



FINAL YEAR PROJECT REPORT

**POWER GENERATION USING TIDAL
ENERGY**

**In fulfillment of the requirement
For degree of
BEE (Electronics)**

By

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Abstract

Tidal energy is a form of hydropower which converts the energy of tides into electricity. It's also a renewable source of electricity. It is the most efficient source in all renewable energy resources and does not have any environmental impact. It does not have any gas emission during the production of electricity. By using tidal energy we can generate electricity. By using tidal energy the expense on nuclear power can be decrease, with its associated radiation risks. The few studies that have been undertaken to date to identify the environmental impacts of a tidal power scheme have determined that each specific site is different and the impacts depend greatly upon local geography. If fossil fuel resources decline during the 21st century, as predicted by Hubert peak theory, tidal power is one of the alternative sources of energy that need to be developed to satisfy the human demand for energy. Whatever the process is a traditional power generation using an alternator and mechanical energy (for rotation) are collected from tidal energy using a simple floating device tidal currents. The whole world's focus is now diverting to renewable energy resources, but unfortunately we are still using the most costly method for producing electricity.

In this final year project study we have covered all remaining requirement to build tidal power plant. In this research we are going to present some collected data. We want to compare the prototype results and the actual site results. This will be very helpful to build tidal power plant. The part of converting energy from such an extremely predictable source seems practical. There are lots of sites on Pakistan coastal area where it is possible to harness energy from tides. There are many new sites available; some tidal creeks are taken into account, only one is calculated for the sample. This will be a great initiative for tidal power industry. Tidal flow is very smooth and predictable source to generate electricity.

It is a fact that we are in the world where almost 80% of the demanding energy is furnished by coal, oil, gas and hydro power plant. Now like other countries this is time for renewable energy sources to fulfil our country needs. Tidal energy is renewable energy source which can be use to generate electricity because tides are caused by the orbital motion of the solar system.

Pakistan national oceanography department studied lots of sites in Pakistan for example Korangi Creek , Phitti creek ,Chan Creek , Paitiani Creek , Chan waddo creek Khudii creek , Khai creek ,Paitang creek ,Dabbo creek , Bhurri creek ,Hajmarro creek ,Khobar creek ,Qalandari creek ,Kahr creek , Bachiar creek , War creek , Kajhar creek , sonmiani creek , gharo creek , sonmiani creek .These creek are on the coastal line of Pakistan through which tidal energy can be harness. These are suitable location for tidal power plant. We are presenting some graphical and small scale observations. These observations and graphs are very helpful to get results for large creeks. Tidal energy can be harnessed through turbines and generator. In this study we want to give all the required parameters and the design for tidal power plant.

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