

# ENERGY EFFICIENCY – BE FIT FOR THE FUTURE

## Implemented by the ACWUA Task Force – Energy Efficiency (EE-TF)

Supported by ACWUA WANT, a regional capacity development programme of GIZ in cooperation with ACWUA and its members in the MENA region

### Solutions to improve energy performance

- Enhance energy efficiency and energy use
- Reduce energy consumption
- Reduce energy bills of water/wastewater utilities, e.g. through flexible pumping hours
- Produce energy from renewable resources: wind, sun, biogas, hydropower etc.

### Why energy is important in the water sector?

- Energy is amongst the biggest cost factors (10–30%)
- Demand for water supply and wastewater treatment will increase – as well as energy prices
- In many countries, the water sector is amongst the highest energy consumers (about 5–20%)
- Global CO2 emissions, resulting from energy production, need to be reduced to control global warming.

### ACWUA WANT assists ACWUA through its EE-Task Force

- to develop instruments to optimize energy: **Guidelines for Energy Checks and Analysis**
- to promote and advocate their application in pilot utilities and across the region through a blend of dialogue, training and networking

Wells + Network (incl. pumping)



Water Treatment



Consumer



Wastewater Treatment

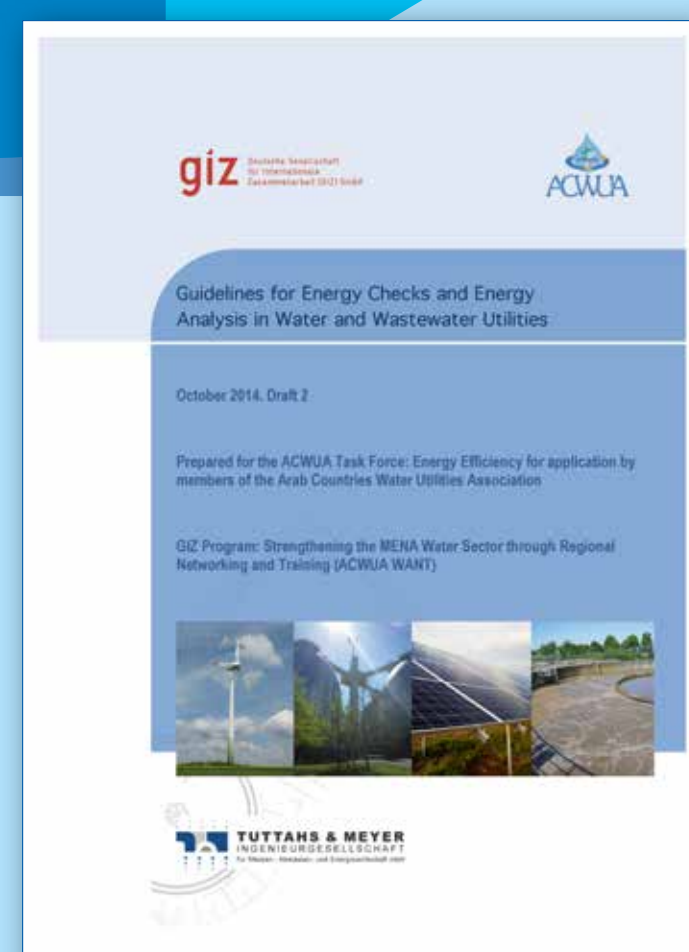
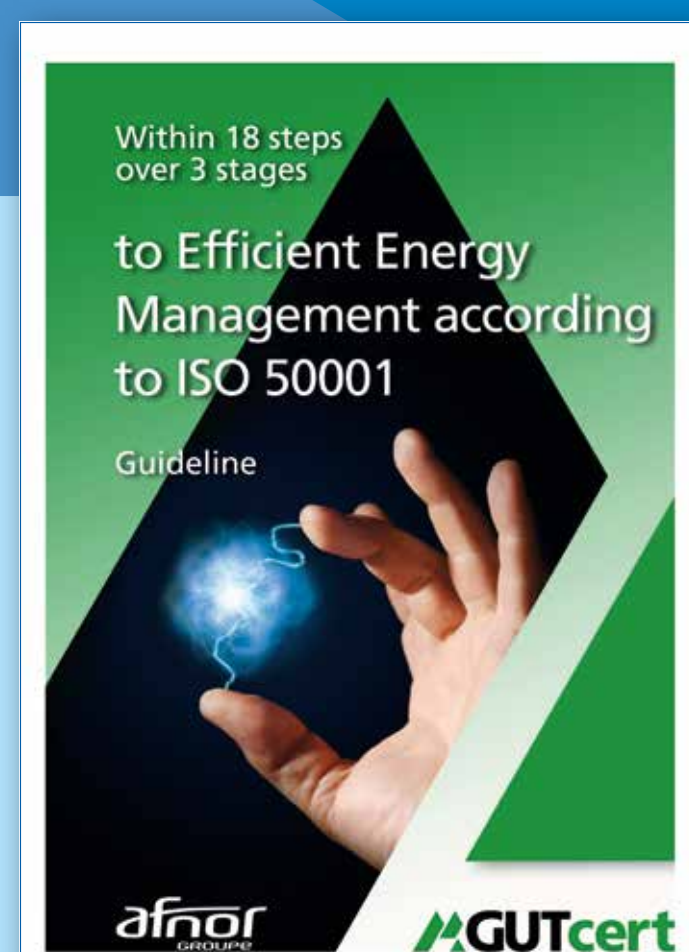


### Energy is consumed along the entire water use cycle



### Management instruments to optimize energy in a water/wastewater utility

- Energy Checks
- Energy Analysis (e.g. DWA-A216)
- Energy Management Systems (ISO 50001)
- Energy Audits (e.g. EN16247)



### The process of regional capacity development

- 1 Establishment of the ACWUA EE-TF
- 2 Dialogue on German experience, e.g. EnMS
- 3 Sharing experience at international fairs
- 4 Develop and test regional guidelines on energy checks and energy analysis (EC/EA)
- 5 Share good practices in MENA water utilities at 3rd Arab Water Week by ACWUA
- 6 Training on energy checks & energy analysis for a pool of regional ACWUA experts
- 7 Guidelines for EC/EA are approved by ACWUA and shared by ACWUA members