



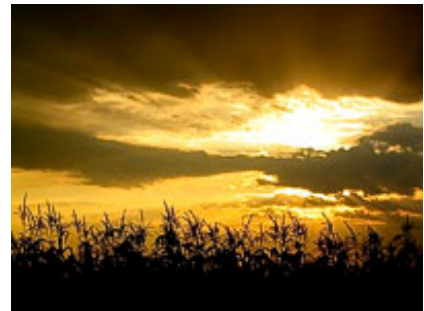
NAWARO® – Our Environmental Concept

We use biomass to make three products: electricity, heat, and depot fertilizer. All that remains when production is completed is pure water. The production of electricity and heat in NAWARO® BioEnergy Parks is CO₂-neutral; this form of energy generation from renewable resources makes a significant contribution to reducing the threat of global warming.

How environmentally friendly is the NAWARO® concept?

The NAWARO process is a closed cycle. We have developed a model that takes environmental aspects into account in all steps of the value-added chain.

All byproducts remaining after energy production are processed to yield a high-quality depot fertilizer. There is no more sustainable way to produce energy.



What are the sources of raw materials for energy generation?

The farmers who are our contract partners cultivate energy crops that facilitate high-yield production of biogas. NAWARO® BioEnergie AG supports research aimed at increasing yields of biomass and biogas to further enhance the efficiency of energy generation. In doing so, we also strive to promote cultivation methods that foster biodiversity. Our goal is to assume – together with our suppliers – a pioneering role in developing and utilizing a broad variety of energy plants.

In cultivating, harvesting, and transporting these crops, NAWARO® works together with local partners whenever possible. This ensures that the costs and environmental impacts are kept to a minimum.

Is the generation of energy in the BioEnergy Parks detrimental to the environment?

Our biogas facilities are operated and monitored around the clock by the company's professionally trained employees. This ensures the highest possible degree of safety, even if a technical malfunction in the facility should occur. Environmental damage due to facility malfunction can be precluded, as far as humanly possible. Since our parks operate with the most modern technology available, unpleasant odors are not emitted into the surroundings.

The NAWARO® production cycle allows for the efficient utilization of both the heat produced during electric power generation and the byproducts of fermentation. We use the waste heat from our combined heat and power station all year around in the fertilizer manufacturing facilities that are part of the BioEnergy Parks. This means that the energy utilization rate of the total process exceeds 80 percent. Conventional thermal power stations achieve rates of about 45 percent.

The environmental performance evaluation for our facilities is further improved, thanks to the fact that we use byproducts to produce fertilizer. These residues left over after fermentation are first dehydrated. The water that results is processed and later returned to the production process, which again saves resources. The nutrients contained in the fermentation residues are processed to yield a high-quality depot fertilizer. By adding specific mineral nutrients, a variety of different types of fertilizer can be produced.



Transportation

In order to produce energy reliably, our BioEnergy Parks need a constant supply of raw materials.



During full operation, each Park needs approximately 300 000 metric tons of corn silage, 60 000 metric tons of manure, and 20 000 metric tons of grain per year. That means sixty deliveries per day or four to five truckloads per hour, excluding empty vehicles.

Together with local suppliers from the farming sector, NAWARO® develops a logistics concept for each site that is carefully designed to reduce delivery traffic and the disturbances that accompany it to a minimum.

In realizing this logistics concept, we rely on local transportation businesses and thus contribute, here again, to promoting regional economies.