

**Amfilochia Pumped Storage Project,
at the locations "Agios Georgios" (maximum absorbable power of 496 MW and
maximum deliverable power of 460 MW) and "Pyrgos" (maximum absorbable
power of 234 MW and maximum deliverable power of 220 MW) and
accompanying works,
in the Municipalities of Amfilochia and Agrinio, Aetolia-Acarnania Regional
Unit**

**Project of Common European Interest (PCI 2.9, formerly 3.24) and Greek
Strategic Investment by the company TERNA Energeiaki – Pumped Storage I
S.A.**

NON-TECHNICAL SUMMARY

INTRODUCTION

The Amfilochia Pumped Storage project is implemented by TERNA Energeiaki - Pumped Storage I S.A., a subsidiary of TERNA Energeiaki S.A., headquartered in Athens, in the Central Athens Regional Unit under the Decentralized Administration of Attica. The project's main construction contractor is TERNA S.A.

The “Pumped Storage System in Amfilochia” represents the largest investment in a storage project in Greece. The EU designated it as a Project of Common Interest (PCI 2.9) in October 2013 and classified it as a Strategic Investment in 2014. The project is part of the National Recovery and Resilience Plan "Greece 2.0," funded by the European Union. Project studies were co-financed by the Connecting Europe Facility Program, and the European Union exclusively supports the project with an aid decision (SA. 57473 (2021/N – Greece)), which provides capital support from the Recovery and Resilience Fund and operational support after the start of operations.

The main project includes two separate pumped storage works in the areas of "Agios Georgios" (with a maximum absorbable power of 496 MW and a maximum deliverable power of 460 MW) and "Pyrgos" (with a maximum absorbable power of 234 MW and a maximum deliverable power of 220 MW), along with their accompanying infrastructure.

The project's purpose is for the units to function as pumps during times of surplus production from large wind farms or photovoltaic systems and to produce electricity as a hydroelectric plant during peak demand hours. Additionally, there is potential for combined operation, where one unit pumps while the other generates power according to System Operator requirements. In this way, the project provides significant ancillary services to the grid, strengthening its stability and allowing safe integration of fluctuating renewable energy sources (wind and solar), thereby maximizing their penetration into the energy production mix.

More specifically, these projects exhibit significant advantages and contribute to:

1. **Maximizing the integration of large wind farms or photovoltaic systems,** which are characterized by load instability. By injecting the generated hydroelectric power through pumped storage systems, the behavior of the

interconnected grid is stabilized, abrupt frequency and voltage changes are managed, and critical ancillary services are provided according to the System Operator's needs.

2. **Fast load ramp-up and ramp-down** capabilities, especially given the rapid development of photovoltaic systems in the Greek system.
3. **Optimization of thermal plant operations (coal and combined cycle natural gas units)**, as reservoirs allow them to operate at technical minimums and store surplus production during low-demand hours. This enhances their operation, reduces greenhouse gas emissions, and extends their lifespan. The project's support for coal plants will continue as long as they operate, taking into account the decarbonization program and the current energy crisis conditions.

PROJECT CLASSIFICATION

According to Ministerial Decisions YΠEN/ΔΠΠΑ/17185/1069/2022 (Government Gazette 841/B` 24.2.2022) & YΠEN/ΔΠΠΑ/64712/4464 (Government Gazette 3636/B`/ 11.07.2022), as applicable, the project under study falls under Group 2: "Hydraulic Works" and is specifically classified in Subcategory A1.

PROJECT DESCRIPTION

The pumped storage project is located near the upper boundary of the Kastraki Lake, immediately downstream of the Kremasta Dam. It includes two separate pumped storage works in the areas of "Agios Georgios" and "Pyrgos" in the municipalities of Amfilochia and Agrinio in the Aetolia-Acarnania Regional Unit, consisting of:

Main Works:

- **Reservoirs - Dams**
 - Agios Georgios Reservoir.
 - Pyrgos Reservoir.
- **Water Conveyance Systems**
 - Agios Georgios Conveyance System.
 - Pyrgos Conveyance System.
- **Amfilochia Electricity Generation and Pumping Station** (integrated building of Agios Georgios and Pyrgos Generation/Pumping Stations)

Accompanying Works:

- Main works disposal areas (in the region of the right bank of Lake Kastraki).
- Main works construction sites (in the region of the right bank of Lake Kastraki).
- Main works access roads (in the region of the right bank of Lake Kastraki).
- Communication restoration roads (in the region of the right bank of Lake Kastraki).
- Connection works with the electric grid (apart from the UHT Substation, located on the left bank of Lake Kastraki):

- **Amfilochia Ultra-High Voltage Center** (on the right bank of Lake Kastraki) and underground cable connection of the Generation Stations to it.
- 400 kV Interconnection Line "Achelous UHT – Amfilochia UHT".
- Rearrangement works of existing overhead Transmission Lines and expansion works of the Achelous UHT.
- Aggregate Supply Area for construction needs, in the Alevrada area.

ENVIRONMENTAL IMPACTS OF PROJECT OPERATION

Project Compatibility with Established Spatial & Urban Planning Commitments

The project site is not located within settlement boundaries, and there are no large settlements or settlements designated as traditional within the study area. The project area does not include designated land uses under the G.P.S. of Agrinio (Government Gazette 14 AAP /2013) or the G.P.S. of Amfilochia (Government Gazette 1164/D/30.11.1987) as the project area is not within G.P.S. boundaries. The project area does not fall within a designated Special Conservation Area (SCA) under Directive 92/43/EEC. Additionally, no National Park is designated in the project area. The environmentally approved project and its modifications comply with the approved Water Management and Flood Risk Management Plans for Western Greece.

Environmental Impact Assessment from Project Operation

Project operation is not associated with increased emissions of gases, particulate pollutants, liquid or solid waste, or urban waste. The project's operational design aims for the highest percentage of its consumed electricity to come from renewable energy sources. The environmentally approved project complies with applicable regulations for the wider area.

Positive Project Impact

The project does not have negative impacts on existing infrastructure in the area (roads, networks, etc.). On the contrary, transportation infrastructure is improved to support both the construction and operation phases. The project positively impacts the human environment by creating new jobs for skilled and unskilled personnel. Specifically, the construction phase is expected to create 900 jobs, and 60 jobs are expected to remain during the operation phase.