

December 17th, 2024

PPC Group: Specialised educational program in pumped storage for engineers

- *In collaboration with the University of Western Macedonia, the National Technical University of Athens and the Aristotle University of Thessaloniki*
- *Academic-level Program "Pumped storage and Hydroelectric power"*

A new, specialised educational program in pumped storage was recently introduced by the PPC Group, recognising the current needs in RES, as well as the challenges in energy storage and management. The program "Pumped storage and Hydropower" was designed for the first time in Greece by the PPC Group in collaboration with the University of Western Macedonia and the National Technical University of Athens and is offered to 40 engineers.

The inter-university program "Pumped storage and Hydropower" is addressed to most Engineering specialties, including Hydraulic Engineers, Civil Engineers, Mechanical Engineers, Electrical Engineers, as well as Environmental Engineers, Geotechnical Engineers, etc. The courses started in November with prominent professors from the University of Western Macedonia (UWM), the National Technical University of Athens (NTUA), the Faculty of Engineering of the Aristotle University of Thessaloniki, as well as executives of major engineering firms abroad.

Participants will be specialised in the design, financial and technical analysis and implementation of pumped storage and hydropower generation projects of the PPC Group and will be able to be employed in similar projects of the Group or other organisations in Greece and internationally.

The PPC educational program "Pumped storage and Hydropower" includes lectures and workshops with a total duration of 150 hours. The courses are mainly conducted through synchronous distance learning, while visits to PPC Group hydroelectric power plants and pumping stations and to UWM's laboratories are also part of the program. The program is expected to be completed in 8 months and graduates will obtain a certificate of successful training.

PPC Group: 1.8 GW additional output from flexible units by 2027

According to the 2025-2027 Strategic Plan, the PPC Group will make significant investments in flexible power generation projects with the aim of adding 1.8GW of installed capacity by 2027. Flexible plants, including storage and pumped storage units, address the stochasticity of RES.

Storage units can store the **excess electricity** generated by RES and inject it to the grid **at a later time**, based on the demand and the needs of the system. At the same time, they provide important energy services, enhance system resilience, and safeguard the electricity supply chain, contributing to the **reduction** of overall **costs**.

Pumped storage is a long-term, **green energy storage unit**, with fully mature technology and global applications. A typical pumped storage **system** includes two **interconnected water reservoirs at different elevations and with reversible hydraulic pump turbines**. Excess electricity is used to pump water from the lower reservoir and channel it into the upper reservoir, for energy storage. When demand increases, the water is pumped from the upper reservoir to the lower reservoir and, through the hydraulic turbines, electricity is generated.

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