



## Indianapolis Power & Light Company Customer Interconnection Application Information

### General Feasibility of Location

1. IPL map and pole numbers or customer meter number
2. Preliminary generator MW capacity and AC voltage rating
3. Street address for customer location
4. Connection to IPL standard distribution circuit three phase main line

### Potential List Information Needed during Application Process

1. System description including protection package, disconnecting means, stand alone or grid dependent operating modes, synchronizing capabilities
2. Models and parameters for use in power flow simulations
3. Three line diagram of generator or inverter system package
4. Current harmonic spectrum at the output of the total generator or inverter system package or at the low voltage side of the transformer that provides power to the facility from the IPL system at 100%, 75%, 50% and 25% output. For total generator or inverter system package locations, provide associated impedance information of intermediate equipment such as the line reactor, transformer, cabling, etc. to the low voltage side of the service transformer to IPL system.
5. Describe how the installation will meet the requirements of IEEE Std 1547 and UL 1741. Demonstrate compliance with IEEE Std 519 at the low voltage side (typically 480V, 208V, etc) of the transformer that provides power to the facility from the IPL system.
6. Provide the power factor over the range of inverter output.
7. Provide short circuit contribution from the inverter system package and associated time of injection of fault current. Identify peak or momentary fault current injection and time duration.
8. Transformer ratings and connections
9. Provide single line diagram for medium voltage equipment (13 to 15kV class) including connection transformer nameplate showing voltage taps and impedance and base primary or secondary voltages
10. Provide site plans showing the physical location of major equipment
11. Provide contact information for major equipment manufacturers
12. Provide short circuit current at inverter side of connection transformer
13. Provide description of generator/inverter operation
14. Provide proof of concept that engineering design will interface with IPL standard distribution circuit operation including but not limited to selective reclosing, capacitor bank operation, unintended single phasing and exposure to transient voltages due to natural causes

Additional information that may be needed can be found in the IPL Goldbook:

- Distributed generation topics for IPL system -- page 6A (pdf version page 9)
- Voltages for use with the IPL system -- page 22 (pdf version page 30)
- IPL metering practices and procedures -- page 25 (pdf version page 34)