

2019 Solar Installer Training

for Xcel Energy New Mexico

Guidelines & Applications

March 2019



Welcome to the 2019 Solar Installer Training

- **Goal:** To provide installers and developers with the information necessary to complete Xcel Energy's solar applications in a timely manner with little to no errors or delays
- Achieving the above goal will aid in meeting or exceeding our mutual customer's expectations, in terms of interconnection timelines, resulting in an overall increase in customer satisfaction



What Can I Learn From This Training?

- **New installers:** Familiarize yourselves with the basics of the solar application process and find answers to common questions
- **Current installers:** Continue your education and learn about best practices
- **Customers:** Learn more about the solar application process and receive answers to common questions



Involved Parties

- **On-Site Solar Team (Colorado)**
 - Renewable Choice Team Lead
 - Marketing Assistants
- **Internal Team Players**
 - Customer Service/Energy Experts
 - Builders Call Line
 - Metering and Area Engineering
 - Field Metering
 - Billing
- **External Industry Team Players**
 - Installer
 - Developers
 - Local inspectors
 - Home builders



Process Updates in 2019: What's New?

➤ Communication Expectations:

- Salesforce Application Notes – to be use for questions regarding active applications only
- NMSolarProgram@xcelenergy.com Inbox – questions related to Cancelled or Completed applications, general inquiries, or customer questions
- Xcel Energy Solar Hotline (303.571.7652) – Only call for urgent requests

➤ New Homes Estimator Table updated to evaluate 120% rule by comparing the '120% of usage' column to the 'System PV Watts' estimate in solar application

➤ Field metering notices:

- When a Meter Corrections or No Access (out) notices are left at the premise – please call the number listed on the notice to reschedule the meter technician to set the solar meters

➤ Replacement solar system process

Application Process

Application Process



1. **Registration:** Login ([slides 8,9](#))
2. **Start:** Programs, Batteries, New Construction, EVs, Rates ([slides 10-20](#))
3. **Contacts** ([slide 21](#))
4. **System Details:** 120% Rule, Proof of SF ([slides 22-30](#))
5. **Documents & Payments:** Online Payments, Designs, Metering ([slides 31-35](#))
6. **Engineering Review** ([slides 36-40](#))
7. **Final Information:** Proof of Insurance, Final Electrical Inspection, Solar Bank Election form ([slides 41-45](#))
8. **Meter Installation:** Orders, Timeframes, Corrections, Permission to Operate ([slides 46-50](#))
9. **Other:** Extensions, Assignment of Contract, System Removals, Replacements, Manuals, Data Requests ([slides 51-60](#))

Step 1: Registration

Application Portal



RESPONSIBLE BY NATURE®

Solar*Rewards®



The Solar*Rewards Program Website allows customers and installers/developers to create, access and edit Solar*Rewards opportunities. Each participating entity will create an account with a unique username and password to access the site. Once logged in, you can create a new Solar*Rewards opportunity that will follow a step-by-step application process.

Login

Username

e.g. xxxxxx@xcelenergysolarrewards.com
[Forgot Your Username?](#)

Password

Sign In

[Forgot Your Password?](#)

Sign Up

Don't have a Solar*Rewards account? To register for online access to the Solar*Rewards Program Website, you will need some basic information regarding your Xcel Energy account (if you are a customer) or business details (if you are an installer/developer). After you register you will receive an email with your login credentials to complete the process.

Register Now

Username and Passwords

Please be sure to register under your respective company name, if applicable

- Usernames will always end in ***@xcelenergysolarrewards.com***
- Forgot Your Username?
Email Nmsolarprogram@xcelenergy.com
- Password? Select “**Forgot Your Password?**” and an email will be sent to reset your password
 - Email will not be sent unless the username is correct
- Once logged in, you can create new applications at any time (as long as capacity is available)

Step 2: Start

Fields displaying adjacent red bar are required

Solar*Rewards® Application

Next Action- App Owner: Complete initial application details and select "Save and Continue" to move to "Contact Information"

Program & Applicant Information

Program State	<input type="text" value="NM"/>	Program Type	<input type="text" value="--None--"/>
Applicant Account Number	<input type="text"/>	Applicant Premise Number	<input type="text"/>
Xcel Meter Number	<input type="text"/>		

Site Details

Check all below that apply.

Premise Address	<input type="text"/>	Premise City	<input type="text"/>
		Premise ZIP Code	<input type="text"/>
DG Fuel Type	<input type="text" value="--None--"/>	Existing DG Size (AC kW)	<input type="text"/>
New Construction	<input type="checkbox"/>	Rental Property	<input type="checkbox"/>
Existing PV System	<input type="checkbox"/>	Electric Vehicle Charged at Premise	<input type="checkbox"/>
Government Entity?	<input type="checkbox"/>		

☐ I have read, understand, and accept the [Terms and Conditions](#)

- Program State
- Program Type
- Xcel Energy Applicant Account Number
- Xcel Energy Applicant Premise Number
- Premise Address
- DG Fuel Type (Solar PV, Battery etc.)
- Estimated Array Capacity (kW)
- DG Generator Type
- Optional Fields:
 - New construction
 - Existing PV System
 - Government Entity
 - Rental Property
 - Electric Vehicle Charged at Premise

Call Customer Service if you need to confirm the account/premise numbers: 1-800-895-4999

Account Numbers

“How do I enter the customer’s account number? I’m entering the 10-digit number and it’s not working”

Program & Applicant Information

Program State	---None---	Program Type	---None---
Applicant Account Number	<input type="text"/>	Applicant Premise Number	<input type="text"/>
Xcel Meter Number	<input type="text"/>		

Site Details

Check all below that apply.

Premise Address	<input type="text"/>
Premise City	<input type="text"/>
Premise ZIP Code	<input type="text"/>
New Construction	<input type="checkbox"/>
Existing PV System	<input type="checkbox"/>

Solar*Rewards Example

PUBLIC SERVICE COMPANY OF COLORADO

PAGE 1 of 4

MAILING ADDRESS	ACCOUNT NUMBER		DUE DATE
JOHN E. CUSTOMER MARTHA W. CUSTOMER 1234 ELECTRIC AVENUE TAKUHIER, CO 00000-0000	53-1234567890-1		MM/DD/YYYY
	STATEMENT NUMBER	STATEMENT DATE	AMOUNT DUE
	0123456789	MM/DD/YYYY	\$00.00

- Must be permanent account and premise numbers
- Only enter the numbers in between the dashes of the account number
- Do not enter any leading zeroes
- Having a recent copy of the customer’s bill on hand when applying for a solar application is highly advised
- Need help? Click the question mark next to the “Applicant Account Number” field

Program Type

- Choose your program type:
 - DG Net Metering (non-incentivized program)
 - Peak Demand Pricing
- Determine the system size:
 - Small (.05-10kW), Medium (10.01-100kW), or Large (>100kW)
- Select either Customer Owned or Third Party Owned:
 - A Third-Party Owned system is owned by a third party installer/developer; in most cases, a customer has entered into a lease agreement with the developer for the system
 - A Customer-Owned system is fully owned by customer (please note Rental Property if applicable)

DG Net Metering Products

[CO - 2018 DG Large \(>500kW\) Customer Owned](#)

[CO - 2018 DG Large \(>500kW\) Third Party](#)

[CO - 2018 DG Medium \(25.01-500kW\) Customer Owned](#)

[CO - 2018 DG Medium \(25.01-500kW\) Third Party](#)

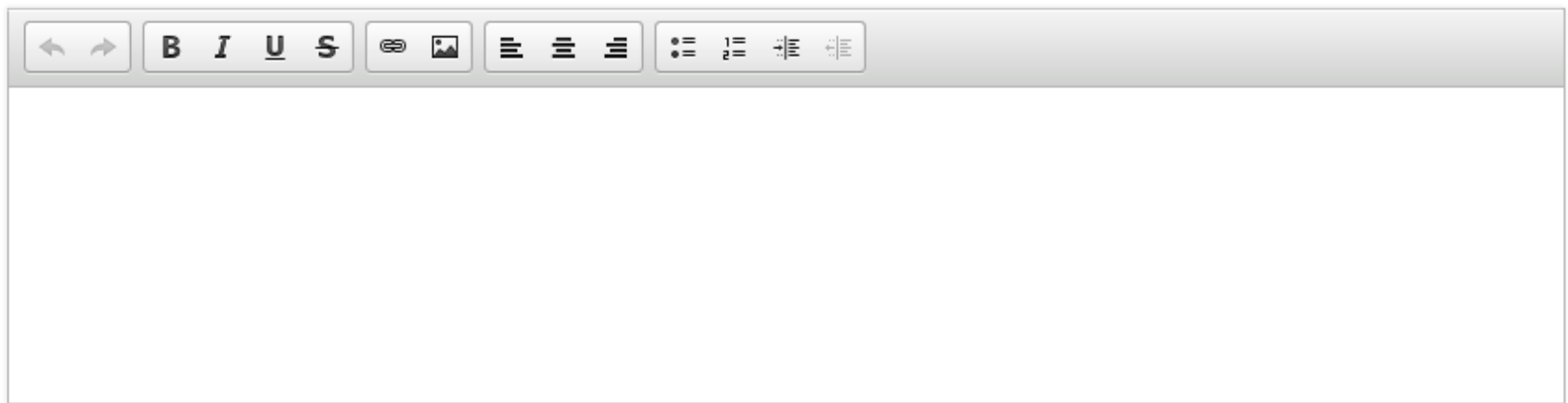
[CO - 2018 DG Small \(.05-25kW\) Customer Owned](#)

[CO - 2018 DG Small \(.05-25kW\) Third Party](#)

Program Type Cont...

- The user will ONLY be able to enter the system size (kW) applicable to the Program Type selection
 - For example, if the small program type is selected you cannot create an application for 11 kW since the small program maximum size is 10 kW
 - If the system was registered within the wrong program, please go to the Application Summary tab and click on 'Cancel Application' as soon as possible, then re-apply for the appropriate program offering

Application Notes



Notes History

Save Share **Cancel Application**

Special Circumstances

Program & Applicant Information

Program State	NM	Program Type	NM - 2019 DG Small (.05-10kW) Third Party
Applicant Account Number		Applicant Premise Number	
Xcel Meter Number			

Site Details

Check all below that apply.

Premise Address		Premise City	
		Premise ZIP Code	
DG Generator Type	--None--	DG Fuel Type	--None--
		Existing DG Size (AC kW)	
New Construction	<input type="checkbox"/>	Rental Property	<input type="checkbox"/>
Existing PV System	<input type="checkbox"/>	Electric Vehicle Charged at Premise	<input type="checkbox"/>
Government Entity?	<input type="checkbox"/>		

☐ I have read, understand, and accept the [Terms and Conditions](#)

☐ It is understood that a production incentive is not applicable for this product type.

New Construction ? ☐

Rental Property ? ☐

Existing PV System ? ☐

Electric Vehicle Charged at Premise ? ☐

Government Entity? ? ☐

- Please make sure you are selecting a box if a special circumstance exists
- Checking the applied box(es) will trigger certain events to occur

Rental Properties

“How do I enter customer information if a tenant is living in the customer’s home?”

- Be sure to check the applicable box for Rental Property - this will require the Tenant and Landlord Release Form to be signed in the Documents & Payments tab of the application

New Construction ? <input type="checkbox"/>	Rental Property ? <input checked="" type="checkbox"/>
Existing PV System ? <input type="checkbox"/>	Electric Vehicle Charged at Premise ? <input type="checkbox"/>
Government Entity? ? <input type="checkbox"/>	

- If the tenant pays the electric bill, then the account number and premise number entered should be the tenants, However, the customer name, contact email, and phone listed should be the actual landlords, not the tenant’s
- If the landlord pays the electric bill, then all customer information should be the landlords

Electric Vehicles

“How will the energy usage be calculated if the customer has an electric vehicle?”

- Submit copy of vehicle registration showing address corresponding with PV install address
 - Will accept the EV proof of purchase
- 120% Rule Calculation
 - < 4 months of consumption history with EV: Add 250 kWh per month (3,000 kWh total per year) to consumption history
 - \geq 4 months of consumption history with EV: Calculate based on customer's average annual consumption with an EV. No exceptions



New Construction

“We have permanent account and premise numbers, but they are under the builder’s name. Can I start a solar application?”



- Yes, an application can begin under builder’s name, as long as the site has permanent account and premise numbers
- After solar meters are installed and the new customer’s name is on the electric account, SolarProgram can initiate an [Assignment of Contract](#)

Existing PV System

- If there is an existing PV system at the premise, must check the box noting Existing PV System on the Systems Details page

New Construction	<input type="checkbox"/>
Existing PV System	<input checked="" type="checkbox"/>
Government Entity?	<input type="checkbox"/>

- Must also enter in the Existing DG Size (AC kW) so that our engineers know what the total aggregate solar capacity is at the premise

CT Cabinet Needed ?	<input type="checkbox"/>
Service Phase	--None-- ▼
Existing DG Type	<input type="text"/>

*This information is checked during Engineering Review and can cause delays if the information isn't provided upfront

Existing PV System Cont...

“A customer wants to add an additional PV system to their already existing system. Do I need to disclose the pre-existing system on the application or on the system designs?”


- The Study Fee will be calculated based on the total AC kW system size;
=SUM of Existing DG Size field + Total System Power Rating field
- If combined kW of systems is greater than 10 kW, a signed [SGIA](#) and study fee of \$1,000 is required
- The aggregate of the existing and additional system sizes cannot exceed 120% of the customer's annual electricity usage
- Existing system and interconnection point must show on the site plan and line diagram
- A second production meter may or may not be installed. Email SolarProgram@xcelenergy.com to find out

CT Cabinet Needed

“How do I submit a new solar application that needs a CT (Current Transformer) Cabinet ?

- Single-phase and three-phase services where the total connected load is in excess of, or anticipated to be in excess of, 320 amps shall use instrument transformer (CT) metering.

PV System Details

Estimated Project Cost	<input type="text"/>	CT Cabinet Needed	<input checked="" type="checkbox"/>
≤ 10' between production & service mtrs?	Yes <input type="button" value="v"/>	Battery Backup	<input type="checkbox"/>
Generator	<input type="checkbox"/>	Pre-Existing Generator?	<input type="checkbox"/>
System Inverter Phase	--None-- <input type="button" value="v"/>	Interested in SPVTOU	<input type="checkbox"/>
Service Voltage 	--None-- <input type="button" value="v"/>		

- Check “CT Cabinet Needed” checkbox in the System Details tab
- Installer will be notified to coordinate with a Metering Engineer for CT delivery on-site prior to the solar meters being installed

Step 3: Contacts

Customer Contact

Customer name below must match name on Xcel Energy account.

Customer Name	<input type="text"/>	Premise Address	<input type="text"/>
Customer Phone	<input type="text"/>	Premise City	<input type="text"/>
Customer Email	<input type="text"/>	Premise State	<input type="text"/>
Customer Email Confirmation	<input type="text"/>	Premise Zip	<input type="text"/>
Premise Address Description <input type="text"/>			

Installer Contact

Installer Company	<input type="text"/>	Installer Address	<input type="text"/>
Installer Contact First Name	<input type="text"/>	Installer City	<input type="text"/>
Installer Contact Last Name	<input type="text"/>	Installer State	<input type="text"/>
Installer Phone	<input type="text"/>	Installer Zip	<input type="text"/>
Installer Email	<input type="text"/>	Installer Email Confirmation	<input type="text"/>

Developer Contact

Developer Company	<input type="text"/>	Developer Address	<input type="text"/>
Developer Contact First Name	<input type="text"/>	Developer City	<input type="text"/>
Developer Contact Last Name	<input type="text"/>	Developer State	<input type="text"/>
Developer Phone	<input type="text"/>	Developer Zip	<input type="text"/>
Developer Email	<input type="text"/>	Developer Email Confirmation	<input type="text"/>

- Customer Contact must match the customer listed on Xcel Energy account (as shown on the customer's bill)
- Installer Contact lists the system installer company
- Developer Contact can be the same or different as the Installer Contact
- Important to verify email addresses before continuing as all system generated emails and documents are sent throughout the process

Step 4: System Details

- Populate all required fields, then click “Save”
- Select correct array type from drop-down menu
 - Fixed describes a ground mount
 - Fixed-Roof Mounted represents rooftop installation
- Add arrays/inverter hardware

Array Detail

# of Panels ?	12
Array Type ?	Fixed Fixed-Roof Mounted 1-Axis Tracking 1-Axis Backtracking 2-Axis Tracking
Array Capacity (kW)	
Array PV Watts ?	

Array(s) and Inverter(s)

“I can’t find the array and inverter I want to use when I try to enter my system details. Can I still use them?”

- We accept all UL certified equipment

Customer Assets

[Add Array](#) [Add Inverter](#)

Action	Asset #	Type	Hardware	# of Panels	Array Capacity (kW)	Array PV Watts	# of Inverters	Power Rating (kW)
Edit Del	CA-0120711	Array	SunPower - SER-235P	20	4.700	6,678		
Edit Del	CA-0120712	Array	Suntech Power - PLUTO240-Wde	11	2.640	3,751		
Edit Del	CA-0120716	Inverter	SolarEdge Technologies - SE 10000A-US (240V)				1	10.0100

- Equipment not listed in Application Portal? Send a screenshot from <http://www.gosolarcalifornia.ca.gov/> to SolarProgram@xcelenergy.com like the one below. We will add the equipment in the order the email is received

Manufacturer Name	Inverter Model number	Description	Power Rating (Watts)	Weighted Efficiency	Approved Built-in Meter	Notes
ABB	MICRO-0.25-I-OUTD-US-208	250W Utility Interactive Inverter	250	96	Yes	NA

*Work with Go Solar California to add equipment to their site if it is not yet listed before we can add it to our site

Power Factor Requirement

- Requirement is based on section 3.3 of the 2-1-17 revised Interconnection Guidelines
- Requires systems have the ability to operate between -0.90 and +0.90
- This PF requirement is part of achieving higher hosting capacities and reducing voltage flicker
- Operating Requirement: Exhibit D language in the Interconnection Agreement

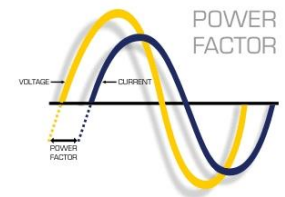
The Generation Facility shall operate at a specified fixed Power Factor:

The specified Power Factor as a condition of interconnection: 98%; Absorbing VARs

This Power Factor is specified at the: Point of Common Coupling

The power factor may be changed from time to time by mutual agreement. A temporary power factor may be specified by Public Service Company of Colorado d/b/a Xcel Energy as a condition of operation in lieu of disconnecting when the distribution system is in a contingency configuration.

The system owner is responsible to operate and maintain all equipment per manufacturer specifications and guidelines.



Power Factor Requirement Cont...

- Applications over 25kW may require a Level II engineering review
- Solar Installer should provide upfront notification (before starting applications) to Nmsolarprogram@xcelenergy.com if a new housing development includes more than 10 homes or 100 kW on a distribution feeder

SAFETY, INTERFERENCE AND INTERCONNECTION GUIDELINES FOR COGENERATORS, SMALL POWER PRODUCERS AND CUSTOMER-OWNED GENERATION (Section 3.3)

www.xcelenergy.com/staticfiles/xcel/Regulatory/Transmission/CO-DG-Tech-Manual.pdf

120% Rule Requirement

- State Statute: PV systems can be sized to produce up to 120% of the customer's average annual electric usage. This is a state statute set forth by the State of New Mexico - all participants are required to adhere to the statute.
- SPSU

Solar System: A distributed generation solar system that is customer-sited and that is limited to a minimum of 500 watts DC up to a maximum electric service entrance capacity of 10 kW DC. The Solar System rated capacity cannot exceed the customer's service entrance capacity nor the Company's distribution capacity that serves the customer. The Solar System capacity rating shall be based on the DC nameplate output of the Solar System and the Solar System shall be sized to supply no more than one hundred twenty percent (120%) of the average annual consumption on the customer's site, which includes all contiguous property owned or leased by the customer. All Solar Systems shall be located entirely within the customer's contiguous property. The Solar System will comply with all interconnection standards and safety provisions set forth in the Company's rules and regulations, the New Mexico Public Regulation Commission, and an Interconnection Agreement between the Company and the Customer must be signed. The Solar System shall be owned, operated and maintained by the customer, as set forth specifically in this tariff.

120% Rule Requirement Cont...

“The application says I am failing the 120% Rule. What do I do?”

- You will receive a system generated email notification about the failure
- Check the “Application Notes” on the Application Summary tab for any notes left by the Solar Team
- All new construction applications will initially fail since additional documentation must be evaluated to bypass the rule
- All existing structures/remodels will be evaluated based on 120% of the customer’s annual electric usage history as long as they have 4+ months of usage
 - If they do not have 4+ months of usage, the application will be evaluated based on livable square footage of the home



Obtaining Customer Usage Data

“How can I obtain my customers’ usage data to evaluate system size?”

Usage is private customer information, we cannot provide the usage numbers without the customer’s consent. Three ways to obtain the information are:

1. Customer signs data consent form

CONSENT TO DISCLOSE UTILITY CUSTOMER DATA

CO

All requested information must be provided for the consent to be valid. This form may be available in other languages. To obtain a copy in another language, please contact inquire@xcelenergy.com. Para obtener una copia de este formulario en español, por favor contacte a su proveedor de servicios públicos.

Utility Name and Contact: Xcel Energy Correspondence Department

Physical and Mailing Address: P.O. Box 8, Eau Claire, WI, 54702

Phone: 1-800-895-4999

Email: datarequest@xcelenergy.com

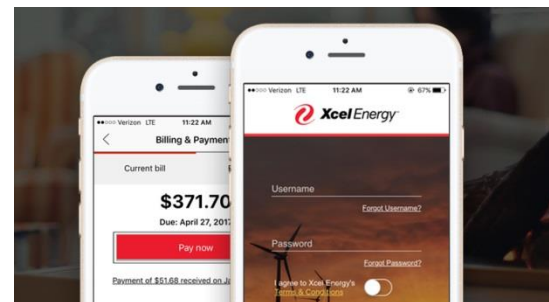
Fax: 1-866-208-8732

For additional information, including the utility’s privacy policy, visit xcelenergy.com.

2. In Customers’ Xcel Energy MyAccount portal:
Pull up usage data and send it to Installer

3. Set Up a Delegate in MyAccount – download guide from Solar Developer Resources webpage under Forms

[How to Set Up a Delegate in MyAccount PDF](#)



Proof of Square Footage

“When do I need to upload Proof of Square Footage?”

- Proof of Square Footage is required for all premises with less than 4 months of electric usage history for the current customer
- New Construction/Remodel
 - Proof of square footage must be from the County Assessor Office or builder's blueprints (Redfin.com, Realtor.com, Zillow etc. will not be accepted)
 - Can only include conditioned/heated/finished areas
- Must show the address where PV system is going to be installed
- A Energy Load Analysis is acceptable for additions or large remodels over 4,000 sf with a System PV Watts estimation greater than 14,946 kWh



Energy Model / Load Analysis

“When do I need to submit an energy model/load analysis?”

- For new construction projects over 4,000 sf with a System PV Watts estimation greater or equal to 14,946 kWh will require an energy load analysis stamped by a Professional Engineer (PE)
 - Must show a monthly or annual snapshot of the total estimated kWh usage (kWh cannot be converted Btu)
 - Must list the premise address for the PV installation



Step 5: Documents & Payments

- All applications are required to pay a study fee for the Engineers review of the application.
- Fees:
 - \$50 for systems $\leq 10\text{kW}$
 - \$100 for systems $>10\text{kW}$ and $\leq 100\text{kW}$
 - \$100+\$1 per kW $>100\text{kW}$

[Pay Fee Online](#)



Payment via Mail

- Pay by Check (~7-days): send Application Deposit/Study Fee Form and check to: ***Xcel Energy DG, PO Box 59, Minneapolis, MN 55440-0059***
- Please be sure to send the study fee form with the check.

Online Payment – Login/Enroll

- Click

Pay Fee Online

- Login or enroll

Don't have a Login ID?

Enroll today to set up your secure user name and password, view and pay bills, and see your account status and payment history.

[Enroll](#)

Xcel Energy

[Admin Login](#)

LOGIN **MAKE PAYMENT**

Welcome to E-Bill Express from Xcel Energy Inc.!

Primary Authorization

Secondary Authorization

[Enroll](#)

Continue as a guest or enroll

Make a one-time payment or enroll today to set up your secure user name and password, view and pay bills, and see your account status and payment history.

[Enroll](#)

Make Payment

Online Payment – Login/Enroll Cont...

- Enter the “Pay My Bills” section of the site

Xcel Energy Home Pay My Bills XXX Solar

Pay My Bills Due Date [Advanced Search](#)

[UNPAID](#) [HISTORY](#) [Hide Account Groupings](#) [Export](#)

<input checked="" type="checkbox"/>	Invoice Date	Due Date	Invoice Number	Amount Due	Remaining Amount	Payment Amount
-------------------------------------	--------------	----------	----------------	------------	------------------	----------------

MESSAGES

Bills are available on this site the day after the interconnection application and fee is created. Payments are posted to the

PAYMENT SUMMARY

0 Invoices \$0.00

[Remove All](#)

Payment Method [Add A Payment Method](#)

Checking Account WFB *****7147

Pay Date

11/14/2016

Payments confirmed before Monday, November 14, 2016 7:00 PM CT will be posted on Monday, November 14, 2016. Payments confirmed after Monday, November 14, 2016 7:00 PM CT will be posted on Tuesday, November 15, 2016.

[Cancel](#) [Continue to Payment](#)

- Click on “Add a Payment Method”
- Complete the bank account information and agree to the ACH debit authorization, then click “Add”
- Click “Continue to Payment”
- Click “By checking this box...” to agree with the Terms and Conditions
- Click “Make Payment”
- Click “Log Out”
- ***Credit cards are not accepted***

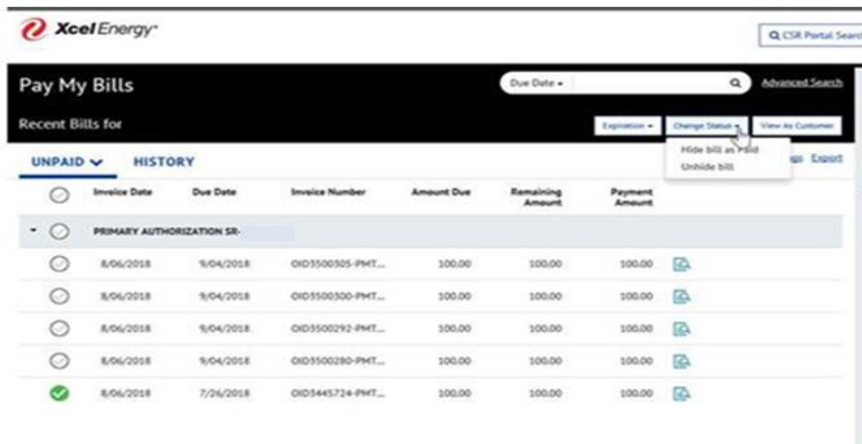
Online Payment – Pay My Bills

- Select all the invoices you want to pay on the “Pay My Bills” screen and pay all at once
- Payment confirmations are sent from Wells Fargo and posted in the solar application OID the next day whenever the payment was made after 7pm CST

• Need Help?
Contact Wells Fargo
E-Bill Express Support
EBillExpress@wellsfargo.com

or

1-877-562-3840



	Invoice Date	Due Date	Invoice Number	Amount Due	Remaining Amount	Payment Amount	
PRIMARY AUTHORIZATION SR.							
<input type="radio"/>	8/04/2018	9/04/2018	OID1500305-PMT...	100.00	100.00	100.00	
<input type="radio"/>	8/04/2018	9/04/2018	OID1500300-PMT...	100.00	100.00	100.00	
<input type="radio"/>	8/04/2018	9/04/2018	OID1500292-PMT...	100.00	100.00	100.00	
<input type="radio"/>	8/04/2018	9/04/2018	OID1500280-PMT...	100.00	100.00	100.00	
<input checked="" type="radio"/>	8/04/2018	7/26/2018	OID1443724-PMT...	100.00	100.00	100.00	

Step 6: Engineering Review

Next Action- App Owner: Address Program Review requested adjustment(s) and select "Submit for Approval"




Array and Inverter Details

# of Panels	80	NamePlate Capacity (kW)	25.600
# of Inverters	2	Total System Power kW Rating	22.000
Estimated Array Capacity (kW) ?	25.600	System PV Watts	39,214

- Application to this point must be reflective of the end product, changes are prohibited during engineering review
 - Changes desired after engineering approval will require an exception and second study fee or new application to be created
 - Engineers have 10-business days to review applications once submitted

******We highly recommend that systems are installed after engineering approval to ensure the system complies with interconnection standards and system upgrades are not needed.

Engineering Review Cont...

Approval History						
Action	Date	Status	Assigned To	Actual Approver	Comments	Overall Status
Step: Engineering Review (Pending for unanimous approval)						 Pending
	4/7/2017 4:00 PM	Pending	Tom Malone	Tom Malone		
	4/7/2017 4:01 PM	Approved	Lisane Dinssa	Elizabeth Klinger		
Approval Request Submitted						
	4/7/2017 4:00 PM	Submitted	test user 1	test user 1		
Step: Engineering Review						 Rejected
	4/7/2017 3:57 PM	Rejected	Lisane Dinssa	Elizabeth Klinger		
Step: Verify Solar*Rewards Opportunity						 Approved
	4/7/2017 3:50 PM	Approved	CO SR Admin	Elizabeth Klinger		
Show 1 more » Go to list (6) »						

- If approved by Engineering, application will move on to Final Documentation
- If a rejection occurs, installer will receive an email with further instructions
- For 10 kW and over reviews, wait until both engineers reply to re-submit for approval (if applicable)

Site Plan, Line Diagram

Solar®Rewards® Application

Documents & Payments

Application #: OID2826306

Next Action- App Owner: Complete download/upload documents and payment requirements. Select "Save and Continue" for Program Review.

[Return Home](#)

Select document you want to upload:

(document type to upload)

Select document file:

[Browse...](#)

Upload file:

[Upload Document](#)

Payments

The fields below will display the date a payment was received. If no date is displayed, we have not yet received the associated payment.

Total Amount Due \$0.00

Total Amount Paid \$100.00

Study Fee Received Date [[4/5/2017 3:43 PM](#)]

- Upload a [Site Plan](#) and [Line Diagram](#)
- Upload [SGIA](#) (if applicable)
- Tenant Release Form (if applicable)

Systems 10 kW and over

“What additional documentation should I submit for systems 10 kW and larger?”

- All systems 10 kW and over require a \$100 Study Fee
 - If the aggregate kW of an Existing PV and new application for PV and/or battery at the same premise is 10 kW or over will require \$100 Study Fee
- All systems 10 kW and over require a [Small Generation Interconnection Agreement Form \(SGIA\)](#) download from Solar Developer webpage
- Review performed by Xcel Energy metering and area engineers
- PE stamped Energy Model/Load Analysis (if applicable)
- CT cabinet checkbox (if applicable)



Metering Requirements

- Metering requirements are listed in the [DG Interconnection Guidelines](#) starting on page 27
- Required Disconnect Labeling is shown on page 46
- Brass tags are a solar installers responsibility to install. If there is an apartment number or it is a 2nd PV meter, it has to be noted on the tag. Tags can be brass, aluminum or stainless steel and **MUST BE** permanently attached to the meter socket



MAIN SERVICE METER
LOCATED 60' ON
WEST SIDE OF HOME

PV PRODUCTION METER
LOCATED 60' EAST
ON DETACHED GARAGE


- The production meter shall be located within ten (10) feet of the existing billing meter. If this cannot be accomplished, additional labeling at each meter directing personnel to the other meter location is required. Production meter locations will be addressed during the engineering review; exception requests are not necessary. Approval from the local Electric Meter Shop may also be required.


Step 7: Final Information


Documents for Download

[NABCEP Form](#)

Final Application Details



Final Invoice Amount  12,247.00

Restricted Access to Meter Area?  ☐

Inspection Date  2/7/2017 [9/28/2017]


PV/DG Installation Date  2/7/2017 [9/28/2017]

Documents to Upload


Please upload the documents listed below. Select the name of the document to upload, select the document file by clicking "Choose File", and click "Upload". Waiting for Upload:  Document Uploaded: 

Proof of Insurance  02/04/2017

Final Electrical Inspection  02/09/2017

NABCEP Form  02/09/2017

Select document you want to upload:

Proof of Insurance 

Select document file:

Browse...

Upload file:

Upload Document

- Final Application Details must be populated and saved before final documents can be uploaded
- Upload Proof of Insurance, Final Electric Inspection, [NABCEP form](#)

Final Electrical Inspection

“What does the Final Electrical Inspection need to include?”

- The premise address
- The name of the inspection agency (ex. City of Denver)
- The type of inspection (Final Electrical)
- The outcome of the inspection (Pass/Fail)
- The date of the inspection
- The inspector's name and signature (electronic signature or initials are accepted)



Final Information Cont...

- Click “Retrieve Documents” button once the final information and documents have been uploaded

Documents to Sign

Click "Retrieve Documents" below to populate and send the final documents requiring your signature. Documents will be sent to the various signer email addresses defined on the contacts tab.

Retrieve Documents

- Once “Retrieve Documents” has been selected, no changes can be made to the application
 - Please be sure the owner’s name is listed on the agreement if tenant is present

Final Information Cont...

- Documents are fully signed when green checkmark shows next to the document

Documents to Sign

Status	Name		Date Signed	Signed Link
Signed	2017_Small.Medium_CustomerOwned_InterconAgreement	✓	9/13/2017 7:10 AM	https://www.sertifi.com/xcelenergy/passthrough...
Signed	DG Reservation Letter	✓	9/13/2017 7:10 AM	https://www.sertifi.com/xcelenergy/passthrough...

- Non-Solar*Rewards (DG) applications have 2 documents to sign electronically

Excess generation: How the Solar Bank is allocated

- Excess generation from the net metered PV system:
 - Less than \$50 will accumulate and rollover month to month until the net accumulated sums to \$50 or more.
 - Greater than \$50 or more the customer will receive a check at the end of the billing period.
- The kWh's of excess generation are cashed out at the avoided fuel cost ~2.5 cents/kWh.

Step 8: Meter Installation

Restricted Meter Access

“If the customer has restricted access to the meters, what do I do?”

- Check “Restricted Access to Meter Area” checkbox
- Add an Application Note on the Application Summary tab detailing the restricted access (dogs, locked gate etc.)
- Didn't check the box? Email NMSolarprogram@xcelenergy.com if an appointment for meter installation needs to be made



Final Application Details

Final Invoice Amount ? 12,201.75

Inspection Date ? 3/5/2015 [3/26/2015]

Restricted Access to Meter Area? ☒

PV Installation Date ? 2/2/2015 [3/26/2015]

Meter Order

“How do I know when the meters are ordered?”

- The Production Meter Order Date on the Application Summary tab will populate when meters are ordered

Meter Order Details

Production Meter Order Date	9/21/2017 6:00 PM	Net Meter Order Date ?	9/21/2017 6:00 PM
Production Meter Install Date ?		Net Meter Install Date ?	
Production Meter Number ?		Net Meter Number ?	

- Once meters are installed, the Production and Net Meter Install Dates and Numbers will populate in Meter Order Details

Meter Order Details

Production Meter Order Date	9/20/2017 6:00 PM	Net Meter Order Date ?	9/20/2017 6:00 PM
Production Meter Install Date ?	9/25/2017	Net Meter Install Date ?	9/26/2017
Production Meter Number ?	000082272703	Net Meter Number ?	000082830505


- The general service meter will be replaced with a Net Meter, and a PV Production Meter will be added for any new solar interconnection

Meter Installation Timeframe

- Please allow **20- business days** from the meter order date for the PV Production and Net Meters to be installed
- For any corrections or access issues, the meter technician will leave a notice at the premise
- You must call the number listed on the notice to reschedule a meter technician to come back out to install the meters
- Please do not contact the solar team to reschedule a meter install

>Customer Notice left when meter technician could not access the meter location

FORM 17-8946

 **Xcel Energy™**

CUSTOMER NOTICE

DATE	TIME
ADDRESS	

☐ We could not:

☐ Install/Turn On/Shut Off/Restore

☐ Gas ☐ Steam

☐ Electric ☐ Electric meter is on, circuit breakers are off - reset for service

☐ Repair appliance

☐ Repair street light - *If further information is needed, please refer to Grid No. _____ when calling _____*

☐ Change meter

☐ Investigate complaint

Other _____

Because:

☐ No one home

☐ Premises inaccessible

☐ Services not yet up to building


Other _____

☐ Please call _____ between 8:00 A.M. and 4:00 P.M. for appointment or further information.

☐ Underground cable has been cut to this light. Underground crew will respond.


☐ While you were out, your gas service was interrupted for repairs. *For relight of your appliances, please call _____ between 8:00 A.M. and 4:00 P.M. After 4:00 P.M. call _____*

Thank You!

 **Xcel Energy™**

Meter Installation Timeframe Cont...

- Customer Notice left by meter technician when corrections are needed before meters can be installed

 **ELECTRIC SERVICE AND WIRING NOTICE**
XCEL ENERGY

Address _____ Date _____

☐ We were UNABLE to provide metered electric service **BECAUSE: ☐ Our Company ☐ Your Electrician *

Should correct the following _____

By _____

*Please telephone _____ when corrections have been made for additional information.
**IF NOT CORRECTED WITHIN 10 DAYS FROM THE DATE OF ISSUE, SERVICE WILL BE DISCONNECTED.
DISCONNECT DATE _____

Meterman write in this space ONLY if someone is contacted on the premises.

CONTACTED: Miss _____
Mrs. _____
Mr. _____

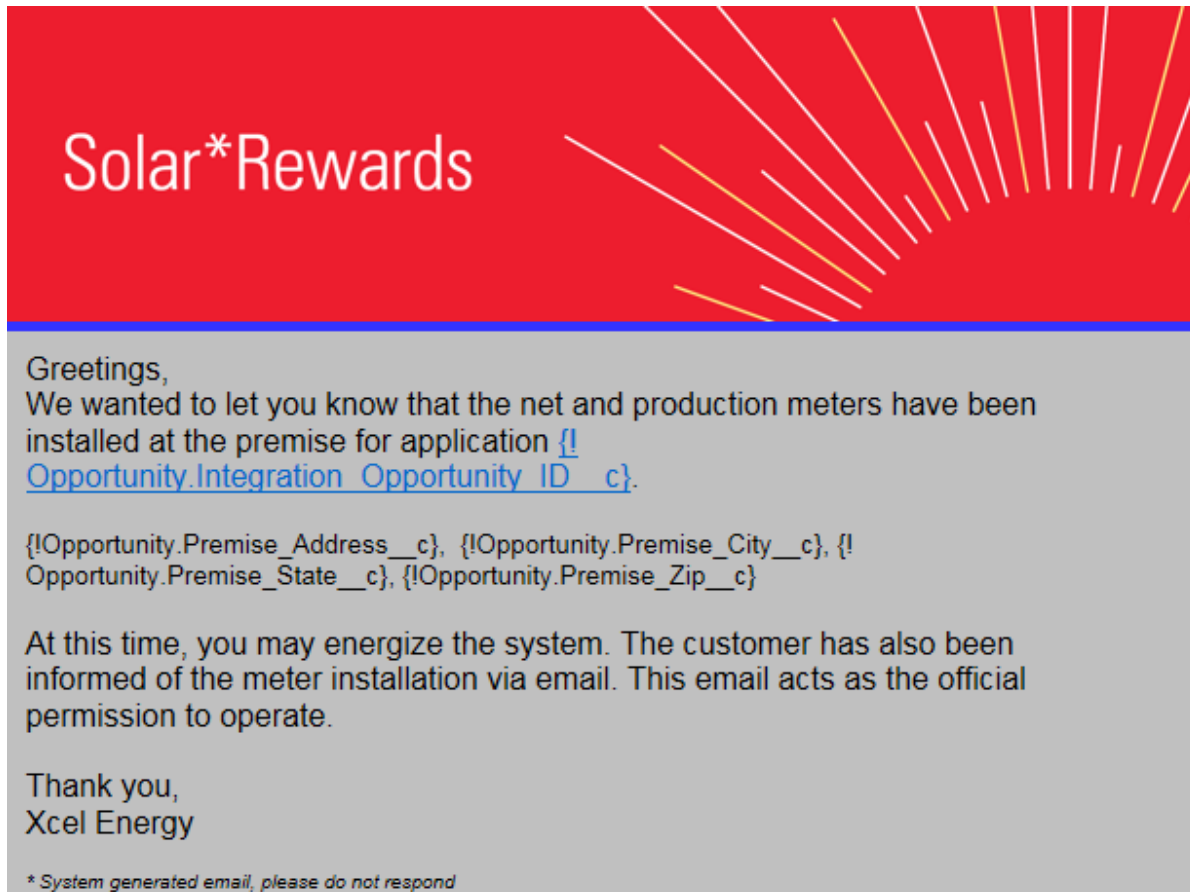
Remarks _____

ECR. No. _____ Signed _____ Date _____

Form (L) 324 - 22 - 0441

Permission to Operate

“How do I know when my Installer can energize my solar system?”



- Once meters have been installed, a door hanger will be provided and Permission to Operate (PTO) email will be sent to the customer after meters have been installed

Multi-Tenant Solar Metering

Building Ownership

- For situations where a building is owned/controlled by a single owner, the owner has the ability to dictate where the solar can be sited at or on their facility without regard to individually metered tenant spaces.
- This assumes that their solar installation proposal is accepted by the authority having jurisdiction (AHJ) who regulates the construction process for both the local jurisdiction building/electrical codes as well as the applicable fire code.
- Every situation will be subject to Xcel Energy provisions as they relate to participation in Solar*Rewards programs, Colorado Code of Regulations, and tariffs.

Multi-Tenant Solar Metering Cont...

If more than 10 individual systems or 100kW in aggregate is applied for:

- Give notice to XE Solar Team that multiple applications will be in close proximity to one another (SolarRewards@xcelenergy.com)
- Additional study fee may be required (may be looked at in aggregate)
- Increased likelihood that system upgrades could be required

Examples of this situation could include planned residential solar developments, multifamily apartment complex, shopping center or mall, small commercial building with tenants, or one owner with multiple buildings.

Assignment of Contract (AOC)

“I’m moving. What do I need to do with my solar agreements?”

- For Solar*Rewards systems: If you sell your home after the application process is complete, you may transfer the Contracts/Agreements to the new owner with an Assignment of Contract. The owner would assume responsibility for the terms of the contract
- For Non-Solar*Rewards (DG) systems: The new homeowner needs to sign a new Interconnection Agreement with Xcel Energy to receive the benefits of the net-metered rate
- View the [Assignment of Contract](#) webpage for the detailed process



System Removals

- In the event that a system needs to be removed or relocated, please notify us by emailing nmsolarprogram@xcelenergy.com
- The Net and PV Production meters will be removed from the premise and the general service meter replaced
- If a system is going to be offline for more than 90 days, notify SolarProgram in writing so that the system does not automatically get flagged for non-production and have a meter removal order logged

*please never remove the NET or PV production meters as they are Xcel Energy property



System Replacement

- In the event that a PV system needs to be replaced, the following steps must be taken:
 1. Notify NM solarprogram@xcelenergy.com with the following information:
New site plan and line diagram for the replacement system showing the exact or close to the same NamePlate kW DC system size as the original installation. Show what equipment is new and what is not new on the designs.
 2. Solar Team sends the replacement system designs to an engineer to confirm it is a 1 for 1 match to the original system (10% threshold on system size permitted)
 3. System replacements must still pass the 120% rule check based on current usage (solar production + net consumption = usage)
 4. Once approved, Installer sends Solar Team the final electrical inspection and owner proof of insurance after system has been installed
 5. Solar Team will upload approved designs to original solar application and order new meters, if needed.
 6. There are no review fees unless a new application is created

DG Manual Updates 2.1.2017

- The DG Manual has been updated to include changes and clarifications as interconnection review practices have evolved

<https://www.xcelenergy.com/staticfiles/xcelenergy/Regulatory/Transmission/CO-DG-Tech-Manual.pdf>

Revised Installation Standards



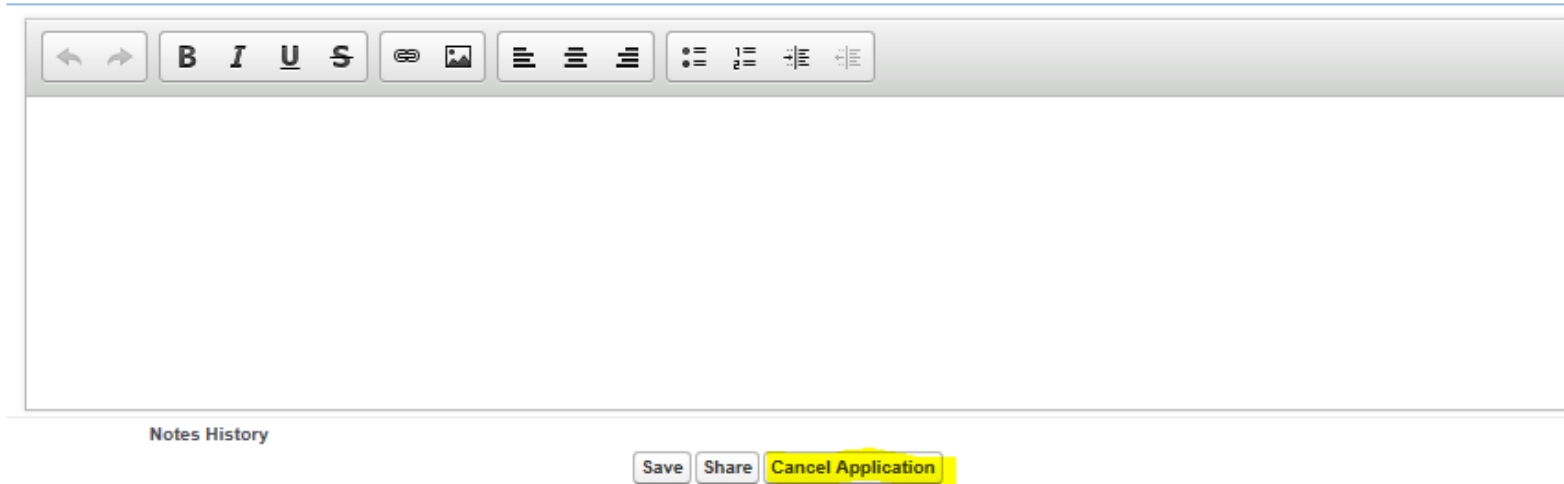
Standards for Electric Installation and Use

- The [Xcel Energy Standard for Electric Installation and Use](#) was revised on 8/15/17
 - Please make sure that all documents submitted include the correct revision date and section numbers
- [Exception Form](#) for requesting exceptions to the “Xcel Energy Standard For Electric Installation and Use”

Stagnant Applications

- Only for Non-Solar*Rewards (DG) applications, please submit the study fee within 60 days of creating an application
- If no action or progress has been taken on an application in 90 days, an email communication or application note will be sent prior to cancelling the application

Application Notes



Notes History

Save Share Cancel Application

- Be sure to cancel any applications that were entered incorrectly before creating a new one

Pre-Application Data Requests

- If you want to check on reliability issues of distributed generation (DG) installations you can complete a [Pre-Application Data Request](#). Steps are as follows:
 - Sign NDA prior to receiving [Pre-Application Data Report](#)
 - Provide map of anticipated Point of Interconnection
 - \$300 payment per Interconnection Address (wire or check)
- Xcel Energy will provide a Pre-Application Data Report of the findings within 15 business days of the receipt of the completed request form and payment of all fees

*see Pre-Application Data Request form for all general details

Substation

Substation Name:	_____	Transformer Absolute	_____
Substation Transformer:	_____	Min Loading (MVA):	_____
Transformer Rating	_____	Existing Generation	_____
(MVA):	_____	(MVA):	_____
Transformer Peak	_____	Total Queued	_____
Loading (MVA):	_____	Generation (MVA):	_____
Transformer Daytime	_____	Available Transformer	_____
Min Loading (MVA):	_____	Generation Capacity:	0 MVA
LTC or Regulator:	Regulator	Circuit distance from site	_____
		to Substation (feet):	_____

Additional Resources

[On-Site Solar Frequently Asked Questions](#)

[Study Fee Form \(PDF\)](#)

[Application Process for Customers](#)

[Solar*Rewards Community Developer Resources](#)

Thank You!



Thank you for reading the 2019 Solar Installer
Training

Still have questions? We are here to help!

Email: NMSolarprogram@xcelenergy.com

Solar Hotline: 303.571.7652 (9am-3pm M-F)

