## Wind Energy

Wind power is the use of airflow through wind turbines to provide the mechanical power to turn electric generators. Wind power, as an alternative to burning fossil fuels, is plentiful, renewable, widely distributed, clean, produces no greenhouse gas emissions during operation, consumes no water, and uses little land. The net effects on the environment are far less problematic than those of fossil fuel sources.

Wind farms consist of many individual wind turbines, which are connected to the electric power transmission network. Onshore wind is an inexpensive source of electric power, competitive with or in many places cheaper than coal or gas plants. Offshore wind is steadier and stronger than on land and offshore farms have less visual impact, but construction and maintenance costs are considerably higher. Small onshore wind farms can feed some energy into the grid or provide electric power to isolated off-grid locations.

In 2018, global wind power capacity expanded by 9.6% to 591 GW. In 2017, yearly wind energy production grew 17% reaching 4.4% of worldwide electric power usage, and providing 11.6% of the electricity in the European Union. Denmark is the country with the highest penetration of wind power, with 43.4% of its consumed electricity coming from wind in 2017.