

# **SOLUTIONS FOR AGRICULTURE**

- + RELIABLE ENERGY
- + SELF-CONSUMPTION OPTIMIZATION
- + INTELLIGENT LOAD SHIFTING
- + BLACK START CAPABILITY (ISLAND MODE)
- **= MAXIMUM AUTARKY**

Biogas plant operators are currently facing major challenges.

The drastic increase in electricity prices for self-supply as well as the unreliable energy supply from the grid makes a profitable operation almost impossible owing to unstable power grids.

Independence from public grids is vital to be able to guarantee a reliable, round-theclock operation.

We offer you the appropriate concepts and advise you on the individual funding plans.

Together to 100 % autarky - Future-proof and independent



## YOUR ENERGY WITHIN REACH

Farmers need solutions for secureing and supplying their electricity and heat demands as well as optimizing their own consumption.

Take the initiative now and gain 3-fold:

#### RELIABLE ENERGY, PROFITABILITY, SUSTAINABILITY,



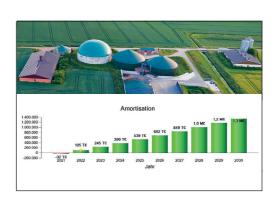




We accompany our customers all the way in their projects from the project dimensioning to the feasibility study. we support you in the planning and in the developing of your custom-made concept.

If desired, we can offer assistance with the installation and the full maintenance of the desired project.

May we prepare your energy supply to be fit for the future?



### **DEMAND-ORIENTED SUPPLY**

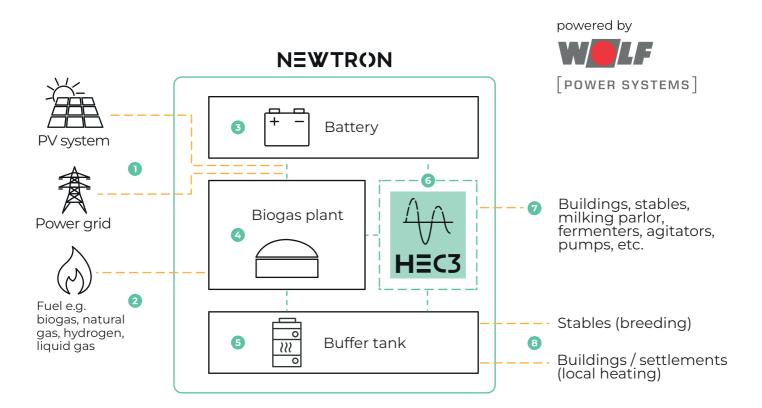
Thanks to digital networking and intelligently controlled energy distribution, the required flexibilities and demands are synchronized.

NEWTRON controls your energy supply comprehensively and complementarily. This ensures a stable heat and power supply for your energy consumers, such as buildings, stables, milking parlor, fermenter, agitators, pumps, etc.

All the energy demands are centrally monitored and supplied by a comprehensive energy automation system. NEWTRON, as an energy source, combines self-generation units such as photovoltaic or biogas plants with suitable grid-supporting components and an intelligent energy storage system.

In practice, this means that a cost-optimized and a carbon-neutral energy supply can be achieved. Accordingly, the customer's site can be sustainably expanded for the future.

We accompany you on your project, every step along the way, beginning form the design of youindivudual NEWTRON solution which is based on real data simulation, till the utilization phase.



HEC3 is the managing core and possess the standardized interface to different energy components, which are configured as requested. With the HEC3 energy management system, energy flows are identified and flexibilities are actively traded on the electricity market.

- Already existing or planned regenerative energy resources such as photovoltaic systems can be easily integrated into the intelligent HEC3 control system.
- NEWTRON can be operated with all energy sources, including hydrogen.
- 3 NEWTRON battery storage systems consist of state-of-the-art and safe lithium iron phosphate battery modules.
- Flexible energy sources can be existing CHPs oder other combined heat power generation plants.

- The most common and most frequently used heat storage systems are aboveground buffer storage tanks. Surplus heat is integrated either into buffer storage tanks or into the local heat network.
- 6 HEC3 is the intelligent control system that coordinates the flow of energy from producers and to consumers. It consists of: Plant control, energy management and the centralized system.
- Flexible energy consumers are agricultural equipment such as milking parlors, fermenters, agitators, stables and pumps.
- 8 Neighboring stables, housing estates / local heating networks can be either supplied with heat or cold airflows.



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[POWER SYSTEMS]

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More info