LINKWATT

ENERGY COST
EFFICIENCY
PLATFORM

We all know that those storage systems that supply water to entire populations are filled with water extracted from wells via incredible powerful pumps.

However, such devices are also incredibly expensive to make work. The Energy required to activate and operate them is a variable most business must wrap their heads around in their efforts to optimise the entire water supply system.

The main objective of the Linkwatt System is to improve the efficiency of such process by gathering historical and real-time data about three important variables: the expected and real demand of water, the storage level of the water containers and reserves and the average and historical energy prices required to make the pumps work

Your Business in your Pocket

Here at Linkwatt, we are committed to and absolute digitalisation of your operations, part of it includes keeping you updated at any time.

Discover the incredible responsiveness of the Linkwatt Platform in your Smartphone or iPhone. Be Power Wise, now from your pocket.

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Save in Energy Expenses

Its efficiency algorithm, which predicts demand based on historical data as well as accounting for deviations in Energy Prices), will dramatically reduce your energy expenses

The Linkwatt system accesses both historical and real time data to construct sound and highly accurate demand predictions.

It is possible to obtain the water demand and deposit level history using data history (Nexus) from deposit sensors acquired from SCADAs.
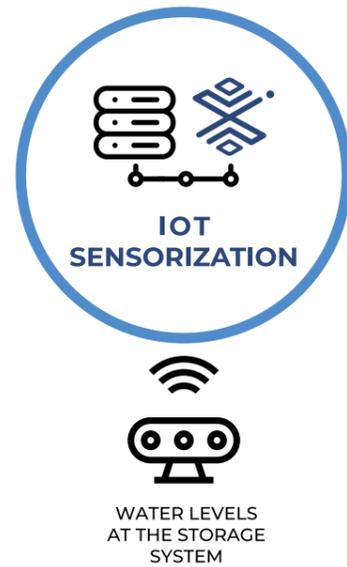
How it works

The hourly energy prices are known for current and next days.

Using the water demand history it is possible to predict future water demand using machine learning techniques (Tirio). Once the water demand prediction is available, jointly with the current deposit levels and energy prices, an optimization problem which tries to minimise the total energy cost is resolved using mathematical optimization tools like the linear programming Simplex method.

Finally, the optimal operation hours are programmed in the corresponding SCADAS, so that the water pumps operate according to the optimal solution achieved.
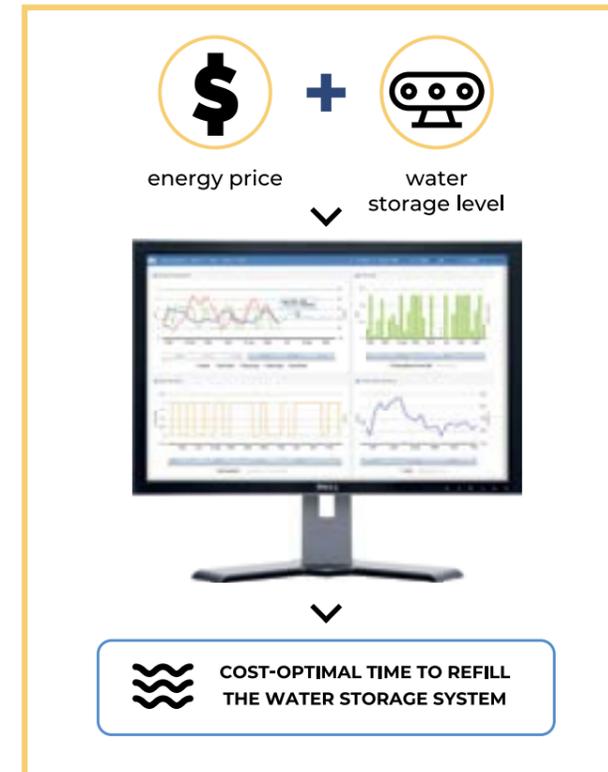
01.
DATA GATHERING

IOT SENSORIZATION

WATER LEVELS AT THE STORAGE SYSTEM

02.
DATA SEARCHER

ENERGY PRICE DATA SEARCHER

03.
ANALYSIS OF THE INFORMATION

energy price + water storage level

COST-OPTIMAL TIME TO REFILL THE WATER STORAGE SYSTEM

Advantages

Real time information

Always available Real Time information, gathered from the water containment systems about both the demand of water and their current levels as well as Energy Prices.

Adaptability

Carry Linkwatt in your smartphone or IPhone, and don't worry about needing an operating workstation or computer to access the platform.

Industry 4.0

Take full advantage of the incredible IoT Platform Nexus Integra, Linkwatt can retrieve data from IoT sensorization and use it to optimise its algorithmic predictions.

Efficiency Algorithm

The Linkwatt Efficiency Algorithm takes into account the real time and historical tendencies of Energy Prices to optimise the energy used (and its cost) when refilling wells.

Highlights

5-11% annual energy cost savings