Abstract

This project discusses about the transportation LNG from gas wells Pagerungan to the power plant in Pemaron, Gilimanuk and Pesanggaran Bali by using concept of Cluster LNG. This concept is different from conventional LNG because LNG temperature will only cooling to -120°C and rated pressures between 20-30 bar. In this condition, Cluster LNG need more specific containment system that can withstand pressures of up to 30 bar. Thus will save cost in the process liquefaction and regasification because it does not need to cooling gas up to -160°C and boil of gas treatment (BOG) on Cluster LNG storage tanks. Cluster LNG concept doesn't required to transport special LNG ships, for transporting, we can use retrofit container that is the container ships that cargo hold has been modified. In this study use three models to calculate the demand for transportation of LNG in Bali. The distribution modeled by a linear programming model and solved using Excel Solver. Models are made considering the production of gas wells, gas demand in power plants and retrofit several container sizes. From the three models are made, will be selected one model that result the lowest transportation cost. From the optimization calculations and economic analysis found a minimum margin cost 4,01 US$/ MMBtu

Keyword: Cluster LNG; Linear Programming; Investment Cost