

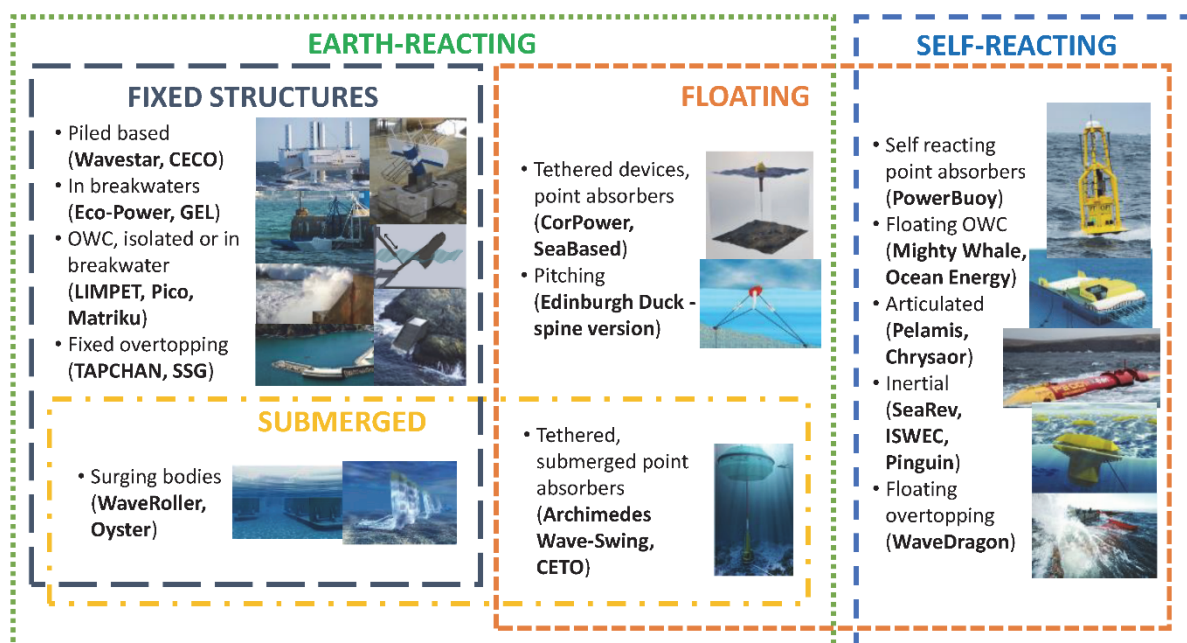
Electricity from sea waves

Wave power infosheet



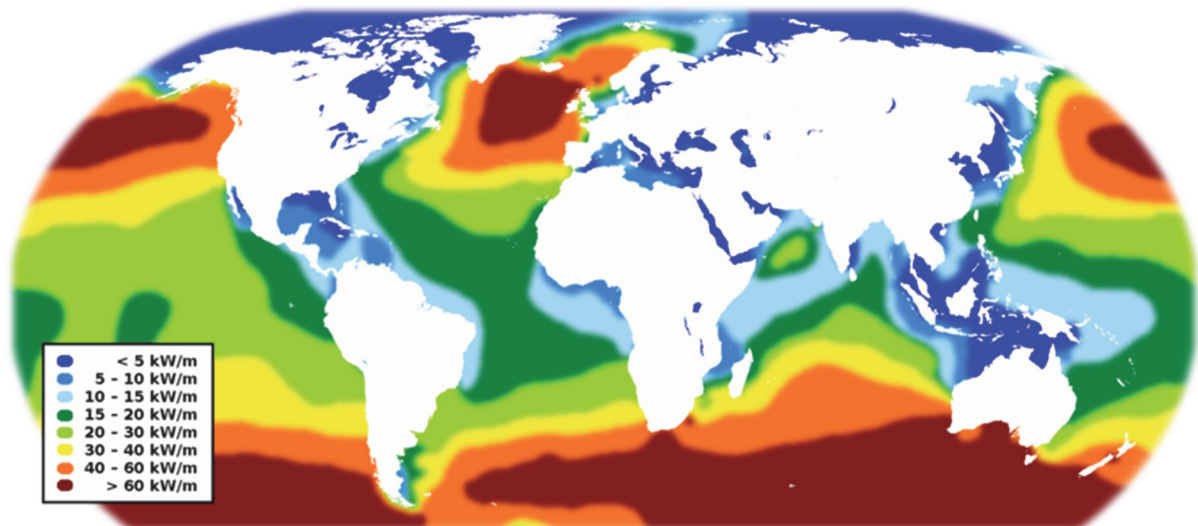
Image: jasperwilde/Unsplash

Wave power is generated by the movement of sea waves, which is caused by the wind. This power can be harvested using different kinds of [wave-energy converters](#), which convert the motion of waves into electrical energy. There are many different designs: some are fixed structures, some are tethered to the sea floor, and others simply float on the surface.



Types of wave-energy converters and examples
 Image: [Journal of Marine Science and Engineering](#), 2020, 8

Wave energy is an inexhaustible resource with immense potential. Ocean waves possess a colossal energy capacity. The amount of energy and the size of the resulting wave depend on a) wind speed, b) the duration for which the wind blows, and c) the distance over which the wind blows. In several regions of the world, prevailing winds exhibit significant consistency and continuity, leading to the constant formation of waves along coastlines.



World wave-energy resource map

Image: Ingvald Straume/[Wikipedia](#), [Public Domain](#)

Wave energy can be used in conjunction with other renewable energy sources and represents an ideal solution for islands or coastal areas.