

Giving Consideration to Ecosystem Conservation and Energy Exploitation to Develop Renewable Energy

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ABSTRACT

The issue of low energy independent rate has been a serious problem in Taiwan, while while the development of renewable energy is an important energy policy at present to solve the energy problem. Offshore Renewable Energy is the most potential part of Taiwanese renewable energy resources, and at this stage the Taiwan government has also been active in promoting the development of offshore wind farms. However, another issue is marine spatial multi-use that indirectly affect the building of offshore wind farm. The main reason is overlapped between the development of sea and important ecosystems, and due to the long-term neglect of ecosystem conservation that was led to protest the development of offshore wind farm. In order to balance between ecosystem conservation and the development of offshore wind farms, this study focuses on the case of demonstration offshore wind farm, and we are especially from the perspective of ecosystem services to re-examine the development of the sea, and then through four service of ecosystem to analyze the services that provided from the ecosystem of demonstration offshore wind farm, as well as the benefits of these services to the stakeholder. From the results, we found that ecosystems provide many services to the stakeholders, and the stakeholders also gain a lot of benefit from the services of ecosystems. Due to the economic value of ecosystems is not priceless, but can not be estimated. If we pay attention to the sustainability of ecosystems, the renewable energy development would truly achieve the objective of sustainable utilization.

Keywords: Renewable Energy,, Ecosystem Services, Offshore Wind Farm, Taiwan