

# SolarGenerations

## PROGRAM HANDBOOK





# TABLE OF CONTENTS

*Please ensure you are reading the most recent version of this handbook by visiting the NV Energy website [www.NVEnergy.com](http://www.NVEnergy.com)*

SOLARGENERATIONS OVERVIEW ..... 3

ELIGIBILITY ..... 4

APPLICATION ..... 5

APPLICATION FEES..... 6

SYSTEM SIZING ..... 7

SITING AND EQUIPMENT..... 9

INCENTIVE CALCULATION..... 10

RESERVATION NOTICE ..... 12

APPLICATION CHANGES ..... 12

INCENTIVE CLAIM ..... 13

INSPECTIONS ..... 14

PAYMENTS..... 16

PRODUCTION VARIATIONS..... 16

CANCELLATION, WITHDRAWAL, AND FORFEITURE..... 16

FOR MORE INFORMATION ..... 17



## SOLARGENERATIONS OVERVIEW

- The goals of the program are to expand and accelerate the development of solar distributed generation systems and to establish a sustainable and self-sufficient solar renewable energy industry in Nevada in which solar energy systems are a viable mainstream alternative for homes, businesses and other public entities.
- The program was created by the Nevada State Legislature and is regulated by the Public Utilities Commission of Nevada, defined in Nevada Revised Statutes and Nevada Administrative Code Chapter 701B. The program is subject to changes made by the Nevada State Legislature, the Public Utilities Commission of Nevada, and NV Energy.
- The program is funded by NV Energy customers and is administered by NV Energy.
- All program participants must qualify for, participate in and comply with all of the rules of [Net Metering](#).
- Installations must be permitted through the local building authority and interconnections must be performed by a Nevada licensed C-2 or C-2g electrical contractor.
- Projects in construction prior to the issuance of a Reservation Notice are not eligible for incentive.
- NV Energy pays incentives as available per NRS 701B.
- All portfolio energy credits issued for a solar energy system installed pursuant to the Solar Program must be assigned to and become property of NV Energy. Any generating capacity installed outside of the Program must be separately metered in order to maintain ownership of portfolio energy credits.
- NV Energy will install digital “smart meters” for both the revenue and generation meter for all program participants.
- NV Energy is not responsible for operation, maintenance, or energy production of renewable energy systems installed through this program.
- NV Energy is not responsible for consumption changes or billing changes as a result of the customer’s decision to install a renewable energy system.

## ELIGIBILITY

**Customers.** NV Energy customers except Federal Government and distribution-only customers are eligible for incentives. Applications are made in one of the following categories, as determined by the type of customer:

- Residential
- Small Commercial
- Large Commercial/Industrial
- Public Entity
- Low-Income/Nonprofit

### Program Categories and Billing Rate Classes

**Residential:** All residential customers.

**Small Commercial:** Non-residential customers in rate classes GS, GS-1 or smaller, including irrigation rate classes.

**Large Commercial/Industrial:** Non-residential customers in rate classes GS-2, LGS-1 or larger.

**Low-Income/Nonprofit:** Customers who demonstrate eligibility by submitting evidence of one of the following:

- Ownership of publicly subsidized housing;
- IRS 501(c)(3) status
- Qualification for the federal low-income housing tax credit (LIHTC);
- Annual household income that does not exceed the low-income limits (80%) of the U.S. Department of Housing and Urban Development's most current Income Limits Documentation System data for the number of individuals in the household and the county in which the person resides; or,
- Qualification as a Title 1 School.

**Public Entity:** Customers that are:

- A department or agency of a state or local government; or,
- A public school district.
- An institute of higher education that is part of the Nevada System of Higher Education;
- An Indian tribe or tribal organization; or,
- A corporation for public benefit.

The System Owner may be the NV Energy Host Customer or a third party as designated by the Host Customer.

**Contractors.** Installers must have an active C-2 or C-2g Nevada contractor’s license. If a contractor’s license is suspended, applications associated with the contractor are not eligible to receive a reservation notice or an incentive payment, unless the system was completed and inspected by the local building authority prior to the suspension date. Customers may select a different Installer – refer to the Application Changes section in this handbook for more information.

## APPLICATION

Applications are submitted online through PowerClerk which is accessed through the NV Energy website.

**Applicant:** The party responsible for preparing the application and incentive claim package in PowerClerk.

**Host Customer:** The NV Energy customer of record at the proposed installation location. The Host Customer name must exactly match the name on the NV Energy bill. The Host Customer is responsible for making any changes to their NV Energy bill prior to application. Persons listed as co-applicants on the NV Energy bill may apply as the Host Customer.

**System Owner:** The owner of the generating system when the incentive is paid. Systems that are on a leasing arrangement, a lease-to-own arrangement, or a Purchase Power Agreement (PPA) are owned by the leasing company or the company providing the Purchase Power Agreement (PPA); therefore, those entities are considered the System Owner.

**Installer:** The Nevada licensed electrical contractor (C-2 or C-2g) who performs the installation and system interconnection.

**Seller:** The party that sells or leases the system to the Host Customer.

Applications are reviewed to confirm that the Host Customer is eligible for the category and that all required documentation is provided.

Important communications are sent by email to program participants. Accurate email addresses are required for ALL program participants, including Host Customers.

Deficient applications will not be processed. Deficient applications that are not corrected within 20 days of the Applicant being notified of the deficiency are canceled and the application fee is forfeited.

An application must include:

1. A copy of the installation contract or energy services agreement for the installation of the system.
2. A recent copy of the Host Customer's NV Energy utility bill.
3. Evidence of host customer category eligibility (Low-Income/Nonprofit only).
4. A site plan indicating where the panels are proposed to be installed. This plan can be from a commercially available overhead image that has been modified to show the location of the solar panels.

**Contract or agreement must include:**

1. Names and signatures of the NV Energy Host Customer and the Installer. Host Customer name on the contract or agreement must match the name on the application and the NV Energy bill.
2. The physical address of the installation.
3. The AC wattage, expected energy output of the system or other clear indication of proposed system size.

**Utility Bill:**

If NV Energy service has not been established, as in new construction, the Applicant may submit in place of the utility bill a document indicating future service. NV Energy service must be established before the system will be interconnected. To demonstrate that service has been established a copy of a recent utility bill must be provided with the incentive claim package.

## APPLICATION FEES

A \$35 non-refundable fee is required for all applicants. The fee must be received by NV Energy before the application will be reviewed and approved. Applications are reviewed in the order that fees are received.

Since the fee may be paid by the customer or the solar company, customers should communicate with their solar company before submitting payment. If NV Energy receives duplicate fee payments for the same application, the first payment is posted and subsequent payments are returned.

The fee may be submitted by check or electronically through the NV Energy Western Union payment portal, SpeedPay. The link to SpeedPay is provided in the application. The application number, generated when the application is submitted, must be written on checks and provided in SpeedPay. Application fee checks are not accepted prior to submission of an application. Cash is not accepted. SpeedPay is only available when an NV Energy account number exists. Residential and commercial new construction will not yet have an NV Energy account number, so SpeedPay will not be available; therefore, payment must be made by check.

If the fee is not received within 30 days of submission of the application, the application will be cancelled.

Application fees may be mailed to:  
**NV Energy**  
**Attn: RenewableGenerations**  
**6100 Neil Road**  
**MS S2A35**  
**P.O. Box 20000 Reno, Nevada 89520**

If a complete incentive claim for the completed system is not submitted prior to the expiration date on the Reservation Notice the fee is forfeited.

## SYSTEM SIZING

When it comes time to properly sizing a solar PV system, the installation contractor will utilize NV Energy's Power Clerk software, or will determine the size based upon historical energy usage at the premise.

**Premise:** All of the real property and apparatus of a residential or non-residential customer employed in a single integrated activity operating under one name in one or more buildings and /or locations on an integral parcel of land where: (a) such buildings and/or locations are situated on a single unit of property; or (b) such buildings and/or locations are situated on two or more units of property which are immediately adjoining or adjacent, and are not divided by intervening public highways, streets, alleys, railways or waterways.

The highest energy usage that occurred in 12 consecutive months out of the last 24 months will be used to determine the maximum size of the new solar PV system. The system size can be less than the amount estimated to be used at the premise, but it cannot be sized to create more energy than is estimated to be consumed in a year based on the customer's annual requirements for electricity.

**Customer's Annual Requirements for Electricity:** The kilowatt-hours (kWh) consumed at the installation location in the consecutive 12 months with the highest energy usage during the two years prior to application submittal.

The size of a net metered solar PV system is measured in kilowatts (kW) in alternating current (AC). The CEC AC wattage of a system equals the California Energy Commission (CEC) rating of each panel multiplied by the number of panels, then multiplied by the CEC efficiency rating of the inverter(s). The "Effective System Size" in PowerClerk is the product of the CEC AC x Design Factor. The Effective System Size must be used to size a solar PV system.

The Design Factor is determined by taking the ratio of estimated production for the actual system to that of an idealized system. PowerClerk will indicate the CEC-AC, the Effective System Size and the Effective Estimated Annual Production as shown below:

System Rating: 4.125 kW DC / 3.421 kW CEC-AC  
Estimated Annual Production: 6340 kWh  
Design Factor: 94.7 %

Calculate

**PLEASE NOTE: Use the Effective System Size and the Effective Estimated Annual Production below to size your system. (Starting Jul 1, 2017)**

The Effective System Size is the result of the CEC AC x Design Factor. This size must be less than or equal to the 12 month billing history. The Effective Estimated Annual Production is the result of the Estimated Annual Production x Design Factor.

Effective System Size  
3.24 kW

[Show Details](#)

Effective Estimated Annual Production  
6003.98 kWh

[Show Details](#)

## Commercial and Residential System Sizing

If energy has not been consumed at a proposed location for a 12 consecutive month period during the two prior years, or if the customer has a change of circumstances that would make the historical usage calculation incorrect, then a Nevada licensed engineer's estimated energy usage may be used for systems as an alternative method for estimating usage. Some of the factors that may contribute to a change of energy consumption include:

1. customers that add on additional square footage to a dwelling that already has a solar installation;
2. customers that add electric vehicles;
3. premises that do not have 12 consecutive months of billing history prior to submission of the application; and
4. other significant load changes.

The estimated production of the proposed system (kWh) may not exceed the engineer's calculation.

## Alternative Residential System Sizing Method

If the host customer has not consumed energy at a proposed residential installation location for a 12 consecutive month period during the two prior years, then the solar system may be sized by using less than 12 months which would produce a smaller than potential maximum system size. Alternatively, the system may be sized based on the interior living area of the residence. In northern Nevada the solar system may be up to 2 watts (CEC-AC) per square foot of interior living space; in southern Nevada the solar system may be up to 2.8 watts (CEC-AC) per square foot of interior living space. If 12 months of energy usage history exists, then the watts per square foot of interior living space method may not be used.



## System Additions

Host Customers may interconnect additional capacity at a premise with existing renewable generation capacity. System addition applications are subject to special terms that require review and approval by NV Energy. The list below addresses some of the considerations for system additions. **Ask before you add!**

- All renewable generation capacity on a Premise that has received or will receive an incentive cannot exceed 500 kW (CEC-AC). This limitation applies separately for renewable generation systems of other types (i.e. wind and hydro generation).
- If ownership of Portfolio Energy Credits (PECs) for previously installed capacity (for systems that did not receive an incentive) is to be maintained by the System Owner, the new capacity must have a generation meter installed to separately measure system production. PECs for any previously installed capacity that is not separately metered are assigned by the System Owner to NV Energy.
- Installation of additional capacity on a system receiving production based incentive requires that the reserved capacity have a separate generation meter from the additional, unreserved capacity.

**Portfolio Energy Credit (PEC):** A measured unit that represents one kilowatt hour (kWh) of renewable energy.

## Additional Notes on Capacity

Customers may install a system larger than the size indicated on the Reservation Notice provided that the system does not exceed 500 kW (CEC-AC) and the size limits as described in Net Metering law.

## SITING AND EQUIPMENT

All completed solar systems must adhere to the following siting requirements:

- Completed systems will be reviewed and may be inspected following submission of the incentive claim to confirm compliance with program rules. If siting requirements cannot be visually verified during the program post inspection, the Applicant may provide NV Energy with a stamped and signed attestation of system azimuth or shading from a Nevada licensed professional land surveyor or engineer, or other evidence of actual azimuth as approved by NV Energy.
- The solar panels (modules) and inverters in the system must be listed on the California Energy Commission [\(CEC\) lists of approved solar equipment](#).
- Solar systems must be new and must have the following warranties:
  - Solar panels – 20 years (product or production)
  - Inverters – 7 years (product)
  - Labor and Workmanship – 2 years

## INCENTIVE CALCULATION

The maximum eligible incentive for an application is calculated and reserved during the initial application process and is listed on the Reservation Notice. The method for incentive calculation and incentive payment are determined by the size of the proposed system.

System Size	Incentive Calculation
0-25 kW (CEC-AC)	Expected Performance Based Buydown (EPBB)
25.001-500 kW (CEC-AC)	Performance Based Incentive (PBI)

**Expected Performance Based Buydown (EPBB):** A one-time payment, determined by the expected production of the solar system.

EPBB incentive payment = CEC-AC multiplied by Design Factor multiplied by incentive level.

**Design Factor:** A ratio calculated in PowerClerk that compares the expected production of the proposed system to the production of a system using ideal design parameters. The installation location, and the azimuth and tilt of each array of solar modules are the variables that determine the Design Factor.

### EPBB Incentive Levels

Category	Step 11
Residential/Commercial/Industrial	\$0.20 / watt
Low-Income/Nonprofit/Public Entity	\$0.45 / watt

The EPBB incentive payment will not exceed the lesser of:

- The maximum amount listed on the Reservation Notice.
- CEC-AC Wattage multiplied by Design Factor multiplied by incentive level.
- AC Wattage multiplied by average installation cost per watt multiplied by 50%.
- The actual total installed cost of the system.

**Performance Based Incentive (PBI):** The incentive is paid over time, in quarterly payments, determined by the amount of energy produced by the system. Energy production is measured by the NV Energy generation (REC) meter installed in the customer provided meter socket.

PBI Incentive payment = energy production (kWh) during payment period multiplied by incentive level

### PBI Incentive Levels

Category	Step 11
Residential/Commercial/Industrial	\$0.0250 / kWh
Low-Income/Nonprofit/Public Entity	\$0.0550/ kWh



The total of all PBI payments will not exceed the lesser of:

- The total kWh production of the system during the five years after initial interconnection multiplied by incentive level listed on the Reservation Notice.
- CEC-AC Wattage multiplied by average PBI installation cost per watt multiplied by 50%
- The total installed cost of the actual system.

## RESERVATION NOTICE

Once an application has been reviewed and approved, the Applicant, Host Customer, Installer and System Owner are sent a Reservation Notice by email that indicates that incentive funds have been reserved for the project. The notice lists the approved kilowatt capacity of the system and the calculated incentive amount for performance based incentives (PBI) and for expected performance based buy-down (EPBB) incentives. The Host Customer has sole rights to the Reservation Notice. The application reservation expires one year from the date the Reservation Notice email is sent from PowerClerk.

Applicants may check the status of their application by signing into PowerClerk. “Active” status indicates that a Reservation Notice has been issued.

Project construction may not begin before a Reservation Notice is issued. Projects that are in construction prior to receiving a Reservation Notice are not eligible for an incentive.

## APPLICATION CHANGES

### **Installation Location**

Applicants and Host Customers may change the installation address of a reservation to another address with the same Host Customer. Changes must be requested in writing to NV Energy and are subject to system sizing rules. Location changes will require that the Applicant provide a copy of a recent NV Energy bill for the proposed location. The new installation location is recorded in PowerClerk, but the Reservation Notice is not revised. The terms of the original Reservation Notice apply to the new installation location.

### **Applicant or Installer**

Host Customers may change or rescind affiliation with any of the parties of the original application with written notice to NV Energy. The Installer may be changed by either the Applicant, System Owner or the Host Customer with written notice to NV Energy.

### **Host Customer**

The Host Customer name for an application may be changed before project completion and interconnection by the original Host Customer with written request to NV Energy. A copy of a recent utility bill in the name of the new Host Customer must be provided with the change request.

## Reservation Notices

Reserved incentives listed on the Reservation Notice cannot be changed. An Applicant can choose to withdraw their Application and reapply for a larger system size if justified by past consumption, and if construction on the Solar PV system has not been started. New applications are subject to incentive levels and the availability of incentive funds at the time of the new application and must comply with current net metering rules. New Applications require a new non-refundable \$35 application fee, and a new Reservation Notice will be sent.

## INCENTIVE CLAIM

The Applicant requests interconnection of the system and payment of the incentive for a completed project by submitting the incentive claim prior to the expiration date listed on the Reservation Notice.

**Completed:** The solar energy system is considered completed when it is completely installed, the building permit is satisfied, the system is capable of producing electricity in the manner and in the amounts for which it was designed, and the incentive has been paid. The system must be interconnected and producing energy before an incentive payment may be issued.

The incentive claim is submitted online through PowerClerk, similar to submitting the original application.

Deficient incentive claims will not be processed. Deficient claims that are not corrected within 30 days of the Applicant being notified of the deficiency may be forfeited. In the case that an incentive application is forfeited the system may still be connected but the reserved incentive funds and the application fee is forfeited.

The incentive claim must include the following:

- Signed Net Metering Agreement
- Signed Incentive Claim Form. If an Applicant changes a system size, then the Incentive Claim Form must list the new size and the new size will supersede the size listed on the installation contract.
- A copy of the satisfied building permit from the local jurisdiction indicating the date of satisfactory final solar system inspection. (In the case of jurisdictions that do not have a building official, verification by a Nevada licensed professional engineer is required attesting to compliance with all applicable state, county, and federal codes and ordinances.)

**System Costs:** Applicants indicate the completed system cost in PowerClerk. System cost includes the cost of the tangible materials and labor for the installed system. The cost of the local building authority permitting must also be listed. Other costs, including other equipment, and design and engineering may be listed as balance of cost of system.

**Cost of Tangible Materials and Labor:** The reasonable cost of materials and labor for permitting, panels, inverters, the balance of system components and any other costs that are directly related to and required for the operation of a solar energy system. The term does not include such costs for improvements to a building or site which are not necessary to accommodate a solar energy system. Such improvements include but are not limited to carports or shade structures, fencing, roof coverings, parking lot surfaces, lighting and components for battery back-up systems.

## INSPECTIONS

### Program Post Inspection

The Program Post Inspection may be conducted for any project. The program post inspection verifies the information contained in the incentive claim, including:

- Installation location and siting
- Installed equipment
- % annualized shading

### Net Metering Interconnection Safety Verification

The Interconnection Safety Verification is an inspection to confirm the system's compliance with net metering standards and is performed by the NV Energy Meter Operations department.

If the system passes the safety verification, the net meter and generation meter are installed and the system may be operated.

If the system does not satisfy the requirements of either the program post inspection or net metering interconnection safety verification, NV Energy will contact the Installer and/or Host Customer to inform them of the issue. Re-inspection may be necessary after corrections are made.

*NOTE: Systems may not be energized prior to successful final net metering verification by NV Energy. The customer will not receive kWh credit for energy put back into the grid until the NV Energy net meter is set.*

**Net Metering:** Enables customers to offset the cost of their electrical consumption by measuring the difference between the electricity supplied by NV Energy and the electricity generated by the customer that is fed back to the utility over the billing period.

**Net Meter:** The meter provided and installed by NV Energy that measures the electricity used by the customer from the grid and the amount of electricity that the customer's renewable energy system sends back to the grid. This meter is usually installed in the place of the original revenue meter.

**Generation Meter:** The meter provided and installed by NV Energy that measures the solar energy system's production of kWh over time. This meter is required for projects completed in the program and is installed in a meter socket provided by the Host Customer. Also referred to as a REC meter.

**Meter Set:** The installation of the net and generation meters by NV Energy which occurs after submission of complete incentive claim and satisfactory net metering verification.

All Projects must comply with applicable NV Energy construction standards which can be found at the following link: [Electric Service Standards](#)

The use of a battery backup system on a grid connected system requires advance review and approval by NV Energy in order to ensure safe interconnection and that all energy produced by the system is recorded on the generation meter.

Modifications to customer-owned electrical service equipment may compromise the original equipment listing. All modifications shall be approved in writing by the Authority Having Jurisdiction, the manufacturer, or a Nationally Recognized Testing Laboratory.

#### **Systems larger than 25 kW**

- The Installer must upload to PowerClerk a one-line metering diagram of the proposed installation prior to construction.
- The customer is responsible for the cost of any upgrades required to make the renewable energy system compatible with the NV Energy distribution system. System upgrades must be completed in accordance with NV Energy procedures and standards.

All Generating Facility Interconnections are subject to the provisions outlined in Rule 15:

Nevada Power Company provisions can be found at:

[https://www.nvenergy.com/company/rates/snv/rules/images/Rule\\_15\\_South.pdf](https://www.nvenergy.com/company/rates/snv/rules/images/Rule_15_South.pdf)

Sierra Pacific Power Company provisions can be found at:

[https://www.nvenergy.com/company/rates/nnv/electric/rules/images/Rule\\_15\\_Electric\\_North.pdf](https://www.nvenergy.com/company/rates/nnv/electric/rules/images/Rule_15_Electric_North.pdf)

## PAYMENTS

Incentive payments are processed only after satisfaction of required inspections and the installation of the net and generation meters. Completed systems must be producing energy before incentive payments may be issued.

Payments are issued to the Payee as indicated on the Incentive Claim Form. Payees must provide NV Energy with a [W-9 Form in the same name and address as the payee on the PowerClerk application](#). NV Energy will issue an Internal Revenue Service 1099-MISC to all Payees at the end of each year in which incentives are paid. To protect Payee privacy, W-9 forms are not submitted in the PowerClerk incentive claim, but are submitted directly to NV Energy. Incentive payments are not made until the W-9 is provided.

### **PBI Payments**

PBI payments are made once a quarter in January, April, July and October. Payments commence the first payment period after the first read of the generation meter and continue quarterly for 60 months of measured system production from the date of the meter set.

### **Payment Delivery Options**

Payments are issued as a bank check mailed to the Payee. PBI project Payees may elect to be paid through an electronic transfer by requesting an Electronic Payment form from [renewablegenerations@nvenergy.com](mailto:renewablegenerations@nvenergy.com). Electronic Payment requests require authentication and are recommended only for Payees expecting to receive multiple incentive payments, as the first payment after an Electronic Payment request may still be issued as a bank check.

## PRODUCTION VARIATIONS

Variations in the production of completed systems, as determined by the readings of the generation meter, may indicate that the actual capacity of the completed system differs from the capacity indicated in the original application. NV Energy may conduct inspections or reviews of completed and operating systems at any time for the purpose of determining the reason for the production variation.


**Low Production:** This review may help the system owner identify installation issues.

**High Production:** If NV Energy determines that additional generation has been added to the original installation, PBI payments may be suspended until the system is verified in its original capacity.

## CANCELLATION, WITHDRAWAL, AND FORFEITURE

An application that has not yet been approved and issued a Reservation Notice may be cancelled by written or verbal request from the Applicant, Installer, System Owner or Host Customer.





An application that has been issued a Reservation Notice may be withdrawn from the program by written request directly from the Host Customer to NV Energy. A Withdrawal Form is also available in PowerClerk.

An application is forfeited if the complete incentive claim is not submitted by the expiration date listed on the Reservation Notice.

Reserved incentive funds for withdrawn and forfeited applications are returned to the program and these applications are no longer eligible for payment. Host Customers may reapply to the program but subsequent applications are subject to the program rules in place at the time of the new application.

If a Host Customer applies for and receives an incentive reservation for an installation location but fails to complete the system on three occasions, the Host Customer may not submit a SolarGenerations program application for that location.

## FOR MORE INFORMATION

RenewableGenerations incentive program:

Website: [NVEnergy.com/RenewableGenerations](http://NVEnergy.com/RenewableGenerations)

Email: [RenewableGenerations@NVEnergy.com](mailto:RenewableGenerations@NVEnergy.com)

Toll-Free: **866-786-3823**

Net Metering:

Website: [NVEnergy.com/NetMetering](http://NVEnergy.com/NetMetering)

Email: [NetMetering@NVEnergy.com](mailto:NetMetering@NVEnergy.com)