SIWA Optim
Upgrade your water supply system with energy-saving optimization

The challenge

Pumps are by far the largest electricity consumers within the water supply network. Their economic operation will also present suppliers with major challenges in the future. The expansion of renewable energy is leading to an ever-increasing proportion of volatile electricity supply from wind and solar energy and thus to increasingly fluctuating electricity prices: cheaper electricity rates when ample supply is available, rising rates with low capacities.

To benefit continuously from the best rates and at the same time ensuring a high level of safety in the water supply requires highly intelligent control of pumps and valves. To accomplish this, diverse data must be taken into account and synchronized in real time: previous consumption patterns, available assets such as peak or base load pumps, storage capacities and current electricity rates. And all this, 24 hours a day, 365 days a year.

Under such circumstances, efficient manual operation is no longer possible.

The solution

SIWA Optim heralds a new era for energy-efficient and reliable water supply. Siemens enables you as a supplier to optimally configure and automate all relevant assets using a cloud-based application.

This digital assistant exploits the full range and depth of the supply and consumer-driven flexibility potential – today as well as tomorrow.

Your benefits at a glance

- Reduce energy consumption and costs of your water supply by up to 15%
- Minimize operational planning efforts
- Ensure sustainable reliability of your water supply even under challenging conditions
- Minimize response times during emergencies and unplanned events
- This engineering tool is also ideal for use by consultants and pump manufacturers
Pump and valve schedules can be optimized based on the latest plant data and demand forecasts as well as the variable daily energy prices. This enables a reduction of energy consumption and costs by up to 15% whilst safeguarding the supply at the same time. As the optimization is updated every 15 minutes, continuous information regarding current water levels is obtained. In this way, changes in water consumption, for example, due to pipe leakage or pump failures can be quickly adapted to.

When performing maintenance work, the tanks, pumps and capacity needed to ensure a reliable supply can be identified. This app offers efficient decision-making support in terms of timing, type and scope of maintenance works. The app can be used to quickly search for alternative operation scenarios in order to maintain a reliable supply. For example, supply zones can be connected easily with each other.

SIWA Optim allows simulation of different scenarios based on actual operating data. The app is therefore also pre-destined for the creation of case studies and can be utilized as an engineering tool by consultants and pump manufacturers.