

Natural Energy Resources:Ocean Energy

Those tough lashing waves that we see on the ocean surfaces are not just for surfing or playing water sports. It can also be used to generate electricity. As of today there are quite a few such plants available. So then, how exactly is electricity generated from the tidal forces of the oceans?

There are different ways of tapping this energy. One way is to capture the tides of the ocean and utilize it to produce mechanical motion; the other ways include capturing the forces of the high tides or low tides and sometimes capturing the temperature differences in different parts of the ocean.

Energy produced using waves: The kinetic energy produced using waves is tapped by setting suitable apparatus so as to utilize that energy. A contraption filled with air lets the high rising tidal wave in, which in turn pushes the air outside. This air while rushing out sets a turbine into a rotary motion can be used to generate electricity.

Tidal energy: Tides rising about on the surface of the oceans, which are caused by the gravitational forces of the sun and the moon, can also be tapped just as the way they do in a hydro electric plant. The rising tide is captured behind a dam like structure and is let out when there is a low tide, thereby functioning just like a hydroelectric plant.

Ocean thermal energy Conversion: Although it sounds way too scientific, the concept is a pretty old one and makes use of the temperature difference in the waters of the ocean. If you had observed while swimming, the water nearer to the ocean surface is warmer than the water that is deep inside. This temperature difference is enough to set a thermocouple into action, which can generate electricity.

Though it is quite a simple process to extract energy out of the oceans, its practicality is again limited to where the oceans are and are again subject to a little unreliability and high costs of operation visa vis average output in electricity generation.

Since oceans cover almost 75% of the earth's surface, they could be thought of as a gigantic solar cell, if you will. With that kind of abundance, it is only a matter of harnessing the right way to deliver this energy to our everyday residential or commercial use.

While it is uncertain if it could be used for mainstream industrial purposes, it could nevertheless supply electric current to our homes one day.

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About the Author

Jason Uvios writes about "Natural Energy Resources:Ocean Energy" to visit: <http://www.crispgenerator.info>, <http://www.generatormadness.info> and <http://www.generatorsgalore.info>