THE ENERGY AND CLIMATE NEUTRAL WASTEWATER TREATMENT PLANT

HOW TO BECOME AN ENERGY PRODUCER

Net-achieving 165% energy self-sufficiency

Over the past five years, the water utility Aarhus Vand has put great focus on energy savings and

At Aarhus Vand's Marselisborg WWTP, the utility has implemented energy-saving technologies such as an advanced SCADA control system, a new turbo compressor, sludge liquor treatment based on the anammox process as well as optimized the fine bubble aeration system.

This has resulted in a reduction in power consumption of approximately 1 GWh per year which equals about 25% in total saving[s].

During the same time period, the energy production has been improved through implementation of new energy efficient biogas engines (CHPs), resulting in an increase in electricity production of approximately 1 GWh per year.

Furthermore, a new heat exchanger has been installed with the aim of selling surplus heat to thedistrict heating grid. which represents approx. The surplus heat represents approx. 2 GWh per year.

From 2020 to 2021, Marselisborg WWTP had an average total energy production of 9.54 MWh per year and an energy consumption of 5.8 MWh per year, equivalent to a net energy production of 165%. Most of the installed technologies have a payback time of less than 5 years.

Aarhus Vand Marselisborg WWTP

Gas engine

357 kW Electricity 373 kW Heating

2015

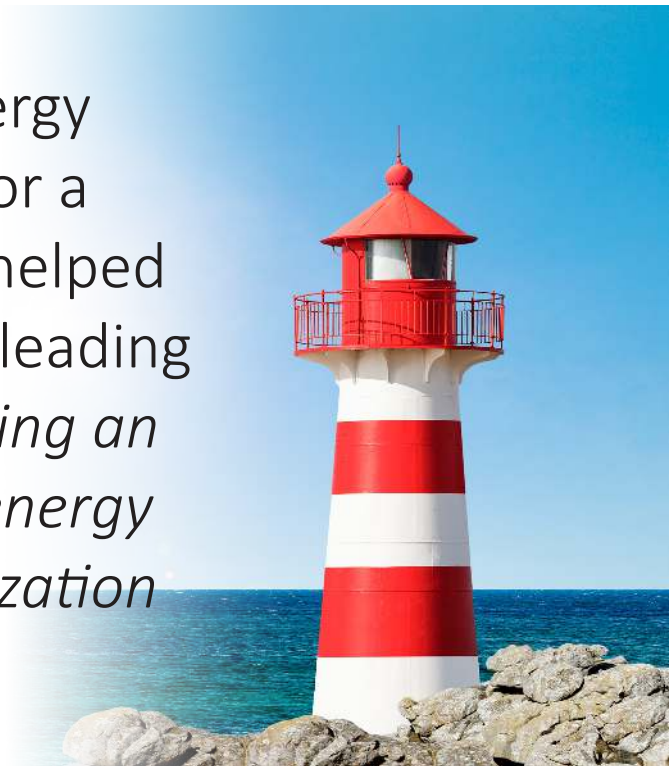
< 5 år

Source: Aarhus Vand

aarhusvand

NISSEN

Aarhus Vand and NISSEN energy have had solid cooperation for a number of years, which has helped to strengthen Aarhus Vand's leading position and ambition of "*being an international lighthouse for energy production and resource utilization of wastewater*".



NISSEN energy performs maintenance, repair & overhauls of gas engines, burners, gas treatment plant and flares at Aarhus Vand's different plant locations.