

Renewable Energy and Energy Security in Malaysia: A Quantitative Analysis

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Abstract : Robust economic growth, increasing population, and personal consumption are the main drivers for the rapid increase of energy demand in Malaysia. Increasing demand has compounded the issue of national energy security due to over-dependence on fossil fuel, depleting indigenous domestic conventional energy resources which in turns has increased the country's energy import dependence. In order to improve its energy security, Malaysia has seriously embarked on a renewable energy journey. Many initiatives on renewable energy have been introduced in the past decade. These strategies have resulted in the exploding growth of renewable energy deployment in Malaysia. Therefore, this study investigated the impact of renewable energy deployment on energy security. Secondary data was used to calculate the energy security indicators. The study also compared the results of applying different energy security indicators namely availability, applicability, affordability and acceptability dimension of energy resources. The evaluation shows that Malaysia will experience slight improvement in availability and acceptability dimension of energy security. This study suggests that energy security level could be further enhanced by efficient utilization of energy, reducing carbon content of energy and facilitating low-carbon industries.

Keywords : energy policy, energy security, Malaysia, renewable energy

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