

# BEST PRACTICES

for Interconnection Processes

## Southern California Rooftop Solar Challenge

PREPARED BY:

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Center for  
Sustainable Energy  
CALIFORNIA



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# 1. INTRODUCTION

**The Southern California Rooftop Solar Challenge (SCRC) supports the goals of the Department of Energy (DOE) Solar Energy Technologies Program and the SunShot Initiative, which seek to make solar electricity cost competitive without subsidies by the end of the decade by reducing balance of system costs for photovoltaics (PV). To encourage market transformation, the California Center for Sustainable Energy (CCSE) is leading a regional Southern California team that will focus on expanding financing options for residential and commercial customers, streamlining permitting processes, and standardizing net metering and interconnection standards across investor- and municipally-owned utilities in the region. The goals will be achieved by fostering cross-jurisdictional collaboration and information sharing.**

Standardizing interconnection processes across the Southern California region will reduce the time spent and cost associated with rooftop solar PV installation. Standardization will benefit contractors, customers, and utilities by providing an efficient process to obtain information, submit applications, process applications, inspect systems, and energize systems. This will decrease the administrative burden faced by utilities and contractors which will help mature the rooftop PV market in Southern California by reducing the overall costs of PV installations to home and business owners.

This section of the document will identify best interconnection process practices across both investor-owned utilities (IOUs) and publicly-owned utilities (POUs). By identifying the different types of utilities in the SCRC, this report will account for the differences created by ownership structures and consequent regulatory oversight to explain a best practice. Consequently, model performing utilities are identified as well as individual processes that represent a regional best practice.

## ABOUT THIS REPORT:

This report, which follows the Policy Overview Document, provides a summary of the best practices in the three major interconnection process categories among the local utilities in the Rooftop Solar Challenge team area, including: (1) Information Access, (2) Application Access and Application Submission, (3) Processing Time, and (4) Inspections.

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Application Access p. 7

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Inspections p. 14



## 2. INFORMATION ACCESS

*The goal of identifying and implementing the best practices in this category is to improve the ease with which an applicant can access interconnection information, find and speak to a designated point-of-contact, and check the status of an application. Implementation of regional best practices should reduce the amount of time spent on instructions about the application process and frequently asked questions that can be quickly answered online, thereby decreasing the administrative burden on a utility and applicant saving personnel hours and other resources.*

Access to application information requires that a utility provide multiple options through which an applicant can obtain needed information. This includes providing access to information by an easy-to-access online information portal, email request, in person, or by mail.

In its efforts to identify ways to streamline the permitting process, the Department of Energy (DOE) has emphasized easily accessible online application information that is reflected in the best practices in the region. The DOE defines “easily accessible” as the availability of interconnection information online in a single site location that can easily be accessed through a utility’s home page.

The model performers in the SCRC distinguish themselves by providing information access through an easy-to-access online location in addition to email, in person, and by mail. Some examples of best practices include San Diego Gas & Electric’s (SDG&E) [web portal](#) with links and information to relevant rooftop solar information, and an online application program. Southern California Edison (SCE) also provides a [web portal](#) through which an applicant can link to self-generation information. Anaheim Public Utilities provides an easy-to-access [web portal](#) that includes a specific section for Developers/Contractors that link to an [Interconnection Guideline webpage](#) as well as a link to [Anaheim’s Solar Advantage website](#) which integrates the interconnection process into the incentive process.

### DESIGNATED POINT OF CONTACT:

In addition to having interconnection information in an online location, an additional regional best practice includes an easily accessible designated point-of contact as a means for applicants to quickly obtain information about the interconnection process if the website does not answer their questions. Contact information for the designated point-of-contact should



**Southern California Edison**  
is a model performer for  
Information Access in the SCRC  
region. SCE’s easy-to-access  
web portal expeditiously directs  
applicants to self generation  
information.

include the address, phone number, and email of the department or person responsible for Interconnection. This information should be easily found online and listed on all forms, guides, webpages and applications. For example, SCE provides this type of information on their website and on applications such as their [Generation Facility Interconnection Application](#). LADWP provides both an email (solar@ladwp.com), phone number, and an [online contact page](#) where an applicant can submit questions or inquiries. Anaheim Public Utilities designates points-of-contact through its Planning Services and Building Division and its Utilities Electrical Engineering. This information is found online on Anaheim's Solar Advantage guides for [Residential](#) and [Commercial](#) Net Energy Metering. For any inquiries about the Pasadena Solar Initiative, Pasadena Water and Power (PWP) clearly includes the Answerline contact information at the bottom of its [website](#). In addition, SDG&E has one point of contact which can be found easily on both the interconnection application and the NEM [website](#).

## CHECKLISTS:

The use of checklists and/or guides outlining a utility's interconnection process represents a regional best practice as they provide a simplified means to identify the steps and resources needed to successfully complete an application. SDG&E offers [online Interconnection Guides for PV systems smaller than 30 kilowatts \(kW\)](#) and larger than 30 kW, and a Multifamily Affordable Solar Housing Checklist. These guides explain the process, requirements, and expectations of the interconnection process to an applicant. Other best practices in this area include SCE's one page [Interconnection Checklist](#) and Net Energy Metering Interconnection Handbook for residential and commercial applications that provide the required forms and a description of the interconnection process. Anaheim Public Utilities' website provides [Guidelines for Interconnection or Customer Generation](#) while its Solar Advantage Incentive Program website provides access to [Residential](#) and [Commercial](#) NEM guides. Los Angeles Department of Water and Power (LADWP) offers interconnection information on its Solar Incentive Program website for residential and commercial projects and includes downloadable PDFs with information of the [Solar Incentive Program](#) guidelines and Residential New Construction Solar Applications, and examples of Single Line Electrical Diagrams and common mistakes on solar installations. PWP provides a clear step-by-step guide on how to complete the entire solar process, including applying for incentives and interconnection.

## STATUS CHECKS:

Providing a mechanism for an applicant to check the status of an interconnection application represents a best practice in the region. By providing a mechanism to check interconnection application status, both the utility and applicant can avoid time-consuming phone calls or visits to the utility to obtain status updates, thereby saving time and resources. LADWP allows applicants to check application status through PowerClerk, an online database that allows an applicant to complete an interconnection application and upload all required documents such as a single-line diagram. An explanation of this process can be found [here](#). SDG&E uses confirmation emails for interconnection status checks, including correspondence regarding receipt of applications, issues with application documents, jurisdictional electrical release, and Permission to Operate authorization.

**Table 1: SDG&E Sample Checklist**

**MASH Progression Process for Contractor**

- 1)  Contractor contacts SDG&E
- 2)  Contractor, NEM Inspector, SDG&E Standards Representative and SDG&E Planner meet at site to set expectations of project.
  - a)  Discuss meter locations
  - b)  Discuss standards
  - c)  Date and timing of meter sets
  - d)  If outage is needed contractor should work with the associated Planner
    - i)  Planner then sends documents to customer to get preferred time and date for "tap" outages.
    - ii)  General Forman will decide crew needs
    - iii)  Planner will cost job based on these needs
  - e)  If tap drawings are required contact applicable engineering firm
  - f)  Electrical Clearances from the appropriate jurisdiction. This is the responsibility of the contractor.
    - i)  One solar system clearance
    - ii)  One meter set clearance.
    - iii)  One re-energize clearance for outage.
    - iv)  Address on clearances must match meter address exactly.
- 3)  SDG&E sends example of an "Allocation" Excel spreadsheet for contractor to fill out.
  - a)  This sheet will show the address, account number, meter number, allocation percentage for each unit, and CEC kW rating – contractor fills out blank spreadsheet  
 If there is more than one address at a particular service point, the lowest number is the one to be used for the CG address and any city permitting.
- 4)  Contractor sends SDG&E the "Allocation" spreadsheet showing meter numbers, addresses, account numbers and allocation percentages for each associated unit at every delivery point.
- 5)  If there is more than one address at a particular service point, the lowest number is the one to be used for the CG address and any city permitting.
- 6)  Inspector visits project to evaluate allocation.
  - a)  Inspector will verify the meter numbers and service points
  - b)  Inspector will also evaluate the clear working area and access for the electric meters, per SDG&E Service Standards
- 7)  After this site visit, SDG&E will:
  - a)  Create premise and temporary CG account number (per lowest address provided by contractor) and
  - b)  Determine Costing for the CG meter set
- 8) SDG&E will then email the contractor the following:
  - a)  Request Letter
  - b)  Rule 2 Contracts
  - c)  Cash Payment Remittance
  - d)  Solar Generation Credit Allocation Form
  - e)  Spreadsheet with the temporary CG account numbers (contractor will submit their applications and one line diagrams (less than 30 kW) online with the temporary CG account numbers that NEM provides to them



### 3. APPLICATION ACCESS & SUBMISSION

***According to the DOE, facilitating access to interconnection application forms and simplifying the methods for submitting applications are important factors in the interconnection process. By identifying and implementing the best practices in this category a utility can improve the process for an applicant to access, complete, and submit an application. The benefits of implementation of regional best practices in this category are twofold: simplifying the means by which an applicant can obtain an application, and decreasing the administrative burden on a utility and applicant by reducing the number of personnel hours and other resources dedicated to the submittal of an application.***

In order to make interconnection applications easily accessible, a utility must provide multiple options through which an applicant can obtain an application. The model performers in the region provide information for residential and commercial interconnection applications through the following options: online, by email, in person, and by mail.

Some examples of top performers in this category are [Anaheim Public Utilities' Interconnection Guidelines website](#), which provides easy access to its [Interconnection Application](#) for systems 30 kW and larger, and links to the guidelines for interconnecting to its grid, as well as information about the Solar Advantage Rebate Program.

LADWP provides access to its interconnection information through its [Install Solar webpage](#), which links applicants to [websites](#) for Residential and Commercial interconnection information. From this webpage an applicant can download documents necessary to complete the application process.



# BEST OF THE BEST: WEB ACCESS

Several examples of website best practices include:

SCE's easy-to-access [website](#) which includes a downloadable sample and required forms: an excel Simplified One-Page NEM Interconnection Application for 10 kW or less systems, a PDF Generating Facility Interconnection (GFIA) Application for systems 10 kW or larger, a sample GFIA, sample single line diagrams and plot plan, and a NEM Agreement for Renewable Technologies, SCE also provides online training for completing the interconnection process through an [Interconnection Paperwork Webinar](#).

The screenshot shows the SCE website's Net Energy Metering FAQs page. At the top, there is a navigation bar with links for Home, About SCE, Outage Center, Contact Us, and My Account, along with a search box and a GO button. Below the navigation bar is a menu with categories: Residential, Business, Customer Service, Environment, Community, Safety, and Edison International. The main content area features a breadcrumb trail: Home > Customer Generation > Net Energy Metering FAQs. The title is "Net Energy Metering FAQs". Below the title is a sub-section "Net Energy Metering FAQ's" with a list of links: Program Overview, Virtual Net Metering, How to Apply, NEM Documents & Forms FAQs, Net Energy Metering Program Overview, How Net Energy Metering Works For You, Billing & Credits Metering, Direct Access Customers, Change In Ownership, Changes To The Generating Facility, Getting Started, and Virtual Net Metering (VNM). On the left side, there is a "SCE.com Log In" form with fields for User Name and Password, a "Remember Me" checkbox, and a "LOG IN" button. Below the login form are links for "Forgot your password?", "New user? Learn more | Register", and a vertical list of links for various NEM-related documents and forms.

**SCE.com Log In**

User Name:  
Password:  
 Remember Me  
**LOG IN**

Forgot your password?  
New user? Learn more | Register

Home : About SCE : Outage Center : Contact Us : My Account Search **GO**

Residential Business Customer Service Environment Community Safety Edison International

Home > Customer Generation > Net Energy Metering FAQs

## Net Energy Metering FAQs

### Net Energy Metering FAQ's

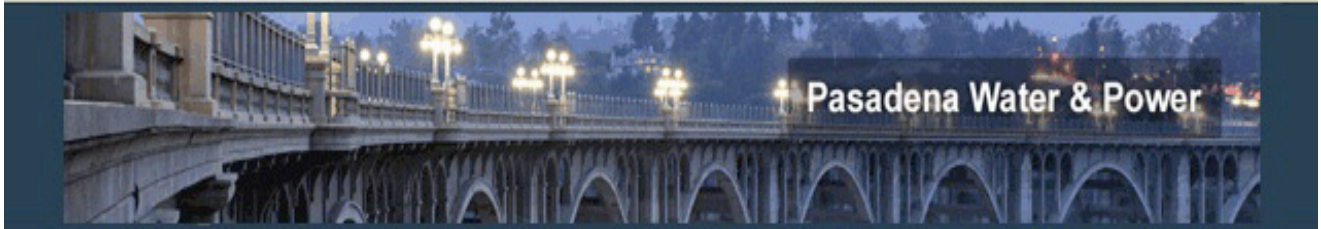
- Program Overview
- Virtual Net Metering
- How to Apply
- NEM Documents & Forms FAQs
- Net Energy Metering Program Overview
- How Net Energy Metering Works For You
- Billing & Credits Metering
- Direct Access Customers
- Change In Ownership
- Changes To The Generating Facility
- Getting Started
- Virtual Net Metering (VNM)

Self Generation (Distributed Generation)  
Net Energy Metering FAQs  
Assembly Bill 920  
NEM Checklist for Standard Solar & Renewables NEM  
Simplified NEM Application for Solar & Wind up to 10 kW (Form 14-753)  
NEM Agreement for Solar & Wind up to 10 kW  
Generating Facility Interconnection Application for over 10 kW (GFIA) (Form 14-732)  
NEM Agreement for Renewable Technologies  
Sample SLD & Plot Plan  
NEM Customer-Generator Warranty  
Rule 21  
NEM Interconnection



Pasadena Water & Power provides a [website](#) which uses as step-by-step format to explain the [interconnection process](#) and provides access to all necessary documents such as the Interconnection and Metering Agreement. This information is also specified as a checklist on PasadenaSolar Initiative's [Application Request Form](#), which uses the same step-by-step format.

THE CITY OF PASADENA



## PSI: Application Instructions

Revised 7/11/12

[<< PSI Home](#)

- city home
- departments
- mayor / council
- phone numbers
- city news
- search
- online bill pay
- emergency & safety info
- start service
- save money
- save water
- save energy
- your bill
- your water
- your power
- news & events
- about your public utility
- contact us
- PWP home

### STEP 1 – FIND AN INSTALLER

Except for those systems that are self-installed, all systems must be installed by appropriately licensed California contractors in accordance with rules and regulations adopted by the State of California Contractors State Licensing Board (CSLB). Solar installation contractors must have an A, B, C-10 or a C-46 license for photovoltaic (PV) systems.

PWP strongly suggests hiring an experienced licensed solar contractor to design and install solar systems. Licensed and experienced contractors are the key to getting the most productive solar energy system possible and avoiding generation production in the future.

Solar energy systems must be designed and installed in conformance with the manufacturer's specifications and with all applicable electrical and building codes and standards.

Typically, the solar installer will apply for PSI incentives on the customer's behalf, apply for local permits, and arrange for the solar system to be interconnected to the utility power grid. 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.

The State of California provides a list of pre-qualified solar installers online at <http://www.gosolarcalifornia.org/database/search-new.php>. Searching for a solar installer by zip code is the fastest way to find a solar installer closest to you, although

SDG&E's interconnection [web portal](#) allows an applicant to apply online through a five-step process for systems of 30 kW or less. The web portal also offers easy access to additional submission documents for systems 30 kW or less such as the [Electrical One-Line Diagram Drawing](#) and Electrical One-Line Diagram Drawing (CSI/PBI). SDG&E also provides a [website](#) for systems larger than 30 kW where an applicant can access documents such as the Generating Facility Interconnection Application (GFIA), Interconnection Agreement for Net Energy Metering, NEM/VNM-A Inspection Report, Electrical One-Line Diagram Drawing (CSI/PBI), Sample Warning Plaque, and Sample Bill of Materials.

SDG&E <sup>connected</sup>  
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Search

My Account Residential Business In the Community Environment Rebates

## Apply For NEM

### Apply Online

Net Energy Metering applications for interconnection 30kW or less must be filled out through our online form. Most residential customers will use this form.

[Apply now](#)

*Please submit your application two (2) weeks prior to city and/or county inspection being released. Submitting your application within this time-frame will minimize or avoid unexpected delays in the application approval process.*

The following documents are needed to complete this form:

- [Electrical One-Line Diagram Drawing \(pdf\)](#)
- [Electrical One-Line Diagram Drawing \(CSI/PBI\) \(pdf\)](#)

*The NEM application may take up to 15 minutes to complete.  
To prevent your session from timing out, please have all required documents on hand before starting the application process.*

Additional documents

Less than 30kW

## 3.2 APPLICATION SUBMISSION

The best practice in this category allows applicants to submit an interconnection application in various formats, ideally with an emphasis on a streamlined application submission process which can be completed in one day or less. The regional best practices are listed below in Table 2.

**Table 2: Application Access Submission**

	Anaheim	SDG&E	LADWP
Application Submission:	In person* By Mail* *Not required for systems below 30 kW	Online (30 kW or less) By Mail (30 kW or more)	Online By Mail
Application Completion Time:	Commercial: ≤ 1 Day	Residential / Commercial: ≤ half day	Commercial: 2-4 Days

The model performing utilities in application submission allow an applicant to submit online, in person, or by mail. SDG&E requires all applications for systems 30 kW or less to be submitted online and all systems greater than 30 kW to be submitted by mail. SDG&E uses this submittal system because smaller installations tend to have simpler configurations (and contractors have ample experience designing and installing these systems) so online submittal is quicker to complete and review. Larger systems, however, must be submitted by mail as the complexity of the application and the variation in the installation increases dramatically, thereby making a simplified online application more complex. However, SDG&E is currently designing a database that will accept all applications, including those larger than 30kW. Alternatively, LADWP accepts applications for both residential and commercial systems online and by mail.

Elimination of the interconnection application process represents a regional best practice, but it should be noted that Anaheim Public Utilities and PWP exemplify processes that markedly vary from the IOU process. As a municipally-owned utility, Anaheim Public Utilities is a part of the City of Anaheim, which allows the interconnection process to be combined with the building department's permitting process. This practice reduces the administrative burden and time requirements by allowing the utility personnel to focus verifying system specifications at the interconnection inspection. Furthermore, PWP does not require an interconnection application, but rather integrates the Interconnection Agreement into the Pasadena Solar Initiative rebate process. After a customer applies to the Pasadena Solar Initiative, PWP Engineering staff will perform technical review of electrical drawings and Site Plan, including interconnection to the electric grid. Upon installation the utility will inspect the solar system to check the accuracy of the rebate application and interconnect after completing the inspection. While these processes represent best practices, in the investor owned utilities this process cannot be achieved, as the jurisdiction and utility are entirely separate entities.

The development of an online interconnection submission database or website represents the regional best practice. [SDG&E's online application submission](#) for systems of 30 kW or less provides an easy-to-use process which saves time, decreases mistakes, and reduces utility personnel review time. An applicant proceeds through SDG&E's online submission process by submitting all necessary information and documents. Account numbers and meter numbers are automatically checked through the utility's database which saves personnel time. Once submitted, the applicant receives a temporary identification number and email requesting submission of its one-line diagram through the NEM website. Submission of this information completes the application process. The applicant then receives email notification and a permanent identification number after the application is finalized.

SDG&E created this online submission process because 98% of their interconnection applications are for systems that are 30 kW or less. The online submittal process therefore reduces the need for additional full time employees as the number of applications increases, since these types of applications are extremely similar and can be verified for accuracy by the database. SDG&E is further developing their interconnection process by creating a Distribution Interconnection Information System (DIIS) under which the interconnection application process will operate. The DIIS system will create a flexible and scalable centralized repository for not only interconnection, but also such programs as Net Energy Metering, Electric Vehicles, Distributed Generation, Wholesale Distributed Access Tariff, and Battery Storage. The DIIS will allow a contractor to actively manage their account, current and past applications, and apply for future projects.

Additionally, LADWP also utilizes an online interconnection submission system. This process requires that an application and other documents are submitted online through the PowerClerk online database. LADWP requires submission of a signed Reservation Request form which is automatically generated on PowerClerk and the following documents: a system purchase agreement or installation contract, the customer's most recent electric bill, a Solar Inspection Agreement, the Electronic Document Authorization form, an Energy Audit through the Home Energy Saver Tool, a Residential Disclosure Agreement, and a Preliminary Review Information Work Sheet. The forms can be downloaded on [LADWP's Solar Incentive Program How to Apply & Forms webpage](#). An applicant uploads these documents and forms through PowerClerk to complete the application process. Although, this process makes the application less burdensome for an applicant, it still burdens the utility in terms of personnel hours and other resources as compared to SDG&E's submission process.





## 4. INTERCONNECTION PROCESSING TIME

***Reducing the time required to complete an interconnection application is a significant and important aspect of decreasing the soft costs of rooftop solar PV in Southern California. The goal of identifying and implementing the best practices in this category is to decrease the personnel hours required to process an application by implementing practices that simplify or expedite the process.***

Utilities should track the processing time between when an application is submitted and a final decision is issued. By doing this, applicants can better standardize the utility's processes and plan their project installations more efficiently, thereby saving time and money. Regional best practices refer to utilities that track the process time between application submission and final decision. Model performers in this category process residential applications in an average of 3 days or less and commercial applications in five days or less.

The model performers in the SCRC include SDG&E which provides a traditional and a fast track interconnection application process for systems 30 kW or less that will be release with the new DIIS database in early 2013. The traditional process requires that an applicant submit its interconnection application and one-line diagram 14 calendar days before the local jurisdiction completes its final electrical inspection in addition to providing access to the electrical meter 24 hours a day and 7 days a week. Under SDG&E's traditional interconnection process the average process time to issue a Permission to Operate letter is six days. The fast track process also requires 24/7 meter access, and submission of the online application and one-line diagram 14 calendars days before the local jurisdiction electrical release. An applicant must also upload a digital photo of the Station/Pole Number to identify the transformer and a digital photo of the plaque and electric meter. By expediting this process, SDG&E can issue a Permission to Operate letter the same day that it receives the local jurisdiction's electrical inspection release.

Another beneficial aspect of the SDG&E interconnection process is that the utility communicates to an applicant by email. Documents that SDGE emails to an applicant include the notice of receipt of the application, jurisdictional electrical release, any application problems, and a Permission to Operate Letter. By maintaining the



### **Anaheim**

**is a model performer for interconnection processing time in the SCRC region. Anaheim Public Utilities tracks the process time between application submission and final decision, and the average processing time is three days or less for residential, and five days or less for commercial.**

communication process via email, it ensures that an applicant receives all notifications in a standardized manner and takes all necessary corrective action to complete the process in the case of issues. Information regarding the processing of an application will also be accessible through SDG&E's upcoming Distribution Interconnection Information System (DIIS). This system will benefit an applicant by allowing applicants to view the current status of submitted application, applications with pending jurisdictional releases or SDG&E inspections, incomplete applications, applications with issues, and completed applications. This process will even further expedite the interconnection process by allowing applicants to see their status in real time without having to search for previously received emails from the utility.

## SAMPLE SCE NEM EMAIL



The image shows a sample email header with a collage of green leaves, wind turbines, a sunflower, solar panels, and a power meter. The main heading is "Updates from NEM Interconnection" dated "March, 2012".

**NEM Billing Delay**  
 In late 2011, SCE received a record number of NEM interconnection applications. The unusually heavy application volume caused a delay in the NEM permit, metering, and rate transfer processes, and as a result, it has taken longer than normal to apply NEM credits to customer's electricity bills.

Please be assured this is only a temporary delay. SCE will retroactively credit customer accounts with compensation for any excess electricity that their system produced; starting with the first full billing cycle after the system was authorized to interconnect. We expect that processing of the retroactive credit will be completed by March 31, 2012, and will appear on the customer's next SCE statement in that billing period.

**NEM Billing Inquiries**  
 Customers with questions about their NEM billing may call SCE's NEM Support center directly, Monday through Friday, 8:00 a.m. to 5:00 p.m., at (866) 701-7868 for Residential customers, and at (866) 701-7869 for Commercial customers.

**Expansion of NEM-Eligible Technologies**  
 With the passage of SB 489, the Net Energy Metering program is now available to a broader scope of generating

**Renewable Fuel Source**  
 To enroll on the standard NEM rate, the

Anaheim Public Utilities streamlines its processing time by not requiring an interconnection application for systems of 30 kW or less. This unburdens its staff from evaluating a large number of smaller systems. Similar to SDG&E's online application submission, this process saves personnel hours on simpler applications for systems of 30 kW or less. Anaheim Public Utilities then redirects the saved personnel hours to processing more complicated PV installation applications and verifying system information during the inspection process.



## 5 . INTERCONNECTION INSPECTION

***The accessibility of information regarding the inspection process and the time necessary to conduct an inspection are important factors in reducing the soft costs of solar PV installations. By implementing the best practices in this category, an applicant will be able to access interconnection inspection information and schedule an inspection far more easily. Implementation of regional best practices should decrease associated soft costs by giving applicants the proper information necessary to complete inspection requests, and providing certainty to contractors regarding time frames for inspections. This will help save time for applicants and installers, thereby allowing them to more efficiently allocate resources.***

To achieve best practices in this category, utilities should provide inspection information through multiple options, respond to inspection requests quickly, and provide certainty to applicants regarding the scheduling of interconnection inspections. The regional best practices are listed in Table 3.

**Table 3: Interconnection Inspection Model Performers**

	SDG&E	SCE
Inspection Information:	Online Mail Email	Online Email Person
Average Inspection Time:	≤ 2 Days	6-10 days (Residential)
Typical Window For Final Inspection:	Contractor Not Required at Inspection	Specific Time

The model performers provide inspection information online, email, in person, and by mail and either do not require a contractor’s presence during inspection or provide a specific inspection time. Model performers conduct an inspection in two days or less after a request is made by the installer or customer, or when the local jurisdiction is received.

The model practices in this category include [SDG&E’s Net Metering Application Guides](#) which provides a detailed explanation of the net energy metering application process. Anaheim Public Utilities gives inspection requirement information through its [Residential](#) and [Commercial](#) Program Guidelines which also explain the entire interconnection process. [Pasadena Water and Power](#) follows a similar inspection process as Anaheim. Pasadena’s process includes having the City Department of Planning and Development inspect the system to verify proper installation; after approval the inspector notifies PWP who installs a net meter.

Another best practice in this category is not requiring contractors to be present for the inspection, which reduces time spent and costs for installers. SDG&E operates under the requirement that it has 24/7 access to the customer’s meter thereby negating the need to schedule an inspection with a contractor. SDG&E’s field inspection investigates the meter, disconnect, and “site map” placards, for which an installer is not necessary to be present. In comparison, SCE provides a specific time for inspection which – although a contractor must be present – reduces time spent and allows the contractor to be present to correct any issues that arise.



## 6. CONCLUSIONS & NEXT STEPS

This document has provided a summary of the best practices in the four major interconnection process categories among the local utilities in the Rooftop Solar Challenge team area, including: (1) Information Access, (2) Application Access and Application Submission, (3) Processing Time, and (4) Inspection. Although we cannot expect each utility to completely standardize its interconnection process to conform to the best practices identified here, it is important to identify the best-in-class practices as ways to improve the predictability of the solar installation process.

This is the second report in a series in which the Southern California Rooftop Solar Challenge team will identify best practices in permitting, interconnection, net metering, and financing in the region. Subsequent activities include developing model resource tool kits to provide more practical information on how a local jurisdiction and utility can implement the best practices in each category.

For more information on the Southern California Rooftop Solar Challenge, please visit our website:  
**[www.energycenter.org/sunshot](http://www.energycenter.org/sunshot)**



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