

Techno-economic study for coal-based synthetic natural gas (SNG) production plant in Korea

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The techno-economic evaluation of synthetic natural gas (SNG) production plant from coal has been performed. In this study, a 1000 MW_{th} production process simulation from coal preparation to SNG purification is designed to achieve efficient production performance for integrating national natural gas pipeline in Korea. Increasing demand and price for natural gas has led a development of SNG production technology from low-cost carbon source, such as coal and biomass. Furthermore, natural gas is a competitive energy carrier as national pipeline gas and transportation fuel. This work presents a guideline for feasibility study and industrial application of SNG production plant in Korea in comparison with previous research.