

Tour 1:

Technical Visit to the CHPP-2 - the largest combined heat and power plant in Latvia

CHPP-2 is the largest combined heat and power plant in Latvia, located 18 km from city centre, which launched its operation in 1973. In 2006, reconstruction of CHPP-2 was started, with construction of the first power unit of the plant completed in late 2008 and the second power unit commissioned on 23 September 2013, thus finalising the reconstruction of the Group's combined heat and power plants. Reconstruction allows for electricity output in both cogeneration and condensation mode, which is essential for the security of the electricity supply.

Currently, CHPP-2 is the most efficient and up-to-date combined-cycle heat and power plant in the Baltics. Two combined-cycle gas turbine (CCGT) units and five water boilers are operated at CHPP-2. With the commissioning of the second power unit, the electrical capacity of CHPP-2 in cogeneration mode reaches 832 MW, while the thermal energy capacity of the two power units is 544 MW in cogeneration mode. The electrical capacity in condensation mode amounts to 881 MW. Meanwhile, the total thermal energy capacity of CHPP-2, including water boilers, is 1,124 MW. The back-up fuel reserves (diesel) is intended for five water boilers and two house-service steam boilers.

In 2014-2017, a reconstruction project for the auxiliary equipment part was implemented at Riga CHPP-2, which included the upgrading of the heating network circulation system by installing new circulating pumps to ensure the quality and economical supply of thermal energy on the right bank of Riga. The project involved modernisation of the power supply system for auxiliary equipment, installing several high voltage frequency converters with a nominal capacity of 2,750 kW_{el} each in order to ensure the effective operation of the heating network circulating pumps, as well as improving the hydraulic system and increasing the level of automation. The reconstruction of the system has resulted in a reduction in the power consumption for pumping the water in the heating networks of up to 50%. In order to ensure auxiliary power consumption, solar panels with a total capacity of 4.7 kW have been installed on the roof of the first power unit of CHPP-2.

**EPE'18 ECCE
EUROPE**

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Technical program

Departure from Kipsala International Exhibition Centre: **10:30**

Time at the CHH2: **11:00 – 12:00**

Arrival at Kipsala International Exhibition Centre: **12:30**

After a short presentation including a description of the Latvian power grid and the role of the CHPP2 in the electricity mix of Latvia and the technical details and achievements of the power station, participants will be lead inside the power station and visit the main hall, halls with power converters, generators, pumps and turbines, automation. + description from Latvenergo

Please be aware of the access restrictions below.

Limiting factors in regard to health condition of the attendees of the EPE Conference when visiting Latvenergo AS facilities at CHPP-2 and HPP

No.	Possible health issues	Possible limiting factors	Notes
HPP, CHPP-2			
1.	Persons with reduced mobility who use technical aids (such as a wheelchair) to move around	1) Problems with movement when passing through the checkpoint of the facility's production areas	It will not be possible to pass through the security checkpoint turnstile and use the stairs in a wheelchair. CHPP-2 has low access possibilities. <i>Moving around the machine hall at the HPP where the hydropower units are being reconstructed is limited.</i>
		2) Exposure to occupational risk factors (noise, vibration)	We provide the following personal protective equipment: a high visibility vest, a helmet and earplugs (if needed).
2.	Persons with impaired vision	1) Moving around the facility's production areas unaccompanied	<i>Moving around the machine hall at the HPP where the hydropower units are being reconstructed is limited.</i>
		2) Exposure to occupational risk factors (noise, vibration)	LE may provide personal protective equipment (a high visibility vest, a helmet and earplugs (if needed)).
3.	Persons with impaired hearing	1) Exposure to occupational risk factors (noise, vibration)	We provide the following personal protective equipment: a high visibility vest, a helmet and earplugs (if needed).
		2) Moving around the HPP production areas unaided	Safety signs must be obeyed at all times. <i>Moving around the machine hall at the HPP where the hydropower units are being reconstructed is limited.</i>
4.	Persons with heart disorders, cardiac pacemakers or metal implants (devices that may be implanted in the human body for medical reasons)	1) Possibility to move around the production areas, as EMF levels near power units may be increased	The duration of stay in the EMF exposure area (next to the operating power units/turbines) should be limited as far as possible. Safety signs must be obeyed at all times. <i>Moving around the machine hall at the HPP where the hydropower units are being reconstructed is limited.</i>
		2) Persons with active cardiac pacemakers or metal implants in the body are denied access to the operating power units at the facility	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><small>Cilvēkiem, kuru ķermenī implantētas aktīvas sirds darbību stimulējošas ierīces, piekļuve aizliegta!</small></p> </div> <div style="text-align: center;">  <p><small>Cilvēkiem, kuru ķermenī ir metāla implanti, piekļuve aizliegta!</small></p> </div> </div> <p>Persons with active cardiac pacemakers implanted in the body are denied access! Persons with metal implants in the body are denied access!</p>
		3) Exposure to occupational risk factors (noise, vibration)	We provide the following personal protective equipment: a high visibility vest, a helmet and earplugs (if needed).

For the visitors of Latvenergo AS facilities at CHPP-2 and HPP flat shoes are required.