A New Spin on Renewable Energy

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ABSTRACT: The key to the foundation of an environmentally sustainable and economically stable world is the domination of the renewable energy resources over the fossil fuel and nuclear reserves. But to achieve this we need a method of extracting renewable energy from a source both strong and reliable. The idea behind this project is to combine the eco-friendly system of a wind turbine or any turbine and use it to utilize the most reliable renewable source of energy, ocean currents. Attaching the turbine on the ocean floor is expensive and difficult to maintain so the project plan is to design an oil rig system which is going to have a shaft attached to a turbine which is going to be lowered into the ocean to generate electricity. Many other things like stabilizing barring generators have made their way into this process of harnessing these hydro giants in the depths of the ocean. After months of research and trial and error the perfect design was achieved. A compliant tower offshore rig will be utilized in order to reach the depths of these currents. A mining shaft will be used to lower the turbine into the ocean in a segmented way so it can easily be recalled. The turbine is specifically designed with the help of SolidWorks flow simulations to ensure maximum rotation. Other aspects such as wear and tear were also tested in the same method. All the testing are in the projects favors and a good amount of electrical output is achieved.

Awards Won:

Fourth Award of $500