THE SELECTION OF DISTRIBUTION SYSTEM FOR UNLOADING PROCESS OF LNG AT CELUKAN BAWANG BALI: CASE STUDY OF LNG SUPPLY FROM TANGGUH FIELD TO BALI

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Abstract

This final project is a case study about the selection of distribution system to supply LNG from Tangguh Field to Bali. In the selection process, there are three alternative options for LNG distribution system. The difference of those three alternatives for distribution system lies on its transportation mode and receiving terminal used. This selection process of the LNG distribution based on qualitative and quantitative criteria. Multiple Attribute Decision Making (MADM) method was used to do the selection based on questionnaires taken from few respondents, whilst Analytical Hierarchy Process (AHP) method used to find relative weight specifically for qualitative criteria. The result shows that the best distribution system is by using LNG carrier equipped by regasification unit with receiving terminal equipped by pipes as unloading system. The entropy value for this system is 0.962. The second best option is distribution system by using LNG carrier which is not equipped by regasification unit with FSRU as its receiving terminal with entropy value of 0.602. And the least option to be chosen is distribution system by using conventional LNG carrier with on-land receiving terminal equipped by storage tanks with entropy value of 0.032.

Key words: selection, liquefied natural gas, distribution, LNG carrier, receiving terminal, MADM.