

Giga-Watt Generation Panel Session

**Wed 27 Aug 08 from 14:00 to 18:00
Room Havane Level 3**

CIGRE 2008 Paris, Group A1 (Rotating Electrical Machines)

You are invited to attend a Panel Session on the 27 Aug 08 in the Havane room on the latest developments in generators and the impact this will have on users.

Background

Historically, the industry has been driven by the “economy of scale” concept and OEMs have continuously increased the size of the generators they produce in response. This trend started to slow down with the introduction of gas turbine generators which, due to the limits of the prime movers, were lower in output. However, the recent trend of reintroducing nuclear plants required larger units to be produced. A similar trend is also taking place on the fossil 2-pole generators matched to supercritical steam turbines. Hydro generation has undergone similar changes in machine sizes.

The purpose of the Panel Session is to facilitate a discussion between OEMs and users on the application of the large generators under development and early opening life.

Session Format

Each OEM will be given a 10 to 15 minute slot to present his latest development and to answer the questions listed below. The OEM presenters will be part of the panel. The presentations will be followed by an open question / answer / discussion session.

Key Questions to OEMs

OEMs will strive to answer the following key questions in their presentations:

- a) What are the largest nuclear (4 pole) and fossil (2 pole) generator that you are developing / have recently developed? Please give summary of this.
- b) What are the largest Hydro units developments that you are developing / have recently developed? Please give summary of this.
- c) What are the main design features that were applied to achieve the larger design? How is transportation solved? Please give summary of this.
- d) What design features have you applied in the generator to enhance the reliability required on such a large unit?
- e) What design assessments have been carried out to ensure the reliability and long term integrity of the generator?
- f) What special consideration will users need to give in the running and maintenance of these large units?
- g) What considerations have been given to ensure stable operation on the grid?
- h) State of the art in the developments of Hydro and Thermal Turbine Generators.