



## Mosenergo Thermal Power Plant No 21 (TPP-21), Moscow

**Date:** Tuesday 23rd March

**Meeting place:** 08.30 at registration desk,  
Riverside entrance, Expocentr

**Depart:** 09.00

**Return:** By 16.00

**Price:** € 85.00

### BACKGROUND

Mosenergo's TPP-21 provides heat and electricity for the North-West and Central Regions of Moscow, as well as Khimki town. It is the biggest producer of thermal power in Europe. Its combined heat and power output is enough to provide for three million consumers.

Construction of TPP-21 commenced in 1961, and by 1963 the first power unit was put into operation. Today there are 11 power units, 2 expansion generator machines and 16 peak hot water boilers.

TPP-21 has an installed capacity of 1800 MWe with thermal capacity of 4900 GCal heat.

### RETROFIT PROGRAMME

In March 2006, under the Mosenergo Development and Retrofitting programme, the construction of the new PGU-450T power unit commenced at TPP-21, with an estimated capacity of 450 MW, and thermal capacity of 300 GCal. The new power unit is built using the most advanced gas-steam cycle technology. With an efficiency rate is 51 per cent, it is significantly higher than traditional steam-power units. The new technology will reduce gas consumption by 30 per cent and will cut the atmospheric emissions by a third. The PGU-450T power unit project was designed by

"Mosenergoproject" Institute, a Mosenergo affiliated organization. Mosenergospecremont is the power unit construction general contractor.

A similar PGU-450T power unit has been installed, by Mosenergo at CHP27 in Mytishi of Moscow borough.

The main equipment of the power unit was supplied by Power Machines and includes 150 MW capacity steam turbine, two gas turbines with 160 MW capacity and two heat recovery steam generators. The unit's mechanical and electrical equipment is controlled by modern DCS microprocessing automatic process control system.

The PGU-450T power unit at Mosenergo TPP-21 will supply power to the 220 kV electricity grid, significantly increasing Moscow power system reliability.

### THE TOUR PACKAGE

The power plant visit will include return coach transfer, a presentation and plant tour by Mosenergo staff and a light lunch. Simultaneous Russian/English translation will be available.

