








GENERAL INFORMATION:

-  LOCATION: KALUNDBORG (DENMARK)
-  NET PRESSURE DROP: 4 BAR
-  FLOW: 43 LITERS/SECOND
-  POWER: 12KW
-  USE OF THE ENERGY: GRID TIED SELF-CONSUMPTION

BACKGROUND

The water treatment plant in Kalundborg (Denmark) receives water from a pressurized pipe with 4 bar of pressure which is reduced to 1 bar before getting into the plant. This extra pressure has traditionally been eliminated in a motorized butterfly valve producing a high level of vibration and noise on the installation room.

THE SOLUTION

Thanks to the installation of two PAT turbines (12kw power each one) in parallel with the existing pressure reducing valve, the vibration and noise has been fully eliminated producing 20kw of renewable energy 100% used for self-consumption in the treatment plant. Each turbine has been also equipped with a motorized valve in order to use 1 or 2 turbines depending on the flow demand of the plant. The installation produces a total of 175.200 kwh in a year, reducing significantly the energy bill of the treatment plant.