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## Natural Gas Utilization to Preserve Indonesia's Energy Security

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## **Abstract**

According to BPMIGAS data in 2012, Indonesia Energy Demand is increase about 6% every year from 2010 until 2025. For gas demand, Indonesia is expected consuming energy from 599.8 MBOEPD in 2010 to 1,405.4 MBOEPD in 2025. Indonesia has abundant gas reserve that is scattered throughout the Indonesia territory. That's why Indonesia has to develop integrated gas infrastructure to facilitate the gas transportation and utilization in Indonesia. BPH Migas has proposed a long term recommendation of Natural Gas transportation in Indonesia to facilitate gas distribution. Indonesia need to build gas pipeline, LNG plant, LPG plant, gas compression station, and LNG receiving terminal, and also to provide LNG transportation and distribution.

Natural gas from gas well head is transported by using gas pipeline to end user or to gas facility to be processed to become other products such as CNG, LNG, or LPG. From LNG receiving terminal, gas can be produced by regasing the LNG and transport it by using gas pipeline to end user. Natural gas is utilized for Fertilizer production, power plant, household. CNG and LNG are utilized for transportation fuel.

Pertamina Gas which was established in 2007 is the subsidiary of PT Pertamina (Persero) the state owned oil and gas enterprise of Indonesia. Its main business is in trading, transportation, processing of gas, and other business for future business development, such as gas distribution, IPP, LNG receiving terminal, etc. It has a role in developing integrated gas infrastructure in Indonesia. It own and operates an extensive Gas Transmission System, mainly of Open Access pipelines. The network is consist of 43 Segments, with total length reach 1589.29 km or 32,674.70 km – inc. Pertamina Gas has developing gas pipeline, such as South Lhoksukon A – Belawan gas pipeline to support Arun LNG Receiving Terminal, Trans Java Gas Pipeline, and Simenggaris – Bunyu gas pipeline to support Bunyu Methanol plant. Pertamina Gas and partners have also developing gas infrastructure, such as: LNG supply chain for PLN power plant in Eastern Part of Indonesia, LNG supply chain for mining heavy duty vehicle in Bontang, Mini LNG plant in Raja Ampat, LPG plant in Pondok Tengah and Sungai Gerong, CNG for Industry in DKI Jakarta and West Java.

To utilize natural gas for preserving Indonesia's energy security, Indonesia needs integrated gas infrastructures. Its need gas stake holders role to support the Government by developing integrated gas infrastructures in Indonesia.

**Keywords:** Energy Security, Natural Gas, Integrated Gas Infrastructure, Pertamina Gas, Gas Stake Holders.