

ENGINEERING TOMORROW is realizing the potential of an energy-neutral water sector

According to the International Energy Agency's 2016 World Energy Outlook report, the water sector is currently responsible for **4% of global energy consumption**. This figure is expected to **almost double over the next 25 years**.

At a local level, the water cycle accounts for **30-50% of municipalities' energy bills**. Achieving an **energy-neutral** water industry yields huge benefits, both economically and environmentally.

Learn more at danfoss.com/energy-and-water



Remove the **water sector** from municipalities' electricity bill

Reduced **water bills** for residents



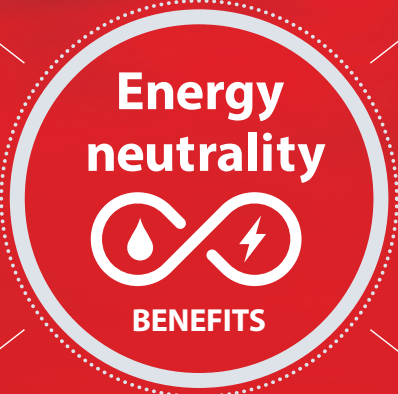
Save water by **reducing leakage** across the distribution network

Improved **air quality** as a result of reduced CO₂ emissions



Generate a strong **return on investment**

Increase the **capacity and lifetime** of treatment facilities

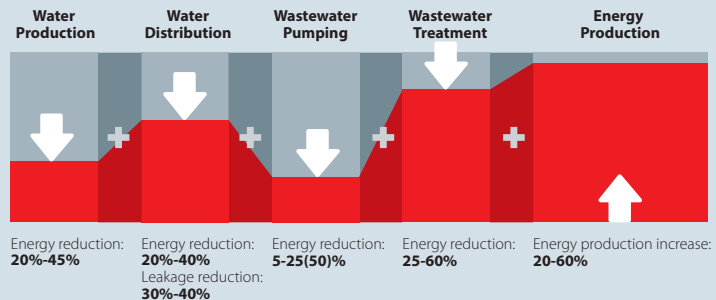


With a coordinated suite of policy measures, the World Energy Outlook predicts possible **energy savings of 270 TWh** and the generation of an additional **70 TWh of electricity by 2040** – equivalent to around **70 large** (800 MW) coal-fired power stations.

The technologies to decouple the water sector from energy use already exist



Aarhus is the second largest city in Denmark and **the first place in the world** where the local water company has succeeded in achieving energy neutrality across the whole water cycle for a catchment area of 200,000 people. This was possible through advanced process optimization and by using more than 290 variable speed drives as control handlers on almost all rotating equipment.



Energy Neutrality



40%
energy savings across the entire water cycle



6%
the level to which total water loss can be reduced



130%
energy surplus generated by Marselisborg WWTP