

Overview of Taean 300 MW IGCC Project

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Korean Government decided the goal of new & renewable energy usage to increase from the current 2% to 10% by 2022. The government program under the support of Ministry of Knowledge & Economy was launched in December, 2006. The first phase of the project has been performed from December 2006 to April 2010, and the following second phase started from Feb., 2011 and will proceed till the end of 2016. The goal of the project is to secure the 300 MW-class IGCC technology through the engineering, manufacturing, construction and operation of the plant. Qualitative target of the project has been set as follows: thermal efficiency of 42%(HHV, net), NO_x less than 30 ppm, SO_x less than 15 ppm, technology self-reliance over 90%, and the local manufacturing of the key facilities over 90%. The plant efficiency of 42% is the highest number among the coal-based IGCC plants that have been operated, which requires the higher gasifier pressure of 42 bar for the new 7FB-class gas turbine. Gross generated power would be 380 MW and the net power capacity is 300 MW. The project comprises of three sub-projects: integrated design of gasification island, construction of 300 MW IGCC plant, and the development of operation technologies including the operator training simulator.