



SUMMARY

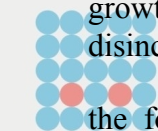
GUSTI AZIS. Economic Analysis and Gas Utilization Business Strategy in Indonesia. Supervised by HERMANTO SIREGAR, ADLER H. MANURUNG and EVITA H. LEGOWO.

In 2010, the Indonesian government has changed the purpose of natural gas utilization, from export oriented – to earn or improve foreign exchange – to focusing more on accomodating the need of natural gas for domestic industries to encourage national natural gas production growth and create a greater multiplier effect for the economy and economic growth. This concept is expressed in The Regulation of Minister of Energy and Mineral Resources No. 03 in the year of 2010 on Allocation and Utilization of Gas for Domestic Needs. Unfortunately, this policy brings a dilemma to the government as the foreign exchange rate that could be obtained from exporting gas decreases. The objectives of this research are (1) analyzing the development and dynamic of gas industry in Indonesia, (2) analyzing economic factors that influence the supply and demand of gas in Indonesia, (3) analyzing impact of economic policies and other economic factors in respect to the utilization of natural gas in Indonesia, and (4) constructing business policy of natural gas utilization in Indonesia to ensure the availability of energy in the future.

The accomplish the purpose of this research, the following was conducted (1) descriptive analysis approach to come up with solution for the first objective of this study, which describes the gas market conditions and development plans of gas utilization business in the future as well as current constraints in local government rules and regulations, (2) econometric approach in the form of simultaneous equations to answer the second and third research objectives as mentioned above. The economic approach that was used is the *Two Stage Least Squares* (2SLS) method and the use of time series data from year 2000 to 2011. The results of this study show that the main factor which influences the dynamic of gas production is the global gas price as well as in Indonesia. Meanwhile, export of Indonesia gas in response to the elastic or flexible gas production in the long run shows a potential gas resource development in Indonesia that may even more encourage the export of gas. On the other hand, factors that influence the demand of gas by Perusahaan Listrik Negara (Indonesian Electrical Company) and industrial urea fertilizers are differ to each other. However, subsidies became a strong influential facet in term of boosting the gas demand from both industries. Results of the simulation shows that compared to other policies, gas reallocation policies could increase domestic demand for gas as well as encouraging economic growth. at the same time, economic growth. However, this condition becomes disincentive to the development of gas production in Indonesia.

Furthermore, Analytic Network Process (ANP) method was used to answer the fourth goal of this study. The main purpose of gas utilization policy in Indonesia, according to the respondents, primarily aims to improve the diversification and energy conservation that is already running now, enhancing the persistency for energy and food, and lastly to give a multiplier effect for the national industry. Currently, the energy that is required for transportation and power generation in Indonesia is still highly dependent on fossil fuels which

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requires a lot of subsidies issued yearly by the government. However, increased use of gas domestically requires the availability of infrastructure and a reliable guarantee of gas supply. The order of priority of solutions can be determined by conducting ANP method. The first solution that must be executed, according to the results of this study, is to strengthen the implementation of the national energy policy. The next step is the determination of domestic natural gas price index and gas subsidies policy. Subsequently the followings should be done: strengthening, monitoring, enforcing, committing, and coordinating before coming to the final step, which is to implement policies to provide incentives for infrastructure development. Formulation of gas business policy based on ANP method are (1) strengthening and improving the regulation of natural gas utilization, (2) encouraging the development of technological innovation and patents, (3) providing subsidies to industries that can generate high multiplier effect, (4) improving governance and the management of natural gas institution, and (5) providing incentives to gas producers and infrastructure developers. Implication on Oil and Gas Upstream Business needs a more attractive fiscal incentive, arrangement of overlapping land minimizing retribution local consent, and there is a need to make a system to monitor national gas balance.

Implication on Oil and Gas Downstream business needs a development on stock system and guaranteed natural gas supply nationally as well as infrastructure development. Furthermore, there is a need for developing retail market and wholesaler that can consumer gas reallocation, as well as formulating gas price index for commercial, household, and transportation needs. Simplifying gas business, negotiating gas export contract and utilization of existing infrastructure to become the backbone for national energy. As for implication for upstream and downstream business aspect, there is a need for improvement or formulation of supporting regulation - government needs to develop an infrastructure using Private Public Partnership (PPP) concept, socialize National Energy Regulation, form Public Service Agency for land, develop Gas City that is bigger and well-planned, deregulation of roles, give responsibilities and rights to the management and regulatory agency for gas business as well as improving and strengthening the existing regulations and policies.

It is expected that the use of gas as an alternative energy can generate a better economic growth and could make Indonesia to be an advance middle-class country in the future by reallocating the need for gas export to one that fulfill domestic needs.

Keywords : analytical network process, economic growth, natural gas, policy, reallocation, simultaneous

