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Analisis keekonomian pemanfaatan kilang LPG Arun sebagai LPG Storage and Transshipment Terminal = Economic analysis on the utilization of Arun LPG plant as LPG Storage and Transshipment Terminal

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Abstrak

Pemanfaatan fasilitas kilang LPG (Liquefied Petroleum Gas) milik PT Arun NGL yang telah berhenti beroperasi sejak tahun 2000 menjadi fasilitas LPG Storage and Transshipment Terminal dilakukan guna memenuhi kebutuhan LPG di Provinsi Aceh dan Sumatera Utara. Konsep yang digunakan adalah dengan menjadikan fasilitas tersebut untuk menerima LPG refrigerated dari sumber lain, menyimpan ke dalam tangki penyimpanan, dan mengirimkannya sesuai kebutuhan dengan memuat ke dalam kapal berpendingin dan tangki penyimpan bertekanan serta menyalurkan LPG refrigerated dan pressurized tersebut dengan truk LPG.
Analisis keekonomian yang dilakukan mencakup perhitungan beberapa parameter kelayakan ekonomi yang umum digunakan yaitu IRR, NPV, benefit cost ratio, dan payback period. Selain itu analisis sensitivitas dan kajian resiko secara kualitatif dilakukan pula untuk mengetahui parameter yang sensitif terhadap keekonomian proyek serta langkah pengelolaan resiko yang terencana.
Hasil analisis keekonomian pemanfaatan kilang LPG Storage and Loading menjadi LPG Storage and Transshipment Terminal menunjukkan bahwa proyek ini layak dijalankan dengan NPV sebesar USD 91.600.000, IRR 11,77%, benefit cost ratio 1,76, dan payback period selama 8 tahun 8 bulan setelah operasi kilang berlangsung. Sementara hasil uji sensitivitas menunjukkan bahwa revenue dan CAPEX merupakan faktor yang berpengaruh terhadap keekonomian proyek.
<hr>The utilization of PT Arun’s LPG Storage and Loading facilities that has not been operated since 2000 as LPG Storage and Transshipment Terminal is performed to fulfill LPG demand in Aceh Province and North Sumatra. The concept of the LPG Storage and Transshipment Terminal is primarily utilizing the existing LPG storage and loading facilities to receive LPG in refrigerated condition from other resources, then store it in the refrigerated storage tanks, and deliver it in refrigerated state as needed by loading into the refrigerated ships and pressurize storage tank as well as deliver it in pressurize condition as needed by particular LPG truck.
Economic analysis is performed by calculating the economic parameters such as IRR, NPV, benefit cost ratio, and payback period. Sensitivity analysis and qualitative risk assessment are also conducted to determine the sensitive parameters and to set the risk management plan of the project.
The results of the economic analysis of the utilization of LPG plant into LPG Storage and Transshipment Terminal indicates that the project is feasible with NPV of USD 91,600,000, IRR of 11.77%, benefit cost ratio of 1.76, and the payback period for 8 years and 8 months after plant operation. Whereas the sensitivity test results reveal that the revenue and CAPEX are the sensitive factors that potentially impact the project.