

Project ID:

The project concerns the supply of equipment for the continuous measurement, recording and transmitting the data of the level, the physicochemical parameters of the water and the meteorological parameters of the **Gratini** and **Papadia** dam lakes of **Komotini** and **Melitis** respectively of **Public Power Corporation (PPC SA)**. Specifically, the procurement concerns equipment for the real-time monitoring of the hydrological and meteorological parameters at the dams of Gratini and Papadia of the Komotini and Melithi respectively

IN BRIEF

The system:

Integrated measuring systems for water qualitative quantitative of the water reservoirs

Where:

Meliti – Florina
Gratini – Komotini

When :

July 2018

ADMINISTRATOR

PPC SA - Meliti
PPC SA – Komotini

Important!

The most complete lake monitoring systems in Greece

Important!

Cutting edge technologies for minimum maintenance requirement

Important!

Combination of wireless communications and fiber optics



Continuous - Automatic Water Mass Balance Calculation

In each dam were installed a) Full Meteorological Station, b) Floating Water Quality Measurement Station (buoy), c) Water Level Radar, d) Transmitters from the water flow Meters of the: Ecological Supply, Factory Supply, Irrigation Supply

The software automatically calculates all outflows, a) from the Overflow, b) from the flow meters, c) from the spillway dam. Thus, in real time it calculates the total outflows

At the same time, the software, through the dam's construction data, calculates in real time the available water reserves within the dam



Data Transfer

The various components of the systems communicate wirelessly with a central station and from there through the fiber optic network with the control room, at the factory

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Case Study

HYDRO - METEOROLOGICAL SYSTEMS PPC- DAM LAKES MELITI & KOMOTINI



DIRECT MEASURED AND CALCULATED PARAMETERS

Water Quality

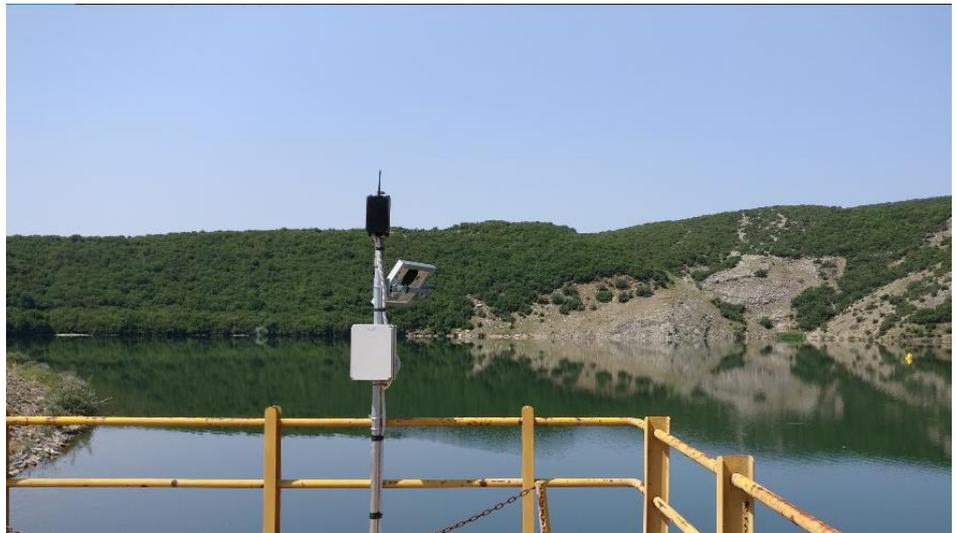
- *pH*
- *ORP*
- *Dissolved Oxygen*
- *Temperature*
- *Chlorophyll A'*
- *Salinity*
- *Total Dissolved Solids (TDS)*
- *Total Suspended Solids (TSS)*
- *Turbidity*
- *Conductivity*
- *Specific Conductivity*

Water Quantity

- *Dam lake Level referred to the sea*
- *Level referred to the Spillway dam.*
- *Surface area of the lake*
- *Available dam's water volume*
- *Evaporated Water Volume*
- *Discharge from the Spillway dam*
- *Water flow to the factory*
- *Ecological water flow*
- *Water flow to the irrigation*
- *Water volume from the rain (on the free surface of the water of the lake)*
- *Total Outflows*

Meteorological data

- *Rain*
- *Solar Radiation*
- *Wind speed*
- *Wind Direction*
- *Air Temperature*
- *Relative Humidity*
- *Barometric Pressure*
- *Evaporation*



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