

Assessment of Fiscal Incentive to Support the Development of Renewable Energy in Indonesia

Topic: CGE and Econometric Input-Output Modeling

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Energy demand continues to increase rapidly along with the Indonesian strong economic growth. The energy demand grew by an average of 7 % per year during the period of 2000 - 2010. In 2010, 96% of the national energy mix is coming from fossil fuels which depends heavily on import. This creates a trade deficit problem as a complimentary of the energy deficit problem for the country. On the other hand, Indonesia has a great potential of domestic renewable energy resources such as biofuel, geothermal, and biomass. However, renewable energy only represents 4% of today's energy use. The Government Regulation No. 5/2006 set a target to utilize renewable resources by 17% on the energy mix in 2025. In addition, many efforts have been done to pro-mote renewable energy such as developing new energy policy and giving fiscal incentives, but still did not give much result. In the literature, so far there is only limited study that assess the government's fiscal incentive supporting the development of renewable energy in Indonesia.

This study develops a Computable General Equilibrium (CGE) model of Indonesia equipped with fiscal and energy features to assess specific government's fiscal incentive for the development of renewable energy in Indonesia, particularly biofuels. We extend the existing model of INDOFISCAL that already has capability on evaluating a range of fiscal incentive such as exemptions from or reductions in import duties, income taxes and VAT. The extension focuses to improve the model to have capability to address energy specific issues, such as inter-energy substitution. The assessment of the specific fiscal incentive would lead the government to be more effective and efficient in management of energy resources.