

Energy efficiency WwTW Nieuwegein



Background

Water Board De Stichtse Rijnlanden (HDSR) takes part in the national initiative called "Energiefabriek". The goal of this initiative is to alter operations to reach at least an energy neutrality for the WwTW.

WwTW Nieuwegein (the Netherlands) was appointed as the WwTW to be examined.

Approach

The options in the water- and sludge line, as well as the opportunities for alternative energy were evaluated for the energy carriers electricity and warmth.

Two brainstorm sessions with experts were organized to achieve a feasible list of options. These sessions led to a blueprint of the necessary measures, after which design and costs calculations were executed to evaluate the options.

Solutions

Appealing and feasible solutions, which may be implemented in a reasonable timeframe, have been elaborated.

The various measures for energy production require investments and influence VE-rates. The VE-rate development has been determined.

Result

The study showed that an energy surplus for electricity and an energy balance for warmth is possible by a set of measures in the waterline, combined with an extension of the sludge treatment, aiming at a better use of the energy value.

The proposed option in the sludge line is practically and economically feasible on the scale of WwTW Nieuwegein.

Company profile

Brightwork BV develops a series of activities in the field of municipal and industrial (waste) water treatment and/or sludge handling, based upon our long-term (inter)national technical and commercial experience:

- Consultancy (ranging from master planning, strategy, process and conceptual design, feasibility up to research and project execution)
- Participation, project development and project management
- Product development and innovation

Analysing complex issues in order to find bright, cost effective and structural solutions forms the basis of our activities.

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