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Abstract Details

Title: Transmission Loss Allocation Methodology are Considered

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Abstract: The restructuring of ELECTRICITY SUPPLY INDUSTRY (ESI) started in 20th century introduced deregulation and subsequent open access policy in electricity. And this restructured system brought competition in energy market. This transformation consists of two aspects that are related with each other; restructuring and privatization. However, due to this change, some problems and challenges have cropped up. Among all the problems, the issue of power losses allocation assumes significance. Allocation of transmission loss has become a contentious issue among the electricity producers and consumers. When electrical power is transmitted through a network, it will cause power losses. And the generating unit must generate more power to compensate these losses. And cause of deregulation and competition, no generating unit would like to generate more power to compensate losses. Logically, both generators and consumers are supposed to pay for the losses. If there is no specified method to handle this problem, then there is a probability that the Independent System Operator (ISO) which is a non-profit entity will be responsible for these power losses. It should be the operating units who should cover up these losses. This dissertation work focuses on presenting a strategy for loss allocation among the generating units. A closed form solution for transmission loss allocation does not exist due to the fact that transmission loss is a highly non- linear function of system states and it is a non- separable quantity. In absence of a closed form solution, different utilities use different methods for transmission loss allocation. Most of these techniques involve complex mathematical operations and time consuming computations.

Keywords: Transmission Loss Allocation, ESI, ISO.