

## WIND ENERGY

Wind energy harnesses the kinetic energy of moving air by using large wind turbines located on land (onshore) or in sea- or freshwater (offshore). Wind energy has been used for millennia, but onshore and offshore wind energy technologies have evolved over the last few years to maximize the electricity produced - with taller turbines and larger rotor diameters. Many parts of the world have strong wind speeds, but the best locations for generating wind power are sometimes remote ones. Offshore wind power offers tremendous potential.



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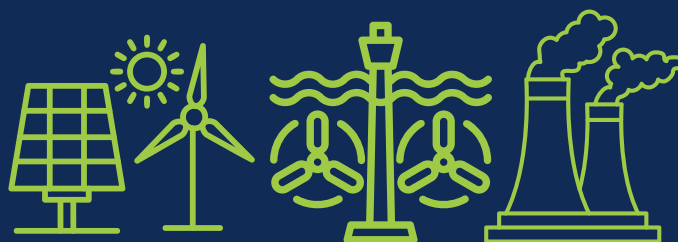
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Climate Change and Development Authority



# RENEWABLE ENERGY

## WHAT IS RENEWABLE ENERGY?

**Renewable Energy is energy derived from natural sources that are replenished at a higher rate than they are consumed. Sunlight and wind, for example, are such sources that are constantly being replenished. Renewable energy sources are plentiful and all around us.**



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# TYPES OF RENEWABLE ENERGY

## SOLAR ENERGY

Solar energy is the most abundant of all energy resources and can even be harnessed in cloudy weather. Solar technologies can deliver heat, cooling, natural lighting, electricity, and fuels for a host of applications. Solar technologies convert sunlight into electrical energy either through photovoltaic panels or through mirrors that concentrate solar radiation.

## OCEAN

Ocean energy derives from technologies that use the kinetic and thermal energy of seawater – waves or currents for instance – to produce electricity or heat. Ocean energy systems are still at an early stage of development, with a number of prototype wave and tidal current devices being explored. The theoretical potential for ocean energy easily exceeds present human energy requirements.

## GEOHERMAL ENERGY

Geothermal energy utilizes the accessible thermal energy from the Earth's interior. Heat is extracted from geothermal reservoirs using wells or other means. Once at the surface, fluids of various temperatures can be used to generate electricity. The technology for electricity generation from hydrothermal reservoirs is mature and reliable and has been operating for more than 100 years.

