

Renewable energy in Southeast Asia: Policies and recommendations

Erdiwansyah^{a,b}, R.Mamat^a, M.S.M. Sani^a, K. Sudhakar^{a,c}

^aFaculty of Mechanical Engineering, Universiti Malaysia Pahang, 26600, Malaysia

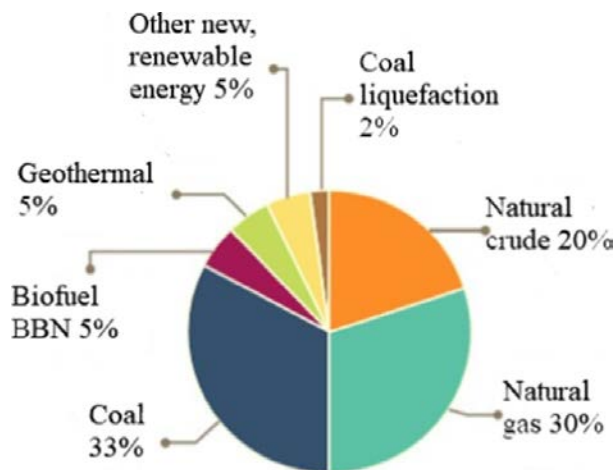
^bFakultas Teknik, Universitas Serambi Mekkah, Aceh, Indonesia

^cEnergy Centre, Maulana Azad National Institute of Technology, Bhopal, India

ABSTRACT

Southeast Asian countries stand at a crossroads concerning their shared energy future and heavily rely on fossil fuels for transport and electricity. Within Asia, especially India and China lead the world renewable energy generation undergoing a period of energy transition and economic transformation. Southeast Asian countries have huge potentials for sustainable energy sources. However they are yet to perform globally in renewable energy deployment due to various challenges. The primary objective of the study is to examine the renewable energy growth and analyse the government policies to scale up the deployment of renewables for power generation substantially. The study also offers policy recommendations to accelerate renewable energy exploitation sustainably across the region. To achieve the ambitious target of 23% renewables in the primary energy mix by 2025, ASEAN Governments should take proactive measures like removal of subsidies of fossil fuels, regional market integration and rapid implementation of the existing project. Eventually, each of this strategy will necessitate sustained leadership, political determination, and concrete actions from stakeholders, in particular, increased cooperation across the region.

GRAPHICAL ABSTRACT



KEYWORDS

Southeast Asia; Sustainability; Energy policy; Renewable energy; ASEAN

DOI: <https://doi.org/10.1016/j.scitotenv.2019.03.273>

ACKNOWLEDGEMENTS

This research was supported by the Universiti Malaysia Pahang (UMP) Flagship Research Grant (RDU1703314) and (RDU1803100) and UMP Research Grant (RDU 1703147).