

## Abstract of Presentation

Presentation Title:

System Modeling and Technical Evaluation of the Philippine Power Grid

Abstract :

This study developed a 41-bus model for the power system of the Philippines. The three major islands of the country namely: Luzon, Visayas and Mindanao were separately modeled in a power flow software following the Wholesale Electricity Spot Market (WESM) generator and load ratings. Luzon grid was modeled as a 15 bus system. Visayas grid model had 14 buses while Mindanao grid had 12 buses. The three island grids were then interconnected via HVDC lines forming the Philippine power grid. Technical evaluation in terms of generation, transformer loadings, voltages and system losses for each island grid and for the Philippine grid were done.

Simulation results showed that total generation and system losses slightly reduced when the three island grids were interconnected together which indicated better performance of the unified grid as compared to that of the individual island grids. Furthermore, results on transformer loadings and voltages revealed no significant difference for both the individual island grids and the Philippine grid.