

UZUNDERE HYDROELECTRIC POWERPLANT

PROVISION OF HYDROELECTRIC POWER TO THE TURKISH GRID.





TURKEY'S TRANSITION TO HYDROPOWER

Turkey is on a clear renewable energy trajectory, with significant aspirations for hydropower, particularly around the centennial of the Republic in 2023, by which time the nation target of 30% of its energy to be sourced from renewables. While the majority of Turkey's energy profile is dominated by fossil fuels, with gas and coal at 32% and 33% respectively, renewables have gained headway with hydropower at around 17%. By choosing hydro, Turkey displaced around 60 million m³ of natural gas.

UZUNDERE HYDROELECTRIC POWER PLANT: MERGING HISTORY WITH MODERN ENERGY

The Uzundere Hydroelectric Power Plant is on the Black Sea in the Erzurum Province of Eastern Anatolia. This large-scale run off-river facility is not just about modern energy. Close by, the town is home to Oshki, a revered Georgian Orthodox monastery dating back to the 10th century.

Beyond its historic backdrop, the plant's core mission is clear: to produce electricity for the Uzundere public grid. In doing so, it serves as a green alternative, significantly cutting greenhouse gas emissions by sidelining fossil fuel-based generation. Key to its efficiency are two vertical-axis Pelton turbines, each boasting a capacity of 31.076 MWe.

MONITORING AND EVALUATION

The plan monitors the quantity of electricity delivered to the grid, which forms the foundation for emission reduction calculations. Another parameter observed is the project activity's installed capacity. Monitoring derives data from supplier information on equipment, which reveals the turbines' installed capacity.

The reservoir area is calculated by obtaining coordinate readings around the reservoir's perimeter. A project verification site visit revealed no negative impact regarding noise, aquatic life, and that the project had generated local employment and safe waste management practices.



873,180 TONS OF CO2 EQUIVALENT (tCO2e) AVOIDED IN TOTAL OVER 10 YEARS

87,318 TONS OF CO2 EQUIVALENT (tCO2e) EMISSIONS AVOIDED ANNUALLY

120 WORKERS EMPLOYED DURING CONSTRUCTION

10 JOBS CREATED FOR OPERATION OF THE PLANT

CERTIFIED BY:

This project is certified by VERRA

Carbon credits on the Verra registry undergo rigorous certification processes, ensuring that the emissions reductions are genuine, measurable, and long-lasting.

VCS 964 link to registry here.

Many companies look to focus their environmental commitments and targets purely on reducing or removing emissions and avoid conflating their environmental program with social and other wider community and stakeholder goals.

The verified emissions reductions from this project are well matched for companies looking to keep their program focus tied to Climate Action through investments in renewable energy.

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