

## **The Trial Operation of Unit A4 Follows**

### **The remaining tests or warranty tests are underway to prove that the installed equipment is operating under the agreed parameters.**

As with the previous three revitalized units of HPP Zvornik, new equipment was installed on the A4 unit: turbine, turbine control, cooling water system, pressure air system, generator with excitation system, generator equipment, control system, unit transformer and 110 kV switchgear.

The first tests, without water, began in mid-November and lasted until 29 November. These are tests of the complete installed equipment, after which the unit was prepared for the first start-up, which was successfully completed on 29 November. Then came idle tests: start, stop, runaway, generator excitation, mechanical braking. The first grid synchronization happened on 4 December, which was followed by tests under all load modes, unit start-up and stopping: control of active and reactive power, disconnection of the units from the network, electrical braking, testing of electrical protection, testing of the control system. The remaining tests or warranty tests are underway to prove that the installed equipment is operating under the agreed parameters. After receiving and confirming the results, it is planned that the A4 unit will start trial operation of one month late this year.

Throughout the testing, HPP Zvornik experts also take an active part, together with the competent departments and sectors of EPS and EMS AD in order to provide adequate testing conditions.

Along with unit revitalization, a revitalization of a part of the HPP Zvornik's auxiliary consumption was performed, allowing the revitalization of a 650 kVA house generator and a new 440 kVA diesel generator throughout the trial operation.

In late November, a call for tenders for the Phase II auxiliary consumption reconstruction was published. It is expected that in about two years, HPP Zvornik will be completely revitalized. This means that besides completing unit revitalization, all other equipment will be upgraded.

### **Contractors and Testing**

Voith Austria is the contractor engaged to test turbine and turbine control, while their Swedish branch has been entrusted with the testing of generators and excitation systems. Elnos conducts testing of electrical protection, generators, unit transformers, generator voltage equipment and switchgear. Gosa Montaza was engaged to test the cooling water system, while the Mihailo Pupin Institute performs control system testing. Unit vibrations are tested by Vibroacoustics, hired by the contractor. The warranty tests were entrusted to the Nikola Tesla Electrical Engineering Institute, also engaged by the contractor.