Abstract

Transmission Cost Allocation (TCA) function will facilitate competitive electricity market by impartially providing energy transportation services to all energy buyers and sellers, while fairly recovering the cost of providing those services. The revenue reconciliation obtained by TCA should include both active as well as reactive power flow in the circuit along with variance in the utilization of the transmission network. The work in this paper proposes the MVA-mile method with variance in the usage of network to evaluate the TCA for efficient revenue reconciliation.
This method adopted in this work shows more fairer and transparent way of allocation of transmission cost. MVA-mile method has an important aspect of deliberation of cost of reactive power flow in TCA. Overall recovery of Annual Revenue Reconciliation (ARR) of transmission facilities provision is higher with proposed MVA-mile component of TCA and lower with Postage Stamp (POS) component of TCA. The absolute, dominant and reverse variants of MVA flow through circuit are used to allocate the transmission cost to users. Standard six bus network is used with different cases of variance in network circuit usages in proposed simulation. It has been assumed the load consumer pays total cost of transmission services to the transmission owner. The TCA is evaluated for load users only.

References

Efficient Transmission Cost Allocation by Composite MVA-Mile Method with Network usage Approach


Index Terms

Computer Science Circuits And Systems

Keywords

Transmission Cost Allocation; MVA-mile; Postage Stamp; Reactive Power Flow; Network Usage