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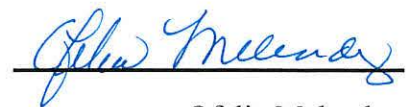
SEP 18 2017

SIERRA ELECTRIC COOPERATIVE, INC.  
2<sup>nd</sup> REVISED FORM NO. 7  
CANCELLING 1<sup>st</sup> REVISED FORM NO. 7

NM PUBLIC REGULATION COMM  
RECORDS MANAGEMENT BUREAU

STANDARD INTERCONNECTION APPLICATION

Advice Notice No. 66



Ofelia Melendez  
Interim General Manager

**EFFECTIVE**

OCT 12 2017

REPLACED BY NMPRC

BY Rule 210

Sierra Electric Cooperative, Inc.  
2<sup>nd</sup> Revised Form No. 7

NMPRC RULE 568 EXHIBIT 1A  
Simplified Interconnection Application  
Certified Inverter-Based Generating Facilities  
With a Rated Capacity up to and including 10kW AC

This Application is considered complete when it provides all applicable and correct information required below. Additional information to evaluate the Application may be required.

**Processing Fee**

A fee of \$50 must accompany this Application.

**Interconnection Customer**

Name: \_\_\_\_\_

Contact Person: \_\_\_\_\_

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

City, State, Zip: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

**Engineering Firm (If Applicable)**

Contact Person: \_\_\_\_\_

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

City, State, Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

**Contact (if different from Interconnection Customer)**

Name: \_\_\_\_\_

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

City, State, Zip: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Owner(s) of the facility (include % ownership by any electric utility):  
\_\_\_\_\_

## Generating Facility Information

Location (if different from above): \_\_\_\_\_

Electric Service Company: \_\_\_\_\_

Account Number: \_\_\_\_\_

### Generator 10 kW Inverter Process:

Inverter Manufacturer: \_\_\_\_\_ Model : \_\_\_\_\_

Nameplate Rating: (kW) \_\_\_\_\_ (kVA) \_\_\_\_\_ (AC Volts) \_\_\_\_\_

Single Phase \_\_\_\_\_ Three Phase \_\_\_\_\_ System Design Capacity: \_\_\_\_\_ (kW) \_\_\_\_\_ (kVA)

Prime Mover: Photovoltaic ☐ Reciprocating Engine ☐ Fuel Cell ☐ Turbine ☐

Other ☐ (describe) \_\_\_\_\_

Energy Source: Solar ☐ Wind ☐ Hydro ☐ Diesel ☐ Natural Gas ☐ Fuel Oil ☐

Other ☐ (describe) \_\_\_\_\_

Is the equipment UL1741 Listed? Yes \_\_\_\_ No \_\_\_\_ If Yes, attach manufacturer's cut-sheet showing UL1741 listing

Estimated Installation Date: \_\_\_\_\_ Estimated In-Service Date: \_\_\_\_\_

The 10 kW Inverter Process is available only for inverter-based Generating Facilities no larger than 10 kW that meet the codes, standards, and certification requirements of Attachment 3 of the Generator Interconnection Procedures (SGIP), or the QRU has reviewed the design or tested the proposed Generating Facility and is satisfied that it is safe to operate.

List components of the Generating Facility equipment package that are currently certified:

<u>Equipment Type</u>	<u>Certifying Entity</u>
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

**Interconnection Customer Signature**

I hereby certify that, to the best of my knowledge, the information provided in this Application is true. I agree to abide by the Terms and Conditions for Interconnecting an Inverter-Based Generating Facility No Larger than 10kW contained in the New Mexico Interconnection Manual, Exhibit 3A and return the notice of completion when the Generating Facility has been installed.

Signed: \_\_\_\_\_

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

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

**Utility Signature**

The undersigned Utility agrees to abide by the Terms and Conditions contained in the New Mexico Interconnection Manual, Exhibit 3A and that optional paragraph 6.0 Indemnification ☐ applies ☐ does not apply.

Signed: \_\_\_\_\_

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

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

Sierra Electric Cooperative, Inc.  
2<sup>nd</sup> Revised Form No. 7

NMPRC RULE 568 EXHIBIT 1B  
Standard Interconnection Application  
Generating Facilities with Rated Capabilities  
Greater Than 10 kW

A Customer-Generator applicant ("Applicant") hereby makes application to \_\_\_\_\_(utility) to install and operate a generating facility with rated capacity greater than 10 kW interconnected with the \_\_\_\_\_ utility system.

Written applications should be submitted by mail, e-mail or fax to Sierra Electric Cooperative, Inc., as follows:

Sierra Electric Cooperative, Inc.

PO Box 290, Elephant Butte, NM 87935

Fax: 575-744-5819

E-Mail Address: sierra@secpower.com

Contact Title: Operations Manager

An application is a Complete Application when it provides all applicable information required below. (Additional information to evaluate a request for interconnection may be required and will be so requested from the Interconnection Applicant by Utility after the application is deemed complete).

**SECTION 1. APPLICATION INFORMATION**

Legal Name of Interconnecting Applicant (or if an Individual, Individual's Name)

Name: \_\_\_\_\_

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

City, State, Zip: \_\_\_\_\_

Facility Location (if different from above):

\_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Utility: \_\_\_\_\_

(Existing Account Number, if generator to be interconnected on the Customer side of a utility revenue meter)

Type of Interconnect Service Applied for (choose one): \_\_\_\_\_ Network Resource, \_\_\_\_\_ Energy Only,  
\_\_\_\_\_ Load Response (no export) \_\_\_\_\_ Net metering

## SECTION 2. GENERATOR QUALIFICATIONS

Data apply only to the Generating Facility, not the Interconnection Facilities.

Energy Source: ☐ Solar, ☐ Wind, ☐ Hydro, ☐ Hydro Type (e.g. Run of River): \_\_\_\_\_,  
☐ Diesel, ☐ Natural Gas, ☐ Fuel Oil, ☐ Other (state type) \_\_\_\_\_.

Prime Mover: ☐ Fuel Cell, ☐ Recip. Engine, ☐ Gas Turbine, ☐ Steam Turbine, ☐ Microturbine,  
☐ PV, ☐ Other \_\_\_\_\_

Type of Generator: ☐ Synchronous, ☐ Induction, ☐ Inverter

Generator Nameplate Rating: \_\_\_\_\_ kW (Typical); Generator Nameplate kVa: \_\_\_\_\_

Interconnection Customer or Customer-Site Load: \_\_\_\_\_ kW (if none, so state)

Typical Reactive Load (if known): \_\_\_\_\_

Maximum Physical Export Capability Requested: \_\_\_\_\_ kW

List Components of the Generating Facility Equipment Package that are currently certified:

	Equipment Type	Certifying Entity
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____

Is the prime mover compatible with the certified protective relay package?

☐ Yes ☐ No

Generator (or solar collector)

Manufacturer, Model Name & Number: \_\_\_\_\_

Version Number: \_\_\_\_\_

Nameplate Output Power Rating in kW:

(Summer) \_\_\_\_\_ (Winter) \_\_\_\_\_

Nameplate Output Power Rating in kVa:

Summer) \_\_\_\_\_ (Winter) \_\_\_\_\_

Individual Generator Power Factor

Rated Power Factor: Leading: \_\_\_\_\_ Lagging: \_\_\_\_\_

Total Number of Generators to be interconnected pursuant to this Interconnection Application: \_\_\_\_\_;

Elevation: \_\_\_\_\_; ☐ Single Phase; ☐ Three Phase



Inverter Manufacturer, Model Name & Number (if used): \_\_\_\_\_

List of adjustable set points for the protective equipment or software: \_\_\_\_\_

Note: A completed Power Systems Load Flow data sheet must be supplied with the Interconnection Application.

Generating Facility Characteristic Data (for inverter-based machines):

Max design fault contribution current: \_\_\_\_\_ Instantaneous or RMS? \_\_\_\_\_  
Harmonics Characteristics: \_\_\_\_\_  
Start-up Requirements: \_\_\_\_\_

Generating Facility Characteristic Data (for rotating machines):

RPM Frequency: \_\_\_\_\_

(\*) Neutral Grounding Resistor (If Applicable): \_\_\_\_\_

Synchronous Generators:

Direct Axis Synchronous Reactance,  $X_d$ : \_\_\_\_\_ P.U.  
Direct Axis Transient Reactance  $X'_d$ : \_\_\_\_\_ P.U.  
Direct Axis Subtransient Reactance  $X''_d$ : \_\_\_\_\_ P.U.  
Negative Sequence Reactance,  $X_2$ : \_\_\_\_\_ P.U.  
Zero Sequence Reactance,  $X_0$ : \_\_\_\_\_ P.U.  
KVA Base: \_\_\_\_\_  
Field Volts: \_\_\_\_\_  
Field Amperes: \_\_\_\_\_

Induction Generators:

Motoring Power (kw): \_\_\_\_\_  
I2t or K (Heating Time Constant): \_\_\_\_\_  
Rotor Resistance,  $R_r$ : \_\_\_\_\_  
Stator Resistance  $R_s$ : \_\_\_\_\_  
Stator Reactance  $X_s$ : \_\_\_\_\_  
Rotor Reactance,  $X_r$ : \_\_\_\_\_  
Magnetizing Reactance,  $X_m$ : \_\_\_\_\_  
Short Circuit Reactance,  $X_d''$ : \_\_\_\_\_  
Exciting Current: \_\_\_\_\_  
Temperature Rise: \_\_\_\_\_  
Frame Size: \_\_\_\_\_  
Design Letter: \_\_\_\_\_  
Reactive Power Required in Vars (No Load): \_\_\_\_\_  
Reactive Power Required in Vars (Full Load): \_\_\_\_\_  
Total Rotating Inertia, H: \_\_\_\_\_ Per Unit on kVa Base

Note: Please contact the Utility prior to submitting the Interconnection Application to determine if the specified information above is required.

Excitation and Governor System Data for Synchronous Generators Only:

Provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS) in accordance with the regional reliability council criteria. A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be substituted.

**SECTION 3. INTERCONNECTION FACILITIES INFORMATION**

Will a transformer be used between the generator and the Point of Common Coupling?

\_\_\_\_ Yes \_\_\_\_ No

Transformer Data (If Applicable, for Interconnection Customer –Owned Transformer):

Is the transformer: \_\_\_\_ single phase \_\_\_\_ three phase? Size: \_\_\_\_\_ kVa

Transformer Impedence: \_\_\_\_\_ percent on \_\_\_\_\_ kVa Base

If Three Phase:

Transformer Primary: \_\_\_\_\_ Volts \_\_\_\_\_ Delta \_\_\_\_\_ Wye \_\_\_\_\_ Wye Grounded

Transformer Secondary: \_\_\_\_\_ Volts \_\_\_\_\_ Delta \_\_\_\_\_ Wye \_\_\_\_\_ Wye Grounded

Transformer Tertiary: \_\_\_\_\_ Volts \_\_\_\_\_ Delta \_\_\_\_\_ Wye \_\_\_\_\_ Wye Grounded

Transformer Fuse Data (If Applicable, for Interconnection Customer-Owned Fuse):

(Attach copy of fuse manufacturer's Minimum Melt and Total Clearing Time-Current Curves)

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Size: \_\_\_\_\_ Speed \_\_\_\_\_

Interconnecting Circuit Breaker (if applicable):

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Load Rating (amps): \_\_\_\_\_ Interrupting Rating (amps) \_\_\_\_\_ Trip Speed (Cycles): \_\_\_\_\_

Interconnection Protective Relays (If Applicable):

If Microprocessor-Controlled:

List of Functions and Adjustable Setpoints for the protective equipment or software:

	Setpoint Function	Minimum	Maximum
1.			
2.			
3.			
4.			
5.			
6.			



If Discrete Components:

(Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting \_\_\_\_\_

Current Transformer Data (If Applicable):

(Enclose Copy of Manufacturer's Excitation and Ratio Correction Curves)

Manufacturer: \_\_\_\_\_

Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_ Proposed Ratio Connection: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_ Proposed Ratio Connection: \_\_\_\_\_

Potential Transformer Data (If Applicable):

Manufacturer: \_\_\_\_\_

Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_ Proposed Ratio Connection: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_ Proposed Ratio Connection: \_\_\_\_\_

#### **SECTION 4. GENERAL INFORMATION**

Enclose copy of site electrical one-line diagram showing the configuration of all Generating Facility equipment, current and potential circuits, and protection and control schemes.

This one-line diagram must be signed and stamped by a licensed Professional Engineer if the Generating Facility is larger than 50 kW. Is One-Line Diagram Enclosed?

\_\_\_\_\_ Yes \_\_\_\_\_ No

Enclose copy of any site documentation that indicates the precise physical location of the proposed Generating Facility (e.g. USGS topographic map or other diagram or documentation).

Proposed location of protective interface equipment on property (include address if different from the Interconnection Customer's address):

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Enclose copy of any site documentation that describes and details the operation of the protection and control schemes. Is Available Documentation Enclosed?

\_\_\_\_\_ Yes \_\_\_\_\_ No

Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable). Are Schematic Drawings Enclosed?

\_\_\_\_\_ Yes \_\_\_\_\_ No

## SECTION 5. APPLICANT SIGNATURE

I hereby certify that, to the best of my knowledge, all the information provided in the Interconnection Application is true and correct. I also agree to install a Warning Label provided by Sierra Electric Cooperative, Inc. on or near my service meter location. Generating systems must be compliant with IEEE, NEC, ANSI, and UL standards, where applicable. By signing below, the Applicants also certifies that the installed generating equipment meets the appropriate preceding requirement(s) and can supply documentation that confirms compliance.

Signature of Applicant: \_\_\_\_\_

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

## SECTION 6: INFORMATION REQUIRED PRIOR TO PHYSICAL INTERCONNECTION

(Not required as part of the application, unless available at time of application.)

Installing Electrician: \_\_\_\_\_ Firm: \_\_\_\_\_

License No.: \_\_\_\_\_

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_

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

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

Signed (Inspector – if required): \_\_\_\_\_

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

(In lieu of signature of Inspector, a copy of the final inspection certificate may be attached)