DISTRIBUTED RESOURCE GENERATION
Excess Distributed Generation

Publish: 04-01-26
Reaffirm: 04-01-26

USE : Requirements and guidelines for interconnection of customer owned, (DR) Distributed Energy Resource, to NIPSCO's electric system, configured for "Excess Distributed Generation."

STANDARD ORIGINATED	PREVIOUS STANDARD REVISION	PREVIOUS STANDARD NUMBERS
04-05	05-20	

REVISION SUMMARY: Updated to current format. Updated to reflect new EDG Standards Revisions and 170-IAC-4-4.3 changes.

REFERENCE(S): (All references are latest revision; unless noted)

National Standard(s)

a.170 IAC 4-4.3, IURC Rule for "Net Metering"
b. Electric Service Tariff - Rider 880 and Rider 889. latest revision
c. IEEE 1547-2018
d. UL 1741, latest revision
e. IEC/NEC (Indiana Electric Code/National Electric Code) latest revision
f. MISO Business Practice Manual Generation Interconnection BPM-015-R8, latest revision

NIPSCO Standard(s)

g. ER 4-350: Direct Transfer Trip Requirements
h. ER 13-210: Meter - Installation, Pad Mount Transformer
i. ER 16-600: Power Quality, Customer & Power Producer, Electric
j. ER 19-240: Service Entrance - Overhead, Single & Three Phase
k. ER 19-255: Service Entrance - Overhead, Transformer Rated, 480 V max, 2000 A max
l. ER 19-270: Service Entrance - Underground, Single & Three Phase, 200 & 320/400 Amp

SPECIFICATIONS:

1. ELIGIBILITY:

Any resident, commercial, industrial customer in good standing may operate a "Excess Distributed Generation" customer facility, interconnected to NIPSCO's electric distribution system if the following are met (subject to current summer peak retail load limitation):

1.1. The customer facility is of a solar, wind, hydro, energy storage system, or technologies.

1.2. The total full load nameplate capacity of the customer facility is 1 megawatt (MW) or less (if multiple units are installed, the aggregate total inverter full load nameplate shall be 1 MW or less).

1.3. The customer facility is located on the eligible customer's premises, is operated by said customer, and is interconnected through a single service point.

1.4. The customer facility is used primarily to offset all or part of the eligible customer's own electric load.

1.5. The customer must submit the "Interconnection Application" to NIPSCO, with proof of insurance coverage to be considered for, and to obtain approval for Excess Distributed Generation.

1.6. NIPSCO shall perform a feasibility review for the proposed customer facility interconnection as an initial screening for the impact it may have to its electric system. The interconnection review will evaluate system readiness for the interconnection and will determine if there is a need for a more extensive study. If an impact study needs to be performed by NIPSCO, any fees associated with this study will be the responsibility of the customer. Additionally, if it is found that the proposed customer facility requires system infrastructure upgrades to NIPSCO's electric system, the customer will be required to pay the total cost of the required system improvements.

During the interconnect review or impact study, if additional customer owned equipment is necessary to meet NIPSCO safety and interconnection practices, NIPSCO shall inform the customer at this time.

1.7. Eligible customers shall enter into an "Interconnection Agreement" with NIPSCO and if any upgrades to NIPSCO's electric system are required, the customer must pay for these, in full, before the customer facility source is allowed to interconnect to NIPSCO's electric system or any work is performed by NIPSCO. Inverter settings are required to be submitted at this time.

1.8. Any customer that wishes to connect to our electric transmission system (69 kV, 138 kV, or 345 kV) must follow all rules and regulations of MISO (Midcontinent Independent System Operator) and abide to NIPSCO's rules and regulations for "Excess Distributed Generation."

2. GENERAL:

2.1. All DR customer facility installations shall comply with all applicable codes and standards, including but not limited to those listed in the reference section of this standard.

2.2 If a customer facility is to be connected to a single-phase shared secondary, the aggregate generation nameplate capacity, shall not exceed the lesser of twenty (20) kVA or the nameplate rating of the service transformer.

2.3. DR generation shall not adversely affect NIPSCO's electric system or any of its customers. Refer to standard ER 16-600 for power quality requirements.

2.4. It shall be the responsibility of the DR generation customer to protect their own equipment and facilities. The protection shall include protection against electrical system over voltages, line frequency disturbances. faults, lightning surges, and any other phenomenon resulting from the interconnections.

2.5. The DR generation customer shall be responsible for costs incurred for any modifications to NIPSCO's electric system, which are required for the DR generation interconnection. (See 1.6 and 1.7)

2.6. The DR generation customer shall be responsible for costs and installation of equipment (which the customer shall own and maintain)_that are required to meet NIPSCO safety and interconnection practices. Equipment such as, but not limited to - poles, switches, reclosers, pad switchgear, etc/ may be necessary. (See 1.6 and 1.7)

2.7. Customer facility source shall comply with IEEE 1547-2018 and UL 1741 (latest revision).

2.8. Interconnection will not be allowed to connect to NIPSCO's electric system until installation has been approved by an authorized municipal, county, or other governmental inspector, where such inspection procedures are established; and a final inspection by a NIPSCO Field Engineer or Representative.

3. INSTALLATION AND OPERATION:

3.1. The eligible customer shall install, operate, and maintain the generation source in accordance with the manufacturer's suggested practices.

3.2. A lockable or power operable disconnect switch, or lockable circuit breaker shall be installed between the generation source and NIPSCO's electric system and accessible to NIPSCO personnel at all times. The switch shall be labeled "Utility-Generator Disconnect Switch" (see Figures 1, 2, & 3) on an engraved plaque.

3.3 In all cases, an engraved plaque shall be placed next to NIPSCO's electric meter providing the location of the utility-generator disconnect switch and the generation source. Furthermore, all buildings or structures with both a utility service and a generation source shall have a permanent engraved plaque or directory providing the location of the utility-generator disconnect switch and the generation source.

3.4. NIPSCO may isolate the eligible customer facility source at any time if it is believed that continued operation of the generation source will create or contribute to a system emergency. A system emergency is defined as any condition on the electric system likely to result in any of the following:

3.4.1. A significant disruption of service to any NIPSCO customer.

3.4.2. A substantial deviation from NIPSCO's normal service standard

3.4.3 An endangerment to life or property

3.5. NIPSCO may perform on site inspections to verify the proper installation and continued safe operation of the generation source, interconnection equipment, and net metering facilities. Inspections shall be done at reasonable times and with reasonable advance notice to the eligible customer.

3.6. Figures 1, 2, & 3 show typical residential solar and wind installations of 320 amps or less. Larger installations for solar and wind, as well as installations for biomass or hydro are generally more complex and are not shown. These larger installations will require additional review from the appropriate NIPSCO Engineering department.

4. METERING

4.1. Metering of the "Excess Distribution Generation" customer facility shall be through an appropriate watt-hour meter. The watt-hour meter shall measure kWh used by the eligible customer, and shall measure the excess kWh exported by the customer to NIPSCO's electric system. (See Figures 1 , 2, & 3)

4.2. NIPSCO will provide the watt-hour meter and the eligible customer shall provide the meter socket (where required), as well as provide for the proper installation of all service entrance equipment required for a "Excess Distribution Generation" interconnection. (NIPSCO Engineers will inform the customer if the customer is to provide the meter socket, or if NIPSCO will provide the meter socket. The Engineer will also provide the customer any applicable NIPSCO Standards as needed.)

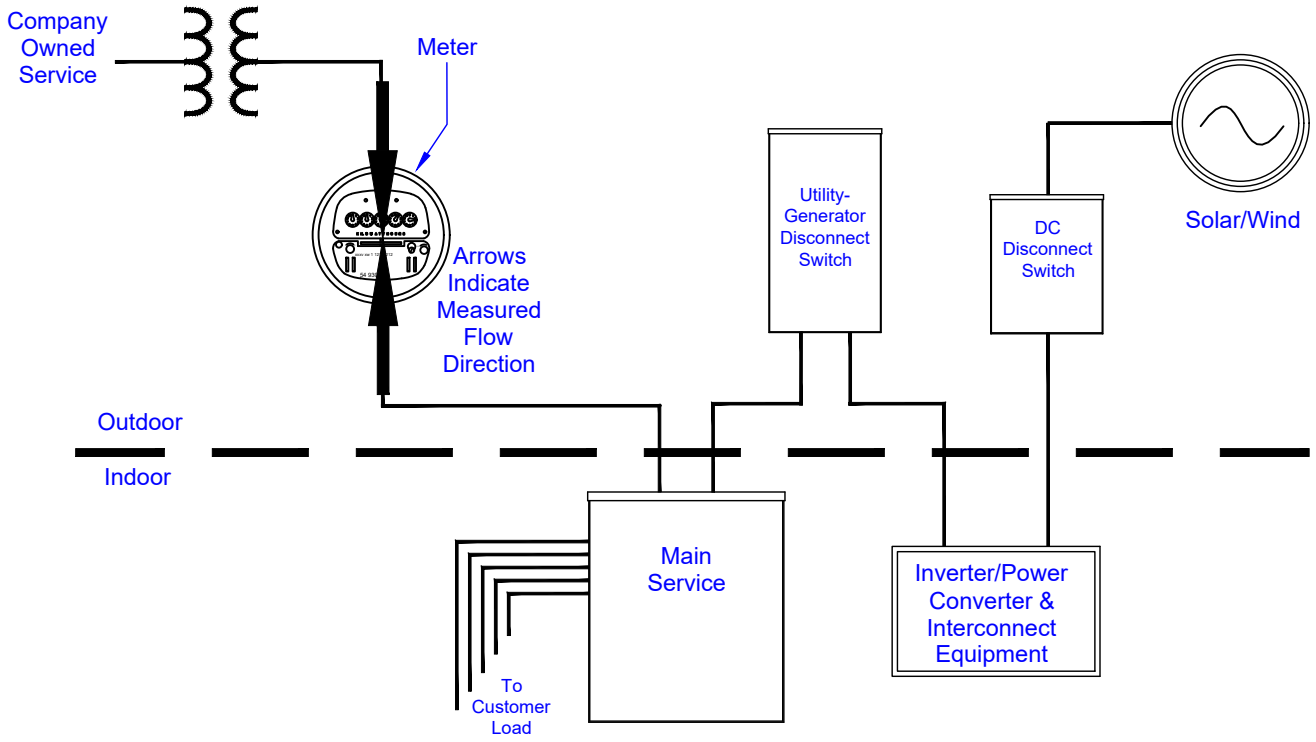


Figure 1: Solar/Wind/Hydro Interconnection - Standalone, No Battery

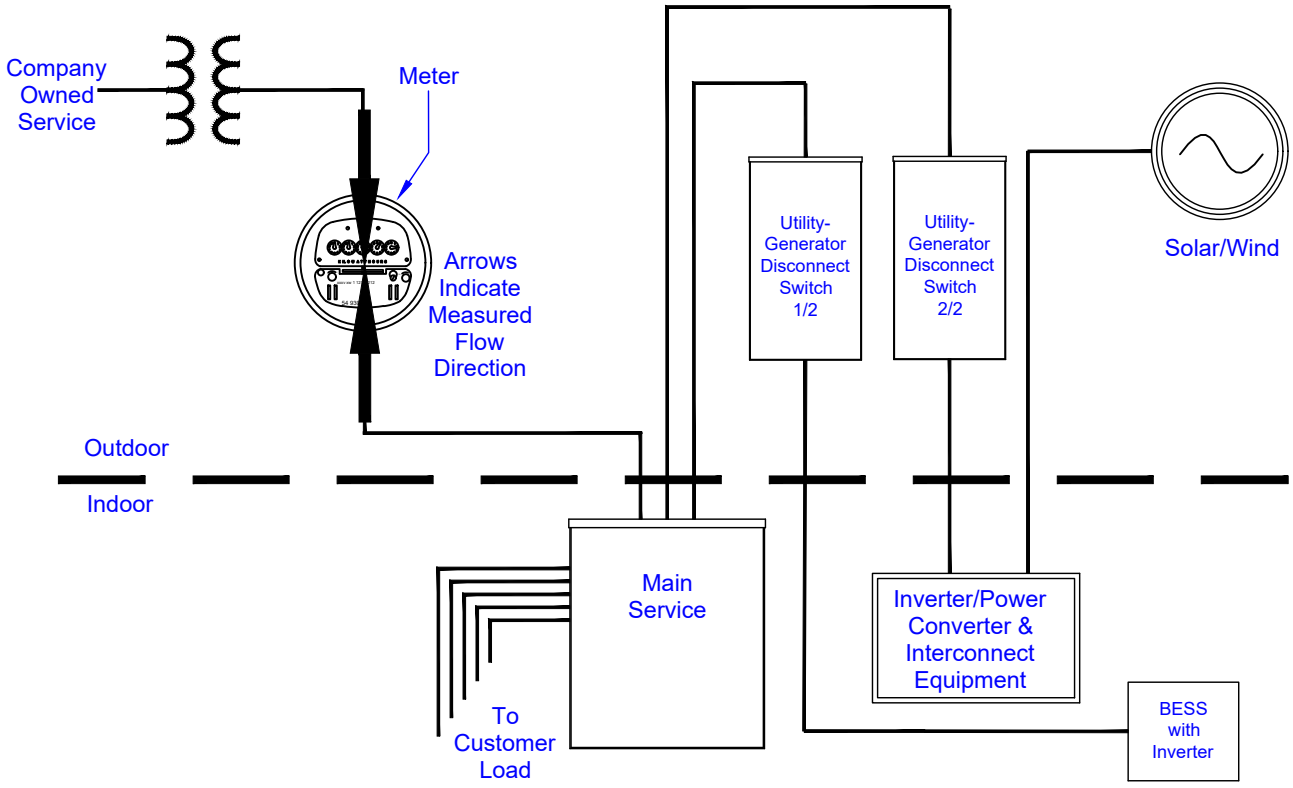


Figure 2: Solar/Wind/Hydro Interconnection - Standalone, with Battery

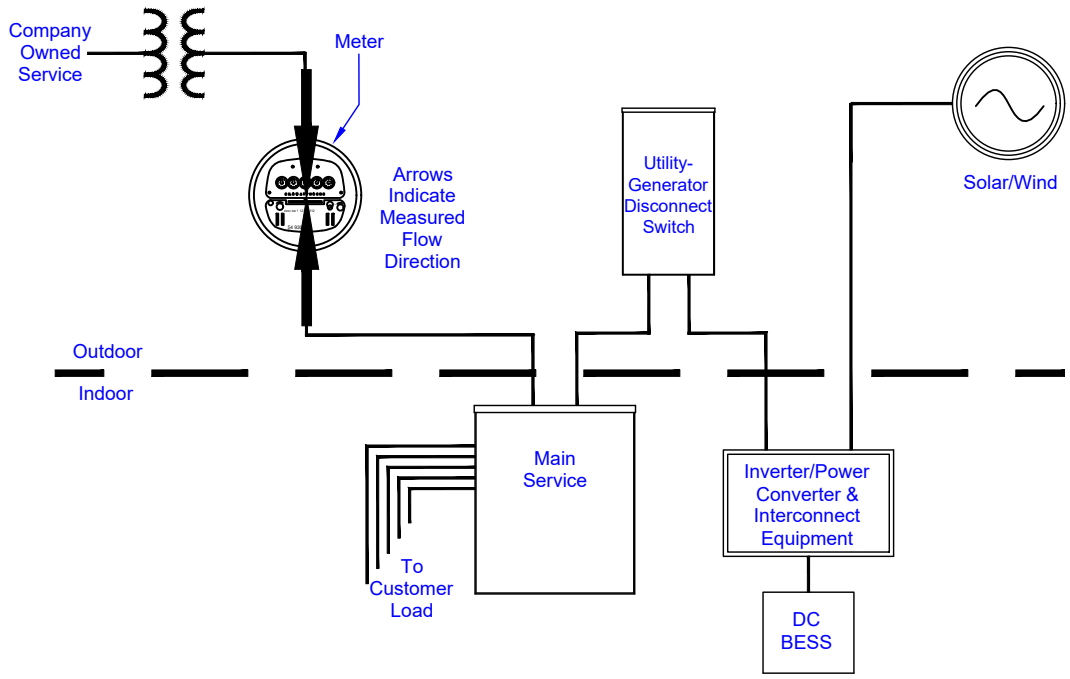


Figure 3: Solar/Wind/Hydro Interconnection - Standalone, with Behind Inverter Battery