

## **Role of Non-Renewable and Renewable Energy for Sustainable Electricity Generation in Malaysia**

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**Abstract :** The main objective of this paper is to give a comprehensive review of non-renewable energy and renewable energy utilization in Malaysia, including hydropower, solar photovoltaic, biomass and biogas technologies. Malaysia mainly depends on non-renewable energy (natural gas, coal and crude oil) for electricity generation. Therefore, this paper provides a comprehensive review of the energy sector and discusses diversification of electricity generation as a strategy for providing sustainable energy in Malaysia. Energy policies and strategies to protect the non-renewable energy utilization also are highlighted, focusing in the different sources of energy available for high and sustained economic growth. Emphasis is also placed on a discussion of the role of renewable energy as an alternative source for the increase of electricity supply security. It is now evident that to achieve sustainable development through renewable energy, energy policies and strategies have to be well designed and supported by the government, industries (firms), and individual or community participation. The hope is to create a positive impact on sustainable development through renewable sources for current and future generations.

**Keywords :** Malaysia, non-renewable energy, renewable energy, sustainable energy

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