



**FEASIBILITY STUDY FOR AN INTEGRATED ENERGY SYSTEM  
(WIND ENERGY)**

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## ABSTRACT

A recent government study concludes that renewable energy resources in Malaysia will amount to more than RM500 billion between year of 2000 and 2020. This underscores the vast untapped potential for industries and businesses to benefit from developing new methods and markets, while creating economic growth for the nation.

At current consumption rates, fossil fuel reserves will be depleted in just a few decades, so the country must strive to advance other energy resources.

This paper describe the feasibility study for integrated renewable energy system at east coast, Peninsular of Malaysia and make a conceptual design with estimating an economic analysis

Malaysia is located in a tropical zone and experiences low prevailing wind speed, consisting of South-west and North- east Monsoons a year. From the Meteorological and Oceanography Department, the highest wave and wind speed occurrence is located at East Coast region (Latitude  $5.5^{\circ}$  N and  $105^{\circ}$  E) - 286 Km from Kuala Terengganu.

The Northeast monsoon brings rain and cloud to east coast region from November to March; this will make the wind, wave and underwater will produce the maximum energy available while the solar energy will give a lowest contribution. While when Southeast monsoon (dry season) from April to October, the climate is hot and

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