lag screw embedded a minimum of 2 1/2" or as recommended by the manufacturer, whichever is more stringent. For other type of construction, the support shall be approved by the Department.

- **Building Plan Check**

- Structural support of solar energy devices requiring a building permit shall be submitted to building plan check for approval.
- NOTE: if your permit does not require a plan check, you can apply for an Express Permit.
  - The requirements for qualifying for an Express Solar Permit are listed [here](#) (page 4, #15).
  - The Express Permit Information Sheet (EPV) can be downloaded here: [http://ladbs.org/LADBSWeb/LADBS\\_Forms/PlanCheck/PV-Install-Wrksht.pdf](http://ladbs.org/LADBSWeb/LADBS_Forms/PlanCheck/PV-Install-Wrksht.pdf)
- If your project is more complex and does not qualify for an Express Permit, you will need to undergo a [Plan Check with LADBS](#).
- Complete plans shall be submitted showing dimensions and location of the supporting structure in relation to the property lines and any adjacent building.

- Substantiating design calculations are required for supporting member sizes, connection details, and design loads imposed on the roof or other support.
  - Where the solar panel/collector surface inhibits superimposed concentrated loads, the weight of the collector may replace part of the code required live load.
  - Regardless of the weight of the solar panel or collector, a minimum of one half of code required live load shall be used for design.
  - The wind load on the vertical projection of the collector shall be included in the analysis.
  - Provide a note on the plan, “No guardrails are required for installed solar energy devices pursuant to LAMC 91.1013.5.”
  - All roof penetrations shall be sealed using approved methods and products to prevent water leakage
- **Electrical Plan Check/ Electrical Permit**
    - Electrical Plan Check: Electrical plan check is required for all photovoltaic system installations.
      - [http://ladbs.org/LADBSWeb/LADBS\\_Forms/PlanCheck/PC-ELEC.APP.03\\_EPCAPP.pdf](http://ladbs.org/LADBSWeb/LADBS_Forms/PlanCheck/PC-ELEC.APP.03_EPCAPP.pdf)
    - Permits: An electrical permit is required for installation of solar photovoltaic systems.
      - [http://ladbs.org/LADBSWeb/LADBS\\_Forms/PlanCheck/PC-ELEC.App.02E-PermitR8.pdf](http://ladbs.org/LADBSWeb/LADBS_Forms/PlanCheck/PC-ELEC.App.02E-PermitR8.pdf)
      - Express Permits Exception: Plan check is not required if all of the conditions listed below are met:
        - The installation is in a one or two family dwelling.
        - A maximum of 2 strings are installed per inverter.
        - The total capacity of the photovoltaic system being installed is 10 KW or less.
        - No DC combiner box is installed (other than the box that is part of and is listed with the inverter).
        - System contains only inverters with isolation transformers.
        - No GFCI or AFCI over current devices are installed in the Alternate Current (AC) output of the inverter.
        - 7. Modules shall be roof mounted crystalline or multi-crystalline material.
        - AC Power system shall be 120/240 volts single phase.
        - The minimum service panel size shall meet one of the following:

1. 100 amps for systems with a maximum 20 amperes dedicated AC branch circuit, or
  2. 150 amps for systems having a maximum 30 (or two 15) amperes dedicated AC branch circuit(s), or
  3. 200 amps for systems having a maximum 40 (or two 20) amperes dedicated AC branch circuit(s).
- The rating of service panel shall not exceed 225 amperes.
  - No AC modules, storage batteries, hybrid systems, or micro-inverters are installed.
- **If these conditions are met, the applicant is required to complete [Form E](#) and [Form EPV](#) and submit them to the Express Permit Counter.**
  - Permit for Photovoltaic Systems which do not require an Electrical Plan Check (Express Permits):
    - Prior to permit issuance, the Express Permit Counter staff shall refer all permit applications for photovoltaic systems to the Los Angeles Fire Department (LAFD) for approval. In addition, the Express Permit Counter staff shall initialize the permit application for photovoltaic system(s); create a clearance summary sheet for Zoning Approval, and direct customers to the Zoning counter to obtain clearance approval.
- **Fire Department and Zoning Approval/Clearances**
    - Fire Department (LAFD) Approval:
      - An approval from LAFD is required for all permits pertaining to solar photovoltaic systems. LAFD's installation guidelines are available at [http://lafd.org/prevention/pdf/forms/solar\\_pwr\\_req.pdf](http://lafd.org/prevention/pdf/forms/solar_pwr_req.pdf)
    - Zoning Clearance(s): Approval from the Zoning counter, by means of a clearance, is required for all Express permits and electrical plan check applications pertaining to solar energy devices.
      - The Zoning Counter staff shall determine if the site is within a Specific Plan, HPOZ, ICO, CRA, or if it involves a historical monument (i.e. CEQA review) and refer customers to the appropriate agency by creating the required clearances, if clearance approval is required.
      - Once all the clearances are approved by the appropriate agency, the Zoning Plan Check Counter staff shall approve the zoning clearance in PCIS and direct customers to the Express Permit Counter (for Express permits) or to the Electrical Plan Check counter (for electrical plan check applications) to complete the process.

### **STEP 5: BUILD SOLAR PV SYSTEM**

- Upon receipt of a solar permit, you can begin installing your solar PV system
- You can contact your lead ESR (electric service representative) at any point for guidance on how to proceed.

### **STEP 6: INSPECTIONS**

- Building Inspection
  - Upon completion of PV system installation customer/contractor will contact Building and Safety for final inspection
    - Phone numbers:
      - Calling from within Los Angeles County: dial 311
      - Calling from outside Los Angeles County: (213) 473-3231
      - Please call 24-48 hours in advance to get your inspection scheduled
- ESR Inspection
  - For larger commercial systems there will be an ESR inspection. The ESR inspector will inspect the installation to ensure compliance with LADWP's electric service rules.

### **STEP 7: SUBMIT INCENTIVE PAYMENT CLAIM FORM**

- After final inspection approvals, customer can access and submit an Incentive Payment Claim Form in PowerClerk.
  - Customer will submit the following documents to LADWP via PowerClerk:
    1. Approved copy of the final B&S permit
    2. Copy of the itemized final sales invoice showing the actual cost of the solar PV system and a zero balance due.
    3. A copy of the utility bill, if the installation location was a new facility without electrical service when the reservation request was submitted

### **STEP 8: LADWP SOLAR INSPECTION**

- After the LADWP Solar Group verifies this Incentive Claim Form information, a solar inspection request is issued to a Solar Inspector.
  - Solar inspections are triggered by the submission of the Incentive Payment Claim. Once the Incentive Payment Claim is reviewed and determined to be complete, the solar incentive team will issue a request to the inspection team and an inspector will make contact with the customer.
- The Solar Inspector schedules appointment and visits customer's site to verify system size, tilt, orientation, shading used for incentive payment calculation and inspects for substandard items. The inspector also ensures that the equipment listed in PowerClerk

also matches what is actually installed. Finally the inspector performs an anti-islanding test.

- Solar Inspector will install net meter and remove lock.
  - For smaller systems, the net meter is not set until the solar inspector visits the site.
  - For larger systems that require meter build ups (typically at customer stations) the meter may actually be built and set prior to a solar inspection. However, the system is not activated yet.
  - Substandard items are noted and referred to customer/contractor for correction, and then a re-inspection will need to be rescheduled.
- Final approval of solar installation is submitted to Solar Group by inspector.

### STEP 9: RECEIVE PAYMENT

- Solar Group reviews final documentation and mails Incentive Check to customer.

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## Permitting Process Information

***\*NOTE: The City of Los Angeles' Solar Process has the incentive, permitting, and interconnection processes integrated throughout the LADWP Solar Incentive process. See the [Solar Process section](#) for the entire process.***

City of Los Angeles  
Department of Building and Safety

### Phone:

Calls within the City of Los Angeles: dial 3-1-1  
Calls outside of the City of Los Angeles: (213) 473-3231

### Permitting Website:

<http://ladbs.org/LADBSWeb/services-permit.jsf>

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# Los Angeles Department of Water and Power (LADWP)

## Interconnection Process

Los Angeles Department of Water and Power (LADWP) is the local utility for the City of Los Angeles. Upon installation of your solar system and completion of your building permit inspection from the City of Los Angeles' Department of Building and Safety, LADWP will complete installation of your meter and your system will be ready for use.

### Contact Information

#### Los Angeles Department of Water and Power (LADWP)

- [www.ladwp.com/solar](http://www.ladwp.com/solar)

#### Program Administrator - LADWP

- Phone: (866) 484-0433 or 1-800-DIAL DWP

### Interconnection Process

***\*NOTE: LADWP's Interconnection Process is integrated throughout the Incentive Approval process. Additionally, if your solar system is smaller than 10kW-AC, you are not required to complete an Interconnection Agreement with LADWP.***

### Additional Interconnection Information

#### LADWP Interconnection Standards

- [https://www.ladwp.com/ladwp/faces/ladwp/residential/r-customerservices/r-cs-electricsservices/r-cs-es-codesspecification?\\_adf.ctrl-state=15ri08oqpp\\_248&\\_afLoop=611757235042000](https://www.ladwp.com/ladwp/faces/ladwp/residential/r-customerservices/r-cs-electricsservices/r-cs-es-codesspecification?_adf.ctrl-state=15ri08oqpp_248&_afLoop=611757235042000)

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