

INTERCONNECTION APPLICATION FOR STATIC INVERTERS

SUPPLEMENTARY INFORMATION

Diagrams specified below are to be specifically prepared for APS' use, and to be submitted for all static inverter based projects. APS will not accept any copyrighted drawings. These must be site specific regarding the information requested below, without extraneous information. All diagrams are to be professionally drawn, using only black print on white paper; and are not to be in color or shaded. Free hand drawn, photocopies and faxed diagrams will not be accepted by APS. All diagrams must include the project name and street address and include diagram revision numbers and dates.

Upon request, APS will provide Customer with a set of sample diagrams that indicate the general layout, the level of detail, the necessary information, and the required quality of the Customer diagrams for a typical inverter-based system.

Standard industry accepted electrical symbols shall be used on the diagrams. The required size for all drawings is 8.5"x11" or 11"x17".

(a) Electrical One-Line Diagram:

Diagram(s) must show all generation sources (eg. photovoltaic panels, wind generator, etc.) and any associated DC electrical components, inverter(s), any combiner panels, metering, Utility Disconnect Switch, as well as the electric service entrance. In addition, the utility meter, connection points of facility loads, and all other associated electrical components must be shown. The electrical ratings of the wire and equipment including all backfed breakers or fuses and any subpanels, must be indicated.

(b) Electrical Three-Line Diagram:

Diagram(s) must show detailed phase wiring of all electrical equipment as specified in the Electrical One-Line Diagram, as well as all neutral, equipment ground and grounding electrode equipment (G.E.C.) conductors and connections.

(c) Plant Location Diagram:

Diagram must show major cross streets and location of facility. Include a North arrow.

(d) Site Plan:

Diagram must show the arrangement of the major GF equipment, including the electric service entrance section and utility meter, location of the inverter(s), Utility Disconnect Switch and any lock-boxes, etc. Include building structure location and any walls, fences and gates etc, to clearly indicate unobstructed access to APS equipment, any required special metering and the Utility Disconnect Switch. Include a North arrow.

INTERCONNECTION APPLICATION FOR ROTATING MACHINERY
(cont'd)

SUPPLEMENTARY INFORMATION

Diagrams and information specified below are to be specifically prepared for APS' use, and to be submitted for all rotating machinery based projects. APS will not accept any copyrighted drawings. These must be site specific regarding the information requested below, without extraneous information. All diagrams are to be professionally drawn, using only black print on white paper, and are not to be color or shaded. Free hand drawn, photocopies and faxed diagrams will not be accepted by APS. All diagrams must include the project name and street address as well as diagram revision numbers and dates.

Standard industry accepted electrical symbols shall be used on the diagrams. The required size for all drawings is 8.5"x11" or 11"x17".

(a) Electrical One-Line Diagram:

Diagram(s) must show generators and all major associated electrical components including protective relaying, any interlocks and control functions, as well as the electric service entrance, utility meter, connection points of facility loads, any transformers, generator metering, and Utility Disconnect Switch. The electrical ratings of the equipment shall be shown.

(b) AC & DC Control Schematics:

Diagram(s) must show the detailed phase wiring of all electrical equipment as specified above for the Electrical One-Line Diagram, including protective relaying, associated instrument transformers, and control functions. Include control power source and all associated AC and DC connections.

(c) Plant Location Diagram:

Diagram must show major cross streets and location of facility. Include a North arrow.

(d) Site Plan:

Diagram must show the arrangement of the major GF equipment, including the electric service entrance section and utility meter, location of generator(s), interface equipment, Utility Disconnect Switch and location of any lock-boxes, etc. Include building structure location and any walls, fences and gates etc, to clearly indicate unobstructed access to APS equipment and Disconnect Switch. Include a North arrow.

(e) Relay Setting Sheet(s):

Setting sheet(s) for the APS-required minimum protective relay functions must show the trip setpoints and times. Settings may be provided after the initial APS review, once the final system configuration has been determined.
