

City of San Diego

This page outlines solar PV incentives, financing mechanisms, permitting process, and interconnection information for the City of San Diego and the utility that serves its territory, San Diego Gas and Electric.

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Contact Information

City of San Diego
Department of Development Services
1222 First Avenue
MS 401
San Diego, CA 92101-4101

Phone:

Appointments: (619) 446-5300
Inspections: (619) 446-5000

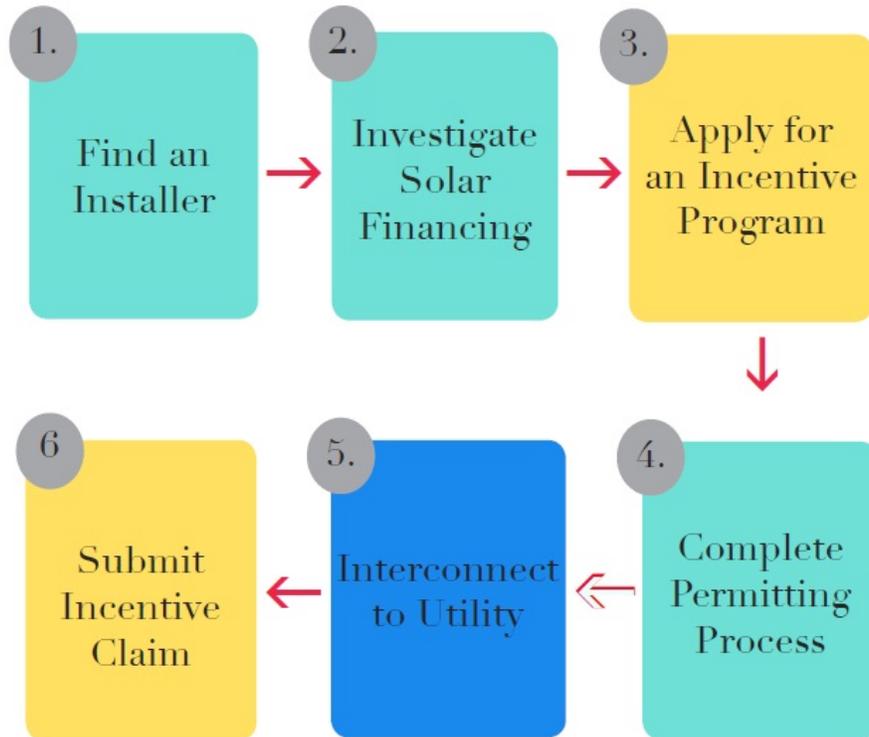
Website:

<http://www.sandiego.gov/development-services/>

Hours:

Monday - Thursday 7:00AM - 4:00PM

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
- **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 San Diego

- **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
- 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

- **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. 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 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

- **Property Assessed Clean Energy (PACE) Programs**

- CaliforniaFIRST

- The CaliforniaFIRST Program is a PACE program for non-residential properties. This program allows property owners to finance the installation of energy and water improvements on commercial, industrial or multi-family (over 5 units) buildings and pay the amount back as a line item on their property tax bill.

For more information: www.californiafirst.org

- **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

- 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/ing/sfh/203k/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

- **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
- San Diego Home Energy Upgrade Program
 - San Diego Metropolitan Credit Union and the City of San Diego have partnered to provide affordable financing to San Diego residents on home energy efficient upgrades as part of the San Diego Home Energy Upgrade program.
 - <http://www.sdmcu.org/home/sdhomeenergyupgrade>
- 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
- **Other Financing Mechanisms**
 - 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.
 - For more information: [SDGE FIT Program](#)
 - Virtual Net Metering
 - One community solar option that is available for numerous jurisdictions is virtual net energy metering (VNEM). VNEM is an agreement under which a share of production credits from a single grid-tied solar system can be distributed to individual ratepayers in a multi-tenant property.
 - For more information:
 - Please call (858) 636-5585 or e-mail Netmetering@semprautilities.com

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Incentive Information

- **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.
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 - http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=US02F&re=1&ee=1
- **California Solar Initiative (CSI)**
 - www.gosolarcalifornia.com/csi
- **Program Administrator**
 - California Center for Sustainable Energy (CCSE)
 - Phone: 858-244-1177
 - Email: csi@energycenter.org
 - Website: www.energycenter.org/csi
- **Step by Step Process of getting a CSI solar rebate**
 - [Step 1: Energy Efficiency Audit](#)

Complete an energy efficiency audit and make sure to take advantage of all the cost-effective ways to save energy and money in your home or business.
 - [Step 2: Find a Solar Installer](#)

Qualified contractors are your key to getting the most productive solar energy system for your home or business.
 - [Step 3: Apply for Rebates](#)

Qualified contractors will handle the CSI application process for your rebates in two or three steps.
 - [Step 4: Install Your System](#)

If you have received your reservation confirmation letter, you're ready to install your system and interconnect to the utility's power grid.
 - [Step 5: Claim Your Incentive](#)

When your project is installed and operational you may submit the Incentive Claim Form.

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Permitting Process Information:

Solar Contact Information

City of San Diego
Department of Development Services
1222 First Avenue
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San Diego, CA 92101-4101

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Website:

<http://www.sandiego.gov/development-services/>

Hours:

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Development Process Flow Chart

<http://www.sandiego.gov/development-services/devprocess/>

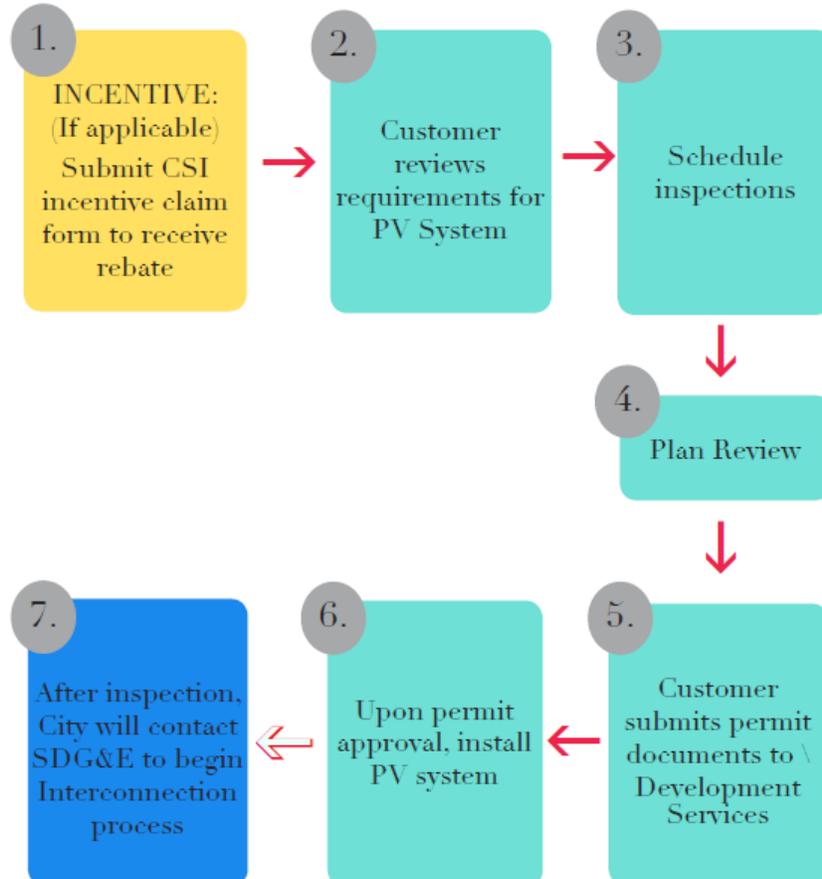
Residential Solar Permitting Website:

<http://www.sandiego.gov/development-services/homeownr/residentialsolar/index.shtml>

Step-by-Step Permitting Process:

<http://www.sandiego.gov/development-services/pdf/industry/infobulletin/ib301.pdf>

PERMITTING PROCESS: San Diego



- **STEP 1: REVIEW APPROVAL REQUIREMENTS**

- A Permit is required for the installation of all PV systems. A solar permit, or combination permit for installations on single family dwellings or duplex projects, may be required if structural modifications to existing construction are proposed to support the PV system.
- A solar permit is required if the project only includes installing a solar PV system. A combination permit is required when a single family residence has a building project in addition to solar PV.
 - An example is a new house with solar PV planned or a house addition with solar PV mounted on it.
- PV systems shall comply with all applicable requirements, City ordinances and regulations including zoning, structure height, FAA notification and condition of prior development permits governing the site.

- **STEP 2: SUBMIT PERMIT DOCUMENTS**

- Requirements:

The following plans and documents shall be provided along with the appropriate fees:

- Application Package

- Provide one copy of the [General Application \(DS-3032\)](#).

- Plans

- Residential installations per Plan Template

- The template was developed to guide you in preparing residential solar PV plans. This template shall be used only for a residential PV project when installed on a sloped roof with the panel weight of 5 pounds per square foot or less. This plan template may be used as a general guideline to prepare residential solar PV plans. Provide the following at your appointment:

1. Two copies of the plans per PV Plan Template sheets [PV-1](#), [PV-2](#), and [PV-3](#).

- The plan template sheets shall be modified to reflect the actual project-specific details.

2. One copy of manufacturer's specifications for the proposed PV panels with all electrical information.
3. One copy of manufacturer's specifications for the proposed PV inverter(s) showing all electrical information.

- Commercial installations (and residential installation where the Residential Plan Template cannot be used). Provide **two sets** of each of the following plans and documents:

- Site Plan

1. The site plan for ground mounted PV system needs to show property lines and setback dimensions. For roof mounted PV systems, provide a plan showing the footprint of the building and the location of the PV system on the building or structure. The plans should also include the site address, legal description, assessor's parcel number, and property owner name/address.

- See [Information Bulletin 122](#) for a sample site plan.

2. A plan showing the location of all existing and proposed PV panels, AC or DC combiners, all disconnects inverters and main electrical service.
3. An electrical one-line diagram showing the number of photovoltaic panels with voltage and kilowatt output, all disconnects, all combiners, all inverters with input and output ratings, the size of the main electrical panel bussing in amperes, the size of the main service disconnect, the size of the PV circuit breaker in amperes, size and type of all raceways and the size and type of all conductors.

4. Manufacturer's specifications for the proposed PV panels with all electrical information (one copy).
 5. Manufacturer's specifications for the proposed inverter showing all electrical information (one copy).
 6. Framing plans showing either the supporting structure for ground mounted arrays and/or the attachment of the panels to the roof. If using pre-manufactured racking systems provide the manufacturer's installation specifications.
 7. A Cross-section showing the height of the proposed PV panel, the supporting structure and the height above the roof for roof mounted PV panels.
 8. Where alterations are required to existing structures to support and provide an attachment for PV systems, structural plans shall be provided that are sufficient in detail and scope to demonstrate the required load path to ground. Structural calculations may be required for the following:
 - Roof or structure mounted PV systems if the weight of the PV system exceeds five pounds per square foot.
 - PV panels mounted more than 30 inches above the roof.
 - Ground mounted PV systems located more than 5 ft. above the ground.
- All plans shall be signed and stamped in accordance with the California Business and Professions Code. Plans may be signed and stamped by a registered electrical engineer or a licensed electrical contractor (C-10 License) or a solar contractor (C-46 License) who is responsible for the installation of the system: A general contractor (B-License) may also sign and stamp the plans only if the PV Panels are installed in a new building or new addition area. A registered architect, civil engineer or structural engineer shall sign structural plans and calculations when required.
 - **Solar PV Permit Fees**
 - Residential Submitted
 - Issuance/with plans.....\$38
 - Travel-documentation\$49
 - records Fee.....\$20
 - First System/Inverter plan Check.....\$169
 - First System/Inverter Inspection.....\$169
 - Residential Per City of San Diego Residential PV Plan Template
 - Issuance/with plans.....\$38
 - Travel-documentation\$49
 - records Fee.....\$20

- First System/Inverter plan Check.....\$108
- First System/Inverter Inspection.....\$169

- Commercial

- Issuance/with plans.....\$133
- Travel-documentation\$49
- records Fee.....\$60
- First 100 Kw plan Check\$324
- Each Additional 100 Kw plan Check\$113
- First 100 Kw Inspection.....\$253
- Each Additional 100 Kw Inspection.....\$98

- If a building or combination permit or additional reviews such as structural reviews are required, additional plan review fees or permit fees may be required and will be charged based on an hourly rate (see Information Bulletin 501).

- **Other Requirements**

- Applicants proposing to install or modify a photovoltaic system on a premise containing a designated historical resource or within a historic district must meet with Historical Resources staff in City Planning & Community Investment prior to submittal of the project to the Development Services Department. Historical Resources staff will work with the applicant to reduce to the extent possible any adverse impact to the historical property through project design and location. Historical Resources staff will then stamp the plans as conforming to the San Diego Municipal Code and will recommend application of the State Historic Building Code. There is no charge for this meeting and review of photovoltaic projects by Historical Resources staff (see [Information Bulletin 581](#)).

- **Options for Review Process**

- All commercial PV projects must be submitted. All residential PV projects which are not prepared as per the Residential PV Plan Template must be submitted. Appointments to submit applications and plans are recommended and can be made by calling (619) 446-5300.
- Residential PV projects prepared in accordance with the City of San Diego
- Residential PV Plan Template will be reviewed over the counter by appointment.

- **STEP 3: PLAN REVIEW**

- Plans for PV systems require a review for compliance with the California Electrical Code as well as City zoning and land development regulations. Additionally, a structural review will be required when PV systems exceed the weight and mounting

height limits requiring structural calculations in the “Submittal Requirements” section above.

- Both over the counter and submitted structural reviews are available, however the availability of over the counter reviews can be limited due to staffing and workload constraints. The Structural counter supervisor will make the determination of whether the review of the PV system attachment and support can be performed over the counter.
- **STEP 4: PERMIT APPROVAL**
 - If all documentation and fees are correct, the City of San Diego will approve a permit for your PV installation and installation of the system can begin.
- **STEP 5: INSTALL THE PV SYSTEM**
- **STEP 6: INSPECTIONS**
 - Upon completion of your installation, the City of San Diego must inspect your solar installation.
 - City of San Diego inspection contact number:
 - (619) 446-5000
 - For additional helpful information on inspections, please refer to the [Residential Photovoltaic Systems Inspection Guidelines](#).
 - Required inspections may include: Electrical Underground; Electrical Rough; Electrical Final; Structural-Foundation; Structural-Rough and Structural-Final.
- **STEP 7: INTERCONNECTION**
 - After receiving final inspection approval for all related City of San Diego Approvals (permits), SDG&E will be notified.
 - The system is not approved to energize until SDG&E approval is obtained.

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San Diego Gas and Electric (SDG&E) Interconnection Process

San Diego Gas and Electric (SDG&E) is the local utility for the City of Chula Vista. Upon installation of your solar system and completion of your building permit inspection from the City of Chula Vista, SDG&E will complete your interconnection agreement and connect your system to the electric grid so you can start generating electricity for your home or business.

Contact Information

San Diego Gas & Electric
8316 Century Park Court, CP52F
San Diego, CA 92123

Phone:

(858) 636-5585

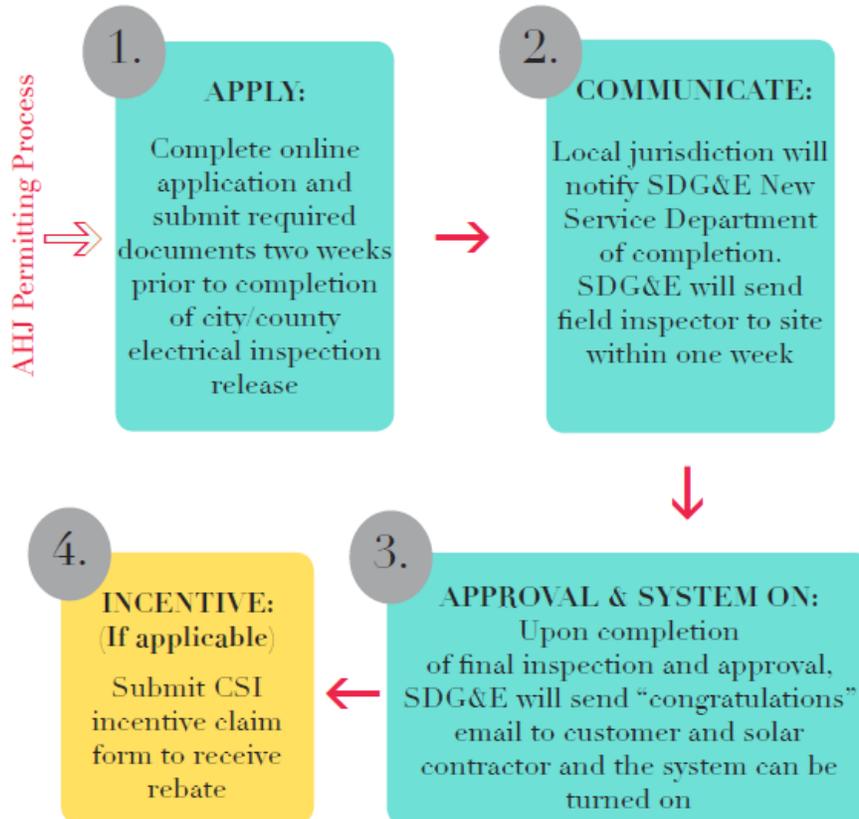
Email:

netmetering@semprautilities.com

Website:

www.sdge.com/nem

INTERCONNECTION PROCESS: San Diego Gas & Electric



- **Interconnection for PV Systems under 30kW**

- **Application Webpage**
 - <http://www.sdge.com/clean-energy/apply-nem/apply-nem>
- **Interconnection Requirements**
 - <http://www.sdge.com/clean-energy/apply-nem/apply-nem-requirements>
- **Interconnection Application Process for PV systems under 30kW:**
http://www.sdge.com/sites/default/files/NEM_app_proc_less30kw.pdf?nid=483
- The interconnection application is submitted online:
<https://nemapplication.sempa.com/>

to be completed and returned by mail or in person to Building 6 Security Desk. Please submit your application two weeks prior to the City of Chula Vista inspection being released. Submitting your application within this time-frame will minimize or avoid unexpected delays in the application approval process.

- Please complete and return the following documents:
 1. [Interconnection Application](#)
 - 3 copies
 2. [Interconnection Agreement](#)
 - 2 signed and dated copies (wet signature only)
 3. [NEM Inspection Report](#)
 4. [Electrical One-Line Diagram Drawing](#)
 5. [Electrical One-Line Diagram Drawing](#) (if CSI/PBI meter is present)
 - 3 copies of one-line diagram
 6. [Sample Bill of Materials for Greater Than 30kW](#)
 - 3 copies of the Bill of Materials

- **Inspection**
 - Upon completion of your final city electrical permit inspection release, the City of Chula Vista will give their electrical inspection release to SDG&E's New Service Department
 - SDG&E's NEM Team sends email to Contractor/Customer that the release has been received.
 - SDG&E's Inspector will inspect the project within one week.
 - For detailed information on the interconnection inspection:
 - http://www.sdge.com/sites/default/files/NEM_app_proc_less30kw.pdf?nid=483
 - This completes the Field Inspection process and 'initiates' the full completion and approval of the solar project.
 - Your solar installation has not been authorized until you receive a "Congratulations" email from SDG&E. At that time, your solar installation has received SDG&E's approval, and you may turn the solar system on.

Additional Interconnection Information

The parallel operation of a solar PV system requires interconnection with SDG&E's electrical grid. Electric Rule 21 is a tariff that describes the interconnection, operating and metering requirements for generation facilities to be connected to a utility's distribution system, over which the California Public Utilities Commission (CPUC) has jurisdiction. Note that the posted Rule 21 may not reflect updates to the tariff that may be pending before the CPUC:

- [SDG&E Rule 21](#)

For comprehensive information on interconnecting to SDG&E's please see the following links:

- [General Net Energy Metering Information](#)
- [Net Energy Metering Rates](#)
- [Net Energy Metering Cap](#)
- [Frequently Asked Questions](#)

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