

## Dannenberg, Lower-Saxony

### Biogas Plant & Bio-methane Filling Station

An innovative concept of combined biogas plant and bio-methane filling station is located in Dannenberg. The operator and investor Horst Seide who is President of the German Biogas Association has invested into a future market. The station sells upgraded biogas from a spice producer's waste, a fruit juice producer's pomace and from energy crops since 2011.



Biogas plant and bio-methane filling station, Dannenberg

As a result car drivers benefit from markedly reduced fuel prices since. The biofuel costs only 69 Cents compared to a liter of petrol.

Furthermore, CO<sub>2</sub> emissions of biogas are 90 % lower than those of petrol. Surplus bio-methane is fed into the natural gas grid. A combined heat and power station produces additional heat and electricity which covers the internal energy requirements of the plant. Remaining electricity is fed into the public electricity grid. Extra heat and thermal discharge of the upgrading plant is transferred to a food producer through a district heating system.

### Technology at a glance

- Inst. power CHP: 690 kW<sub>el.</sub>, 700 kW<sub>therm.</sub>
- Biogas production: 750 Nm<sup>3</sup> / h
- Bio-methane production: 200 Nm<sup>3</sup> / h
- Digester: 1 x 2 000 m<sup>3</sup>, wet fermentation
- Process temperature: 39 °C
- Biogas upgrading method: AminSelect
- Substrate input / a: 20 000 t maize, 15 000 t parsley stalks and fruit pulp

### Information on financing

- Year of realization biogas plant: 2007
- Year of realization upgrading plant: 2011
- Investment cost: 5 Mio. Euro
- Sales price bio-methane: 1,099 Euro / kg
- Feed-in tariff electricity: ca. 18 cent / kWh
- Sales price digestate: 1,5 Euro / t

### More Information

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