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.

OWNER/APPLICANT INFORMATION

Company:					
Mailing Addres	s:				
City:	Сот	.inty:	State:	Zip Code:	
Phone Number:			Representative:		
•••••		•••••			
PROJECT	T DESIGN EN	GINEER	(as applicable)		
Company:					
Mailing Addres	s:				
City:	Со	.nty:	State:	Zip Code:	
Phone Number:			Representative:		
•••••					
ELECTRI	CAL CONTR	ACTOR (if different than pro	ject design enginee	r)
Compony					
Mailing Addres					
City:	S		State	Zin Code:	
Phone Number	C0	inty	State	Zip code	
Thone Number.			Representative		
TYPE OF	GENERATO	R			
Photovoltaic		Wine	1		
1 noto vontare		** 110			
ESI. LUA	AD, GEN. KA	ATTING AF	ND MODE OF C	JPERATION	
The following is not intended	information will b l as a commitment	e used to design or contract for	ign the Utility custom or billing purposes.	er interconnection. T	This information
Total Site Loa	d (k	W)			
Type: Reside	ential	Comme	ercial	Industrial	
Generator Rat	ing	(kW)	Estimated Annual	Generation	(kWh)
o energion run			• ()		
Mode of Op	eration (at custon	1er delivery p	point)		
Mode of Ope Parallel (stand	eration (at custon lard)	ner delivery p Isolated (non-	ooint) -standard)		

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).

INVERTER DATA (if available)

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

CIRCUIT BREAKER (if available)

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

.....

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

ELECTRIC UTILITY CONTACT FOR APPLICATION SUBMISSION AND FOR MORE INFORMATION:

Utility contacts: Mariano Montoya, Engineering Associate

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

Phone: (505) 663-1828

e-mail: mariano.montoya@lacnm.us

DEPARTMENT OF PUBLIC UTILITIES LOS ALAMOS COUNTY LOS ALAMOS, NEW MEXICO



UTILITY CONSTRUCTION STANDARDS - ELECTRIC

DISTRIBUTED GENERATION INSTALLATIONS



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

APPLICATION INCLUDES RULE E-5 FOR CUSTOMER REFERENCE

STANDARD INTERCONNECTION AGREEMENT

INCORPORTED 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. Electric rates, including net metering customers, are subject to change.

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 a 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: Name:	CUSTOMER
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	Wind	Seismic	Subject to	damag	e from	Winter	Ice Barrier	Flood	Air	Mean
Snow Load	Speed (mph)	Design Category	Weathering	Frost Line Depth	Termite	Design Temp	Underlayment required	Hazards	Freezing Index	Annual Temp
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_0 from $T_0 = 0.2$ SD1/SDS to $T_0 = 0.1$ 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
1. Building Permit Application completed and		
signed.		
2. Site Plan showing location, site utilities, set		
backs and easements		
3. Height of tallest portion of completed assembly		
form the finished grade.		
4. Engineering* for the foundation of the system		
5. Engineering* for the rack assembly		
6. Engineering* for P.V. Panel attachment to the		
rack.		
7. New Mexico one Call		
De service d'in sections for Courses d'Monardo de		
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 rate	ed and listed.

FOR OFFICE USE ONLY	Permi	t Application		Building Safety
Date:				boliding outer
Plan/Permit #:				
Plan Review Fee:			Floodplain:	
Please complete a	ll areas on this form that a	pply. Incomplete applicat	ions may delay process.	
	Residential	-	Commercial	
Project Address:				
Owner:		Address:		
-none:		Email:		
Contractor:		Phone:	Email:	
Address:			License #:	
Design Professional (if ap	plicable):		Phone:	
Address:		Email:		
 Accessory Structure Addition 	 Fence ** Fireplace 	Remodel	Sun Room Photovoltaic	Sign Permanent
Addition	Fireplace	Dwelling	Photovoltaic	Temporary
🖵 Curb-Cut	Foundation	New Roof	Re-Roof	Uwindow/
Deck/Porch Carport	Grading/Excav.	Other	Siding/Stucco	Demo
Square Footage: Heated_	Garage: De	eck, Carport, Porch or Pati	o Cover Total Sq. F	t
Valuation of Work: \$	Numb	er of Stories:	Height	
Description of Work:				
Name:		Date: Signatu	ıre:	
l understand that by ente	ering my name above, it co	onstitutes as a legal signat	ure.	
**Easement Encroachment. foundation or structural mer responsible (at permit holde contractor may deem the str way or easements shall ensu	This permit authorizes the perm mber), within the boundaries of a r's cost) for the removal and rep ucture interferes with work on t re that exiting drainage patterns	it holder to construct/install a m an existing public utility easemen lacement of such non-permaner he public utility for which the ea are being maintained and unim	on-permanent structure (requires nt. Whenever this is the case, pern nt structure(s), at any time County isement is in place. Any encroach peded as applicable.	; no subsurface mittee shall be fully / personnel or County ment to the right of
			1000 Cent	ral Avenue, Suite 150
Rigg:	Util:			Alamos NIM 8754

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Plng: _____ PW: _____ Fire: _____

Los Alamos, NM 87544 P 505.662.8120 F 505.662.8363



Requirements for Roof Mounted Installation

2 copies of all documentation required

Provide:	PROVIDED	NA
1. Building Permit Application completed and signed.		
2. <u>Roof Plan</u> (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. Panel Layout Plan (1/4" scale Min) Show exact panel loca-		
tions, provide weight, panels in pounds and/size. Provide dead		
load weight per attachment point, and number of attachment		
points.		
A Anchoring system for panel rack Include engineering and		
flashing details for mounts.		
5. Anchoring system of P. V. Panels to rack		
(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.		
Dequired inspections for Deef mounted.		
Required inspections for Kool mounted:		
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.

FOR OFFICE USE ONLY	Permit	Application		Building So
Date:				building Sc
Plan/Permit #:				
Plan Review Fee:			Floodplain:	
Please complete a	ll areas on this form that ap	ply. Incomplete applica	tions may delay process.	
Project Address:	Residential	-	Commercial	
Owner:		Address:		
Phone:		Email:		
Contractor		Phone	Fmailt	
Auuress:			License #:	
Design Professional (if ap	plicable):		Phone:	
Address:		Email:		
Main Point of Contact: C Type of Work:	Owner: Contractor:	Design Profession	nal: Sun Room	🗖 Sign
Structure	Firenlace			Permane
		Dwelling		Tempora
Curb-Cut	Foundation	New Roof	Re-Roof	U Windo Door
Deck/Porch Carport	Grading/Excav.	Other	Siding/Stucco	Demo
Square Footage: Heated_	Garage: Dec	k, Carport, Porch or Pat	io Cover Total Sq. F	t
Valuation of Work: \$	Number	r of Stories:	Height	
Description of Work:				
Name:		Date: Signat	ure:	
I understand that by ente	ering my name above, it cor	istitutes as a legal signa	ture.	
**Easement Encroachment. foundation or structural mer responsible (at permit holde contractor may deem the str way or easements shall ensu	This permit authorizes the permit mber), within the boundaries of an r's cost) for the removal and repla ructure interferes with work on the re that exiting drainage patterns a	holder to construct/install a r existing public utility easeme cement of such non-permane e public utility for which the e ure being maintained and unin	non-permanent structure (requires ent. Whenever this is the case, perr nt structure(s), at any time County asement is in place. Any encroach npeded as applicable.	no subsurface nittee shall be fully personnel or Coun nent to the right of
			1000 Cont	ral Avenue Suite
Bldg:	Util:		Los	Alamos, NM 875
PIng:	PW:	Fire:	P 505.662 812	0 F 505.662 83

	18.	

Rev. 2/2018

P 505.662.8120 F 505.662.8363 Iosalamosnm.us