

CATEGORY 2 GENERATOR INTERCONNECTION APPLICATION

FOR ALL PROJECTS WITH AGGREGATE GENERATOR OUTPUT OF MORE THAN 20 KW BUT LESS THAN OR EQUAL TO 150 KW

Also Serves as Application for Category 2 DG Rider

(Note: Category 2 DG Rider Program only available to Renewable Generator Projects)

Electric Utility Contact Information

Indiana Michigan Power
Distributed Generation Coordinator - Shari Konger
PO Box 60
Fort Wayne IN 46801-0060
Interconnection Hotline: 260-408-3402
Interconnection Email: DGCoordinator_I&M@aep.com

For Office Use Only

Application No. _____
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 E-Mail Address: (optional)
Electric Service Account #
Electric Service Meter Number:

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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

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

Alternative Electric Supplier Name

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Generation System Site Information

Physical Site Service Address (if not Billing Address):

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Annual Site Requirements Without Generation in Kilowatt-hours

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

| | |
|--|----------|
| | kWh/year |
| | kW/year |

Attached Site Plan:

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

(Per MPSC Order in Case No. 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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Synchronous/Induction Generators: Must fill out Appendix A or B and provide a Detail One-Line Diagram

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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 KVa
- 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

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Generation System - Manufacturer Information

System Type (Solar, Wind, Biomass, Methane Digester, etc.):
 Generator Type (Inverter, Induction, Synchronous):
 Total Generator(s) Nameplate DC Rating (Solar Only):
 Total Generator(s) Nameplate AC Rating:
 Expected Annual Output in Kilowatt-hours
 AC Output Operating Voltage:
 Generator Wiring Configuration (Single Phase, Three Phase):
 Is the Inverter tested to IEEE1547.1?

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| |
| kW |
| kW |
| kWh/year |
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| |

Yes No Not Applicable

Inverter Based Systems:

Manufacturer
 Model (Name / Number)
 Inverter Output Power Rating (kW)
 No. of Inverter(s)

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Induction & Synchronous Based Systems

Manufacturer
 Model (Name / Number)

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Installation Information

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

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

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Requested In Service Date:

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Licensed Professional Engineer Name (If applicable)
 Licensed Electrical Contractor Name (If applicable)
 Electrical Contractor/PE Phone #:
 Electrical Contractor/PE E-Mail:

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Customer and Contractor Signature and Fees

- Attached \$100 Interconnection Application Fee or
- Attached \$100 combined Interconnection & DG Rider Program application fees **(Check # / Money Order #)**
- (\$75 Interconnection Application Fee plus \$25 fee required if selecting DG Rider)

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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).

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

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

Customer

Project Developer/Contractor (If Applicable)

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

APPENDICES

- Appendix A: Technical Information for Synchronous-Type Generators
- Appendix B: Technical Information for Induction-Type Generators
- Appendix C: Sample Site Plan
- Appendix D: Sample One-Line diagram for Inverter Type Project
- Appendix E: Sample One-Line diagram for Synchronous Type Project
- Appendix F: Sample One-Line diagram for Induction Type Project

Generator Information

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

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| 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 sub transient open circuit time constant
- r. Quadrature axis sub transient 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. |

Generator Information

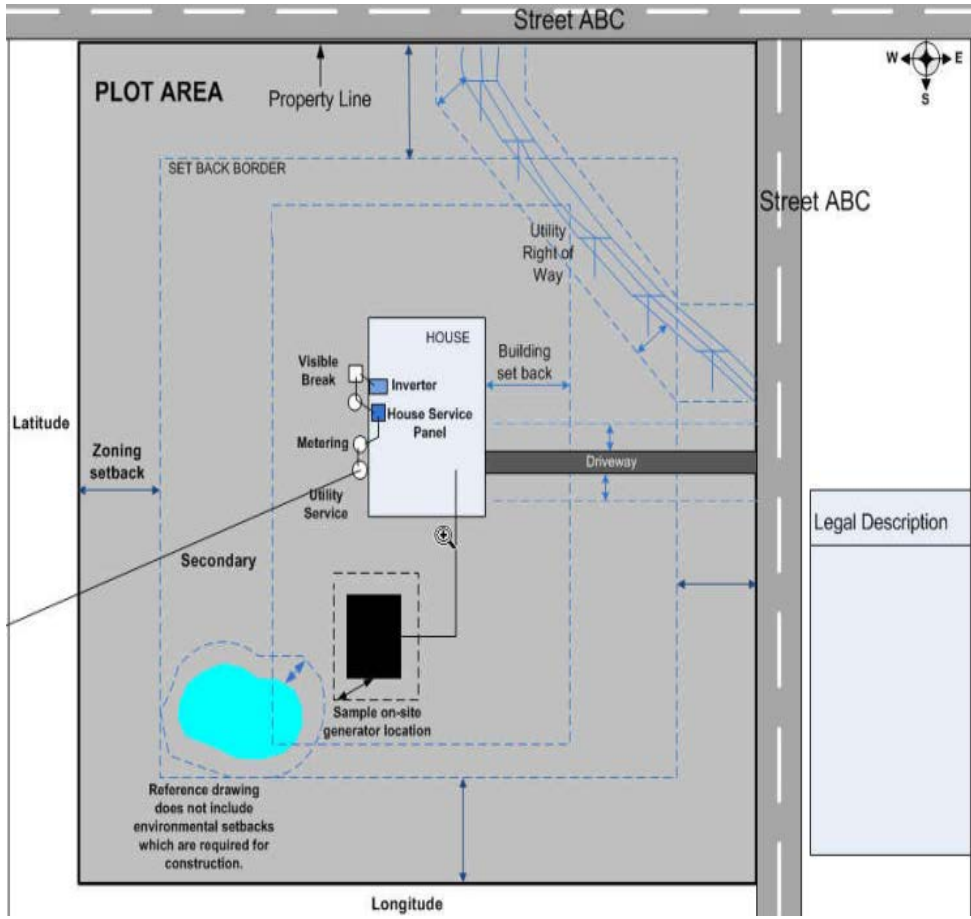
- a. Generator Nameplate Voltage
- b. Generator Nameplate Watts or Volt-Amperes
- c. Generator Nameplate Power Factor (pf)
- d. RPM

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| 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 drive
- 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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| aa. |
| bb. |



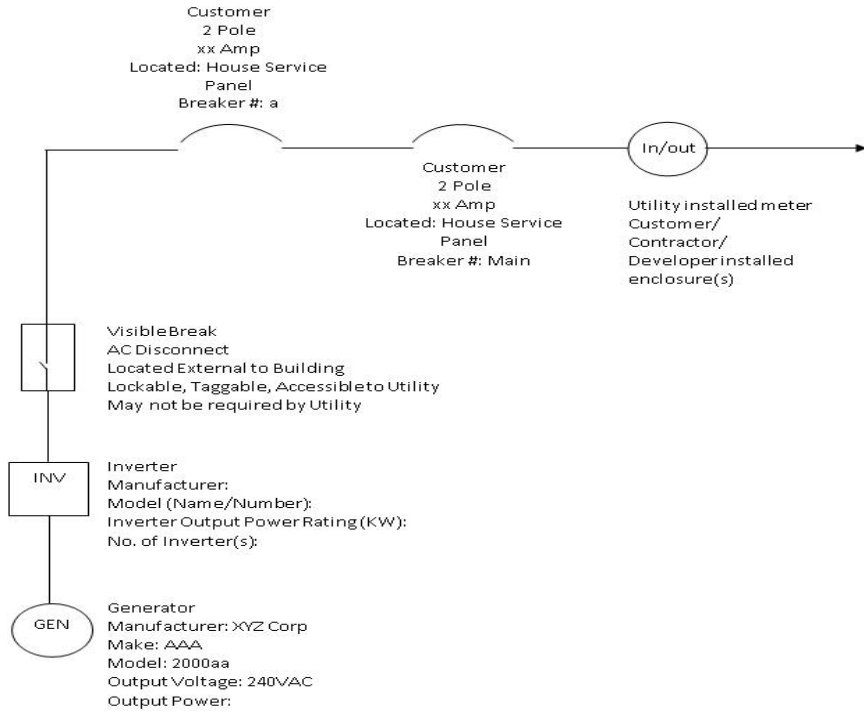
Customer Name: _____

Project Site Address: _____

Site Plan Prepared By: _____

Prepared Date: _____

Appendix D: Sample One Line Drawing for DG Rider Inverter Based Generators



NOTE: 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

Customer Name: _____

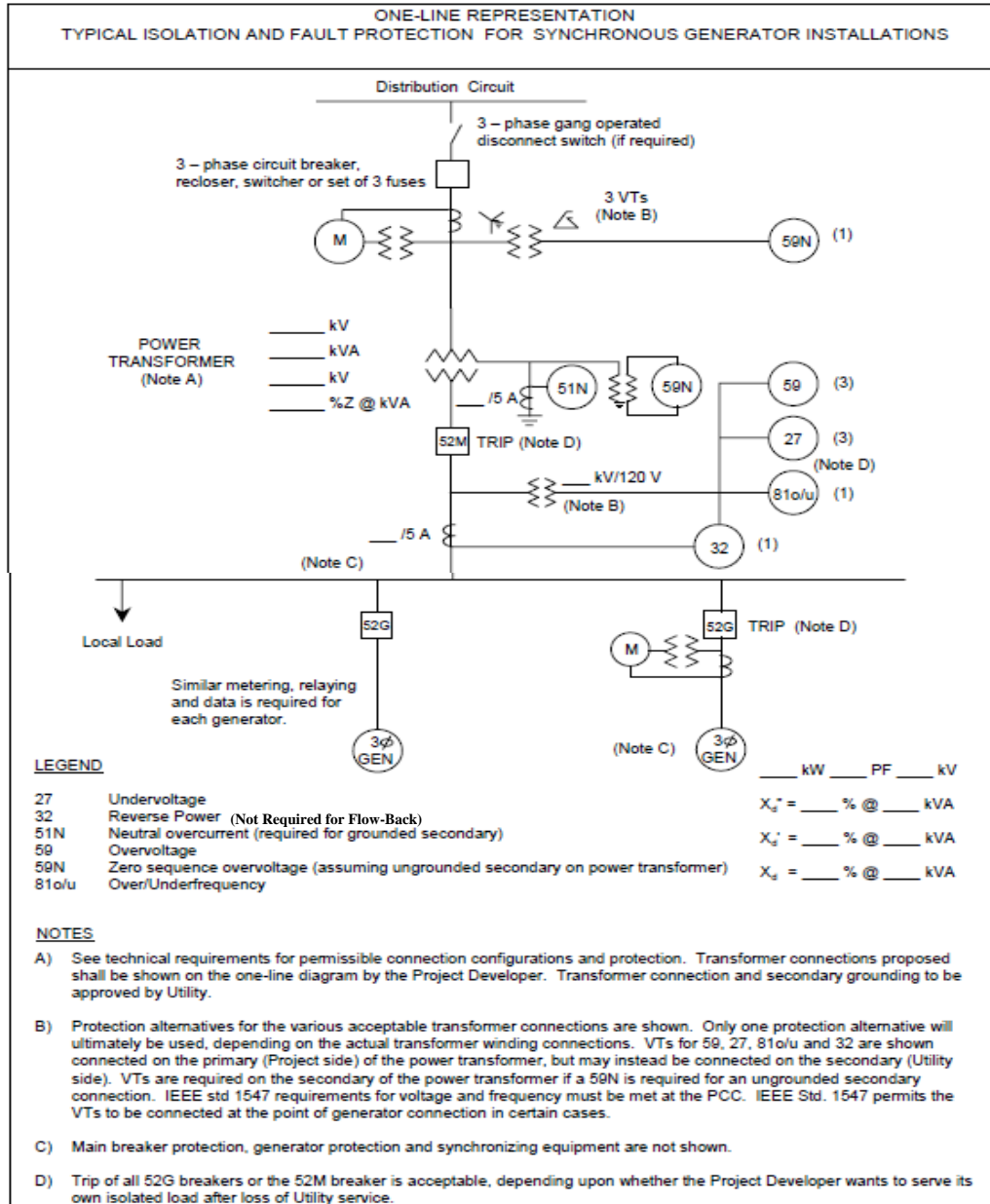
Project Site Address: _____

Licensed Professional Engineer Name (If applicable): _____

Licensed Professional Engineer Signature: _____

Electrical Contractor License Number: _____

Date: _____



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Customer Name: _____

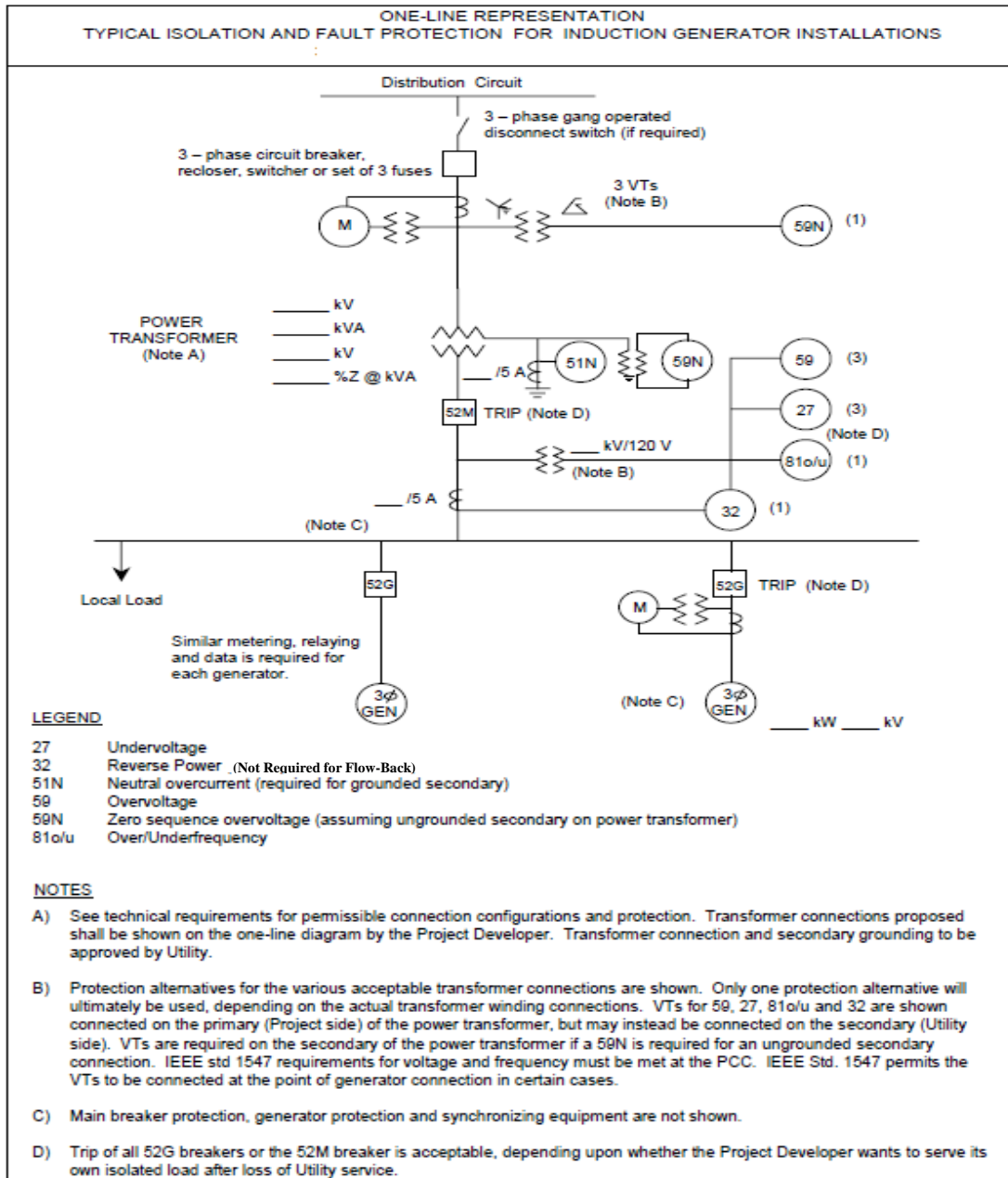
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