

## Green energy: Renewable energy focused on ocean energy

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**Problem statement:** Owing to the heavy growth in population and pollution currently the global generation of electricity is shifting from fossil fuel to green energy. One such suite of renewable energy is ocean energy. However, the reasons for the stakeholder who doesn't show much interest in ocean technology have been due to factors like high cost (operation and maintenance), poor technological advancements such as wind and solar, and site selection. Meanwhile, there is still research going on in harvesting the potentiality of ocean energy. The purpose of this study is to bring out the potentiality of the ocean technologies such as: tidal and wave energy technologies, discussing the future industrial interests, present technologies and Levelised Cost of Energy (LCOE).

**Methodology and theoretical orientation:** An in-depth knowledge about ocean technology was attained by referring to journals and books. Framework and comparison charts were utilized to get in-sight details of ocean energy. Visually viewed the working principles and construction of tidal and wave plants online.

**Findings:** Scientists and Engineers have reported that ocean energy minimizes the usage of fossil fuel and coal dependency as it can contribute to 100% of the world's energy demands. Ocean, Marine, or Blue energy is a renewable source that has the potential to generate nearly 10,000–80,000 TWh of electricity per year. The researchers have encountered many gaps in the development of tidal and wave technologies because of a lack of awareness among stakeholders and high costs. Although the potentiality for these technologies is high there is a lack of new technologies in this field of green energy.

**Conclusion:** Considering the amount of energy produced from solar and wind the energy potential for the ocean is higher and cleaner. Recommendations are made for the increase in LCOE and energy generation through tidal and wave energy.

### Biography

Varun Vijayamohan is experienced in solving real-time problems with an engineering solution, is experienced in handling various projects and is designated as the project manager. He has observed a problem in the manufacturing sector and solved it by inventing an exoskeleton chair for the employees. With his passion for technology and environmental wellness he writes snippet articles on LinkedIn to take the new emerging technology in the field of the renewable energy sector and helps readers understand the need to change from conventional to non-conventional sources of energy.

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