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## **Renewable Energy in Southeast Asia: Priorities and Commitments Needed**

*By Margareth Sembiring and Julius Cesar I. Trajano*

### **Synopsis**

*Strong commitments from governments in Southeast Asia are key to a successful development of renewable energy in the region.*

### **Commentary**

THE SOUTHEAST Asian region is now viewed as an oasis of socioeconomic development and the region's vibrant economic growth has led to a corresponding increase in energy consumption. ASEAN energy ministers have collectively recognised the important role of the energy sector in establishing the ASEAN Economic Community and shaping the post-2015 agenda.

In order to reduce the region's over-reliance on imported fossil fuels and build a more sustainable and environmentally friendly power supply, ASEAN member states are exploring the use of alternative energy sources such as nuclear and renewable energy.

### **Nuclear power, renewables and their challenges**

Despite the 2011 Fukushima disaster nuclear remains a viable alternative energy source due to its mature technology and its capability to produce stable power supply. On the other hand renewable energy technologies are still being perfected, and their intermittent power-generating characteristics make them appear less reliable. However, while some countries in Southeast Asia have considered the nuclear option for decades, the relatively recent renewable energy sources have already made inroads in the region.

In 2011, renewable energy power plants, particularly hydropower and geothermal, made up about 15 per cent of total power generated in ASEAN. They were the third largest after gas-fired and coal-powered power plants. Nuclear power, on the other hand, is projected to enter the region's energy mix only after 2023, on the assumption that nuclear plants are successfully commissioned in Vietnam.

Although countries in the region have set higher targets for renewables share in their national energy mix, overall the use of renewables in the region is still limited relative to their potential. In Southeast

Asia, wind and tidal energy are largely untapped, and the huge solar potential in the region remains underdeveloped.

As the mechanisms of power generation from renewables are different from those of conventional energy sources, adopting renewable energy into existing national energy system is indeed a challenging undertaking. Renewable energy developments are capital intensive, and are far less competitive than the dominant fossil fuel-based energy sources.

In addition, renewable energy sources are often located in remote areas, rendering connection to main power grids a significant technical hurdle. Cumbersome administrative processes arising from overlapping and uncertain regulations and a lack of coordination among relevant authorities further hinder renewable energy penetration in the national energy market. Limited access to financing options and insufficient financial incentives also dissuade investors from participating in renewable energy development in the region.

### **ASEAN cooperation in renewable energy development**

Apart from technical and financial barriers, renewables also have a completely different set of environmental and socioeconomic costs. Although hydropower has fuelled the power trade in the Greater Mekong Subregion, helping Thailand and Vietnam meet their rapidly growing demand, hydropower dams have displaced communities, undermined the quality and quantity of water supply, and continued to disrupt the livelihood of people living in Mekong River Basin. In the Philippines and Indonesia, land acquisitions for geothermal developments are often met with strong opposition from local populations.

Realising the multiple challenges facing its member states in getting renewable energy on board, ASEAN has come up with a number of supporting initiatives. The ASEAN Plan of Action for Energy Cooperation (APAEC) 2010–2015 envisions a collective target of 15% renewable energy of total power installed capacity by 2015.

To this end, ASEAN spells out action plans directed towards enhancing awareness of renewable energy, and preparing the region as a renewable energy hub.

The ASEAN Centre for Energy (ACE) in cooperation with German Development Cooperation (GIZ) has also conducted a study to investigate opportunities and challenges of renewable energy development in Southeast Asia. The resulting report ASEAN Guideline on Renewable Energy Support Mechanisms for Bankable Projects notes that ASEAN member states currently stand at different stages of renewable energy market development, with Thailand being the most advanced, followed by Malaysia, Indonesia, and the Philippines.

As different stages of development entail different sets of challenges, each country needs to stay committed to overcoming the hurdles it faces so that the collective target that ASEAN has set can be achieved.

ASEAN cooperation with GIZ has also come up with an online platform that facilitates the sharing of information, best practices, and progress updates among ASEAN member states. Such platform is very useful to monitor renewable energy development in each country although for it to effectively serve its intended functions like the one currently used by the European Union, countries in the region need to get more proactive in supplying relevant information to the system.

### **Needed: Commitments to renewable energy**

The commendable initiatives taken by ASEAN must be supported by strong commitments from member states. As renewable energy is a relatively new form of energy sources, governments need to establish investors' trust of its profitability and people's trust of its utility and reliability. Efforts to shape conducive environment for renewable energy market are only a part of the equation as buy-in from the public is equally important to support government's substantial spending on renewable energy and the ensuing infrastructural changes that will come with renewable energy usage.

Creating enabling environment for renewable energy investments, which include implementing

policies, enacting reliable regulations, and simplifying administrative processes, needs to take place at national level.

When it comes to cooperation, governments need to identify priorities. Of the various recommendations made at the regional level, there are three collaborative efforts that will collectively accelerate renewable energy development in meaningful ways: first, conduct research to strengthen ASEAN manufacturing capabilities for renewable energy technologies and products; second, establish innovative financing instruments and mechanisms; third, standardise and harmonise ASEAN-made renewable energy products.

Acquiring the capability to manufacture and operate the technologies will make renewable energy significantly cheaper. Having secure financial assistance mechanisms will greatly support renewable energy development in its earlier stages. Furthermore, standardising and harmonising systems before the renewable energy market is fully developed will lay a good foundation for continuing future cooperation. Getting things right from the outset, after all, will cost less than refurbishing them later. To this end, governments in the region need to stay strongly committed to renewable energy development.

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