Metering

As part of the interconnection process, customers must have a special electronic meter installed on their premises. ComEd will install this electronic, two-channel meter that will separately measure the gross amount of electricity delivered by ComEd to the customer and the excess electricity generated by the customer that flows back to ComEd.

ComEd Authorization for Operation

Before commencement of parallel operation with the ComEd system, the installation must be inspected by ComEd personnel to ensure that all ComEd requirements are satisfied. Once ComEd determines that the installation has met the requirements, it will authorize the wind or photovoltaic system for operation. Operation of the wind or photovoltaic generation system will be subject to compliance with ComEd policies and procedures related to wind and photovoltaic systems.

Note: It is the customer's responsibility to ensure that the wind or photovoltaic system complies with all applicable city, state and federal codes, laws and regulations and to obtain all necessary permits.

Contact ComEd: Customers interested in interconnecting wind and photovoltaic generation systems to ComEd's electrical system should call 1-800-TALKGEN for more information.

ComEd's Tariffs

ComEd will charge or pay for the electricity supplied to or provided by enrolled customers in the following manner:

- ComEd will charge for the electricity supplied to the customer at the same rates applicable to other customers with similar end-use characteristics.
- ComEd will pay the customer for all power supplied to ComEd by the customer at rates pursuant to Rider 4.

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ComEd's Interconnection Guidelines for Wind and Photovoltaic Generation Systems

CID 0000082

This document provides ComEd's requirements for interconnecting wind and photovoltaic (PV) generation systems 40 kW in size or smaller. ComEd's primary concern is that these systems be interconnected safely and in accordance with all applicable codes and regulations without adversely affecting ComEd's electrical utility system. Wind and photovoltaic systems larger than 40 kW require additional equipment not covered in this document. Interconnection requirements for systems not covered by this document are identified in "Guidelines for Interconnection of Generation to the ComEd System," available from ComEd for a nominal price.

Wind and Photovoltaic Systems

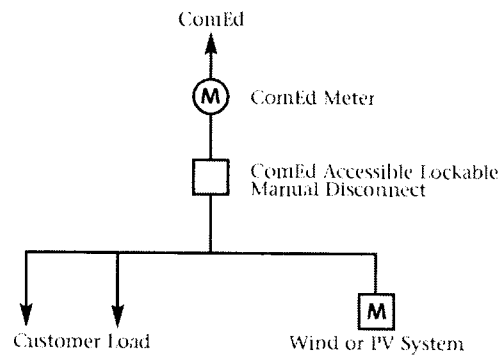
Wind systems utilize a wind turbine to catch the wind's energy with their propeller-like blades. Usually, two or three blades are mounted on a shaft to form a rotor. A blade acts much like an airplane wing. The combination of lift and drag causes the rotor to spin like a propeller, and the turning shaft spins a generator to make electricity.

Photovoltaic (PV) systems convert sunlight directly into electricity. This is accomplished when solar cells are exposed to light. The electricity generated by a multitude of these cells can be channeled into an inverter for conversion into a usable AC power source.

ComEd requires the following for interconnection of wind and photovoltaic generation systems 40 kW or smaller:

- Wind and PV systems must comply with all applicable codes, laws and regulations.
- Wind and PV systems must not adversely affect the power quality, reliability or safety of ComEd's system.
- Wind and PV systems must automatically disconnect from ComEd's system when ComEd's source is lost.
- A manual disconnect that is visible and accessible to ComEd and lockable with a ComEd lock must be installed.
- Appropriate wiring and metering must be installed if the customer wishes to receive compensation for excess energy transferred to the ComEd system.
- Approval for operation in parallel with the ComEd system must be obtained prior to operation to assure that the wind and PV systems will not adversely affect the safety, reliability or quality of local electric service.

Wind or Photovoltaic Interconnection Diagram



Code Requirements

Customers are responsible for designing, installing, operating, and maintaining their own equipment in accordance with all applicable codes, laws and regulations.

For example:

- Photovoltaic equipment installed on top of a building or wind/PV equipment installed on the ground needs to meet local building codes and zoning laws.
- Wind and photovoltaic electrical equipment needs to be designed, installed and tested in accordance with the National Electrical Code and/or local code.

Power Quality

All power sources, including wind and PV generation systems, must NOT adversely affect the quality, reliability or safety of the ComEd system. The wind or PV system must meet or exceed the power quality requirements as stated in the most current version of IEEE 929.

Loss of ComEd Supply

One of the primary safety concerns associated with independent power sources is their ability to produce energy regardless of ComEd's supply connection. The loss of ComEd supply can be caused by a variety of conditions (e.g., a short circuit on the distribution line, maintenance outage, etc.). During an outage on a ComEd supply line to which a wind or PV system has been interconnected, the wind or PV system has the ability to back-feed ComEd's line, creating a hazardous condition. To prevent this from occurring, wind and PV systems shall automatically disconnect from ComEd's system when a loss of ComEd's supply occurs. Wind and PV systems shall be installed in accordance with current IEEE 929 standards and be UL1741-listed using utility interactive (non-islanding) inverters with non-adjustable setpoints.

Lockable Manual Disconnect

A manual load break disconnect switch that is accessible to ComEd and lockable by ComEd is required to allow ComEd personnel to disconnect the wind or PV generation system from ComEd's system for maintenance, reliability and safety concerns. ComEd will have the right to disconnect the wind or PV generation system for maintenance, reliability and safety concerns.