

GENERATOR INTERCONNECTION APPLICATION
FOR ALL PROJECTS WITH AGGREGATE GENERATOR OUTPUT OF
MORE THAN 150 KW BUT LESS THAN OR EQUAL TO 550 KW
Also Serves as Application for Category 3 DG Rider
 (Note: Category 3 DG Rider Program only available to Methans Digester Projects)

Electric Utility Contact Information

Indiana Michigan Power
Interconnection Coordinator - Shari Konger
1 Riverside Plaza
Columbus OH 43215-2373
Interconnection Hotline: 614-716-4020
Interconnection Email: dgcoordinator@aep.com

For Office Use Only
Application #:
Date & Time Application Received:

Customer / Account Information

Electric Utility Customer Information: (As shown on utility bill)

Customer Name (Last, First, Middle):

Customer Mailing Address:

Customer Phone Number:

Customer E-Mail Address: (optional)

Electric Service Account #

Electric Service Meter Number:

Are you applying for the DG Rider Program? Yes No

Are you interested in selling Renewable Energy Credits (REC's) Yes No

Will you have an Alternative Electric Supplier? Yes No

Name:

Notes: Enter name ONLY if your energy is supplied by a 3rd party, not the utility.

You must apply to both the Distribution Utility and your Alternate Energy Provider (if applicable) for Net Metering

Generation System Site Information

Physical Site Service Address (if not Billing Address):

Annual Site Requirements Without Generation (in Kilowatthours)

Peak Annual Site Demand in Kilowatts (only for customers billed on demand rates)

	kWh/Year
	kW

Attached Site Plan:

Attached Electrical One-Line Drawing (See the Appendix D for a sample Inverter Type Project)

(Per MPSC Order in Case # U-15787, The one-line diagram must be signed and sealed by a licensed professional engineer,

licensed in the State of Michigan or by an electrical contractor licensed by the State of Michigan with the electrical contractor's license number noted on the diagram)

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Page #

Synchronous/Induction Generators: Must fill out the information on Appendix A or B and provide a Detail One-Line Diagram

Page #

See Appendix E and F for a sample the Detail One-Line Diagram for Synchronous or Induction projects

Note: The following information on these system components shall appear on the preliminary Detail One-Line Diagram

- Breakers - Rating, location and normal operating status (open or closed)
- Buses - Operating voltage
- Capacitors - Size of bank in kVAR
- Circuit Switchers - Rating, location and normal operating status (open or closed)
- Current Transformers - Overall ratio, connected ratio
- Fuses - normal operating status, rating (Amps), type
- Generators - Capacity rating (kVA), location, type, method of grounding
- Grounding Resistors - Size (ohms), current (Amps)
- Isolating transformers - Capacity rating (kVA), location, impedance, voltage ratings, primary and secondary connections and method of grounding
- Potential Transformers - Ratio, connection
- Reactors - Ohms/phase
- Relays - Types, quantity, IEEE device number, operator lines indicating the device initiated by the relays.
- Switches - Location and normal operating status (open or closed), type, rating

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Generation System - Manufacturer Information

System Type (Solar, Wind, Biomass, Methane Digester, etc):
 Generator Type (Inverter, Induction, Synchronous):
 Generator Nameplate Rating:
 Expected Annual Output in Kilowatthours
 A.C. Operating Voltage:
 Wiring Configuration (Single Phase, Three Phase):
 Certified Test Record No.(Testing to standard UL1741 scope 1.1a)

Inverter Based Systems:

Manufacturer
 Model (Name / Number)
 Inverter Power Rating (kW)

Induction & Synchronous Based Systems

Manufacturer
 Model (Name / Number)

Installation Information

Project Single Point of Contact: (Electric Utility Customer, Developer, or other)

Name:
 Company (If Applicable):
 Phone Number:
 E-Mail Address:

Requested In Service Date:

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Licensed Contractor (Name of Firm or Self):

Contractor Name (Last, First, MI):
 Contractor Phone #:
 Contractor E-Mail:

Customer and Contractor Signature and Fees

Attached \$150 Interconnection Application Fee or (Check # / Money Order #)

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Attached \$100 combined Interconnection & DG Rider Program application fees

(\$75 Interconnection Application Fee plus \$25 fee required if selecting DG Rider)

(Sign and Return complete Application with Application Fee to Electric Utility Contact)

I/We understand that we are applying for participation in the DG Rider as defined in the Terms and Conditions of Service of Indiana Michigan Power on file with the Michigan Public Service Commission. To enable appropriate billing/metering requirements for the DG Rider, I/We agree to the installation of an AMI meter to record electrical usage(Outflow/Inflow).

To the best of my knowledge, all the information provided in this Application Form is complete and correct.

 Customer Signature

 Contractor Signature (if applicable)

Note: Refer to the applicable "Michigan Electric Utility Generator Interconnection Requirements" for a detailed explanation of the Interconnection Process and Technical Requirements.

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Appendix A

Synchronous Generators

Generator Information

- a. Generator Nameplate Voltage
- b. Generator Nameplate Watts or Volt-Amperes
- c. Generator Nameplate Power Factor (pf)
- d. RPM

a.
b.
c.
d.

Technical Information

- e. Minimum and Maximum Acceptable Terminal Voltage
- f. Direct axis reactance (saturated)
- g. Direct axis reactance (unsaturated)
- h. Quadrature axis reactance (unsaturated)
- i. Direct axis transient reactance (saturated)
- j. Direct axis transient reactance (unsaturated)
- k. Quadrature axis transient reactance (unsaturated)
- l. Direct axis sub-transient reactance (saturated)
- m. Direct axis sub-transient reactance (unsaturated)
- n. Leakage Reactance
- o. Direct axis transient open circuit time constant
- p. Quadrature axis transient open circuit time constant
- q. Direct axis subtransient open circuit time constant
- r. Quadrature axis subtransient open circuit time constant
- s. Open Circuit saturation curve
- t. Reactive Capability Curve showing overexcited and underexcited limits (Reactive Information if non-synchronous)
- u. Excitation System Block Diagram with values for gains and time constants (Laplace transforms)
- v. Short Circuit Current contribution from generator at the Point of Common Coupling
- w. Rotating inertia of overall combination generator, prime mover, couplers and gear drives
- x. Station Power load when generator is off-line, Watts, pf
- y. Station Power load during start-up, Watts, pf
- z. Station Power load during operation, Watts, pf

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v.
w.
x.
y.
z.

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Appendix B

Induction Generators

Generator Information

- a. Generator Nameplate Voltage
- b. Generator Nameplate Watts or Volt-Amperes
- c. Generator Nameplate Power Factor (pf)
- d.RPM

a.
b.
c.
d.

Technical Information

- e. Synchronous Rotational Speed
- f. Rotation Speed at Rated Power
- g. Slip at Rated Power
- h. Minimum and Maximum Acceptable Terminal Voltage
- i. Motoring Power (kW)
- j. Neutral Grounding Resistor (If Applicable)
- k. I_2^2t or K (Heating Time Constant)
- l. Rotor Resistance
- m. Stator Resistance
- n. Stator Reactance
- o. Rotor Reactance
- p. Magnetizing Reactance
- q. Short Circuit Reactance
- r. Exciting Current
- s. Temperature Rise
- t. Frame Size
- u. Design Letter
- v. Reactive Power Required in Vars (No Load)
- w. Reactive Power Required in Vars (Full Load)
- x. Short Circuit Current contribution from generator at the Point of Common Coupling
- y. Rotating inertia, H in Per Unit on kVA Base, of overall combination generator, prime mover, couplers and gear drives
- z. Station Power load when generator is off-line, Watts, pf
- aa. Station Power load during start-up, Watts, pf
- bb. Station Power load during operation, Watts, pf

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w.
x.
y.
z.
aa.
bb.

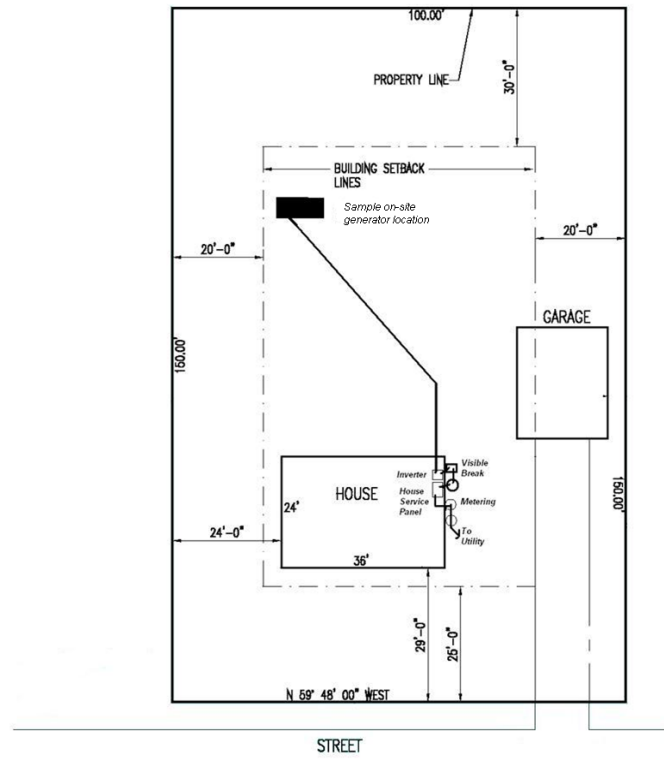
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Appendix C

Sample Site Plan

SITE PLAN

APPLICANT	
ADDRESS	
CITY/TOWN	SIGNATURE



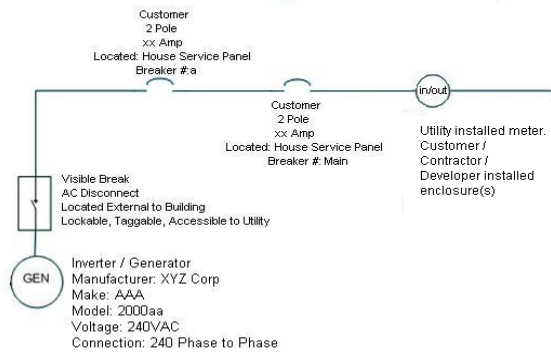
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Appendix D

Sample One-Line Diagram for Inverter-Type Project

Sample One-Line Drawing

UL 1741 Scope 1.1A Compliant



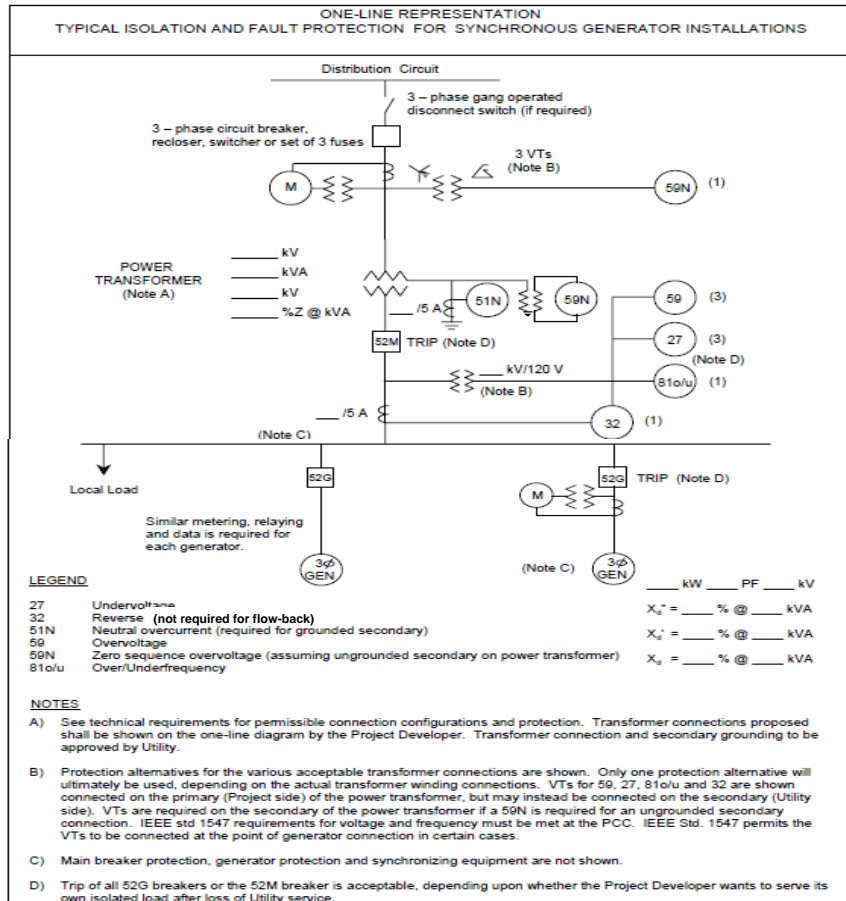
Legible Hand Drawn One-Line is
acceptable

One - Line Diagram
 Name of the Professional Engineer _____
 PE License Number _____
 Address _____
 Signature _____

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Appendix E

Sample One-Line Diagram for Synchronous-Type Project



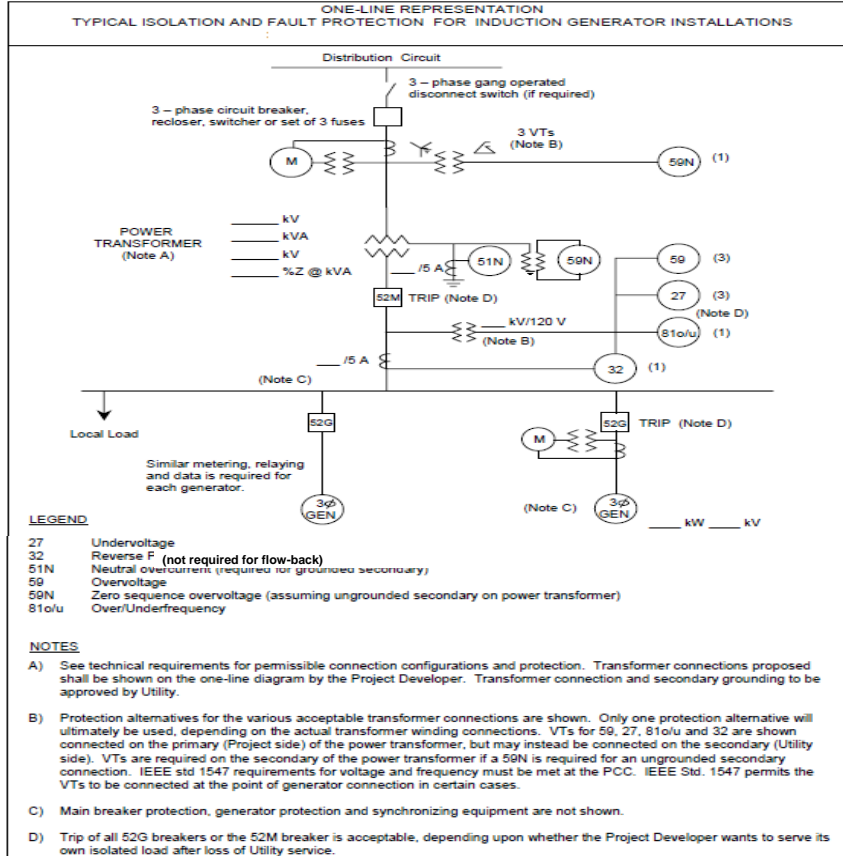
One - Line Diagram
 Name of the Professional Engineer _____
 PE License Number _____
 Address _____

 Signature _____

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Appendix F

Sample One-Line Diagram for Induction Type-Project



One - Line Diagram

Name of the Licensed Contractor/PE: _____
 Contractor Licensed Number: _____
 Address: _____
 Signature: _____