



# Energy efficiency and supply reliability for municipal waterworks with High Efficiency systems from Franklin Electric

## Commitment to Sustainable Water Management

With rising operating costs and increasing demands for energy efficiency, municipalities are under growing pressure to modernize their infrastructure with advanced, energy-saving solutions.

Since 2022, Franklin Electric has been working closely with a major municipality in Northern Italy. The goal of this partnership: a transition towards an efficient and sustainable water infrastructure.

This municipality supplies clean drinking water to millions of citizens. At the start of the modernization effort, two priorities were clear: reducing energy consumption and ensuring a reliable water supply.

There is significant potential for greater energy efficiency - particularly in water extraction from wells and storage tanks. The key lies in selecting the right components and precisely sizing the system. Up to 90 percent of a pump system's total life cycle cost can be attributed to energy consumption. Smart planning here leads to long-term cost savings—while also protecting the environment and conserving resources.

Reliability and quality are also essential when it comes to securing the water supply for millions of people. At Franklin Electric, the key factors of success are quality, innovation, service, availability, and cost-efficiency. That's why the municipality chose Franklin Electric's High Efficiency Systems—laying the foundation for a successful collaboration.

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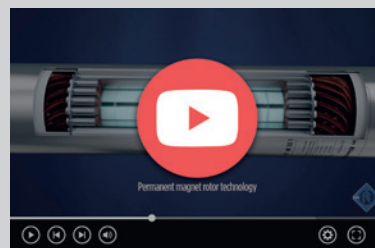


## Optimizing energy consumption with permanent magnet technology

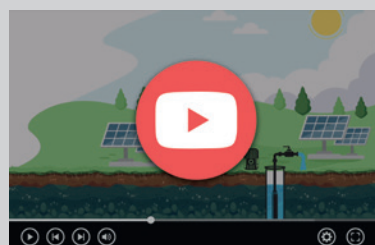
A key factor in reducing energy consumption and achieving high efficiency in pumping systems is the use of permanent magnet motor technology. Instead of a traditional squirrel-cage induction motor, Franklin Electric's High Efficiency System features a rotor design with integrated permanent magnets. This results in significantly higher efficiency and lower overall energy consumption compared to standard induction motors.

The permanent magnet motor eliminates electrical rotor losses, improves partial load behaviour, and generates less heat during operation. With the same pump load, the synchronous motor requires less current - delivering greater energy savings and enhanced system performance.

Visit our YouTube channel and find out why permanent magnet technology achieves such enormous efficiency levels:



In this video, we explain clearly and in detail the potential savings offered by the High Efficiency System:



## Franklin Electric's High Efficiency Systems

Since 2022, Franklin Electric has supplied numerous High Efficiency Systems (HES) to the municipality - delivering impressive, measurable results. The full energy-saving potential is unlocked only through the perfectly matched interaction of all components, combined with a Variable frequency drive:

- Submersible pump (VS / VSI)
- Permanent magnet motor (6" / 8")
- Output filter
- Frequency drive (VFD)

Franklin Electric's HES solutions are specifically designed to meet the needs of municipal water management. They deliver top-level efficiency with significantly reduced energy consumption. This lowers electricity costs and frees up municipal budgets for other critical priorities.

Built for reliability, the HES enables precise speed control, optimized water flow, and reduced wear on components. The result: Fewer service interruptions, lower maintenance requirements, and longer system life - supporting a more sustainable and efficient public water infrastructure.



## Sustainable Municipal Water Utilities

Franklin Electric's collaboration with municipalities around the world highlights the benefits of advanced motor and pump technologies in optimizing energy use, reducing costs, and improving service reliability.

By using permanent magnet motors, municipalities can achieve long-term sustainability while maintaining a high-performance water supply for their communities.

Franklin Electric is a pioneer in permanent magnet technology for submersible motors. Thousands of these systems have been installed globally - and have proven their real-world effectiveness for over a decade. They reach efficiency levels of up to 94% and consistently deliver double-digit energy savings.

The difference in investment costs between the HES and a regular pumping system is amortized in less than 2 years in most cases - making them a smart and sustainable investment for public water infrastructure.

Find out more in our product catalog:



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**EMPOWER EFFICIENCY - ELEVATE SAVINGS**

4" - 10" Permanent magnet motors

4" - 12" Submersible pumps

Variable frequency drive



**FRANKLIN ELECTRIC  
PUMP SELECTOR**



For more information on Franklin Electric pump systems, visit [franklinwater.eu](http://franklinwater.eu).