



# HydroGenerations Incentive Program Policies & Procedures

## Summary

HydroGenerations was created by NV Energy to implement the Waterpower Energy Systems Demonstration Program authorized by the Nevada State Legislature on July 1, 2007. The program offers one-time cash incentives for small hydro generating systems installed for agricultural uses within NV Energy service territory of Nevada. This program is subject to change and has limited funding. Please consult [www.nvenergy.com/renewablegenerations](http://www.nvenergy.com/renewablegenerations) for up-to-date information on program requirements.

Applicants approved by the Nevada Renewable Energy and Energy Conservation Task Force (Task Force), which oversees the program, will receive an Incentive Commitment/Authorization to Proceed letter. All other customers will receive a letter detailing their application being placed on the waiting list or an explanation of why their application has been rejected. Customers may elect to complete their hydro system after submitting their application; however, an incentive can only be paid for a system that has been approved by the Task Force. Customers who begin construction before the application date set forth for the current program year and/or prior to receipt of their Approval Letter do so at their own risk. There is no guarantee that an application submitted to the Task Force will be approved. It is strongly suggested that customers not purchase equipment or sign a binding contractor or consultant agreement until after receipt of the Approval Letter.

Participants in the program will be eligible to participate in NV Energy's Net Metering program. Net Metering allows a participant to offset the purchase of electricity with on-site generated electricity, essentially making the utility revenue meter run backwards. NV Energy will then only bill the customer the monthly customer charge and the net amount of electricity used from the utility grid. Net metering rules do not allow NV Energy to pay you for electricity that you produce beyond what you consume, so proper sizing of your system is critical. However, any excess electricity remains as a kilowatt hour credit on your system for the life of the system.

## Policies and Procedures

### 1. PROGRAM APPLICATION AND PRENOTIFICATION REQUIREMENTS

Funding for HydroGenerations is administered on a **first come, first served basis**. The Nevada Legislature sets capacity levels for each program year and NV Energy will accept applications during a program year until these capacity levels are reached.

Projects are not guaranteed an incentive prior to Nevada Renewable Energy and Energy Conservation Task Force (Task Force) approval and an Incentive Commitment Letter/Authorization to Proceed being issued to the customer designating the project address.

### 2. INCENTIVES AND CAPS

#### 2.1 Incentive Calculation

NV Energy offers a one-time cash incentive to agriculture customers of NV Energy in the state of Nevada. The incentive is calculated by the lesser of:

1. Sixty percent of the eligible installed system cost, or
2. The dollar amount obtained by multiplying \$2.50 by the number of Watts of the system determined by dividing the estimated kilowatt hour output of the system by the greater of 1752 or the estimated hours of system operation. The calculation of the estimated hours of operation and the estimated annual kilowatt hour output must be determined by a Nevada licensed professional engineer.

#### 2.2 Project Caps

NV Energy will pay incentives up to and including the first 50 kilowatts of installed capacity per capacity. However a customer may apply to expand their system under a subsequent program year.



### 3. ELIGIBILITY

A successful participant in the HydroGenerations program must satisfy the following requirements:

- Applicant must submit a complete application. Applications with missing information may be rejected.
- Applicants must be an existing or new grid-connected customer of NV Energy within the state of Nevada, at the time of paid incentive.
- Applicant's account must be active and current at the site of the installation, or for new construction, a new service application must be filed with the Utility.
- The proposed system must be for agricultural purposes as defined by Nevada Revised Statute, NRS 361A.030.
- The proposed system has never been installed at another location.
- An existing installation is ineligible for an incentive

### 4. PROJECTS

#### 4.1 Size Requirements

There is no minimum size of hydro system required. Participants in HydroGenerations are eligible to Net Meter up to 1,000 kW but may only receive an incentive up to and including the first 50 kW of installed capacity per program year.

Size requirements are specified per property and per meter basis for each program year. For example, an agricultural customer that has two different properties could be eligible for funding for up to 50 kW at each property or funding for up to 50 kW for each meter on one property.

#### 4.2 Equipment Specifications

A complete hydro generating system installation is defined at minimum as a having a hydro generator, inverter (if applicable), generation meter socket, grid interconnection, and AC and/or DC disconnects in compliance with all applicable codes and utility standards.

#### 4.3 Compliance Requirements

1. NV Energy reserves the right to inspect an installation in order to ensure compliance with 24 hour emergency access, utility standards, and program requirements.
2. NV Energy reserves the right to post-installation follow-up visit(s) to provide NV Energy the opportunity to evaluate the installed hydro generating system in order to verify the actual kW output.
3. The customer is responsible for any tax liability imposed as a result of incentive payments.
4. To receive an incentive, the applicant must submit a copy to NV Energy at the appropriate address listed below of the itemized invoice from his Nevada electrical contractor.
5. This program applies to hydro generating system installations made operational during the term of this program. NV Energy reserves the right to modify or withdraw this program and its incentives at any time. See website for more details: [www.nvenergy.com/renewablegenerations](http://www.nvenergy.com/renewablegenerations).
6. NV Energy will, at all reasonable times, have the right of access to a customer's premises for any purpose normally connected with the furnishing of electric energy and the exercise of the rights secured to it by law or these rules. To ensure public safety, NV Energy, at any time and without notice, may have to disconnect the customer owned generation from distribution system in order to work on NV Energy owned equipment. Therefore, NV Energy will **require unimpeded and unescorted 24 hour access** to the disconnect switch as a matter of public safety. Additionally, the meter readers have to connect an optical probe to the revenue meter every month and will therefore **require unimpeded, unescorted access** to the revenue meter and the generation meter during regular hours of operation, which are 6 a.m. to 6 p.m. Monday through Saturday.
7. NV Energy is required to install a generation meter in an approved meter socket provided by the applicant. The meter will be furnished and installed by NV Energy after project completion and a satisfactory verification by NV Energy personnel. The customer and/or his contractor are responsible for installing the meter socket that complies with NV Energy standards as follows:
  - ANSI Standard 4 Jaw socket



- 120/240 Volts
- 100 amps or 200 amps depending on system size
- Single phase three wire
- UL Listed, NEMA 3R
- Ring Design
- No by-pass mechanism
- AC disconnect and Generation meter socket must be located with 10 feet of the Revenue Meter

The Net Metering Design Standards are available for download from the program website on the Resources and Links page.

#### **4.4 Contractor Requirements**

The installation must be performed by a Nevada licensed electrical contractor with a C-2 license and preferably with experience in the design and installation of small hydro installations. A list of contractors and equipment suppliers who have expressed interest in the program can be viewed on the HydroGenerations website at [www.nvenergy.com/renewablegenerations](http://www.nvenergy.com/renewablegenerations).

NV Energy makes no guarantees or warranties, whether expressed or implied, for either contractors' performance or expertise in designing and installing hydro generating systems. NV Energy is not associated with and does not have a business interest in any of these contractors. NV Energy does not attest to their authority, competency, or integrity. NV Energy requires participants to work with Nevada state licensed contractors and to work under the terms of a contract.

#### **4.5 Additional Requirements**

The following are additional requirements that must be taken into consideration when applying for an incentive under the HydroGenerations program:

The inverter (if applicable) must be listed on the California Energy Commission (CEC) web site, UL Listed for grid-interactive operation and anti-islanding (but isolated if grid power is lost)

NV Energy may install at its own expense additional monitoring of the new hydro system with the agreement of the customer.

Systems must meet warranty requirements:

- Hydro generation equipment – 1 year
- Inverters – 7 years
- Labor (Labor and Workmanship as defined by the Nevada State Contractors Board) – 2 years

NV Energy may conduct pre- or post-installation verifications at project sites

Systems may not go online until NV Energy sets the meter. However, a system test may be conducted using a UL listed jumper or customer provided UL rated meter. The applicant will not receive kWh credit for energy put back into the grid until the NV Energy meter is set.

#### **4.6 Design Considerations**

A hydro generator needs unobstructed access to steady water flow. Hydro generators are affected by changing weather conditions and water volume and flow speed. Hydro generators produce the most energy when placed in sustained high water flow. A Nevada professional engineer is required to provide the computation necessary to verify flow and electrical production.

#### **4.7 Portfolio Energy Credits**

The signed Net Metering Agreement<sup>2</sup> transfers all Portfolio Energy Credits (PEC) to NV Energy. For an explanation of PEC, please refer to the Definitions section at the end of this document.

#### **4.8 Projects NOT Eligible for Incentives**

The following projects are **not** eligible for an incentive from the HydroGenerations program:

- Off-grid installations
- Systems installed by non NV Energy customers
- Systems installed by customers outside the state of Nevada
- Installed hydro systems that do not meet NV Energy standards or appropriate building codes
- Existing systems or generators



## 5. HOW TO APPLY

### 5.1 Program Steps

**Step 1:** Download the application from the “Apply for Incentives” page at [www.nvenergy.com/renewablegenerations](http://www.nvenergy.com/renewablegenerations). A hard copy may be requested by calling (866) 786-3823 or emailing [info@HydroGenerations.com](mailto:info@HydroGenerations.com).

**Step 2:** Complete and submit the application during the open application period along with site pre-inspection form and site sketch.

**Step 3: Submit the Application by:**

Email: [info@hydrogenerations.com](mailto:info@hydrogenerations.com)

Fax: (775) 834-5514

Mail or delivery to:

NV Energy  
HydroGenerations  
6100 Neil Road M/S S2A35  
Reno, NV 89511

NV Energy  
HydroGenerations  
6226 West Sahara Ave. M/S S2A35  
Las Vegas, NV 89151

**Step 4:** All applications are reviewed by NV Energy and a pre-verification is scheduled with the customer.

**Step 5:** You will receive a written preliminary authorization letter which provides conditional approval pending confirmation of the project moving forward (by copy of a contract with a Nevada Licensed electrical contractor), or a letter informing you that you are on the waiting list, or a letter stating that your application was not approved.

**Step 6:** Within sixty (60) days from the date of the preliminary approval letter, the applicant will provide NV Energy a computation stamped by a Nevada licensed engineer showing the estimated hours of operation of the hydro system and the estimated annual kilowatt hour output. Upon final approval an Incentive Commitment/Authorization to Proceed letter will be sent to the applicant.

**Step 7:** Inform NV Energy that your project is complete by calling (866) 786-3823, faxing (775) 834-5514, or emailing [info@HydroGenerations.com](mailto:info@HydroGenerations.com). Send final documentation to NV Energy. This includes a “signed-off” building permit, invoice from your contractor (consisting of cost of labor and materials, including equipment make and model), Voltage Verification and Application Change Order Form (if applicable).

**Step 8:** NV Energy will complete a safety and meter socket verification and provide a Net Metering Agreement specific to your system. If your hydro generating system meets all NV Energy standards, NV Energy will schedule the installation of the bi-directional (revenue) meter and generation meter (see the Utility Standards for more information on meters). Once the new meters are set, you are ready to energize your new hydro generating system.

**Step 9:** The incentive check will be mailed within 60 days of successful verification of the installation and receipt of the executed Net Metering Agreement. Systems that exceed the program cap will only receive the maximum incentive noted on the Incentive Commitment/Authorization to Proceed letter. Acceptance of the incentive assigns all portfolio energy credits (PEC) derived from operation of the hydro generating system to NV Energy.

**Step 10:** NV Energy will provide you a participant survey to help NV Energy maximize the effectiveness of the HydroGenerations program.

**Still have questions?** Please contact us at:

E-mail: [info@HydroGenerations.com](mailto:info@HydroGenerations.com)

Phone: 866-786-3823



## 5.2 Discrepancies

If it is determined that there are differences between the completed application and our on-site analysis, the participant will receive a letter detailing these findings. This letter provides an opportunity for the applicant (or assigned contractor) to dispute the verification results. After a period of 10 days, if the customer does not dispute the findings, the revised incentive levels will be confirmed.

## 5.3 Changes after Application Approval

### 5.3.1 Variances to NV Energy Standards

Customers who request an exception to NV Energy standards in order to participate in the program must follow the procedures below or risk being withdrawn from the program and forfeiting the incentive.

The request must be submitted by electrical contractor or professional engineer including company name, address, contact phone, email and license number. All drawings shall reference the contractor or engineer.

The submittal will include a written description of the request, the applicable NV Energy standard and the reason for requesting the exception along with an estimated cost of not complying with the standard. In addition, the request should include a site drawing with the hydro generating equipment, disconnect and generation meter clearly shown including dimensions to clearly denote the requested variance. When possible, the customer should submit digital photos of the existing condition that warrants consideration.

In addition to the Change Form, the contractor must submit a revised site drawing (downloaded from [www.nvenergy.com/renewablegenerations](http://www.nvenergy.com/renewablegenerations)) showing the hydro generating equipment, disconnect and generation meter clearly shown including dimensions to clearly denote the requested change. All such requests must be approved by NV Energy in writing before customer proceeds with the installation.

Drawings must be clearly legible and show all existing conditions. It is preferred all drawings are submitted electronically. All drawings become the property NV Energy and a written response including approval of the change (if applicable) will be emailed or mailed to the customer.

### 5.3.2 Changes to Original Application

Any proposed changes to an approved application must be submitted to NV Energy on a Change Form. This form is available for download at [www.nvenergy.com/renewablegenerations.com](http://www.nvenergy.com/renewablegenerations.com).

The following items may be submitted for change:

- Contractor
- Equipment
- Incentive assignment
- Completion date
- Location of equipment

## 5.4 Verifications

In addition to local building department inspections, NV Energy pre- and post-installation verifications may be conducted to determine compliance with program requirements. Additionally, an NV Energy safety verification will be conducted at each site prior to final approval, replacing and/or setting of the new meters and operation of the system. All verifications must result in satisfactory approval prior to final approval of the project. General verification procedures are detailed below:

### 5.4.1 Pre-Installation Verification

The pre-installation verifications are only for compliance with the program rules. Systems that do not meet current local building codes or NV Energy standards must be corrected to meet the current codes and standards. The pre-installation verification should not be construed to be an inspection for compliance with building codes and NV Energy standards. The pre-installation verification may include the following:

- Observation and photographs of the area and anticipated equipment location
- Project street location and address
- Proposed inverter location
- Available space at the existing meter for placement of the required generation meter socket and AC disconnect
- Other items as necessary to confirm project adheres to program rules

Any deviation(s) from program requirements discovered at the pre-installation verification will be accompanied by a list of recommendations for correcting noted deficiencies. Re-verification may be required prior to issuing an Incentive Commitment/Authorization to Proceed letter from NV Energy.



#### **5.4.2 Post-Installation Verification**

The program post-installation verification may include the following:

- Observation and verification of project installation
- Compliance with application, site drawing and one-line electrical drawing (if applicable)
- Verification of and specification of hydro generator
- Verification of inverter model, quantity, specification and placement (if applicable)
- Photographs of completed installation, specifically the generation meter socket, AC disconnect, and revenue meter
- Any deviation from program requirements or approved design discovered at the post-installation verification will be accompanied by a list of recommendations for correcting noted deficiencies. Re-verification may be required prior to performing the final verification and setting of the meter(s).

#### **5.4.3 Utility Safety Verification**

NV Energy verification will include the following checks:

- AC disconnect and generation meter socket are located within 10 feet of the Revenue Meter
- AC disconnect is accessible, lockable, visible-blade type, and is manually operated from outside the enclosure
- AC disconnect operates properly
- Generation meter and AC disconnect are wired correctly to meet NV Energy standards
- Generation meter tag is installed (by NV Energy)
- AC disconnect tag is installed properly (by NV Energy)
- Revenue meter tag is installed (by NV Energy)
- Transformer tag is installed properly, if applicable (by NV Energy)
- System meets all applicable NV Energy standards, (such as meter height between 48" and 75")

Meters may be set and system energized only after required verifications have been completed and approved.

### **5.5 Forms**

The following forms are part of the incentive application process.

#### **5.5.1 HydroGenerations Application**

The HydroGenerations application acts as the enrollment form for the program incentive. The application will provide details on the proposed hydro generating system and provide a basis for the verification.

#### **5.5.2 Computations by a Nevada Licensed Professional Engineer**

Within sixty (60) days from the date of the Incentive Commitment/Authorization to Proceed letter, the applicant will provide NV Energy a computation stamped by a licensed professional engineer in the State of Nevada.

#### **5.5.3 Site Pre-Verification Form and Site Sketch**

The site pre-verification form and site sketch provide detailed information about the proposed site for the hydro system. The sketch should show the location of hydro generating equipment on the site.

#### **5.5.4 Net Metering Agreement**

The Net Metering Agreement defines the rules between NV Energy and the customer for operation of the hydro generating system and the associated interconnection requirements. It also transfers the appropriate PECs to NV Energy. The Net Metering Agreement will be mailed or hand delivered during the final verification. An executed copy will be provided to the customer for their records.

## **6. PAYMENT PROCESS**

The HydroGenerations incentive will be paid directly to the designated assignee as directed by the applicant on the application or Change Form. The incentive will be paid within 60 days of the new hydro generating system's connection to the electrical grid. Payment of the incentive is contingent upon a site verification confirming compliance with program rules, utility standards, and receipt of all required documentation (see Section 7).

If the customer's account for service with NV Energy is more than 30 days in arrears, approval by the HydroGenerations Program Manager may be required before an incentive can be issued to the incentive assignee.



## 7. FINAL DOCUMENTS REQUIREMENTS

For final processing of the incentive, the following documents are required:

- Satisfied building permit by appropriate municipal authority
- Copy of electrical contractor's itemized invoice(s) including labor, material and equipment. Location or business name on the invoice must be consistent with the application information. System costs include: cost of labor, permits, sales tax, hydro generating equipment, inverters, any performance meter, meter socket, disconnect box, interconnection equipment, and other expenses associated with the project.
- Application Change Form (as applicable)
- Voltage Verification Form
- Digital photos of the completed installation including hydro generator, inverter, AC disconnect and meter socket
- As-Built one-line electrical drawing (if applicable)

## 8. DISPUTE RESOLUTION

NV Energy will make all efforts to ensure a high level of satisfaction with all aspects of the program. However, if any problems or concerns should arise, we encourage you to contact NV Energy immediately at (866) 786-3823 or by email at [renewablegenerations@nvenergy.com](mailto:renewablegenerations@nvenergy.com).

If the dispute cannot be resolved, contact John Hargrove, Senior Program Manager for NV Energy at (775) 834-5580.

## 9. INTERNAL REVENUE SERVICE FILING AND REPORTING

The project costs paid by this program (incentives) may have tax implications for applicants who participate in the HydroGenerations program and receive an incentive. All applicants are encouraged to consult a tax professional. Applicants will be responsible for any tax liability imposed as a result of incentive payments.

## 10. DEFINITIONS

**Agriculture Customer:** A customer of NV Energy in the state of Nevada who will use the proposed hydro generating system for purposes as defined by Nevada Revised Statute, NRS 361A.030.

**Alternating Current (AC):** the current received by NV Energy and the output from the inverter.

**Applicant:** a person who is applying to participate in the Hydro Energy Systems Incentive Program (HESIP).

**Direct Current (DC):** the current produced by the hydro generating system and the input to the inverter.

**Disconnects (AC or DC):** a breaker in a distribution panel or a fusible switch. Both may be required and NV Energy personnel must have access to this box.

**Generation Meter:** the display required for metering to indicate the system production in terms of kWh over time. Will be provided by NV Energy.

**Grid:** the distribution network of NV Energy.

**Inverter:** a device that converts DC power from the hydro generating system into AC electricity for use at the property where the hydro system is located. Only grid-interactive inverters are eligible for participation in the HydroGenerations program. This type of inverter operates in parallel with the grid only when the NV Energy grid is available. In event of a power outage, the system is designed to disconnect from the grid until NV Energy power is restored. This function is to provide protection for field personnel.

**Net Metering:** the measuring of the difference between the electricity one buys from NV Energy and the electricity produced using his or her own generating equipment. The electric meter keeps track of this "net" difference between the electricity generated on site and the electricity taken from the electric grid.

**Owned, leased or occupied:** any real property, building or facilities which are owned, leased or occupied under a deed, lease, contract, license, permit, grant, patent or any other type of legal authorization.

**Participant:** a person who has been selected by the Task Force to participate in the HydroGenerations program.



**Person:** a public entity.

**Portfolio Energy Credit (PEC):** a process of awarding, trading, tracking, and submitting credits as a means of meeting the Renewable Portfolio Standard for renewable energy. A PEC relative to this program represents one kilowatt hour (kWh) of renewable energy that is physically metered and verified. Per Nevada law, NV Energy must produce a certain amount of renewable energy per year. The hydro systems installed under this program will qualify for PEC for NV Energy. Formerly called Renewable Energy Credit (REC).

**Professional Engineer:** A person licensed under the laws of the State of Nevada to practice professional engineering.

**Program year:** the period of July 1 to June 30 of the following year.

**Incentive:** the amount to be paid to the customer, contractor, or supplier (see Section P.2 for amounts) once the required project documentation has been approved.

**Renewable Portfolio Standard (RPS):** a regulatory policy that requires the increased production of renewable energy sources such as solar, wind and hydro energies. It places an obligation on NV Energy to produce a specified fraction of its electricity from renewable energy sources.

**Task Force:** the Task Force for Renewable Energy and Energy Conservation created by NRS 701.350. This body oversees the operation of the HydroGenerations program.

**Utility:** NV Energy

**Utility Interconnection:** the physical connection between the NV Energy grid and the customer generation. An Interconnection Agreement (or a Net Metering Agreement) is needed for a customer to have on-site electric generation connected to the NV Energy grid.

## 11. CONTACT INFORMATION

HydroGenerations program: Toll Free – (866) 786-3823

Email: [renewablegenerations@nvernergy.com](mailto:renewablegenerations@nvernergy.com)

Website: [www.nvernergy.com/renewablegenerations](http://www.nvernergy.com/renewablegenerations)