

# Los Alamos County Utilities

## Application for Operation of Customer-Owned Generation

**NOTE: This application should be completed and returned to the Utility to commence the process request. The information in this application will be used by the Utility to determine the electrical requirements for the utility and generator interface.**

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### OWNER/APPLICANT INFORMATION

Company: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ County: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Representative: \_\_\_\_\_

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### PROJECT DESIGN ENGINEER (as applicable)

Company: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ County: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Representative: \_\_\_\_\_

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### ELECTRICAL CONTRACTOR (if different than project design engineer)

Company: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ County: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Representative: \_\_\_\_\_

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### TYPE OF GENERATOR

Photovoltaic \_\_\_\_\_ Wind \_\_\_\_\_

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### EST. LOAD, GEN. RATING AND MODE OF OPERATION

The following information will be used to design the Utility customer interconnection. This information is not intended as a commitment or contract for billing purposes.

Total Site Load \_\_\_\_\_ (kW)

Type: Residential \_\_\_\_\_ Commercial \_\_\_\_\_ Industrial \_\_\_\_\_

Generator Rating \_\_\_\_\_ (kW) Estimated Annual Generation \_\_\_\_\_ (kWh)

**Mode of Operation** (at customer delivery point)

Parallel (standard) \_\_\_\_\_ Isolated (non-standard) \_\_\_\_\_

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## DESCRIPTION OF PROPOSED INSTALLATION AND OPERATION

Give a general description of the proposed installation and when you plan to operate the generator. **Separately, provide a site map** of the generator installation relative to the electrical service entrance (utility meter location).

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### INVERTER DATA (if available)

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_  
Rated Power Factor (%): \_\_\_\_\_ Rated Voltage (Volts): \_\_\_\_\_ Rated Amperes: \_\_\_\_\_  
Inverter Type (ferroresonant, step mod., pulse wm, etc): \_\_\_\_\_

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### CIRCUIT BREAKER (if available)

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_  
Rated Voltage and Phase (1PH or 3PH): \_\_\_\_\_ Rated ampacity (Amps) \_\_\_\_\_  
Short Circuit Interrupting rating (Amperes): \_\_\_\_\_ BIL Rating: \_\_\_\_\_

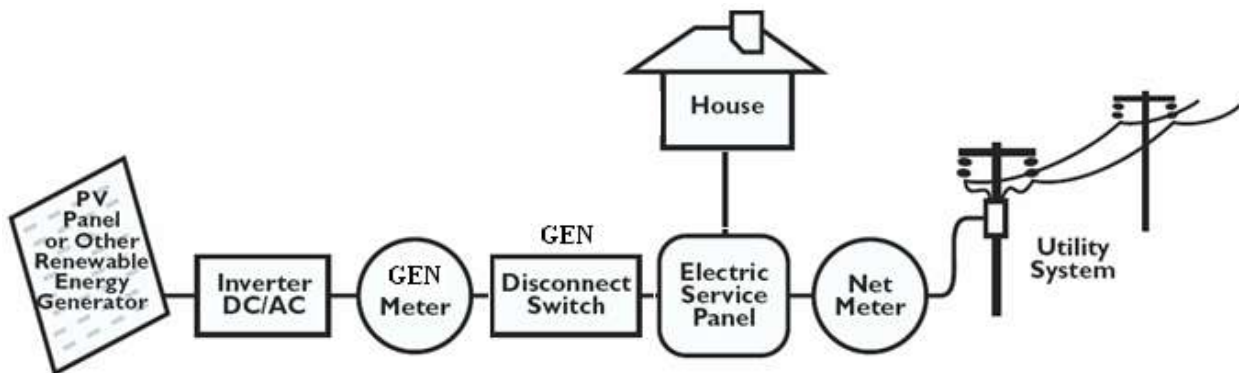
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### ADDITIONAL INFORMATION

*Separately and for your PV system, please provide a detailed one-line diagram for the equipment illustrated in the diagram below. Also, refer to the LAC typical PV system installation diagram for additional detail requirements.*

#### Typical residential generator installation diagram:



## **SIGN OFF AREA**

The customer agrees to provide the Utility with the generator interconnection requirements called for in this application. Note: Failure to comply with these requirements may delay the processing of this application. In addition, the customer agrees to comply with the requirements called for in the Standard Interconnection Agreement and in the Utility's Electric Rule E-5. The customer understands that rates and rate structures are not guaranteed to any point in the future.

\_\_\_\_\_  
Applicant

\_\_\_\_\_  
Date

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## **ELECTRIC UTILITY CONTACT FOR APPLICATION SUBMISSION AND FOR MORE INFORMATION:**

Utility contacts:      Stephen Marez, Electrical Engineering Manager

Address:                1000 Central Avenue, Suite 130 Los Alamos,  
New Mexico 87544

Phone:                 (505) 662-8499

Fax:                    (505) 662-8005

e-mail:                [stephen.marez@lacnm.us](mailto:stephen.marez@lacnm.us)



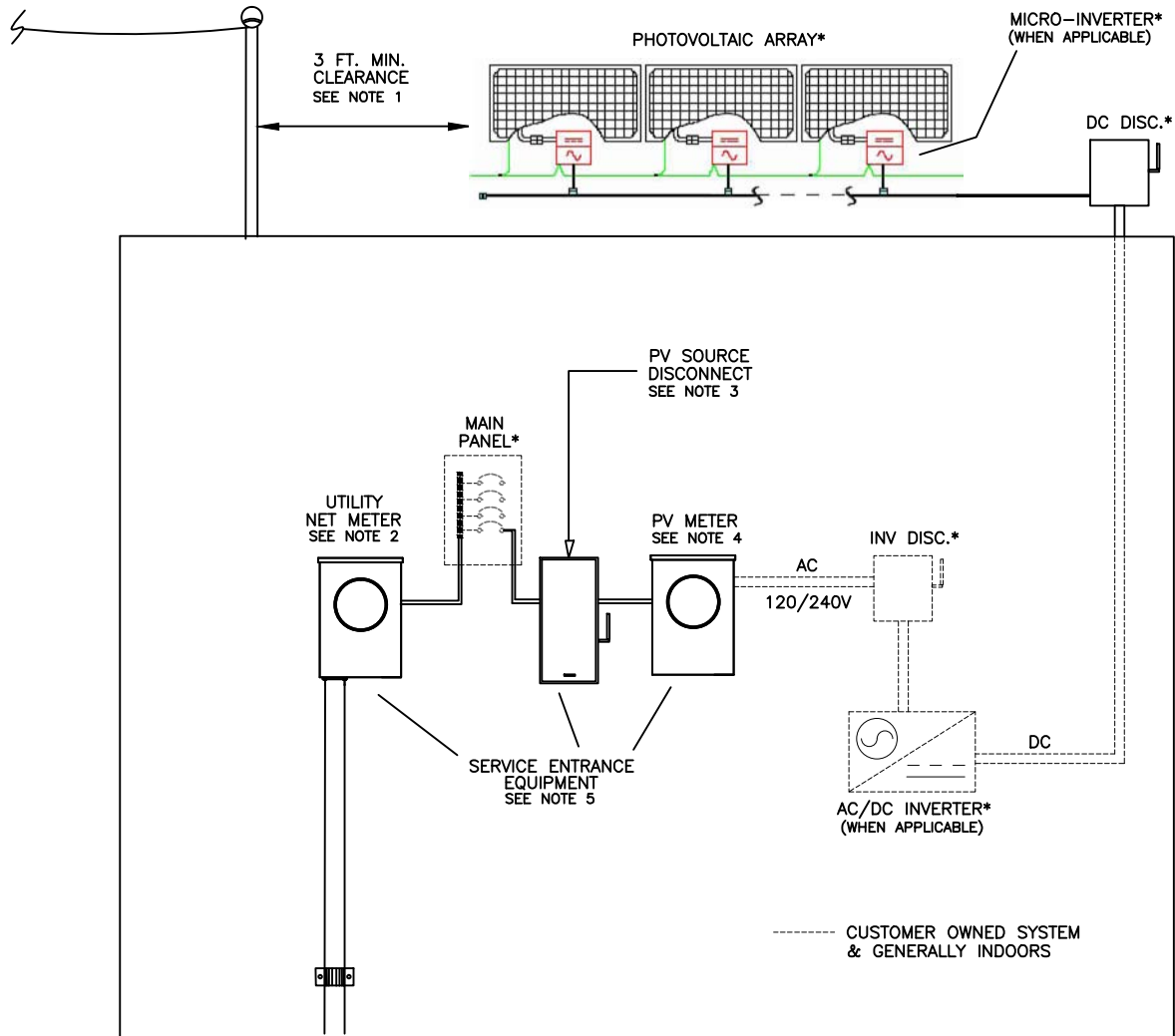
No.

DATE:

REVISION:

APPROVED BY:

DATE: SEPTEMBER 2013



\* CONNECTIONS PER NMCID AND NEC REQUIREMENTS  
SEE NOTE 5

ELECTRICAL NOTES:

1. IF APPLICABLE, SERVICE MAST SHALL BE CLEARED AND AWAY FROM ROOFTOP PV.
2. UTILITY SERVICE METER SHALL BE CLEAR AND ACCESSIBLE TO UTILITY PERSONNEL AT ALL TIMES.
3. THE AC DISCONNECT SWITCH SHALL BE FOR UTILITY USE ONLY AND MOUNTED NEXT TO THE SERVICE METER. THE DISCONNECT SHALL BE LABELED "PV SOURCE DISCONNECT".
4. CUSTOMER PV METER FOR MEASURING ENERGY PRODUCED BY THE PV SOURCE. METER SHALL BE LABELED "PV METER".
5. ALL SERVICE ENTRANCE EQUIPMENT SHALL BE GROUPED TOGETHER; CLEAR AND ACCESSIBLE TO UTILITY AT ALL TIMES.
6. ALL OTHER EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE TO LOCAL JURISDICTION INCLUDING LOS ALAMOS COUNTY COMMUNITY DEVELOPMENT, NM CONSTRUCTION INDUSTRIES DIVISION AND NATIONAL ELECTRICAL CODES.

**RULES AND REGULATIONS  
ELECTRIC (E)  
RULE E-5  
INTERCONNECTION - CONNECTION WITH COGENERATION  
AND SMALL POWER PRODUCERS**

**E-5.01 GENERAL**

The purpose of this rule is to provide for the purchase of energy from customers of the Utility meeting the interconnection requirements for Qualifying Facilities.

All interconnections with the electric distribution system require prior written approval by the Utility department of Engineering, the completion of the Interconnection Agreement (see Appendix I) and the payment of all applicable fees.

**E-5.02 DEFINITIONS**

As used in this rule, unless otherwise specified:

- A. "Qualifying Facility" means a cogeneration or a small power production facility which meets the criteria for qualification contained in 18 C.F.R. Section 292.203, or such other criteria as may be reasonably prescribed by rule by the Utility.
- B. "Customer" means a customer of Utility who owns or operates a Qualifying Facility.
- C. kW – Kilowatts is a measure of power: 1000 watts = 1 kW
- D. kWh – Kilowatt Hours is a measure of the consumption of energy. A 1 kW heater used over one hour will consume 1 kWh of energy.
- E. PV – Photovoltaic: PV system inverters and generators are sized according to the maximum power output they can produce in kW.
- F. AC – Alternating Current
- G. DC – Direct Current

**E-5.03 PURCHASES OF ENERGY FROM CUSTOMER-OWNED QUALIFYING FACILITIES**

Utility may purchase up to 6000 kW of capacity, in the aggregate, of solar, wind, or other renewable energy from customer-owned Qualifying Facilities within the service area of Utility.

The system maximum installed capacity for any individual residential location is limited to the capacity in kW sufficient to produce energy up to the level of total consumption of the residence based on actual consumption for the immediately preceding twelve months, using standard efficiency and availability calculations for the Los Alamos service area as defined by the Department, with a maximum allowed of 10 kW DC.

The system maximum installed capacity for any commercial location is limited to the capacity in kW sufficient to produce energy up to the level of total consumption of the customer based on actual consumption for the immediately preceding twelve months, using standard efficiency and availability calculations as defined by the Department, with a maximum allowed of 100 kW DC, if the capacity available on the transformer serving the customer is sufficient. For commercial customers upgrade of transformer capacity will be at the customer's expense.

The Customer shall submit system specifications which size the output of the PV system to offset existing average annual consumption. The customer can obtain this information from the utility bill or by calling customer service (505-662-8333). The utility will compare the previous annual consumption to the proposed production using the "PVWATTS" website (<https://pvwatts.nrel.gov/>) or an equivalent energy output estimation method.

#### **E-5.04 PROCEDURE FOR INTERCONNECTION**

- A. General. Unless otherwise specifically provided for in a special interconnection agreement negotiated with the Utility, the procedures for standard interconnection agreements and interconnections set forth in this rule shall be followed.
- B. Conditions of interconnection. Utility shall interconnect with any Qualifying Facility which:
  - 1) is covered by a signed standard or special interconnection agreement between the customer and Utility, which is consistent with the approved form of agreement set forth in this rule;
  - 2) is capable of operating safely and commencing the delivery of power into the Electric Utility's system, including but not limited to protection from over currents, fault currents, frequency disturbances, and voltage differentials;
  - 3) has met all applicable safety and performance standards established by local and national electrical codes, including the most recent National Electrical Code (NEC), the most recent National Electrical Safety Code (NESC), the Institute of Electrical and Electronics Engineers (IEEE), and Underwriters Laboratories, as well as all applicable safety and performance standards adopted by rule of the Utility that are necessary to protect public safety and system reliability;
  - 4) was constructed in accordance with a design that has been submitted to and approved by the Utility;
  - 5) has been installed by a licensed electrician who has obtained all required permits and inspections.
- C. Isolation transformers and disconnection switches. Utility shall not require an isolation transformer for interconnection of single phase photovoltaic Facilities meeting the requirements of Subsection B of this section. If Utility determines that an isolation transformer is required for other types of Qualifying Facilities, the Utility may require the transformer by providing written notice to the Customer at the time of application. The customer shall have installed and maintained in proper operating condition, at Customer's sole expense, a separate load break disconnect switch as a visible means of disconnection, unless the customer and Utility shall agree in writing to the use of the meter as a visible means of disconnecting single-phase photovoltaic facilities.
- D. Meters. A single reversible meter shall be used unless an alternate metering arrangement is agreed to by the customer and Utility. The register shall be used to measure the amount of energy delivered by the Utility to the customer and will reverse enabling measurement of the amount of energy which is produced by the Qualifying Facility and delivered to Utility. The customer shall be required to pay the cost of the required metering equipment with the exception of the meter. Within twenty (20) days of receiving notification from the customer of the intent to interconnect, the Utility will notify the customer of any metering costs. Charges for special metering costs shall be paid by the customer, or arrangements for payment agreed to between the customer and Utility, prior to the Utility authorizing interconnected operation.
- E. Liability insurance. Customers are urged to obtain adequate liability insurance to cover risks, liabilities, and consequences, which may arise as a result of interconnection with a utility system. For good cause shown, the Utility may require a customer to obtain general liability insurance.
- F. Provision of interconnection agreement. The Utility shall provide a standard interconnection agreement within ten (10) days of a request for such form. When a customer enters into an interconnection agreement pursuant to this rule, the Utility shall provide the customer with a copy of that interconnection agreement. Utility shall provide a blank form of application for interconnection within ten (10) days of a written request for such form. The Utility shall maintain a file of each interconnection agreement entered into by the Utility.

#### **E-5.05 METERING CALCULATION**

Utility shall calculate each customer's bill for the billing period using the standards and conditions stated in this section.

- A. Applicable rate. Customers shall be billed for service in accordance with the rate structure and monthly charges that the customer would be assigned if the customer had not interconnected a Facility with Utility's system, plus any incremental cost of required metering equipment. Energy produced or consumed on a monthly basis shall be measured in accordance with standard net metering practice. Power supplied to the customer will be billed at the customer's applicable rate under Utility's current rate schedule.
- B. Credit for excess energy. If electricity generated by the customer exceeds the electricity supplied by the Utility during a billing period, the Utility shall credit the customer through a balancing account for the excess kilowatt-hours of energy generated, by crediting the customer for the net energy supplied to the Utility. The rate paid or credited to the Customer will be the Utility's average cost for capacity and energy from the Los Alamos County Resource Pool for the previous year. The Customers balancing account shall be closed out annually and any funds owing to the Customer will be paid within 30 days.

#### **E-5.06 COMPLAINTS AND INVESTIGATIONS**

Any disputes over the implementation of this rule shall be addressed in accordance with dispute resolution procedures set forth in the rules governing service from Utility.

#### **E-5.07 SEVERABILITY**

If any part of this rule or any application thereof is held invalid, the remainder of this rule or its application to other situations or persons shall not be affected.

#### **E-5.08 EXEMPTION OR VARIANCE**

- A. Any interested person may file an application for an exemption or a variance from the requirements of this rule. Such application shall:
  - 1) describe the situation which necessitates the exemption or variance;
  - 2) set forth the effect of complying with this rule on the utility and its customers if the exemption or variance is not granted;
  - 3) identify the Section of this rule for which the exemption or variance is requested;
  - 4) describe the result which the request will have if granted;
  - 5) state how the exemption or variance will promote the achievement of the purposes of this rule; and,
  - 6) state why no other reasonable alternative is available.
- B. If the Utility determines that the exemption or variance is consistent with the purposes of this rule, the exemption or variance may be granted. The Utility may, at its option, require an informal conference or formal evidentiary hearing prior to the granting of the variance. All exemption or variance requests will be considered on an individual basis and the customer shall be responsible for all necessary system upgrade costs as determined by the utility.

#### **E-5.09 REQUEST FOR STAY PENDING AMENDMENT, EXEMPTION, OR VARIANCE**

A request for an amendment, exemption, or a variance from the requirements of this rule may include a request that the Utility stay the application of the affected portion of this rule for the transaction specified in the motion. Utility has the sole discretion to determine whether to grant a request for an amendment, exemption or variance or an accompanying request for a stay. In reviewing such request, Utility will not act unreasonably.

#### **E-5.10 CUSTOMER INFORMATION**

Utility will provide information to all customers regarding this rule, including, but not limited to, contact persons and a description of terms and conditions for purchases from Qualifying Facilities.



**STANDARD INTERCONNECTION AGREEMENT**  
INCORPORATED COUNTY OF LOS ALAMOS DEPARTMENT OF PUBLIC UTILITIES  
STANDARD INTERCONNECTION AGREEMENT FOR  
QUALIFYING FACILITIES

\_\_\_\_\_ (“Customer”) and the Incorporated County of Los Alamos, New Mexico, by and through its Department of Public Utilities (“Utility or County”), referred to collectively as parties and individually as party, agree as follows:

1. QUALIFYING FACILITY (“Facility”):

Customer's electric service account number \_\_\_\_\_

Type of generating facility \_\_\_\_\_  
(Solar, Wind, etc.)

Rated generating capacity \_\_\_\_\_ (kW)

Customer and facility address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Facility will be ready for operation on or about \_\_\_\_\_ (date)

2. OPERATING OPTION

2.1. Customer has elected to operate its Qualifying Facility in parallel with Utility's system.

2.2. Customer understands that if this agreement is accepted, connection and operation of customer’s Qualifying Facility must meet at all times all applicable safety and performance standards, including those established by the National Electrical Code (NEC), the Institute of Electrical and Electronics Engineers (IEEE), Underwriters Laboratories (UL), the National Electrical Safety Code (NESC), and all additional safety and performance standards of Utility that are necessary to protect public safety and system reliability.

Customer shall be subject to the terms and conditions set forth in the Utility’s Electric Rule E-5 for Interconnection – Connection with Cogeneration and Small Power Producers (“Utility Rule”), a copy of which is attached to this agreement. Customer hereby acknowledges that Customer has read this rule.

3. UTILITY RULE. This Agreement shall be subject to and interpreted consistent with the provisions of Utility Electric Rule E-5.

4. CREDIT FOR NET ENERGY. Credit for net energy shall be in accordance with the Utility’s Rule, E-5.05, Metering Calculation.

5. INTERRUPTION OR REDUCTION OF DELIVERIES

5.1. Utility shall not be obligated to accept or pay for and may require Customer to interrupt or reduce deliveries of available energy in the following circumstances:

- a. when necessary in order to construct, install, maintain, repair, replace, remove, or inspect any of its equipment or part of its system; or
- b. if Utility reasonably determines that curtailment, interruption, or reduction is necessary because of emergencies, forced outages, force majeure, or compliance with prudent electrical practices.

5.2. To the extent practicable, Utility shall give Customer reasonable notice of the possibility that interruption or reduction of deliveries may be required.

5.3. Notwithstanding any other provision of this agreement, if at any time Utility reasonably determines that:

- a. The Customer's facility may endanger Utility personnel or other persons or property, or
- b. the continued operation of this facility may endanger the integrity or safety of Utility's electric system, then Utility shall have the right to immediately disconnect and lock out Customer's facility from Utility's electric system. No prior notice to the customer is required in circumstances where the Utility reasonably determines that the immediate action is necessary provided that the Utility shall notify Customer as soon as practicable. Customer's facility shall remain disconnected until such time as Utility is reasonably satisfied that the conditions referenced in this Section have been corrected.

## 6. INTERCONNECTION

6.1. Customer shall deliver the as-available energy to Utility at the Utility's meter.

6.2. Customer shall pay for designing, installing, operating, and maintaining the electric generating facility in accordance with all applicable laws and regulations, including the requirements of Utility for interconnection of a Qualifying Facility with Utility's electric system.

6.3. Utility shall furnish and install a standard kilowatt-hour NET meter. Customer shall provide and install a meter socket and any related interconnection equipment per Utility's requirements.

6.4. Utility shall meter the Customer's usage by using two registers. A separate register shall be used for measurement of energy flows in each direction at the point of delivery. Metering shall be at the expense of the Customer.

6.5 Customer shall provide a clearly understandable sketch or one-line diagram showing the Qualifying Facility, the interconnection equipment, breaker panel(s), disconnect switches and metering, to be attached to this Agreement.

6.6 The customer must provide an exterior, lockable disconnect switch to allow Utility personnel to physically disconnect the Customer's Facilities from the Utility.

6.7 Customer shall not commence parallel operation of the generating facility until written approval of the interconnection facilities has been given by Utility. Such approval shall not be

unreasonably withheld or delayed. Notwithstanding the foregoing, Utility approval to operate Customer's Qualifying Facility in parallel with Utility's electrical system should not be construed as an endorsement, confirmation, warranty, guarantee or representation concerning the safety, operating characteristics, durability or reliability of Customer's Qualifying Facility. Utility shall have the right to have its representatives present at the initial testing of Customer's protective apparatus.

## 7. MAINTENANCE AND PERMITS

7.1. Customer shall maintain the generating facility and interconnection facilities in a safe and prudent manner and in conformance with all applicable laws and regulations including, but not limited to, this interconnection requirement, and

7.2. Customer shall obtain any governmental authorizations and permits required for the construction and operation of the electric generating facility and interconnection facilities.

8. ACCESS TO PREMISES. Utility may enter Customer's premises:

- a. to inspect, at all reasonable hours, Customer's protective devices and read or test meters; and
- b. to disconnect, without notice, the interconnection facilities, if Utility reasonably believes a hazardous condition exists and such immediate action is necessary to protect persons, or Utility's facilities, or property of others from damage or interference caused by Customer's facilities, or lack of properly operating protective devices.

## 9. INDEMNITY AND LIABILITY

9.1. Subject to all limitations contained in applicable state law, including the New Mexico Tort Claims Act, each party shall indemnify the other party, its directors, officers, agents and employees against all loss, damages expense and liability to third persons for injury to or death of persons or injury to property caused by the indemnifying party's engineering design, construction ownership or operations of, or the making of replacements, additions or betterment to, by failure of, any of such party's works or facilities used in connection with this agreement by reason of omission or negligence, whether active or passive. The indemnifying party shall, on the other party's request, defend any suit asserting a claim covered by this indemnity. The indemnifying party shall pay all costs that may be incurred by the other party in enforcing this indemnity. It is the intent of the parties hereto that, where negligence is determined to have been contributory, principles of comparative negligence will be followed and each party shall bear the proportionate cost of any loss, damage, expense and liability attributable to that party's negligence.

9.2. Nothing in this agreement shall be construed to create any duty to any standard of care with reference to or any liability to any person not a party to this agreement. Neither Utility, its officers, agents or employees shall be liable for any claims, demands, costs, losses, causes of action, or any other liability of any nature or kind, arising out of the engineering, design construction, ownership, maintenance or operation of, or making of replacements, additions or improvements to, customer's facilities by customer or any other person or entity.

9.3. Neither Utility, its officers, agents or employees shall be liable for damages to the electrical generating equipment caused by an electrical disturbance on the Utility system or on the system of another, whether or not the electrical disturbance results from the negligence of Utility.

10. GOVERNING LAW. This agreement shall be interpreted, governed, and construed under the laws of the state of New Mexico as if executed and to be performed wholly within the state of New Mexico.

11. AMENDMENT, MODIFICATIONS OR WAIVER. Any amendments or modifications to this agreement shall be in writing and agreed to by both parties. The failure of any party at any time or times to require performance of any provision hereof shall in no manner affect the right at a later time to enforce the same. No waiver by any party of the breach of any term or covenant contained in this agreement, whether by conduct or otherwise, shall be deemed to be construed as a further or continuing waiver of any such breach or a waiver of the breach of any other term or covenant unless such waiver is in writing.

12. NOTICES. All written notices shall be directed as follows:

Attention: Utilities Manager  
1000 Central Avenue, Suite 130  
Los Alamos, New Mexico 87544

Attention: CUSTOMER  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_

Customer notices to Utility pursuant to this Agreement shall refer to the Customer's electric service account number set forth in Section 1 of this agreement

13. TERM OF AGREEMENT. This Agreement shall be in effect when signed by the Customer and Utility and shall remain in effect for one year and from year to year unless terminated by either party after the initial year on ten (10) days' prior written notice.

14. ASSIGNMENT. This Agreement and all provisions hereof shall inure to and be binding upon the respective parties hereto, their personal representatives, heirs, successors, and assigns. Customer shall not assign this Agreement or any part hereof without the prior written consent of Utility, and such unauthorized assignment may result in the termination of this Agreement.

15. ATTACHMENTS. This Agreement includes the following attachments, as labeled and incorporated herein by reference:

- a. Utility's Electric Rule E-5 Interconnection – Connection with Cogeneration and Small Power Producers.
- b. Customer's completed Application for Operation of Customer-Owned Generation.

- c. Customer's site plan and one line diagram for generation source including service entrance requirements, disconnecting means, panels, breakers, wire types and sizes, etc.
- d. Utility's written authorization to interconnect (this form), and completed service request form (when applicable--for new service installations).

IN WITNESS WHEREOF, the parties have caused two originals of this agreement to be executed by their duly authorized representatives. This agreement is effective as of the last date set forth below.

**CUSTOMER**

Name (Printed): \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**UTILITY**

Philo Shelton

Utilities Manager

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Los Alamos County Code of Ordinances;**  
**Chapter 16 – Development Code**

**Sec. 16-279. Solar energy collection system.**

(a)

When a solar energy collection system is installed on a lot, accessory structures or vegetation on an abutting lot shall not be located so as to block the solar collector's access to solar energy. The portion of a solar collector that is protected is that portion which:

(1)

Is located so as not to be shaded between the hours of 10:00 a.m. and 3:00 p.m. by a hypothetical 12-foot obstruction located on the lot line; and

(2)

Has an area not greater than one-half of the heated floor area of the structure, or the largest of the structures served.

(b)

Subsection (a) of this section does not apply to accessory structures or vegetation existing in any abutting lot at the time of installation of the solar energy collection system, or on the date of adoption of this chapter, whichever is later. Subsection (a) of this section controls any accessory structure erected on, or vegetation planted in, abutting lots after the installation of the solar energy collection system.

(c)

A statement that a solar energy collection system has been installed on a lot, and a right to solar access is claimed, shall be filed and recorded with the county clerk on the day the building permit for the improvement is issued. A copy of the recorded statement shall be provided to the community development department by the person owning the solar energy collection system. The solar energy collection system must be completed and have a final inspection by the county building inspector within one year from the statement's recorded date.

*(Ord. No. 85-210, § 3, 1994; Code 1985, § 17.40.090)*

## Design Criteria for Los Alamos County PV Installations

Ground Snow Load	Wind Speed (mph)	Seismic Design Category	Subject to damage from			Winter Design Temp	Ice Barrier Underlayment required	Flood Hazards	Air Freezing Index	Mean Annual Temp
			Weathering	Frost Line Depth	Termite					
30 Lbs	90	D †	Moderate	3' LA 2' WR	Slight to Moderate	10	Yes	Sept. '87	650	45-50

†

1613.5.4 Design spectral response acceleration parameters. Substitute the following text:

Five-percent damped design spectral response acceleration at short periods,  $S_{DS}$ , = 0.75 g, and at 1-second period,  $S_{D1}$ , = 0.64 g.

Replace in Sections 11.3 and 11.4.5 of ASCE 7, the definition for  $T_o$  from  $T_o = 0.2 S_{D1}/S_{DS}$  to  $T_o = 0.1$  sec.



# Ground Mounted Photovoltaic and Hot Water Solar Panels

Los Alamos County Community Development Department  
1000 Central Avenue, Suite 150, Los Alamos, NM 87544  
505-662-8120 Fax 505-662-8363

## Requirements for Ground Mounted Installation

2 copies of all documentation required

Provide:	PROVIDED	NA
<b>1. Building Permit Application completed and signed.</b>		
<b>2. Site Plan showing location, site utilities, setbacks and easements</b>		
<b>3. Height of tallest portion of completed assembly form the finished grade.</b>		
<b>4. Engineering* for the foundation of the system</b>		
<b>5. Engineering* for the rack assembly</b>		
<b>6. Engineering* for P.V. Panel attachment to the rack.</b>		
<b>7. New Mexico one Call</b>		
<b>Required inspections for Ground Mounted:</b> 1. Excavation and steel 2. Final.		
Note: Permits will only be issued to electrical contractors.		
*Engineering must address gravity, wind, snow and seismic loads. Panels and rack must be rated and listed.		



# Permit Application

**FOR OFFICE USE ONLY**

Date: \_\_\_\_\_

Plan/Permit #: \_\_\_\_\_

Plan Review Fee: \_\_\_\_\_

Floodplain: \_\_\_\_\_

Please complete all areas on this form that apply. Incomplete applications may delay process.

\_\_\_\_ Residential

\_\_\_\_ Commercial

**Project Address:** \_\_\_\_\_

Owner: \_\_\_\_\_ Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Contractor: \_\_\_\_\_ Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Address: \_\_\_\_\_ License #: \_\_\_\_\_

Design Professional (if applicable): \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_ Email: \_\_\_\_\_

Main Point of Contact: Owner: \_\_\_\_ Contractor: \_\_\_\_ Design Professional: \_\_\_\_

**Type of Work:**

<input type="checkbox"/> Accessory Structure	<input type="checkbox"/> Fence **	<input type="checkbox"/> Remodel	<input type="checkbox"/> Sun Room	<input type="checkbox"/> Sign Permanent
<input type="checkbox"/> Addition	<input type="checkbox"/> Fireplace	<input type="checkbox"/> New Dwelling	<input type="checkbox"/> Photovoltaic	<input type="checkbox"/> Sign Temporary
<input type="checkbox"/> Curb-Cut	<input type="checkbox"/> Foundation	<input type="checkbox"/> New Roof	<input type="checkbox"/> Re-Roof	<input type="checkbox"/> Window/Door
<input type="checkbox"/> Deck/Porch Carport	<input type="checkbox"/> Grading/Excav.	<input type="checkbox"/> Other	<input type="checkbox"/> Siding/Stucco	<input type="checkbox"/> Demo

Square Footage: Heated \_\_\_\_\_ Garage: \_\_\_\_\_ Deck, Carport, Porch or Patio Cover \_\_\_\_\_ Total Sq. Ft. \_\_\_\_\_

**Valuation of Work:** \$ \_\_\_\_\_ Number of Stories: \_\_\_\_\_ Height \_\_\_\_\_

Description of Work: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Signature: \_\_\_\_\_

I understand that by entering my name above, it constitutes as a legal signature.

**\*\*Easement Encroachment.** This permit authorizes the permit holder to construct/install a non-permanent structure (requires no subsurface foundation or structural member), within the boundaries of an existing public utility easement. Whenever this is the case, permittee shall be fully responsible (at permit holder's cost) for the removal and replacement of such non-permanent structure(s), at any time County personnel or County contractor may deem the structure interferes with work on the public utility for which the easement is in place. Any encroachment to the right of way or easements shall ensure that exiting drainage patterns are being maintained and unimpeded as applicable.



Bldg: \_\_\_\_\_ Util: \_\_\_\_\_  
 Plng: \_\_\_\_\_ PW: \_\_\_\_\_ Fire: \_\_\_\_\_

1000 Central Avenue, Suite 150  
 Los Alamos, NM 87544  
 P 505.662.8120 F 505.662.8363



# Building Guide for Roof Mounted Photovoltaic and Hotwater Solar Panels

## Requirements for Roof Mounted Installation

2 copies of all documentation required

Provide:	PROVIDED	NA
1. Building Permit Application completed and signed.		
2. <b>Roof Plan</b> (1/4" scale Min) include size and type of rafters, type of decking, slope of roof, type of existing roofing, and number of existing roof coverings.		
3. <b>Panel Layout Plan</b> (1/4" scale Min) Show exact panel locations, provide weight, panels in pounds and/size. Provide dead load weight per attachment point, and number of attachment points.		
4. <b>Anchoring system for panel rack.</b> Include engineering* and flashing details for mounts.		
5. <b>Anchoring system of P. V. Panels to rack</b> (welded attachment of panels to rack will not be allowed) Include engineering* for panels and their attachments to rack.		
6. Height of tallest portion/ point of completed assembly from the finished grade.		
<b>Required inspections for Roof mounted:</b> 1 Rack Installation and Flashing. 2. Final.		
*Engineering must address gravity, wind, snow and seismic loads. Panels and rack must be rated and listed.		

This handout was developed by the Los Alamos County Community Development Department as a basic plan submittal under the current codes. It is not intended to cover all circumstances. Los Alamos County will not be held responsible for the design of P. V. Solar System.

FORM DATE: 08/02/10

# Permit Application

**FOR OFFICE USE ONLY**

Date: \_\_\_\_\_

Plan/Permit #: \_\_\_\_\_

Plan Review Fee: \_\_\_\_\_

Floodplain: \_\_\_\_\_

Please complete all areas on this form that apply. Incomplete applications may delay process.

\_\_\_\_ Residential

\_\_\_\_ Commercial

**Project Address:** \_\_\_\_\_

Owner: \_\_\_\_\_ Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Contractor: \_\_\_\_\_ Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Address: \_\_\_\_\_ License #: \_\_\_\_\_

Design Professional (if applicable): \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_ Email: \_\_\_\_\_

Main Point of Contact: Owner: \_\_\_\_ Contractor: \_\_\_\_ Design Professional: \_\_\_\_

**Type of Work:**

<input type="checkbox"/> Accessory Structure	<input type="checkbox"/> Fence **	<input type="checkbox"/> Remodel	<input type="checkbox"/> Sun Room	<input type="checkbox"/> Sign Permanent
<input type="checkbox"/> Addition	<input type="checkbox"/> Fireplace	<input type="checkbox"/> New Dwelling	<input type="checkbox"/> Photovoltaic	<input type="checkbox"/> Sign Temporary
<input type="checkbox"/> Curb-Cut	<input type="checkbox"/> Foundation	<input type="checkbox"/> New Roof	<input type="checkbox"/> Re-Roof	<input type="checkbox"/> Window/Door
<input type="checkbox"/> Deck/Porch Carport	<input type="checkbox"/> Grading/Excav.	<input type="checkbox"/> Other	<input type="checkbox"/> Siding/Stucco	<input type="checkbox"/> Demo

Square Footage: Heated \_\_\_\_\_ Garage: \_\_\_\_\_ Deck, Carport, Porch or Patio Cover \_\_\_\_\_ Total Sq. Ft. \_\_\_\_\_

**Valuation of Work:** \$ \_\_\_\_\_ Number of Stories: \_\_\_\_\_ Height \_\_\_\_\_

Description of Work: \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Signature: \_\_\_\_\_

I understand that by entering my name above, it constitutes as a legal signature.

**\*\*Easement Encroachment.** This permit authorizes the permit holder to construct/install a non-permanent structure (requires no subsurface foundation or structural member), within the boundaries of an existing public utility easement. Whenever this is the case, permittee shall be fully responsible (at permit holder's cost) for the removal and replacement of such non-permanent structure(s), at any time County personnel or County contractor may deem the structure interferes with work on the public utility for which the easement is in place. Any encroachment to the right of way or easements shall ensure that exiting drainage patterns are being maintained and unimpeded as applicable.



Bldg: \_\_\_\_\_ Util: \_\_\_\_\_  
 Plng: \_\_\_\_\_ PW: \_\_\_\_\_ Fire: \_\_\_\_\_

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 Los Alamos, NM 87544  
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