

The largest Romanian electricity producer Hidroelectrica is planning to build a green hydrogen production unit with a capacity of 50 MW and a solar power plant with energy storage batteries on the island of Ostrovu Mare on the Danube, located near the hydropower system Iron Gates II.

The idea is still in its infancy, with Hidroelectrica surveying the market and seeking for a consultant to prepare the feasibility study and other documentation needed to start the project. The project consists of producing green hydrogen from water hydrolysis, using a hydrolyzer with an installed capacity of 50 MW, using as resources the Danube water and renewable energy produced in the dedicated solar power plant.

The feasibility study will also have to analyze whether it is possible to connect the dedicated/ exclusive hydrogen production unit to HPP Iron Gates II as a back-up variant to the solar power plant, as well as the optimal installed power of the solar facility.

Hidroelectrica plans to start producing ultra high- purity green hydrogen at Ostrovu Mare in 2026, aiming for a process efficiency of 75 %, a hydrolyser operating regime with a minimum load of 10 % and a production of at least 7,500 tons per year, at a sales rate of no more than 4 euros/ kilogram.