

**Energy potential study for the municipal wastewater treatment plants in Baden-Württemberg**

Wastewater treatment plants are usually the biggest energy consumer in municipalities with an energy demand of approx. 20 % of the total municipal energy demand. Therefore it suggests itself to check this sector for possible savings. Then again it is possible to produce biogas by digesting sewage sludge, which can then be converted into electricity and heat by the use of a combined heat and power plant. From economic as well as ecological aspects it should be the aim to reduce the energy consumption and to increase the production of electricity.

However, it should also be considered that increasing requirements regarding the effluent quality of wastewater treatment plants, e. g. the removal of micropollutants or the recovery of resources from wastewater or sewage sludge, usually lead to a higher total energy demand of the wastewater treatment plant.

The aim of the project was to compile an energy potential study for the municipal wastewater treatment plants in Baden-Württemberg. The main task was to look at the energy management of wastewater treatment plants in its entirety, both the sector energy consumption and the sector energy production. On the one hand the usable energy potentials based on the present situation should be described, on the other hand an outlook on future requirements of the energy management of wastewater treatment plants should be given.

To do so the data from the 'DWA-Leistungsvergleich 2013' for Baden-Württemberg as well as 62 energy analyses were evaluated, which have been conducted on wastewater treatment plants in Baden-Württemberg. These energy analyses were kindly provided by the operators of the treatment plants.

The result was supposed to be a guideline, which is compliant with the eco-political aims of the federal state of Baden-Württemberg. With the help of theoretical basic information and practical advice this guideline is supposed to support municipal policy-maker, authorities, planners and operators of wastewater treatment plants to both identify the energetic optimization potential and implement it during the operation as well as during the planning phase. The recommendations were not referred to single wastewater treatment plants, but it was tried to ensure a transferability of the results to a multitude of wastewater treatment plants.

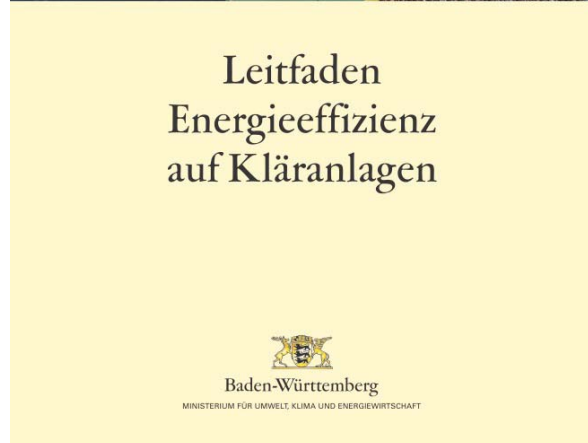


Figure: Cover page of the guideline „Energieeffizienz auf Kläranlagen“

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