

Studi pelepasan beban akibat gangguan beban lebih pada jaringan pt pln persero apb Jakarta dan Banten subsistem kembangan = Study of load shedding due to over load fault on pt pln persero apb Jakarta and Banten grid kembangan subsystem

Fariz Hazmi Ahdiyat, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20421841&lokasi=lokal>

Abstrak

[ABSTRAK

Skripsi ini membahas tentang Over Load shedding pada subsistem Kembangan jaringan PT. PLN APB Jakarta dan Banten. Pelepasan beban dilakukan dengan tujuan melindungi sistem dari keruntuhan total (blackout) akibat beban lebih dan menaikkan tegangan sistem yang mengalami susut tegangan sampai batas toleransi nilai yang diizinkan yaitu +10 % dan -10 %. Simulasi dilakukan dengan menggunakan perangkat lunak ETAB 12.6. Pelepasan beban dibuat dengan 3 skenario. Skenario 1 berdasarkan nilai besar beban. Skenario 2 berdasarkan nilai susut tegangan. Skenario 3 berdasarkan jumlah daya yang dapat dilepas. Total daya pada sistem sebesar 650,35 MW. Beban maksimal yang dapat diterima oleh masing-masing IBT adalah 458 MW. Sehingga perlu dilakukan pelepasan beban sebesar 29,6%. Dengan melihat besarnya daya yang dilepas dan nilai susut tegangan rata-rata pada setiap skenario, skenario yang paling optimal adalah skenario 2, dengan susut tegangan rata-rata 7,38% dan beban yang dilepas sebanyak 198,27 MW.

ABSTRACT

This thesis discusses Overload shedding on Kembangan subsystem PT. PLN APB Jakarta and Banten grid. Load shedding is done in order to protect the system from total collapse (blackout) due to overload and stabilized voltage system to the value of the permitted tolerance +10% and -10%. Simulations done using software ETAB 12.6. Load shedding created with 3 scenarios. Scenarios 1 is based on the value of the loads. Scenario 2 is based on the value of undervoltage. Scenario 3 is based on the amount of power that can be removed. The total power in the system amounted to 650.35 MW. The maximum load that can be accepted by each IBT is 458 MW. So it is necessary to release the load by 29.6%. By looking at the amount of power that is removable and the average value of undervoltage on each scenario, the optimal scenario is scenario 2, the average of undervoltage is 7.38% and the load shedding as much as 198.27 MW

D;This thesis discusses Overload shedding on Kembangan subsystem PT. PLN APB Jakarta and Banten grid. Load shedding is done in order to protect the system from total collapse (blackout) due to overload and stabilized voltage system to the value of the permitted tolerance +10% and -10%. Simulations done using software ETAB 12.6. Load shedding created with 3 scenarios. Scenarios 1 is based on the value of the loads. Scenario 2 is based on the value of undervoltage. Scenario 3 is based on the amount of power that can be removed. The total power in the system amounted to 650.35 MW. The maximum load that can be accepted by each IBT is 458 MW. So it is necessary to release the load by 29.6%. By looking at the amount of power that is removable and the average value of undervoltage on each scenario, the optimal scenario is scenario 2, the average of undervoltage is 7.38% and the load shedding as much as 198.27 MW

D, This thesis discusses Overload shedding on Kembangan subsystem PT. PLN APB Jakarta and Banten

grid. Load shedding is done in order to protect the system from total collapse (blackout) due to overload and stabilized voltage system to the value of the permitted tolerance +10% and -10%. Simulations done using software ETAB 12.6. Load shedding created with 3 scenarios. Scenario 1 is based on the value of the loads. Scenario 2 is based on the value of undervoltage. Scenario 3 is based on the amount of power that can be removed. The total power in the system amounted to 650.35 MW. The maximum load that can be accepted by each IBT is 458 MW. So it is necessary to release the load by 29.6%. By looking at the amount of power that is removable and the average value of undervoltage on each scenario, the optimal scenario is scenario 2, the average of undervoltage is 7.38% and the load shedding as much as 198.27 MW

D]