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Optimization Placement Static Var Compensator (SVC) Using Artificial Bee Colony (ABC) Method On PT PLN (Persero) Jawa-Bali, Indonesia

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***Abstract*— Reactive power injection using Static Var Compensator (SVC) is one of the efforts that can be used to overcome the problem of transmission power loss and voltage drop caused by the increase of electrical load. Artificial bee colony (ABC) is an optimization method used to determine the position and capacity of SVC. The research purpose for knowing the location and optimal capacity of SVC in IEEE-30 Bus System using Newton-Raphson method and Artificial Bee Colony (ABC). The data to be used is primary data consisting of data bus, data channel, and data generator on Java-Bali transmission system 500 kV and data processing using software Matlab. Result and discussion First, SVC**

Much research has been undertaken to apply SVC equipment in dealing with various issues related to the electricity system. Is used the Ant Colony Optimization method in determining the optimal SVC MVAR on the 500 KV Java-Bali transmission system [1].

As for the other research of using Artificial Bee Colony method in determining the optimal MVAR of SVC on 500 KV Java-Bali transmission system [2]. This research uses the Bacteria Foraging Algorithm method in determining the optimal SVC MVAR of the 500 KV Java-Bali systems [3].