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ENERGY SECURITY OF RESOURCE-POOR COUNTRIES: A NEW PARADIGM OF CONCEPTUAL FRAMEWORK

Abstract:

It is important to recognize the similarities of the four resource-poor island countries in East Asia: Singapore, South Korea, Japan and Taiwan, which have many characteristics in common. All of them had high growth rates that had been sustained over many years. Energy production, particularly fossil fuel production in these countries is not able to keep up with the pace of energy demand growth. Therefore, they are highly dependent on imported energy.

This research will present a novel framework for assessing energy security of the resource-poor island countries and evaluating energy policies of these countries. The framework consists of three dimensions: vulnerability, reliability, and sustainability. First, as these countries have little indigenous energy resources, their import dependency makes these countries highly vulnerable to disruption of energy supply. This constitutes the first critical dimension for their energy security: vulnerability. This dimension covers the primary energy resources. Second, besides the vulnerability of fossil fuels import dependency, another key factor that has deep impact on these resource-poor countries is the reliability of electric power sector, which sustains the engine of their economic growth. This dimension covers the secondary energy resources. Third, environmental issues are always closely associated with energy production and utilization. The resource-poor countries have remained committed to putting efforts in maintaining sustainability and keeping the country green. Hence, concerns of sustainability constitute an indispensable component of their contemporary energy regime. This is the third dimension for their energy security: sustainability.

Based on the three dimensions of energy security, the research will compare energy policies and energy security situation of the four resource-poor countries in East Asia. Through the evaluation and comparison of their energy policies, the aim of the research is to identify energy policies that help to improve energy security of resource-poor countries, discuss the policy implications, and give suggestions to the governments.

Keywords:

Energy policy; energy security framework; resource-poor countries