INTERCONNECTION REQUEST APPLICATION FORM

Utility: _____

Designated Utility Contact: _____

E-Mail Address: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____

An Interconnection Request Application Form is considered complete when it provides all applicable and correct information required below.

Preamble and Instructions

An Interconnection Customer who requests a Town of Forest City interconnection must submit this Interconnection Request Application Form by hand delivery, mail, e-mail, or fax to the Utility.

Request for: Fast Track Process ____ Supplemental Review ____
Study Process ____ Standby Generator/Closed Transition____

(Refer to Section 3 of the Interconnection Standards for guidance in selecting Fast Track Review options. All Generating Facilities larger than 2 MW must use the Section 4 Study Process.)

Processing Fee or Deposit

Fast Track Process – Non-Refundable Processing Fees

- If the Generating Facility is larger than 20 kW but not larger than 100 kW, the fee is $750.
- If the Generating Facility is larger than 100 kW but not larger than 2 MW, the fee is $1,000.

Supplemental Review – Deposit

- If the Generating Facility is larger than 20 kW but not larger than 100 kW, the fee is $750.
- If the Generating Facility is larger than 100 kW but not larger than 2 MW, the fee is $1,000.

Study Process – Deposit

If the Interconnection Request is submitted under the Study Process, whether a new submission or an Interconnection Request that did not pass the Fast Track Process, the Interconnection Customer shall submit to the Utility an Interconnection Facilities Deposit Charge of $20,000 plus $1.00 per kW_{AC}.

Standby Generator/Closed Transition – Deposit

- If the Facility is less than 1 MW, deposit is $2,500.

- If the Facility is equal to or greater than 1 MW the deposit is $5,000.

Change in Ownership – Non-Refundable Processing Fee

If the Interconnection Request is submitted solely due to a transfer of ownership or change of control of the Generating Facility, the fee is $500.

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Application continues on next page

Interconnection Customer Information (Utility Billing Customer)

Legal Name of the Interconnection Customer (or, if an individual, individual's name)

Name: _____

Contact Person: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Facility Location (if different from above): _____

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____ E-Mail Address: _____

Alternative Contact Information (if different from the Interconnection Customer)

Contact Name / Title: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____ E-Mail Address: _____

Installer

Name: _____

Address: _____

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____ E-Mail Address: _____

Application is for:

_____ New Generating Facility
_____ Capacity Change to a Proposed or Existing Generating Facility
_____ Change of Ownership of a Proposed or Existing Generating Facility to a new legal entity
_____ Change of Control of a Proposed or Existing Generating Facility of the existing legal entity.
_____ Equipment Substitution
_____ Other

Please provide additional information regarding the proposed change(s): _____

_____

_____

Will the Generating Facility be used for any of the following?

	Yes	No
Net Billing (in lieu of Net Metering)?	____	____
To Supply Power to the Interconnection Customer?	____	____
To Supply Power to the Utility?	____	____
To Supply Power to Others? (If yes, discuss with the Utility whether the interconnection is covered by the Interconnection Standard.)	____	____

Is the Generating Facility owned by the Interconnection Customer or Leased from an Electric Generator Lessor in NC?

Owned _____

Leased _____ NCUC Docket No. _____

Requested Point of Interconnection: _____

Requested In-Service Date: _____

For installations at locations with existing electric service to which the proposed Generating Facility will interconnect, provide:

Local Electric Service Provider*: _____

Existing Account Number: _____

To be provided by the Interconnection Customer if the local electric service provider is different from the Utility:

Contact Name / Title: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____ E-Mail Address: _____

Generating Facility Information

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

Prime Mover Information (Refer to U.S. EIA Form 860 Instructions, Table 2 Prime Mover Codes and Descriptions at: https://www.eia.gov/survey/form/eia_860/instructions.pdf or https://www.eia.gov/survey/form/eia_860m/instructions.pdf

Prime Mover Code _____

Prime Mover Description _____

Energy Source Information (Refer to U.S. EIA Form 860 Instructions, Table 28 Energy Source Codes and Heat Content at: https://www.eia.gov/survey/form/eia_860/instructions.pdf

Fuel Type	Energy Source Code	Energy Source Description

Type of Generator: Synchronous __ Induction __ Inverter __

Total Generator/Storage Nameplate Capacity: _____ kW_{AC} (Typical) _____ kVAR

Storage Nameplate Energy: _____kWh

Interconnection Customer or Customer-Site Load:_____ kW_{AC} (if none, so state)

Interconnection Customer Generator Auxiliary Load: _____ kW_{AC}

Typical Reactive Load (if known): _____ kVAR

Maximum Generating Capacity Requested: _____ kW_{AC}
(The maximum continuous electrical output of the Generating Facility at any time at a power factor of approximately unity as measured at the Point of Interconnection and the maximum kW delivered to the Utility during any metering period)

Production profile: provide below the maximum import and export levels (as a percentage of the Maximum Generation Capacity Requested) for each hour of the day, as measured at the Point of Interconnection. Power flow in excess of these levels during the corresponding hour shall be considered an Adverse Operating Effect per section 3.4.4 of the Interconnection Agreement.

Maximum import and export, hour ending:

0100 imp: exp: %	0200 imp: exp: %	0300 imp: exp: %
0400 imp: exp: %	0500 imp: exp: %	0600 imp: exp: %
0700 imp: exp: %	0800 imp: exp: %	0900 imp: exp: %

1000 imp: exp: %	1100 imp: exp: %	1200 imp: exp: %
1300 imp: exp: %	1400 imp: exp: %	1500 imp: exp: %
1600 imp: exp: %	1700 imp: exp: %	1800 imp: exp: %
1900 imp: exp: %	2000 imp: exp: %	2100 imp: exp: %
2200 imp: exp: %	2300 imp: exp: %	2400 imp: exp: %

Please provide any additional pertinent information regarding the daily operating characteristics of the facility here or attached as noted. Also note information about intended reactive flows:

_____
_____
_____
_____

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

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

Generator (or solar panel information)

Manufacturer, Model & Quantity: _____

Nameplate Output Power Rating in kW_{AC}: Summer _____ Winter _____

Nameplate Output Power Rating in kVA: Summer _____ Winter _____

Individual Generator Rated Power Factor: _____ Leading _____ Lagging

Total Number of Generators in wind farm to be interconnected pursuant to this Interconnection Request (if applicable): _____ Elevation: _____

Inverter Manufacturer, Model & Quantity: _____

Latitude: _____ Degrees (decimal format, to at least 4 places)
Longitude: _____ Degrees (decimal format, to at least 4 places)

For solar projects provide the following information:

Orientation: _____ Degrees (Due South=180°)
❒ Fixed Tilt Array ❒ Single Axis Tracking Array ❒ Double Axis Tracking Array
Fixed Tilt Angle: _____ Degrees

Impedance Diagram - If interconnecting to the Utility System at a voltage of 44-kV or greater, provide an Impedance Diagram. An Impedance Diagram may be required by the Utility for proposed interconnections at lower interconnection voltages. The Impedance Diagram shall provide, or be accompanied by a list that shall provide, the collector system impedance of the generation plant. The collector system impedance data shall include equivalent impedances for all components, starting with the inverter transformer(s) up to the utility level Generator Step-Up transformer.

Load Flow Data Sheet - If interconnecting to the Utility System at a voltage of 44-kV or greater, provide A completed Power Systems Load Flow data sheet. A Load Flow data sheet may be required by the Utility for proposed interconnections at lower interconnection voltages.

Excitation and Governor System Data for Synchronous Generators - If interconnecting to the Utility System at a voltage of 44-kV or greater, 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 required at lower interconnection voltages. A copy of the manufacturer's block diagram may not be substituted.

Generating Facility Characteristic Data (for inverter-based machines)

Max design fault contribution current: _____ Instantaneous _____ or RMS _____

Harmonics Characteristics: _____

Start-up requirements: _____

Inverter Short-Circuit Model Data

Model and parameter data required for short-circuit analysis is specific to each PV inverter make and model. All data to be provided in per-unit ohms, on the equivalent inverter MVA base.

Inverter Equivalent MVA Base: _____ MVA

Values below are valid for initial 2 to 6 cycles:

Short-Circuit Equivalent Pos. Seq. Resistance (R1): _____ p.u.

Short-Circuit Equivalent Pos. Seq. Reactance (XL1): _____ p.u.

Short-Circuit Equivalent Neg. Seq. Resistance (R2): _____ p.u.

Short-Circuit Equivalent Neg. Seq. Reactance (XL2): _____ p.u.

Short-Circuit Equivalent Zero Seq. Resistance (R0): _____ p.u.

Short-Circuit Equivalent Zero Seq. Reactance (XL0): _____ p.u.

Special notes regarding short-circuit modeling assumptions:

_____

_____

Generating Facility Characteristic Data (for rotating machines)

RPM Frequency: _____

(*) Neutral Grounding Resistor (if applicable): _____

Synchronous Generators:

Direct Axis Synchronous Reactance, Xd: _____ 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): _____

I_2^2t or K (Heating Time Constant): _____

Rotor Resistance, Rr: _____

Stator Resistance, Rs: _____

Stator Reactance, Xs: _____

Rotor Reactance, Xr: _____

Magnetizing Reactance, Xm: _____

Short Circuit Reactance, Xd'': _____

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 Request to determine if the specified information above is requires. Excitation and Governor System Data for Synchronous Generators Only.

Interconnection Facilities Information

Will more than one transformer be used between the generator and the point of common coupling? *(If yes, copy this section and provide the information for each transformer used. This information must match the single-line drawing and transformer specification sheets.)* Yes ____ No ____

Will the transformer be provided by the Interconnection Customer? Yes ____ No ____

Transformer Data (if applicable, for Interconnection Customer-owned transformer):

Is the transformer: Single phase ___ Three phase* ___ Size: _____ kVA

Transformer Impedance: _____ % on _____ kVA Base

*If Three Phase:

Transformer Primary Winding _____ Volts,
❒ Delta ❒ WYE, grounded neutral ❒ WYE, ungrounded neutral

Primary Wiring Connection
❒ 3-wire ❒ 4-wire, grounded neutral

Transformer Secondary Winding _____ Volts,
❒ Delta ❒ WYE, grounded neutral ❒ WYE, ungrounded neutral

Secondary Wiring Connection
❒ 3-wire ❒ 4-wire, grounded neutral

Transformer Tertiary Winding _____ Volts,
❒ Delta ❒ WYE, grounded neutral ❒ WYE, ungrounded neutral

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

If Discrete Components:
(Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

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: _____

General Information

1.0 One-line diagram

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

- The one-line diagram should include the project owner's name, project name, project address, model numbers and nameplate sizes of equipment, including number and nameplate electrical size information for solar panels, inverters, wind turbines, disconnect switches, latitude and longitude of the project location, and tilt angle and orientation of the photovoltaic array for solar projects.
- The diagram should also depict the metering arrangement required whether installed on the customer side of an existing meter ("net metering/billing") or directly connected to the grid through a new or separate delivery point requiring a separate meter.
- List of adjustable set points for the protective equipment or software should be included on the electrical one-line drawing.
- 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 ___

2.0 Site Plan

Enclose copy of any site documentation that indicates the precise physical location of the proposed Generating Facility (Latitude & Longitude Coordinates and USGS topographic map, or other diagram) and the proposed Point of Interconnection.

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

Address: _____

City: _____ State: _____ Zip: _____

Is Site Plan Enclosed? Yes ___ No ___

3.0 Is Site Control Verification Form Enclosed?

Yes ____ No ___

4.0 Equipment Specifications

Include equipment specification information (product literature) for the solar panels and inverter(s) that provides technical information and certification information for the equipment to be installed with the application.

Are Equipment Specifications Enclosed? Yes ___ No ___

5.0 Protection and Control Schemes

Enclose copy of any site documentation that describes and details the operation of the protection and control schemes.

Is Available Documentation Enclosed? Yes ___ No ___

(continued on next page)

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 ___

6.0 Register with North Carolina Secretary of State (if not an individual)

Has the registration with NC Secretary of State been completed? Yes ___ No ___

Applicant Signature

I hereby certify that, to the best of my knowledge, all the information provided in this Interconnection Request Application Form is true and correct.

For Interconnection Customer:

Signature _____ Date:_____
(Authorized Agent of the Legal Entity)

Print Full Name _____

Company Name _____

Title with Company _____

E-Mail Address _____

Mailing Address _____

City: _____State:_____Zip:_____

County _____

Telephone (Day)_____(Evening)_____

Fax_____

In the Matter of the Application of [Developer Name] for an Interconnection Agreement with [Utility Name])

SITE CONTROL VERIFICATION

I, [Authorized Signatory Name], [Title] of [Developer Name], under penalty of perjury, hereby certify that, [Developer Name] or its affiliate has executed a written contract with the landowner(s) noted below, concerning the property described below. I further certify that our written contract with the landowner(s) specifies the agreed rental rate or purchase price for the property, as applicable, and allows [Developer Name] or its affiliates to construct and operate a renewable energy power generation facility on the property described below.

This verification is provided to [Utility Name] in support of our application for an Interconnection Agreement.

Landowner Name(s): _____

Land Owner Contact information (Phone or e-mail): _____

Parcel or PIN Number: _____

County: _____

Site Address:_____

Number of Acres under Contract (state range, if applicable): _____

Date Contract was executed _____

Term of Contract _____

_____[signature]_____

[Authorized Signatory Name]

[Authorized Signatory Name], being first duly sworn, says that [he/she] has read the foregoing verification, and knows the contents thereof to be true to [his/her] actual knowledge.

Sworn and subscribed to before me this _____ day of _____, 201____.

_____[signature]_____
[Authorized Signatory Name]

[Title], [Developer Name]

_____[Signature of Notary Public]_____
Notary Public

_____
Name of Notary Public [typewritten or printed]

My **Commission Expires**_____