

# Bryan Municipal Utilities

## Application for Operation of Customer-Owned Generation

This application should be completed and returned to Bryan Municipal Utilities in order to begin processing the request. See Customer Guidelines for Electric Power Generator Installation and Interconnection for additional information.

INFORMATION: This application is used by Bryan Municipal Utilities to determine the required equipment configuration for the Customer interface. Every effort should be made to supply as much information as possible.

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### PART 1 OWNER/APPLICANT INFORMATION

Owner/Customer

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

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

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

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

Email Address: \_\_\_\_\_ Fax Number: \_\_\_\_\_

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### PROJECT DESIGN/ENGINEERING (ARCHITECT) (as applicable)

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

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

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

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

Email Address: \_\_\_\_\_ Fax Number: \_\_\_\_\_

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### ELECTRICAL CONTRACTOR (as applicable)

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

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

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

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

Email Address: \_\_\_\_\_ Fax Number: \_\_\_\_\_

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### TYPE OF GENERATOR (as applicable)

Photovoltaic \_\_\_\_\_ Wind \_\_\_\_\_ Microturbine \_\_\_\_\_  
Diesel Engine \_\_\_\_\_ Gas Engine \_\_\_\_\_ Combustion Turbine \_\_\_\_\_  
Other \_\_\_\_\_

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**ESTIMATED LOAD, GENERATOR RATING AND MODE OF OPERATION INFORMATION**

The following information is necessary to help properly design BMU customer interconnection.  
This information is not intended as a commitment or contract for billing purposes.

Total Site Load \_\_\_\_\_ (kW)  
Residential \_\_\_\_\_ Commercial \_\_\_\_\_ Industrial \_\_\_\_\_  
Generator Rating \_\_\_\_\_ (kW) Annual Estimated Generation \_\_\_\_\_ (kWh)

**Mode of Operation**

Isolated \_\_\_\_\_ Paralleling \_\_\_\_\_ Power Export \_\_\_\_\_

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**DESCRIPTION OF PROPOSED INSTALLATION AND OPERATION**

Give a general description of the proposed installation, including a detailed description of its planned location, the date you plan to operate the generator, the frequency with which you plan to operate it and whether you plan to operate it during on or off-peak hours.

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**PART 2**

(Complete all applicable items. Copy this page as required for additional generators)

**SYNCHRONOUS GENERATOR DATA**

Unit Number: \_\_\_\_\_ Total number of units with listed specifications on site: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Date of manufacture: \_\_\_\_\_  
Serial Number (each): \_\_\_\_\_  
Phases: Single Three R.P.M.: \_\_\_\_\_ Frequency (Hz): \_\_\_\_\_  
Rated Output (for one unit): \_\_\_\_\_ Kilowatt \_\_\_\_\_ Kilovolt-Ampere  
Rated Power Factor (%): \_\_\_\_\_ Rated Voltage (Volts): \_\_\_\_\_ Rated Amperes: \_\_\_\_\_  
Field Volts: \_\_\_\_\_ Field Amps: \_\_\_\_\_ Motoring power (kW): \_\_\_\_\_  
Synchronous Reactance (Xd): \_\_\_\_\_ % on \_\_\_\_\_ KVA base  
Transient Reactance (X'd): \_\_\_\_\_ % on \_\_\_\_\_ KVA base  
Subtransient Reactance (X'd); \_\_\_\_\_ % on \_\_\_\_\_ KVA base  
Negative Sequence Reactance (Xs): \_\_\_\_\_ % on \_\_\_\_\_ KVA base  
Zero Sequence Reactance (Xo): \_\_\_\_\_ % on \_\_\_\_\_ KVA base  
Neutral Grounding Resistor (if applicable): \_\_\_\_\_  
I<sub>2</sub><sup>2</sup>t or K (heating time constant): \_\_\_\_\_  
Additional information: \_\_\_\_\_

**INDUCTION GENERATOR DATA**

Rotor Resistance (Rr): \_\_\_\_\_ ohms      Stator Resistance (Rs): \_\_\_\_\_ ohms  
Rotor Reactance (Xr): \_\_\_\_\_ ohms      Stator Reactance (Xs): \_\_\_\_\_ ohms  
Magnetizing Reactance (Xm): \_\_\_\_\_ ohms      Short Circuit Reactance (Xd''): \_\_\_\_\_ ohms  
Design letter: \_\_\_\_\_      Frame Size: \_\_\_\_\_  
Exciting Current: \_\_\_\_\_      Temp Rise (deg C°): \_\_\_\_\_  
Reactive Power Required: \_\_\_\_\_ Vars (no load), \_\_\_\_\_ Vars (full load)  
Additional information: \_\_\_\_\_

**PRIME MOVER (Complete all applicable items)**

Unit Number: \_\_\_\_\_ Type: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_  
Serial Number: \_\_\_\_\_ Date of manufacture: \_\_\_\_\_  
H.P. Rated: \_\_\_\_\_ H.P. Max.: \_\_\_\_\_ Inertia Constant: \_\_\_\_\_ lb.-ft.<sup>2</sup>  
Energy Source (hydro, steam, wind, etc.) \_\_\_\_\_

**GENERATOR TRANSFORMER (Complete all applicable items)**

TRANSFORMER (between generator and utility system)  
Generator unit number: \_\_\_\_\_ Date of manufacturer: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_  
Serial Number: \_\_\_\_\_  
High Voltage: \_\_\_\_\_ KV, Connection:    delta    wye, Neutral solidly grounded?  
Low Voltage: \_\_\_\_\_ KV, Connection:    delta    wye, Neutral solidly g rounded?  
Transformer Impedance(Z): \_\_\_\_\_ % on \_\_\_\_\_ KVA base.  
Transformer Resistance (R): \_\_\_\_\_ % on \_\_\_\_\_ KVA base.  
Transformer Reactance (X): \_\_\_\_\_ % on \_\_\_\_\_ KVA base.  
Neutral Grounding Resistor (if applicable): \_\_\_\_\_

**INVERTER DATA (if applicable)**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_  
Rated Power Factor (%): \_\_\_\_\_ Rated Voltage (Volts): \_\_\_\_\_ Rated Amperes: \_\_\_\_\_  
Inverter Type (ferroresonant, step, pulse-width modulation, etc): \_\_\_\_\_

Type commutation:    forced          line  
Harmonic Distortion: Maximum Single Harmonic (%) \_\_\_\_\_  
   Maximum Total Harmonic (%) \_\_\_\_\_

Note: Attach all available calculations, test reports, and oscillographic prints showing inverter output voltage and current waveforms.

**POWER CIRCUIT BREAKER (if applicable)**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_  
Rated Voltage (kilovolts): \_\_\_\_\_ Rated ampacity (Amperes) \_\_\_\_\_  
Interrupting rating (Amperes): \_\_\_\_\_ BIL Rating: \_\_\_\_\_  
Interrupting medium / insulating medium (ex. Vacuum, gas, oil ) \_\_\_\_\_ / \_\_\_\_\_  
Control Voltage (Closing): \_\_\_\_\_ (Volts)    AC    DC  
Control Voltage (Tripping): \_\_\_\_\_ (Volts)    AC    DC    Battery    Charged Capacitor  
Close energy:    Spring    Motor    Hydraulic    Pneumatic    Other: \_\_\_\_\_  
Trip energy:    Spring    Motor    Hydraulic    Pneumatic    Other: \_\_\_\_\_  
Bushong Current Transformers: \_\_\_\_\_ (Max. ratio) Relay Accuracy Class: \_\_\_\_\_  
Multi ratio?          No          Yes: (Available taps) \_\_\_\_\_

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**ADDITIONAL INFORMATION**

*In addition to the items listed above, please attach a detailed one-line diagram of the proposed facility, all applicable elementary diagrams, major equipment, (generators, transformers, inverters, circuit breakers, protective relays, etc.) specifications, test reports, etc., and any other applicable drawings or documents necessary for the proper design of the interconnection. Also describe the project's planned operating mode (e.g., combined heat and power, peak shaving, etc.), and its address or grid coordinates.*

**END OF PART 2**  
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**SIGN OFF AREA**

The customer agrees to provide Bryan Municipal Utilities with any additional information required to complete the interconnection. The customer shall operate his equipment within the guidelines set forth by Bryan Municipal Utilities.

\_\_\_\_\_  
Applicant

\_\_\_\_\_  
Date

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**BRYAN MUNICIPAL UTILITIES CONTACT FOR APPLICATION SUBMISSION AND FOR MORE INFORMATION:**

Title: Electric Superintendent  
Address: Bryan Municipal Utilities  
841 E Edgerton Street  
Bryan, OH 43506  
Phone: 419-633-6121  
Fax: 419-633-6105  
e-mail: [utility@cityofbryan.com](mailto:utility@cityofbryan.com)