ANALYSIS OF THE EFFECT OF ADDITIONAL RDMP CDU PROJECT LOAD ON AMPERE RATING AND SHORT CIRCUIT SWITCHGEAR AT SUBSTATION 15 PT KILANG PERTAMINA INTERNASIONAL RU-VI BALONGAN

Jian Nurdwiyati
Electrical Engineering Study Program, Faculty of Science & Technology
University of Technology Yogyakarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
Email : jnurdwiyati@gmail.com

ABSTRACT

PT Kilang Pertamina Internasional RU-VI Balongan is increasing production capacity or implementing the RDMP CDU project. RDMP (Refinery Development Master Plan) is a long-term strategic plan for the development of oil and gas refinery facilities, while CDU (Crude Distillation Unit) is one of the main units in the refinery which is tasked with separating crude oil into various types of oil. It is possible that new loads will be added which will produce new load data for the RDMP CDU project. The additional load in the RDMP CDU project on substation 15 units needs to be evaluated on the effect of additional load on the ampere rating and short circuit switchgear. Evaluation of the electric power system at PT Kilang Pertamina Internasional RU-VI Balongan was carried out using ETAP (Electric Transient and Analysis Program) software. From the results of the load flow simulation in the case of LF1 – LF5 4 STG running or 5 STG running it has no influence on the amperage rating on each busbar or does not exceed the predetermined limits, but there are several LFs that experience marginal conditions and can still be handled by changing the tap. on the transformer. For short circuit switchgear it has no influence on the busbar rating at each SC1 – SC5 5 STG running, and for transformer capacity when there is an increase in load there is no influence on transformer capacity, but for tap changers this must be done by calculation.

Keywords*: Load Addition, Ampere Rating, Load Flow, Short Circuit, Tap.*