

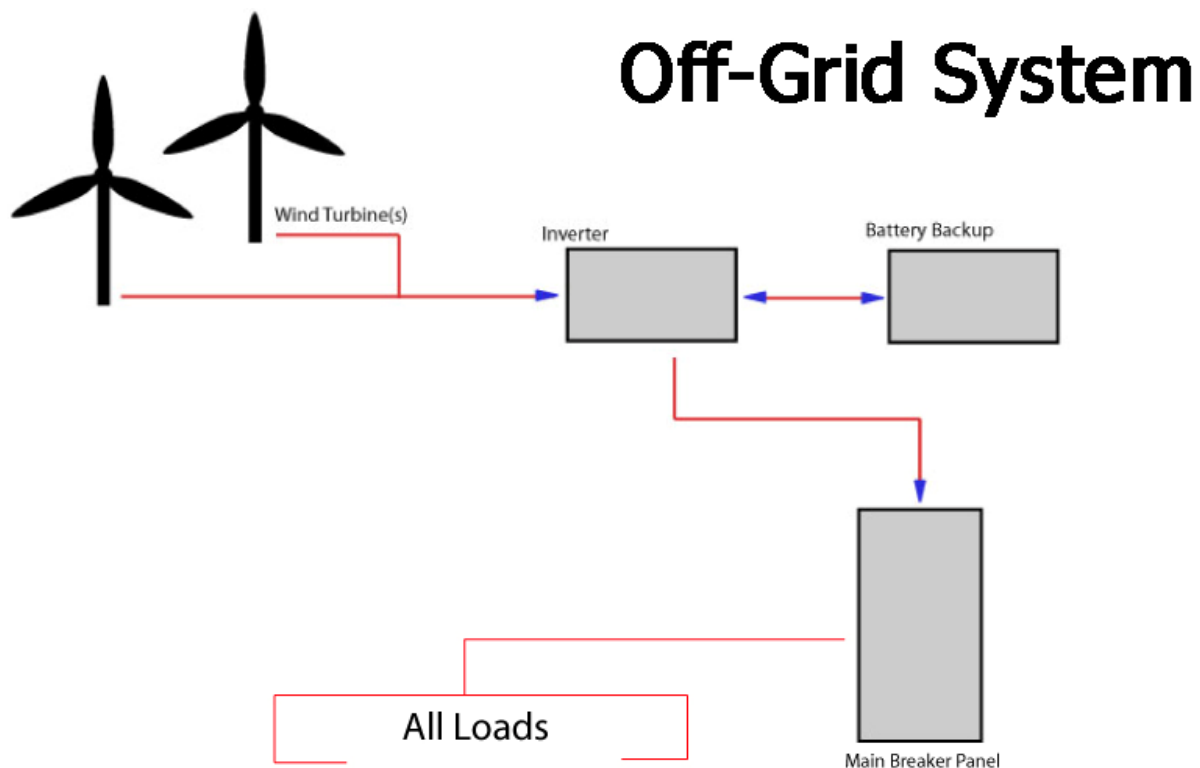


Renewable Energy Systems, including Wind Energy, and Hybrid Wind-Solar Systems come in two main system setups. There are Off-Grid Systems, and there are On-Grid (Grid-Tied) Systems. Each system type has its own advantages and disadvantages when compared to the other. Most generally, however, if you already have an electrical utility connection, it is wisest to install an On-Grid System, which will allow you to take advantage of a wide number of incentives, credits, and other benefits.

Off-Grid Systems

Off-Grid Renewable Energy Systems are generally used for remote locations, such as cabins or cottages, or other applications where a utility connection is not available, or not cost-effective. Other uses of Off-Grid Applications are RV's, Boats, Campgrounds, RV Parks, among many others.

Here is a typical configuration for an Off-Grid System. Please note that your system may vary slightly.



There are many advantages to Off-Grid Systems, which include:

- No reliance on the utility grid
- Elimination of pollution and greenhouse gas emissions from electrical usage
- No costly utility connections, transformers, meters, etc to install
- No monthly cost for electrical usage



On-Grid Systems (Grid-Tied)

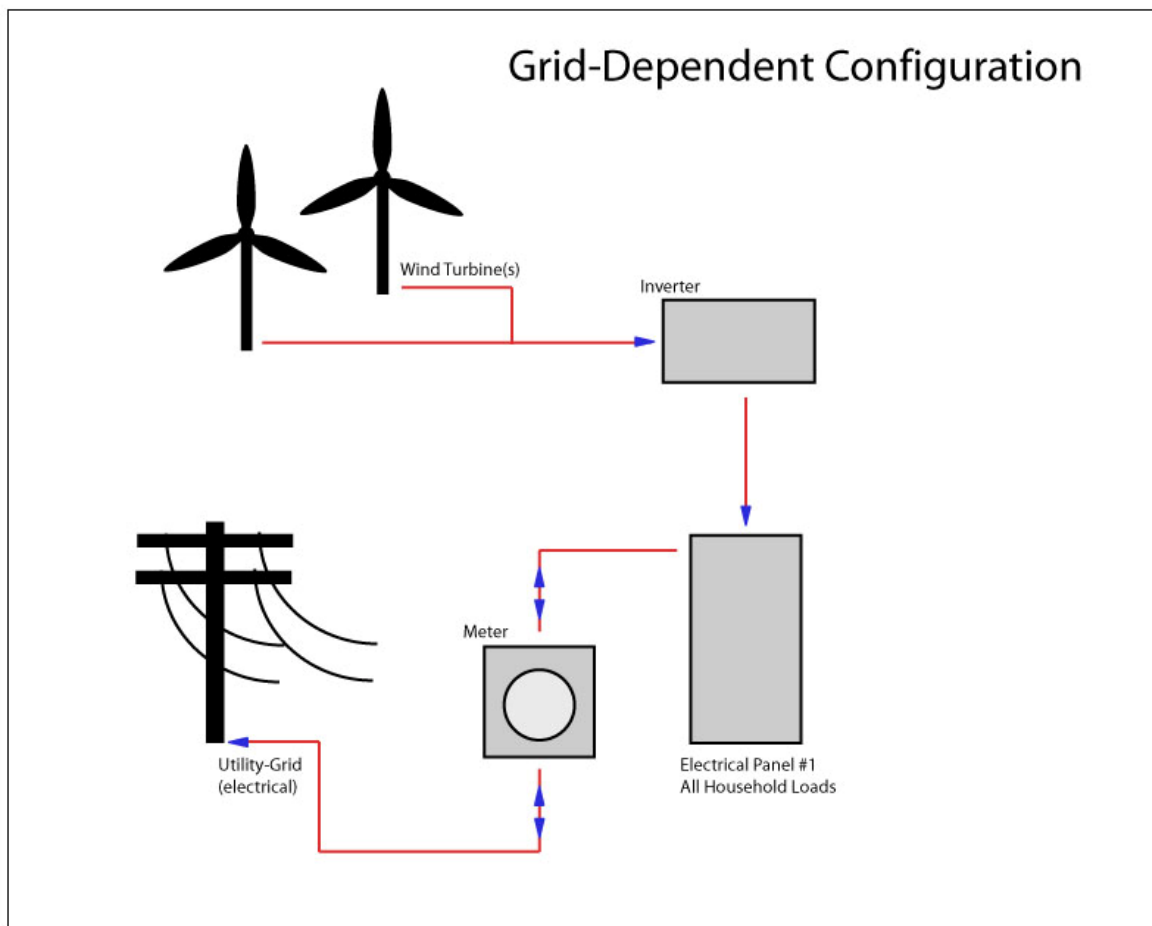
On-Grid , or Grid-Tied Systems can be used in all applications where an electrical utility connection is available and cost-effective. Wind Energy Direct recommends the use of an On-Grid System when a utility connection is available. This includes Homes, Farms, Offices, and other grid connected applications.

Here are the benefits of an On-Grid System:

- Take advantage of net-metering laws to sell excess energy back to the utility grid
- Utility grid operates as a backup in case wind system fails
- No need for expensive storage batteries, though they may still be added to the system if desired.

There are two types of On-Grid Systems; Grid-Dependent and Grid-Interactive Systems.

Here is a typical configuration for a Grid-Dependent System. Again, please note that your system setup may vary slightly.

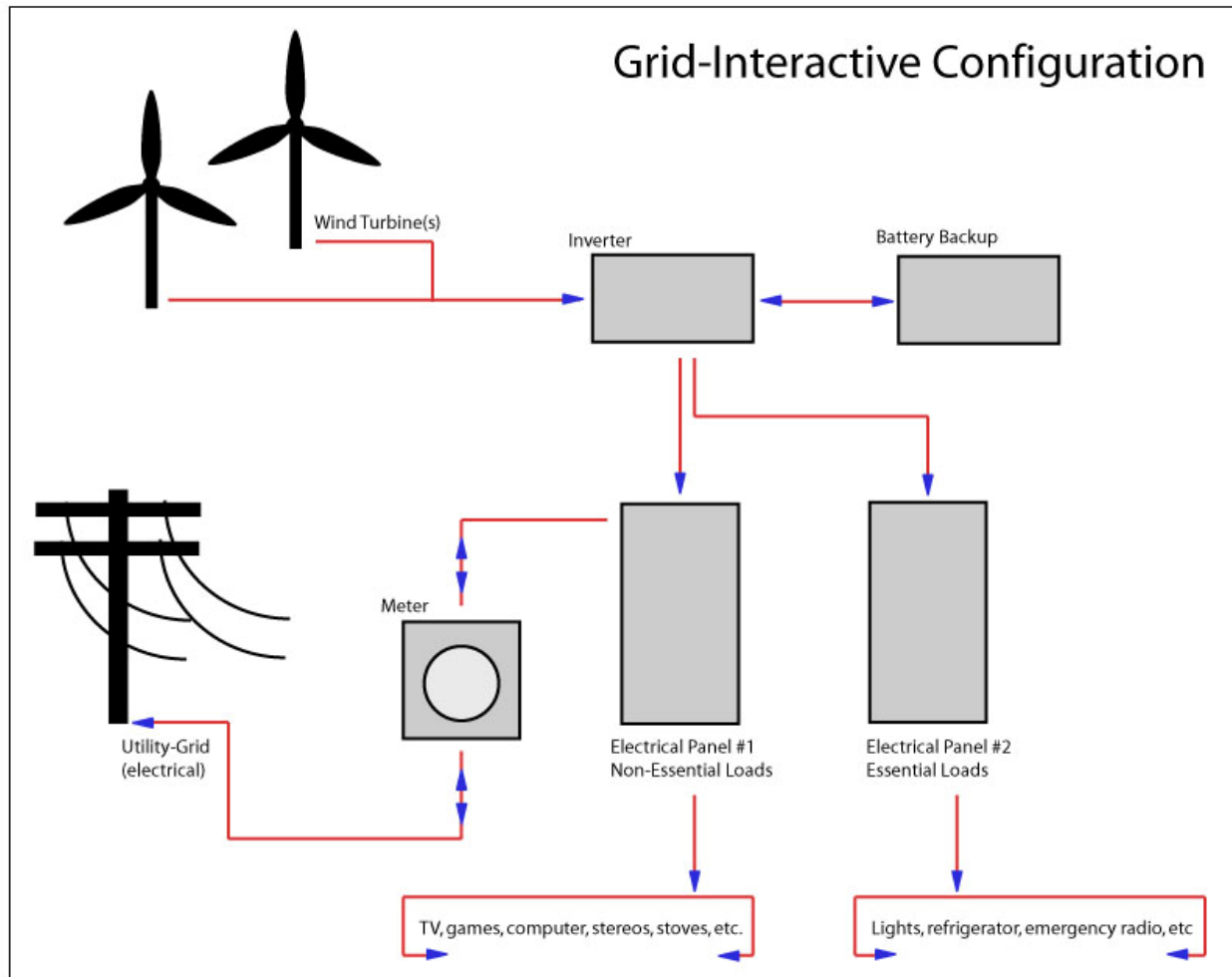




The Benefits and Limits of a Grid-Dependent System are:

- Lower cost because there are no storage batteries purchased
- Easier to design, configure and install than other systems
- Will not operate when the utility grid is inactive, such as during blackouts, etc

The second type of On-Grid Configuration is a Grid-Interactive System. Here is a typical Grid-Interactive Setup:



Grid-Interactive have the ability to operate as both On and Off-Grid Systems. These systems always feature a battery backup as well as two breaker panels. This allows the system to operate normally when the utility grid is functioning, and also allows certain loads to be used when the utility grid is down because of the battery backup and second breaker panel keeping those critical emergency loads separated from the utility grid connection.

The major benefit of the Grid-Interactive System is its ability to operate your home electrical loads even when the utility grid goes down.