

References Biogas Plants

| Project | Location | Substrat | Gas Utilization | Technical Data | UTECH Services | Customer | Year |
|-------------------------------------|----------------------------|---|--|--|--|------------------------------|-------------|
| Biogas Plant Pohl'sche Heide | Kreis Minden-Lübbecke, NRW | organic waste fraction | biogas treatment and feed into the public natural gas pipeline; utilization in decentral cogeneration plants | solid waste digestion, biogas treatment to NG-quality, flare, gas storage , capacity 500 m ³ biogas per hour, combination with compost plant | concept, draft- and permission planning, bids for tender, supervision, commissioning of the gas treatment plant, feed into the gas pipeline, cogeneration plants | AML-Immo | 2008 |
| Biogas Plant Liebenburg | LK Goslar Niedersachsen | cow manure maize silage gras silage | cogeneration 1x500 kWel Gas Otto waste heat utilization in a hospital | digester 2x1500 m ³ , central agitator, manure storage tank with gas storage, 2.500 m ³ ; manure storage tank 2.500 m ³ ; flare, mechanical drying of biogas, silage area 5.000 m ² ; gas- and district heating pipe 800 m | concept, permission planning, detail planning, supervision, commissioning | Bioenergie Lewe GmbH & Co.KG | 2008 |
| Biogas Plant Negrete | Region VIII Chile | cow manure Rindergülle, food scraps silage | cogeneration 1 x 35 kWel Gas-Otto waste heat utilization in boarding school | digester 200 m ³ manure storage lagoon, buildings, district heating, ppp-sponsored project of BMZ first biogas plant in chile with gas utilization | concept, permission planning, detail planning, supervision, commissioning, training | UTECH | 2008 |
| Biogas Plant Schröder | LK OHZ Niedersachsen | cow manure maize silage gras silage | cogeneration 1 x 365 kWel Gas-Otto | digester 2500 m ³ ; second digester 2.900 m ³ , manure storage tank 1.500 m ³ , silage area 5.000 m ² | concept, permission planning, detail planning, supervision, commissioning | Farmer | 2008 |
| Biogas Plant Banja Luka | Banja Luka Bosnien | cow manure straw | cogeneration 1 x 35 kW Gas-Otto | financed by Deutschen Bundesstiftung Umwelt (dbu) | concept, permission planning, detail planning, supervision, commissioning | Caritas Banja Luka | 2008 |

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| Biogas Plant Lüchow | LK Lüneburg Niedersachsen | cow manure maize silage cereals others | cogeneration | digester, second digester with gas storage, building for substrat handling, treatment and separation, flare | concept, accompanying laboratory tests to solve digestion problems | BioWend Lüchow | 2008 |
| Biogas Plant Wahrenholz | LK Gifhorn Niedersachsen | cow manure maize silage | cogeneration 1 x 500 kWel Gas-Otto | digester 2.000 m ³ , central agitator second digester 1.500 m ³ with gas storage, manure storage tank, gas flare, buildings, silage area | concept, draft- and permission planning | e3 Bioenergie GmbH&Co KG | 2007 |
| Biogas Plant Voitze | LK Gifhorn Niedersachsen | cow manure maize silage | cogeneration 1 x 500 kWel Gas-Otto | digester 2.000 m ³ , central agitator second digester 1.500 m ³ with gas storage, manure storage tank, gas flare, buildings, silage area | concept, draft- and permission planning | e3 Bioenergie GmbH&Co KG | 2007 |
| Biogas Plant Hude | LK Diepholz Niedersachsen | cow manure poultry manure maize silage gras silage | cogeneration 1 x 265 kW diesel engine waste heat utilization in farm dairy | digester 1.500 m ³ with gas storage; second digester 2.500 m ³ with gas storage, building | concept, permission planning, detail planning, supervision, commissioning | Farmer | 2007 |
| Biogas Plant Rauschenberg | LK Marburg Hessen | cow manure maize silage | cogeneration 1 x 500 kWel Gas-Otto waste heat utilization on the farm | digester 2.000 m ³ , central agitator second digester 1.500 m ³ with gas storage, manure storage tank, gas flare, buildings, silage area | concept, permission planning, detail planning, supervision, commissioning | TRI-S GmbH & Co KG | 2007 |

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| Biogas Plant Neetze | Neetze Niedersachsen | cow manure maize silage | cogeneration 1 x 500 kWel Gas-Otto | digester 2.000 m ³ , central agitator second digester 1.500 m ³ with gas storage, manure storage tank, gas flare, buildings, silage area | concept, permission planning, detail planning, supervision, commissioning | e3 Bioenergie GmbH&Co KG | 2007 |
| Biogas Plant Staffel | LK Marburg Hessen | cow manure maize silage gras silage | cogeneration 1x265 kWel diesel engine waste heat utilization on the farm | first and second digester, buildings | draft planning, feasibility study, technical consultancy and electrical connection to the grid | Biogas Staffel GbR | 2007 |
| Biogas Plant Neu Wendischthun | Amt Neuhaus Niedersachsen | organic waste | cogeneration 1 x 330 kWel Gas-Otto waste heat utilization for compost production and aquaculture | digester 2 x 100 m ³ , central agitator hygienisation, manure storage, buildings | concept, permission planning, detail planning, supervision, commissioning, operation, training | Hanseatische Humus GmbH | 2006 |
| Biogas Plant Minden | LK Minden NRW | vinasse from chemical production plant | cogeneration 350 kWel | fixed bed digester 1.200 m ³ heat exchanger, gas storage | concept, continuous laboratory tests, draft- and detail planning | BASF | 2006 |
| Biogas Plant Düversbruch | LK Diepholz Niedersachsen | cow manure pig manure maize silage gras silage | cogeneration 2x250 kWel diesel engine waste heat utilization for potatoe treatment | first and second digester 2500 m ³ with gas storager, manure storage tank 3.700 m ³ ; silage area 3.500 m ² | feasibility study, concept, draft- and permission planning | Fangmeier Biogas GmbH & Co KG | 2005 |
| Biogas Plant Gülze | Gülze Meckl.-Vorp. | cow manure, waste food | cogeneration 500 kWel waste heat utilization on the farm | digester 2 x 1.850 m ³ , 2x 4.600 m ³ , gas storage , gas flare, buildings, electricity supply to the grid | concept, draft- and permission planning, consultations | Biogas Teldau GmbH & Co KG | 2005 |

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| Biogas Plant Wüsthof | Niedersachsen | organic waste | cogeneration 1 x 650 kWel Gas-Otto cogeneration 2 x 1.020 kWel Gas-Otto | substrate handling and treatment, hygienisation, digesters 1x700 , 1x2.000, 2x3000, 2x5000 m ³ , manure storage tank 12.000 m ³ , buildings, gas storage, gas flare | concept for diverse extensions, draft- and permission planning, extension plannings, amendment applications, consultations | Wüsthof Biogas GmbH | 2005 |
| Biogas Plant Grüne Energie | Unterstedt LK Rotenburg Niedersachsen | pig manure maize silage | cogeneration 2 x 350 kW Gas-Otto waste heat utilization for heating and drying process | first and second digester 2.500 m ³ with gas storage, solid substrate input, pre-tank, technical buildings | Concept, permission planning, detail planning, supervision, commissioning | Grüne Energie GmbH & Co KG | 2004 |
| Biogas Plant Elm | Evessen LK Wolfenbüttel Niedersachsen | maize silage | cogeneration 1 x 500 kWel Gas-Otto waste heat utilization 100% Neuerkeroder Anstalten | digester 2150 m ³ , central agitator, second digester 1.075 m ³ with gas storage, manure storage tank 5.000 m ³ ; gas flare, buildings | Concept, permission planning, detail planning, supervision, commissioning | Bioenergie Elm Betriebs Gmbh | 2004 |
| Biogas Plant Medan | Sumatra Indonesien | wastewater oil mills | none | fixed bed digester, R&D with BMBF und IOPRI | concept, permission planning, detail planning, supervision, commissioning, operation | TÜV Rheinland | 2001 |
| Biogas Plant Ganderkesee | LK Oldenburg Niedersachsen | organic waste fraction | gas boiler 100 kW, process energy, heating system | fixed bed digester 80 m ³ , hydrolysis tank 4 x 10 m ³ , storage tank, gas washer, gas flare | concept, draft planning, commissioning, scientific works | Landkreis Oldenburg | 1995 -1997 |
| Biogas Plant Wüsthof/Soltau | Stadt Soltau Niedersachsen | organic waste, cow manure | cogeneration 200 kWel Gas-Otto | substrat handling and treatment, hygienisation, digester 700 m ³ , manure storage lagoon, buildings, gas storage, gas flare | concept, responsible planning, installation and commissioning | Wüsthof Biogas GmbH | 1997 |

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| Biogas Plant Jakarta | Jakarta Indonesia | slaughterhouse wastewater | Cogeneration 40 kWel Gas-Otto | mechanical pre-treatment, fixed bed digester, gas storage, gas utilization, combination with compost plant, financed by BMBF, | concept, responsible planning, installation and commissioning, training | TÜV Rheinland | 1997 |
| Biogas Plant Gut Tannholz | LK Celle Niedersachsen | organic waste, manure | Cogeneration 72 kWel Gas-Otto | digester 500 m ³ , manure storage 2000 m ³ gas storage, gas flare | concept, permission planning, detail planning according to BlmSchG | Ventimola Gut Tannholz GmbH & Co KG | 1996 |
| Biogas Plant VFZ Hamburg | Hamburg | flotat, rumen press water; screenings | gas boiler 100 kW, process energy, heating system | digester 300 m ³ , gas storage, gas flare, Buildings, mixing tanks | concept, permission planning, detail planning, supervision, commissioning, operation | Stadt Hamburg | 1986 |
| Biogas Plant VFZ Hamburg | Hamburg | rumn content wastewater | none | pilot plant with 2-stage-digestion with hydrolysis; digester and seperation of sludge; R&D together with mit FH Bremerhaven | responsible for the tests, analytics, reports, plant adaptations and technical improvements | FH Bremerhaven | 1986 |
| Biogas Plant Quickborn | LK Lüneburg Niedersachsen | pig and cow manure | gas pipeline to decentral gas boilers | decentral biogas plants (lying digester and totally mixed systems, various producers), gas pipeline with central gas storage | inventory analysis and restructuring plan, list of deficiencies, preparation of a detailed catalog of measures for the technical renovation | BMBF Bonn | 1985 |
| Biogas Plant Bremen-Strom | Bremen | cow manure | gas boiler for house heating | digester underneath the stable, 80 m ³ , second digester 90m ³ , integrated gas storage, sponsored from Bundesministerium für Landwirtschaft (BML) and Bremer Wirtschaftssenator | concept, permission planning, detail planning, supervision, commissioning | Farmer | 1983 |

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| Biogas Plant Wohlenhausen | LK Hildesheim Niedersachsen | pigs manure | gas boiler | psychrophile biogas plant, digester 300 m ³ , gastight top with plastic film, gas storage sponsored by Niedersachsen | concept, permission planning, detail planning, supervision, commissioning | Farmer | 1981 |