

Readiness of Indonesian Industries in Accelerating Renewable Energy Development

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New and renewable energy (NRE) plays an important role in increasing energy security and decarbonization of the global economy. In supporting it, Indonesian Government has established a National Energy Policy (KEN) as outlined in Government Regulation (PP) No. 79 of 2014. However, the government's efforts to encourage the achievement of the NRE target are encountering many obstacles, which causes investment in the NRE sector to be less profitable or unattractive. Therefore, problems related to the development of NRE in Indonesia are trying to be solved through a partnership study among Ministry of Industry of Republic Indonesia (Kemenperin), and the Centre of Energy Studies of Universitas Gadjah Mada (PSE UGM).

PSE UGM has conducted several literature studies related to the NRE. First, an analysis of the main problems in determining NRE prices in Indonesia. There is a market failure which is caused by three factors, namely: (1) An archipelago nation; (2) Unequal distribution of population and income among regions; and (3) Unfairly distributed energy consumption. Second, an analysis related to the potential of NRE in the form of solar, wind, and marine power in Indonesian regions. It shows the variations of the potential utilization of NRE. Third, studies about economics and financial studies such as investment, tax incentives, NRE competitiveness, and Renewable Portfolio Standards (RPS). The studies present historical and future data that are important for knowing the economic position of NRE development in Indonesia. (4), the analysis of the NRE power generation industry development model explains the ability of domestic companies to build power plants' components. The selection of the company deliberates the principles of project management, financing, and risk in its construction projects. (5), studies related to the contribution of technology components to the industry using the THIOCMP approach (Technoware-Humanware-Infoware-Orgaaware-Cysbetware-Mangeware - Partnerware). The studies become important because the future NRE ecosystem will become a large industry composed of various companies with variations production capacity and type of components that can be produced. (6), legal and regulatory aspects are also carried out as an optimization of the fulfilment of the

domestic component level of the NRE power plant. These analyses establish an essential foundation for PSE UGM in performing this study.

Online platforms have been distributed to companies with an introduction through webinars and technical meetings which were held in May 2020. Currently, there are 24 registered companies. In particular, there are 4 EPC/IPP companies, 17 manufacturing companies, and 1 service company. There are 20 companies that have filled in the data either completely or incompletely. Still, there are 4 companies that have registered themselves on the online platform but have not filled in the complete data either in the profile, financial, products, components, and estimation sections. It can be seen from the number of participating companies, the current data is still lacking to be able to comprehensively understand the capability of the NRE power plant industry in Indonesia.