Reference list

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biomethane plant POLSKA	Poland	2023/2025	sugar beet pulp	new construction: 4 x 10.000 m³ steel tanks	Biogas updgrading system: 8.500 Nm³/h biogas Biogas output: 45 MW	Industrial biogas plant 4 digester, 2 secondary digester biogas upgrading unit, digestate treatment system, external gas holder	Basic evaluation, engineering & design; preliminary; draft; layout planning; participation in the awarding of contracts, support of site management, support of commissioning
Biomethane plant NETHERLANDS	Netherlands	2026-2028	225.000 t/a chicken litter	new construction: 10 x 10.000 m³ steel tanks	Biogas updgrading system: 6.000 Nm³/h biogas Biogas output: 35,2 MW	Industrial biogas plant 10 digester, 2 digestate buffer tanks, 2 biogas buffer tanks, 2 mixing/ sedimentation tanks 1 maintenance digester tank biogas upgrading unit including biomethane injection station, CO2 liquification unit, digestate treatment system consisting of multiple steps: separation, MVR, steam distillation, drying, combustion	Basic evaluation, engineering & design; preliminary; draft; layout planning; (Process Flow Diagram and Piping and Instrumentation Diagram)
Biomethane plant Im BRAHM	Germany	2024	Food waste, horse manure	Stock 2 x 1,200 m³ flat concrete digesters	Biogas upgrading system: 200 Nm³/h	2 digesters, 2 secondary digesters, 4 CHPs, digestate separator, extension: biogas upgrading plant (membrane) with heat recovery	Design planning, approval and implementation planning, tendering, participation in the awarding of contracts, support of site management, support of commissioning

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biomethane plant MICHIGAN 3	USA	2024-2025	Dairy manure	new construction: 1 x 7100 m³ steel tank	Biogas upgrading system: 550 Nm³/h biogas; Biogasoutput: 2,9 MW	Industrial biogas plant 1 digester, 1 secondary digester, 1 biomethane compressor station with heat recovery, 1 gas treatment plant and gas feed-in. Separation of the fermentation residue using screw separators	Basic evaluation, preliminary, draft, approval and implementation planning, tendering, involvement in awarding contracts, site management, commissioning, training
Biomethane plant MICHIGAN 2	USA	2024-2025	Dairy manure	new construction 2 x 9.200 m³ steel tanks	Biogas upgrading system: 1.400 Nm³/h biogas; Biogasoutput: 7,2 MW	Industrial biogas plant 2 digesters, 1 secondary digester, 1 biomethane compressor station with heat recovery, 1 gas treatment plant and gas feed-in. Separation of the fermentation residue using screw separators	Basic evaluation, preliminary, draft, approval and implementation planning, tendering, involvement in awarding contracts, site management, commissioning, training
Biomethane plant MICHIGAN 1	USA	2024-2025	Dairy manure	new construction: 1 x 9.300 m³ steel tank	Biogas upgrading system : 700 Nm³/h biogas Biogasoutput: 3,7 MW	Industrial biogas plant 1 digester, 1 secondary fermentation tank, 1 raw gas compressor station, 1 gas treatment plant (DWW) with heat recovery and gas feed-in. Separation of the fermentation residue using a screw separator	Basic evaluation, preliminary, design and implementation planning, tendering, involvement in awarding contracts, site management, commissioning, training

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biomethane plant NEW YORK STATE 3	USA	2024-2025	Dairy manure	new construction: 1 x 6.700 m³ steel tank	Biogas upgrading system : 500 Nm³/h biogas Biogasoutput: 2,7 MW	Industrial biogas plant 1 digester, 1 secondary fermentation tank, 1 raw gas compressor station, 1 gas treatment plant (DWW) with heat recovery and gas feed-in. Separation of the fermentation residue using a screw separator	Basic evaluation, preliminary, draft, approval and implementation planning, tendering, involvement in awarding contracts, site management, commissioning, training
Biomethane plant NEW YORK STATE 4	USA	2024- 2025	Dairy manure	new construction: 6.700 m³ steel tank	Biogas upgrading system: 416 Nm³/h Biogas Biogasoutput: 2,6 MW	Industrial biogas plant with 1 digester, 1 secondary digester, 1 biomethane compressor station with heat recovery, 1 gas treatment plant and gas feed-in. Separation of the fermentation residue using screw separators	Basic evaluation, preliminary, draft, approval and implementation planning, tendering, involvement in awarding contracts, site management, commissioning, training
Biomethane plant VELEN	Germany	2023- 2024	pig-, cattle-, horse-, chicken- and turkey manure and dry chicken manure	new construction: 2 x 9.500m³ steel tanks	Biogas upgrading system 1860 Nm³/h bBiogas, 945 Nm³/h biomethane, biomethane is planned for up to 2.000 Nm³/h	2 secondary digesters, 2 external gas storage tanks, 2 fermentation residue storage tanks, external desulphurisation, separation of fermentation residue	Implementation planning, preparation and participation in the awarding of contracts, construction supervision (site management), commissioning, as well as: Risk assessment, explosion protection document, operator training

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biomethane plant HEILIGENGRABE	Germany	2023- 2024	corn silage, chicken manure, dry chicken manure, separated fermentation residue, cattle manure, process water	2 steel tanks	Biogas upgrading system: 905 Nm³/h biogas, feed into the gas grid	2 connected fermentation lines: change in substrate quantities and composition, new solids input; construction of a separation unit & biogas upgrading plant	Basic evaluation; preliminary planning; design planning; approval planning, implementation planning
Biomethane plant BIOERDGAS ISENHAGEN	Germany	2023- 2024	energy plants and chicken- and cattle manure	Existing digester	Biogas upgrading system: 1.400 Nm³/h biogas	Conversion of 2 existing biogas plants that are fed with energy crops, chicken and cattle manure	Basic evaluation, approval planning, implementation planning, CO2 liquefaction, dry ice production, heat recovery
Biomethan plant NEW YORK STATE 1	USA	2023 - 2024	Dairy manure	Existing digester	Biogas upgrading system 450 m³/h	Extention of existing agricultural biogas plant, virtual gas pipeline (by truck), digestate heat recovery	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operator training
Biomethan plant NEW YORK STATE 2	USA	2023 - 2024	Dairy manure	Existing digester	Biogas upgrading system 600 m³/h	Extention of existing agricultural biogas plant, digestate heat recovery	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operator training

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biomethan plant MEßSTETTEN	Germany	2022-2024	Municipal organic waste with green cuttings		Biogas upgrading system 500 m³/h	Municipal organic waste digestion plant (BAV) including biogas upgrading, CO2 liquefaction. Storage tank for liquid digestate, biofilter, digestate storage with gas storage roof, compost hall, regenerative thermal oxidation.	Basic evaluation, preliminary, draft, approval, and implementation planning
Biogas Plant XANTHI	Greece	2017/18	Corn silage, cattle manure	Concrete tank 2 x 2,400 m³	Gas engine 500 kWel	Agricultural biogas plant: 2 flat digester and secondary digester with gas holder roof, reception pit and solid input device, mesophilic operation, separation of digestate	Draft- and execution planning, tendering, site management/project controlling, start-up, training for operators
Biogas Plant DERBY	Great Britain	2017/18	Kitchen waste solid and liquid, viscera (Cat. 2 waste), paper & cards, straw	Concrete tank 2 x 5,300 m³	Biogas upgrading system	Industrial biogas plant for the digestion of hydrolysed waste. Thermal pressure hydrolysis process, buffer tank, cooling tank, mesophilic operation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators
Biogas Plant RIO CUARTO II	Argentina	2017/18	Corn silage, thin stillage/Vinasse	Glass coated steel tank 8,000 m³	Gas engine 2 x 1,200 kWel and boiler for heat production	Biogas plant digesting energy crops and organic waste (expansion): Reception tank for aggressive media (pH, temperature), digester, secondary digester with gas holder roof, solid input device, external desulphurization, heat usage in bioethanol plant	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant RIO CUARTO I (Expansion)	Argentina	2017	Corn silage, cattle manure, thin stillage	Glass coated steel tank 4,600 m³ + 5.500 m³ (extension)	Gas engine 1,200 kWel + 1.200 kWel (extension)	Biogas plant digesting energy crops and organic waste: 2 digester, 1 secondary digester with gas holder, mesohilic operation, heat utilisation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators
Biogas Plant FUKUOKA	Japan	2016/17	Kitchen waste, industrial waste	Glass coated steel tank 2 x 5,000 m³	Gas engine 2 x 1,056 kWel	Biogas plant digesting organic waste: 2 digester, 1 secondary digester with gas holder roof, mesophilic operation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators
Biogas Plant JIAOZUO	China	2016/17	Kitchen waste	Steel tank, welded 2 x 1,500 m³	Biogas upgrading system	Biogas plant digesting organic waste: 2 digester, 1 storage tank (by client), 1 hydrolysis tank (by client), oil separation with heat recovery system	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators
Biogas Plant WUHU	China	2016/17	Kitchen waste	Steel tank, welded 2 x 3,400 m³	Biogas upgrading system	Biogas plant digesting organic waste: 2 digester, 1 storage tank (by client), 2 hydrolysis tanks (by client), oil separation with heat recovery system	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators
Biogas Plant MCDONNELL (Expansion)	Ireland	2014/15	Kitchen waste, animal by-products (ABP), cattle slurry, poultry manure, corn silage	Concrete tank 3,200 m³	Gas engine 250 kWel (existing on site)	Expansion of a biogas plant digesting food waste by 1 digester, gas desulphurisation, pump room and equipment	Basic evaluation, pre-, draft and execution planning, additional consulting services

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant SZEPIETOWO	Poland	2014/15	Rye silage, corn silage, silage grass, sugar beet pulp silage, waste pulp potatoes, fruit pomace	Glass coated steel tank 5,000 m³	Gas engine 1.2 MWel	Biogas plant digesting organic waste: 1 digester, 1 secondary digester with gas holder roof, 1 storage tank, external heating, thermophilic operation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators
Biogas Plant WARLE (Expansion)	Germany	2014	Pig manure,corn silage, turkey dung	Concrete tank 2,500 m³	Gas engine 1 x 205 kWel 1 x 400 kWel (existing on site)	Improvement of an existing agricultural biogas plant and expansion by 1 storage tank	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, local construction supervision, start-up, training for operators
Biogas Plant IM BRAHM II (Expansion)	Germany	2014	Kitchen waste, pig manure	Concrete tank 2 x 1,200 m³	Gas engine 4 x 190 kWel	Expansion of a biogas plant by 1 storage tank and 1 co-generator	Pre-planning, approval and execution planning, consultancy services, supervision of construction, training for operators
Biogas Plant GUT ALTENHOF (Expansion)	Germany	2014	Corn silage, wheat silage, grass silage	Concrete tank 1,500 m³	Gas engine 365 kWel	Expansion of an existing agricultural biogas plant by co-generator, long distance heat pipes, new heat distribution system	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators
Biogas Plant DAISEN / PHAROS FARM	Japan	2013/14 expansion in 2017	Pig manure, fats, sewage sludge, industrial kitchen waste	Glass coated steel tank 5,000 m³	Gas engine 2 x 370 kWel + 370 kWel (expansion)	Biogas plant digesting kitchen waste: 1 digester , 1 secondary digester with gas holder roof, expansion of an existing biogas plant, mesophilic operation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant QINHUANGDAO	China	2013/14	Kitchen waste	Black steel, welded 2 x 3,400 m³	Biogas upgrading system, biomethane used for vehicle fuel	Biogas plant digesting kitchen waste: pre-treatment, hydrocyclone, 1 hydrolysis tank, 2 digester, 1 storage tank, digestate treatment, mesophilic process, external heating and cooling	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators
Biogas Plant SÖDER (Expansion)	Germany	2013/14	Corn silage, pig manure	Concrete tank 2 x 1,800 m³	Gas engine 716 kWel	Expansion of an agricultural biogas plant by 2 digestate storage tanks	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators
Biogas Plant DEQINGYAN	China	2012/13	Pretreated chicken manure, biowaste, corn straw, recirculating digestate	Stainless steel 2 x 2,600 m³	Biogas upgrading system, biomethane used in households	Biogas plant digesting organic waste: 2 digester, 2 secondary digester, external gas storage, biogas upgrading and utilisation in households	Basic evaluation, pre-planning, draft planning, execution planning, tendering
Biogas Plant RIO CUARTO	Argentina	2013/14	Corn silage, cattle manure	Glass coated steel tank 4,600 m³	Gas engine 1,200 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester with gas holder, thermophilic operation, heat utilisation, first biogas plant using energy crops in Argentina	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant RIHA	Germany	2012	Cattle manure, corn silage	Glass coated steel tank 1,500 m³	Gas engine 2 x 252 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester with gas holder, 1 storage tank, mesophilic operation, heat utilisation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant BASILIANO	Italy	2012	Triticale silage and corn silage	Concrete tank 2,500 m³	Gas engine 625 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester with gas holder, 1 storage tank, thermophilic operation, heat utilisation	Execution planning, tendering, participating in contract awarding process, site management/project controlling
Biogas Plant DIETZ	Germany	2012	Cattle manure, cattle dung, gras-, triticale- and corn silage	Concrete tank 2,600 m³	Gas engine 191 kWel	Agricultural biogas plant: 1 digester, 2 secondary digester with gas holder, 1 storage tank, mesophilic operation, heat utilisation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant TORRES DE SEGRE	Spain	2012	Sludge from slaughterhouse, water treatment muds, glycerin or vegetable oil, corn silage	Concrete tank 2 x 4,400 m³	Gas engine 2 x 1.2 MWel	Biogas plant digesting organic waste: 2 digester, 1 secondary digester, reception hall, separator, mesophilic operation, heat utilisation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant VIERVERLATEN	The Netherlands	2012	Sugar beets and potato waste	Glass coated steel tanks 4 x 4,600 m³	Biogas upgrading system, injektion into the grid	Industrial biogas plant: 4 digester, 1 secondary digester with gas holder, digestate treatment , gas cooling system, mesophilic operation, biogas upgrading system and injection into grid	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant RUDA	Italy	2012	Triticale- und corn silage	Concrete tank 5,000 m³	Gas engine 999 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester with gas holder, 1 storage tank, thermophilic operation, heat utilisation	Execution planning, tendering, participating in contract awarding process, site management/project controlling
Biogas Plant HOTTELN (Expansion)	Germany	2012	Corn silage	Concrete tanks 1 x 2,200 m³ 1 x 3,000 m³	Gas engine 536 kWel Gas engine 2 x 250 kWel	Expansion of an agricultural biogas plant by 1 digester, 2 gas engines, conversion of a secondary digester in a digester, bigger size solid input device	Basic evaluation, pre-, draft- and approval planning, additional consulting services
Biogas Plant ANKLAM	Germany	2012	Sugar beet, vinasse	Glass coated steel tank 4 x 4,600 m³	Biogas upgrading system, injektion into grid	Industrial biogas plant: 4 digester, 1 secondary digester, gas holder above secondary digester, digestate treatment, mesophilic operation, biogas upgrading and injection into grid	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators
Biogas Plant MEZDRA	Bulgaria	2012	Cattle manure, corn silage	Glass coated steel tank 2 x 4,600 m³	Gas engine 3 x 800 kWel	Agricultural biogas plant: 2 digester and 1 secondary digester with gas holder, thermophile operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process
Biogas Plant EICKHOFF (Expansion)	Germany	2011	Corn silage	Concrete tank 2,200 m³	Gas engine 526 kWel 350 kWel	Expansion of an agricultural biogas plant by digester storage, satellite CHP	Basic evaluation, pre-, draft- and approval planning, additional consulting services
Biogas Plant DECKER (Expansion)	Germany	2011	Corn silage, whole-crop-silage	Concrete tank 1,400 m³	Gas engine 360 kWel 800 kWel	Expansion of an agricultural biogas plant: digester, storage tank, satellite CHP	Basic evaluation, pre-, draft- and approval planning, additional consulting services

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant WALLRAPP (Expansion)	Germany	2011	Pig manure, expired foodstuff (food, bread)	Lipp-Digester 1,100 m³	Dual fuel co-generator 100 kWel Gas engine 185 kWel	Expansion of a biogas plant for digesting food waste by 1 secondary digester	Basic evaluation, pre-, draft-, approval and execution planning, additional consulting services
Biogas Plant TORRE SANTAMARIA	Spain	2011	Cattle manure, corn silage	Concrete tank 2,100 m³	Gas engine 190 kWel	Agricultural biogas plant, gas holder above first digester, mesophilic operation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, start-up
Biogas Plant OTTERBEIN	Germany	2011	Pig manure, cattle dung, gras silage, corn silage, corn crop, whole crop silage, fodder mixture	Concrete tank 1,200 m³	Dual fuel co-generator 265 kWel (inkluding 30 kWel additional power of gas turbine)	Agricultural biogas plant: digester, secondary digester, digestate storage, dual fuel engine with additional power of gas turbine, heat utilisation	Approval planning, technical advice for execution planning, final construction plans
Biogas Plant DINTELOORD	The Netherlands	2011	Sugar beet, vegetable waste (potato, chicoree)	Glass coated steel tanks 4 x 4,600 m³	Biogas upgrading system, injection into grid	Industrial biogas plant: 4 digester, 1 secondary digester, digestate treatment, gas cooling system, mesophilic operation, biogas upgrading and injection into grid	Basic evaluation, consultancy services for approval planning, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, local construction supervision, start-up, training for operators
Biogas Plant BELGOROD	Russia	2011	Corn silage, sewage sludge, slaugtherhouse sludge, pig manure	Glass coated steel tanks 2 x 3,000 m³	Gas engine 2 x 1.2 MWel	Industrial biogas plant: 2 digester, 2 secondary digester with gas holder, mesophilic operation, heat utilisation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant NEIßETAL	Germany	2010/11	Pig manure, pig dung, cattle dung, lucerne silage, corn silage, sugar beet	Glass coated steel tank 3,000 m³	Gas engine 716 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester with gas holder, 1 storage tank, mesophilic operation, heat utilisation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant IM BRAHM (Expansion)	Germany	2010	Pig manure, horse dung, kitchen waste	Concrete tank 1,200 m³	Gas engine 3 x 190 kWel	Expansion of a biogas plant by co-generator, digester and storage tank	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling
Biogas Plant ADENSEN (Expansion)	Germany	2010	Corn silage	Concrete tank 2,400 m³	Gas engine 400 kWel	Expansion of a biogas plant: co-generator, digester and secondary digester	Basic evaluation, approval planning, additional consulting services
Biogas Plant FORCATE	Italy	2010	Grass-, corn silage	Concrete tank 1,700 m³	Gas engine 365 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, separation, thermophilic operation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant OS DE BALAGUER	Spain	2009	Pig manure, sludge of slaugtherhouses, fats	Concrete tank 2 x 1,200 m³	Gas engine 370 kWel	Biogas plant digesting organic waste: 2 digester, 1 secondary digester, mesophilic operation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant MCDONNELL	Ireland	2009	Cattle manure, poultry dung, animal by-products (ABP)	Steel tank 1,300 m³	Gas engine 250 kWel	Biogas plant digesting organic waste: 1 digester, 1 secondary digester, mesophilic operation, separation, pasteurisation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, training for operators

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant SEMD	Germany	2009/10	Corn silage	Prestressed concrete, prefabricated element tank 2,500 m³	Biogas upgrading system, injektion into grid	Agricultural biogas plant: gas holder above digester, secondary digester and digestate storage tank, mesophilic operation, biogas upgrading and injection into grid	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling
Biogas Plant CASSA DE LA SELVA	Spain	2008	Pig manure, sludge of slaugtherhouses, fats	Concrete tank 1,700 m³	Gas engine 370 kWel	Biogas plant digesting organic waste: 1 digester, 1 secondary digester with gas holder, mesophilic operation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant TORREGROSSA	Spain	2008	Pig manure, sludge of slaugtherhouses, fats	Concrete tank 1,400 m³	Gas engine 191 kWel	Biogas plant digesting organic waste: 1 digester, 1 secondary digester, mesophilic operation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant FALKENSTEIN	Germany	2008	Corn silage, wheat silage, sweet sorghum	Glass coated steel tank 2 x 3,100 m³	Gas engine 2 x 716 kWel	Agricultural biogas plant: 2 digester, 2 secondary digester, thermophilic operation, heat utilisation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant BRETAGNE	France	2008	Pig manure, sewage sludge, fats, food residuals	Concrete tanks 2 x 1,100 m³	Gas engine 400 kWel	Industrial biogas plant: 2 digester, 1 secondary digester with gas holder, digestate treatment with separation, mesophilic operation, heat utilisation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant LORSCH	Germany	2008	Corn silage, cattle manure	Concrete tank 1,600 m³	Gas engine 370 kWel	Agricultural biogas plant: gas 1 digester, 1 secondary digester, 1 digestate storage tank, thermophilic operation, heat utilisation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant PRINCE EDWARD ISLAND	Canada	2007	Potato raw material, oil, potato sludge	Glass coated steel tanks 4 x 5,500 m³	Heat utilisation	Industrial biogas plant: 1 Hydrolysis tank, 4 digester, 2 secondary digester, mesophilic operation, separation, heat utilisation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant PORTA (Expansion)	Spain	2007	Pig manure, food waste	Concrete tank 1,400 m³	Gas engine 2 x 191 kWel	Expansion of a biogas plant digesting food waste by co-generator and gas cooling	Basic evaluation, pre-, draft- and execution planning, additional consulting services
Biogas Plant GUT ALTENHOF	Germany	2007	Corn silage, wheat silage, grass silage	Concrete tank 1,500 m³	Gas engine 365 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, 1 digestate storage tank, thermophilic operation, heat utilisation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant MONTARGULL	Spain	2007	Pig manure, fats, sludge from slaughterhouse	Concrete tank 2,100 m³	Gas engine 364 kWel	Biogas plant digesting organic waste: 1 digester, 1 secondary digester, separation, mesophilic operation, heat utilisation	Basic evaluation, pre-, draft- and execution planning, tendering, additional consulting services, site management/project controlling, start-up
Biogas Plant GÖTTINGEN	Germany	2007	Percolate of compost	Concrete tank 1,900 m³	Gas engine 254 kWel	Integration of a biogas plant in an existing compost plant incl. heat utilisation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant NOYON	France	2007	Sewage sludge, fats, food residuals, process water	Glass coated steel tank 3,500 m³	Gas engine 716 kWel	Industrial biogas plant: 1 digester, 1 secondary digester with gas holder, digestate treatment with separation and drying of solid phase, mesophilic operation, heat utilisation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant WIESENAU II	Germany	2007	Cattle manure, dung, wheat, corn silage	Glass coated steel tank 4,300 m³	Gas engine 2 x 526 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, 1 digestate storage tank, mesophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant RIEDLINGEN	Germany	2007	Cattle manure, corn silage, grass silage, crop silage	Glass coated steel tank 4,300 m³	Gas engine 2 x 526 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat recovery, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant SECHZEHN-EICHEN	Germany	2007	Corn silage, grass silage, wheat silage	Concrete tank 2,200 m³	Gas engine 536 kWel	Agricultural biogas plant: 1 digester and gas holder above secondary digester, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant WEIß (Expansion)	Germany	2006/07	Corn silage, grass silage, pig manure, cattle dung	Concrete tank 1,100 m³	Dual fuel co-generator, 250 kW	Expansion of the biogas plant	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant INLAND EMPIRE	USA	2006	Manure, organic waste	Epoxy/Glass coated steel tanks 2 x 4,500 m³	Feeding into gas distribution system	Industrial biogas plant: 2 digester, storage tank, feeding into gas distribution system (20,000 m³/d)	Basic evaluation, pre-, draft- and execution planning, start-up, consultancy service on site

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant PORTA	Spain	2006	Pig manure, food waste	Concrete tank 1,400 m³	Gas engine 191 kWel	First agricultural biogas plant in Spain	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant AMELN	Germany	2006	Corn silage, wheat silage	Glass coated steel tank 2,600 m³	Gas engine 650 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant SCHENK	Germany	2006	Corn silage, grass silage, wheat silage	Concrete tank 800 m³	Gas engine 190 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, 1 digestate storage tank, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant THANNER	Germany	2006	Corn silage, grass silage, wheat silage	Concrete tank 1,400 m³	Gas engine 350 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, 1 digestate storage tank, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant BAILER	Germany	2006	Corn silage, wheat silage	Conrete tank 800 m³	Gas engine 191 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant HOTTELN	Germany	2006	Corn silage	Concrete tank 2,200 m³	Gas engine 536 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant BUCHLOE	Germany	2006	Corn silage, grass silage, wheat silage	Concrete tank 4,600 m³	Gas engine 2 x 526 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, 1 digestate storage tank, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant EICKHOFF	Germany	2006	Corn silage	Concrete tank 2,200 m³	Gas engine 526 kWel	Agricultural biogas plant: 1 digester and gas holder above secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant BAESWEILER	Germany	2006	Corn silage, wheat silage	Concrete tank 2,200 m³	Gas engine 536 kWel	Agricultural biogas plant: 1 digester and gas holder above secondary digester, 1 digestate storage tank, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant ADENSEN	Germany	2006	Corn silage	Concrete tank 1,400 m³	Gas engine 370 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, mesophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant HORGAU	Germany	2006	Corn silage, grass silage, wheat silage	Concrete tank 2,700 m³	Gas engine 536 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, 1 digestate storage tank, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant STÖLZLE	Germany	2006	Corn silage, grass silage, wheat silage	Concrete tank 1,100 m³	Dual fual co-generator 250 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant WANGEN	Germany	2006	Cattle manure, corn silage, grass silage	Concrete tank 2,600 m³	Gas engine 370 kWel dual fual co-generator 250 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, 1 digestate storage tank, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant PFEIFFER	Germany	2005	Corn silage, grass silage, crop silage	Concrete tank 1,400 m³	Dual fuel co-generator 2 x 180 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant HÖRNLE	Germany	2005	Corn silage, grass silage, wheat silage	Concrete tank 700 m³	Gas engine 180 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant DECKER	Germany	2005	Corn silage, wheat silage	Concrete tank 1,400 m³	Gas engine 360 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant BUCHMANN	Germany	2005	Corn silage, grass silage, wheat silage, pig manure	Concrete tank 600 m³	Gas engine 110 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, mesophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant MILLER	Germany	2005	Clovergrass silage, corn silage	Concrete tank 1,500 m³	Gas engine 360 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant NOOTBAAR	Germany	2005	Corn silage	Concrete tank 1,000 m³	Dual fuel co-generator 2 x 110 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant WEBER	Germany	2005	Corn silage, grass silage, wheat silage	Concrete tank 800 m³	Gas engine 2 x 90 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant EICHENHOFER	Germany	2004/05	Corn silage, grass silage	Concrete tank 500 m³	Gas engine 125 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant IM BRAHM	Germany	2004/5	Pig manure, kitchen waste, horse manure	Concrete tank 1,200 m³	Dual fuel co-generator 2 x 190 kWel	Biogas plant digesting organic waste: 1 digester, 1 secondary digester, mesophilic operation, heat utilisation (pasteurisation kitchen waste, heating of buildings)	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant WIESENAU	Germany	2004/05	Cattle manure, cattle dung, corn silage, grass silage	Concrete tank 2,600 m³	Gas engine 526 kWel	Agricultural biogas plant: 1 digester and gas holder above secondary digester, heat utilisation, mesophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant BÖCKERMANN II	Germany	2004/05	Pig manure, corn silage	Glass coated steel tank 4,100 m³	Gas engine 2 x 536 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant FAKLER	Germany	2004/05	Corn silage, grass silage, wheat silage	Concrete tank 1,100 m³	Gas engine 250 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant FREY	Germany	2004/05	Corn silage, grass silage, wheat silage	Concrete tank 1,500 m³	Gas engine 330 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant DOBLER	Germany	2004/05	Corn silage, grass silage	Concrete tank 800 m³	Gas engine 2 x 90 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant KORNMAYER	Germany	2004/05	Cattle manure, cattle dung, corn silage and grass cut	Concrete tank 600 m³	Dual fuel co-generator 40 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, mesophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant MENZ	Germany	2004/05	Pig manure, cattle manure, corn and grass silage	Concrete tank 1,000 m³	Gas engine 250 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant LEUTER	Germany	2004/05	Pig manure, pig dung, corn and crop silage	Concrete tank 400 m³	Dual fuel co-generator 100 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant BIOENERGIE HEHLEN	Germany	2004/05	Corn silage	Concrete tank, 2,000 m³	Gas engine 536 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant NATURGAS HEHLEN	Germany	2004/05	Corn silage	Concrete tank 2,000 m³	Gas engine 536 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant GRIMM + SCHÖNDIENST	Germany	2004/05	Pig manure, energy crops, dung	Concrete tank 900 m³	Gas engine 2 x 100 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant HOLLANDHOF	Germany	2004	Pig dung, turkey dung, energy crops	Concrete tank 400 m³	Gas engine, 60 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation, thermophilic operation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant BIOENERGIE-DORF JÜHNDE	Germany	2004	Manure, energy crops	Concrete tank 2,800 m³	Gas engine, 500 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, supply of local heat network	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant CUDWORTH PORK	Saskatoon, Canada	2003	Manure, potatoes	Steel tank, 2,000 m³	Microgas turbine 4 x 30 kWel	Biogas plant digesting organic waste: 1 digester, 1 secondary digester	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant GROSS MUEHLINGEN (Expansion)	Germany	2003	Manure, organic waste	Steel tanks, 2 x 800 m³	Gas engine, 730 kWel	Expansion of an existing biogas plant by pasteurisation, storage tanks, hydrolysis tank, process control system for the whole plant	Basic evaluation, pre-, draft- and approval planning, additional consulting services
Biogas Plant SCHORN-BUSCHER BIOGAS GmbH	Germany	2003	Corn, organic industrial waste	Concrete tank with stainless steel roof, 1,500 m³	Gas engine, 520 kWel	Biogas plant digesting organic waste: 1 digester, 1 secondary digester, pasteurisation, thermophilic operation, process water recycling	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, operation
Biogas Plant VAN GENNIP	Germany	2003	Pig manure, fats, corn silage, dung	Steel tank, 4,300 m³	Gas engines 167 kWel 2 x 344 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant MILCHHOF WEINHEIM	Germany	2002	Manure, corn	Stainless steel tank, 800 m³	Dual fuel co-generator, 110 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester	Basic evaluation, pre-, draft-, approval and execution planning

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant JOHANESBURG (Expansion)	Germany	2002	Pig and cattle manure, fats	Steel tank, 1,500 m³ (Expansion)	Gas engine, 630 kWel (Expansion)	Expansion of an existing 10 years old biogas plant by a new pasteurisation, digester, CHP and process controll system for the whole plant	Basic evaluation, pre-, draft- and approval planning completely; execution planning, tendering, participating in contract awarding process for gas system, piping and electrical/process control system, site management/project controlling, start-up (for Hese Umwelt GmbH)
Biogas Plant WERLTE	Germany	2002	Pig and cattle manure, fats	Steel tanks, 2 x 3,200 m³	Gas engines, 2 x 1,3 MWel	Biogas plant for digesting organic waste: reception hall, pasteurisation, 2 digester, 2 secondary digester, 50.000 m³ storage capacity	Basic evaluation, pre-, draft- and approval planning completely; execution planning, tendering, participating in contract awarding process for gas system, piping and electrical/process control system, site management/project controlling, start-up (for Hese Umwelt GmbH)
Biogas Plant KOERBER-HARRIEHAUSEN	Germany	2002	Gras, energy crops in general	Concrete tank, 600 m³	Dual fuel co-generator, 110 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant TODENDORF	Germany	2002	Manure, grass silage	Steel tank, 2,400 m³	Dual fuel co-generator, 2 x 180 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant SCHMITZ	Germany	2002	Manure, agricultural organic waste	Concrete tank, 600 m³	Gas engine, 100 kWel + 70 kWel	Biogas plant for digesting organic waste: 1 digester, 1 secondary digester, pasteurisation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant HEILIGENKREUZ	Heiligen-kreuz am Waasen, Austria	2002	Manure, fats, corn, glycerine, kitchen waste, grass, concentrate of fruits, waste of bakeries	Concrete tank, 1,100 m³	Gas engines, 511 kWel	Biogas plant for digesting organic waste: 1 hydrolysis tank, 1 digester, 1 secondary digester, heat utilisation in the village	Basic evaluation, pre-, draft-, approval and execution planning of main components, measurement and process technology, start-up
Biogas Plant HAUS RISWICK	Germany	2002	Manure, agricultural organic waste	Concrete tank 600 m³	Dual fuel co-generator, 65 kWel	Agricultural biogas plant: 1 digester with gas holder, external heat exchanger	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant EICHHOF	Germany	2001/ 2002	Manure, other organic waste	Concrete tank, 600 m³	Dual fuel co-generator, 22 kWel, gas engine, 15 kWel	Improvement of an 18 year old biogas plant, gas holder above manure storage tank, demonstration biogas plant for education of farmers	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant UELZEN GMBH	Germany	2001/ 2002	Manure, corn, onions, potatoes, agricultural residues	Concrete tank, 1,300 m³	Dual fuel co-generator, 2 x 100 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, 1 digestate storage tank	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up
Biogas Plant BOECKERMANN I	Germany	2001/ 2002	Manure, corn silage, grass silage, dung	Glass coated steel tank, 2,500 m³	Dual fuel co-generator, 2 x 160 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester, heat utilisation in the stables	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, operation
Biogas Plant EGGERT	Germany	2001	Manure, fats, corn	Stainless steel tank, 800 m³	Dual fuel co-generator, 100 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester	Basic evaluation, pre-, draft-, approval and execution planning

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant MADER	Germany	2001	Manure, corn, grass, bakery residues	Stainless steel tank, 800 m³	Dual fuel co-generator, 100 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester	Basic evaluation, pre-, draft-, approval and execution planning
Biogas Plant THODE	Germany	2001	Manure, corn silage	Stainless steel tank, 600 m³	Dual fuel co-generator, 65 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester	Basic evaluation, pre-, draft-, approval and execution planning
Biogas Plant ECKERTZ	Germany	2001	Manure, energy crops	Stainless steel tank, 600 m³	Dual fuel co-generator, 100 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester	Basic evaluation, pre-, draft-, approval and execution planning
Biogas Plant HOFFMANN	Germany	2001	Cattle manure, dung	Stainless steel tank, 600 m³	Dual fuel co-generator, 100 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester	Basic evaluation, pre-, draft-, approval and execution planning
Biogas Plant HINNEMANN	Germany	2001	Manure, dung, corn, other organic waste	Stainless steel tank, 1,000 m³	Dual fuel co-generator, 160 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester	Basic evaluation, pre-, draft-, approval and execution planning
Biogas Plant FELDMANN	Germany	2001	Manure, corn	Stainless steel 1,100 m³	Dual fuel co-generator, 160 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester	Basic evaluation, pre-, draft-, approval and execution planning
Biogas Plant FABEL	Germany	2001	Manure, corn, potato starch residues, agricultural residues	Concrete tank, 1,000 m³	Dual fuel co-generator, 2 x 110 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, operation
Biogas Plant PRATO allo STELVIO	Italy	2001	Manure, straw, other organic waste	Concrete tanks, 2 x 750 m³	Integration in central energy system for electricity and heat production	Biogas plant digesting organic waste: 2 digester, biogas plant of 53 farmers	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, site management/project controlling, start-up, operation

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant DICKHOVEN	Germany	2001	Cattle manure, other organic waste	Concrete tank, 900 m³	Dual fuel co-generators, 2 x 65 kWel	Biogas plant digesting organic waste: 1 digester, gas holder above 1,500 m³ manure storage tank, pasteurisation	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, conception for measurement system
Biogas Plant SCHLEUPEN	Germany	2001	Manure, other organic waste	Concrete tank, 900 m³	Dual fuel co-generators, 2 x 75 kWel	Biogas plant digesting organic waste: 1 digester, gas holder above 3,000 m³ manure storage tank	Basic evaluation, pre-, draft-, approval and execution planning, tendering, participating in contract awarding process, conception for measurement system
Biogas Plant SCHULTE-SPECHTEL	Germany	2001	Manure, other organic waste	Concrete tank, 500 m³	Dual fuel co-generator, 40 kWel	Biogas plant digesting organic waste: 1 digester, gas holder above 1,000 m³ manure storage tank	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, conception for measurement system
Biogas Plant PETRUSHEIM	Germany	2001	Manure, other organic waste	Concrete tank, 1,000 m³	Dual fuel co-generators, 2 x 100 kWel	Biogas plant digesting organic waste: 1 digester, gas holder above 1,000 m³ manure storage tank, heat utilisation	Basic evaluation, pre-, draft- and execution planning, tendering, participating in contract awarding process, conception for measurement system, site management/project controlling
Biogas Plant BEKKAI	Japan	2000-2001	Manure, other organic substrates	Steel tank, 1,500 m³	Dual fuel engine, 3 x 67 kWel	Biogas plant digesting organic waste: 1 digester, gas holder above 450 m³ manure storage tank and 1 extra gasholder	Basic evaluation, pre-, draft and execution planning for digester, gas holder/storage tank, gas system, piping system (for Hese Umwelt GmbH)
Anaerobic Waste Water Treatment Plant WIETZENDORF	Germany	2000-2002	Waste water of a starch-producing plant (potato-starch), potato residues	Glass coated steel tank 4 x 2,500 m³	Gas engine, 4 x 2.1 MWel	Industrial biogas plant: 4 digester, biomass recovery, external gas storage tank, protein recovery, ammonia stripping, reverse osmosis, composting/curing	Basic evaluation, pre-, draft and execution planning of complete biological treatment, gas holder, dewatering, safety + measuring + controlling devices

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant NIJ BOSMA ZATHE	The Netherlands	2000	Manure, grass	Steeltanks, 2 x 80 m³	Dual fuel co-generator, 37 kWel	Agricultural biogas plant: 2 horizontal digester	Basic evaluation, pre-, draft and execution planning
Biogas Plant THIESSEN	Germany	2000	Manure, energy crops	Stainless steel tank, 600 m³	Dual fuel co-generator, 45 kWel	Agricultural biogas plant: 1 digester, 1 secondary digester	Basic evaluation, pre-, draft and execution planning, start-up
Biogas Plant BERLIN-MARIENFELDE	Germany	1999-2000	Kitchen waste, fats, depackaged food	Stainless steel tanks 4 x 60 m³	Gas engine, 2 x 90 kWel	Biogas plant digesting organic waste: 1 digester, 1 secondary digester	Basic evaluation, pre-, draft and execution planning for buffer- and hydrolises tank, digesters
Biogas Plant TOTTORI	Japan	1999-2000	Manure	Steel tank, 3,100 m³	Dual fuel engine, 2 x 100 kWel	Agricultural biogas plant: 1 digester, gas holder above 350 m³ manure storage tank	Basic evaluation, pre-, draft and execution planning for main equipment
Biogas Plant STANGE	Germany	1999-2000	Chicken manure, pig manure, turkey dung	Concrete tank, 450 m³	Gas engine, 45 kWel	Agricultural biogas plant: 1 digester, gas holder above 1,000 m³ manure storage tank	Basic evaluation, pre-, draft- and execution planning, tendering, site management/project controlling, start-up
Biogas Plant GASTRO STAR	Switzerland	1998	Fruit and vegetable residues	Steel tank, 300 m³		Biogas plant digesting food waste: 1 hydrolysis tank, 1 digester	Basic evaluation, pre-, draft- and execution planning for digester and hydrolysis tank
Biogas Plant AGROKOMPLEX KOLINANY	Slowacia	1996-1999	Manure, straw	Steel tank, 100 m³	Gas engine, 15 kWel	Agricultural biogas plant: 1 digester, gas holder above 300 m³ manure storage tank, research and development plant	Basic evaluation, pre-, draft- and execution planning for mixer, heating system, site management/project controlling, start-up (for TBW GmbH)
Small digestion Plant W&A	Germany	1997-1999	Black water, kitchen waste	6 m³	Gas oven	Biogas plant digesting organic waste (blackwater of several houses, vacuum toilets, kitchen waste) by one 6 m³ digester, modular system	Basic evaluation, pre-, draft- and execution planning incl. pre-fabrication and final assembly, site management/project controlling, start-up (for TBW GmbH)

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Digestion Plant BEG BIOENERGIE GMBH	Germany	1997/ 1998	Biowaste, separately collected in households, sewage sludge	Steel tanks, 3 x 350 m³		Biogas plant digesting organic waste: IMK-process, two-stage with aerobic hydrolysis, sedimentation tank, external gas storage tank	Basic evaluation, pre-, draft- and execution planning for digesters, sedimentation tank, gas holder, process optimisation after start-up
Biogas Plant GAERTEC	Germany	1997	Kitchen waste, organic industrial residues	Steel tank, 150 m³	Dual fuel co-generator, 27 kWel	Biogas plant digesting organic waste: Pilot plant, Freese system	Basic evaluation, pre-, draft- and execution planning, tendering and construction of digester
Biogas Plant BARZ	Germany	1996-1998	Manure, kitchen waste	Concrete tanks, 20 m³ and 250 m³	Dual fuel co-generator, 45 kWel	Biogas plant digesting organic waste: 2 digester, pasteurisation	Basic evaluation, pre-, draft-, approval and execution planning, site management/project controlling, start-up (for TBW GmbH)
Biogas Plant ROHE	Germany	1996/ 1997	Manure	Concrete tank, 400 m³	Dual fuel co-generator, 45 kWel	Agricultural biogas plant: diversion of existing tanks, gas holder in container	Basic evaluation, pre-, draft-, approval and execution planning, site management/project controlling, start-up (for TBW GmbH)
Biogas Plant RoRo-ENERGIE	Germany	1996-1998	Biowaste, separately collected in households, residues from breweries	Concrete tank, 1,000 m³	Dual fuel co-generators, 2 x 95 kWel	Biogas plant digesting organic waste: pre-treatment for all input substrates, pasteurisation, 1 central located digester, 1 storage tank, other digester decentralized	Basic evaluation, pre-, draft-, approval and execution planning (for TBW GmbH)
Biogas Plant HOLZ	Germany	1996	Manure, other organic waste	Steel tanks, 2 x 100 m³	Dual fuel co-generator , 45 kWel	Biogas plant digesting organic waste: 2 digester, gas bag	Basic evaluation, pre-, draft-, approval and execution planning, start-up (for TBW GmbH)
Biogas Plant DIPPEL	Germany	1996	Manure, straw, other organic waste	Steel tanks, 2 x 100 m³	Dual fuel co-generator , 45 kWel, container	Biogas plant digesting organic waste: 2 digester, gas bag, separation	Basic evaluation, pre-, draft-, approval and execution planning, site management/project controlling, start-up (for TBW GmbH)

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant WERNE v., AANSE BOUDIN; PRASLIN	Seychelles	1996	Pig manure	Digestion channel, 200 m³		Agricultural biogas plant: 1 digestion channel (non-heated system) with gas holder above, gas cooling	Basic evaluation, pre-, draft-, approval and execution planning (for TBW GmbH)
Biogas Plant MARTENS	Germany	1995/ 1996	Manure, other organic waste	Concrete tanks, 400 m³ and 800 m³	Dual fuel co-generators in containers	Biogas plant digesting organic waste: 2 digester, development of especially light roofs for digester, modular system for farms with about 100 bis 200 cattle	Basic evaluation, pre-, draft and execution planning for zero series (6 systems): start-up of biogas plants Lau, Wuelpern, Gerken, Hobbie, Albers, Martens (for TBW GmbH)
Biogas Plant GROEDEN	Germany	1995/ 1996	Manure, other organic waste	Steel tanks, 2 x 3,500 m³		Industrial biogas plant: 2 digester, external gas storage tank, pasteurisation	Advisor for final plannings (for Haase Energietechnik GmbH)
Biogas Plant SCHAEFER	Germany	1995	Manure, straw, other organic waste	Concrete tank, 500 m³	Dual fuel co-generator, 35 kWel	Biogas plant digesting organic waste: 1 digester, feed batch system	Basic evaluation, pre-, draft- and approval planning, advisor for construction
Biogas Plant BLUEMEL (Kompostbetrieb)	Germany	1994/ 1995	Biowaste, separately collected in households	Concrete tanks, 2 x 800 m³	Dual fuel go-generators, 2 x 160 kWel	Biogas plant digesting organic waste: 2 digester	Basic evaluation, pre-, draft-, approval and execution planning, site management/project controlling, start-up (for TBW GmbH)
Biogas Plant SCHNEIDER	Germany	1994/ 1995	Manure, other organic waste	Steel tanks, 2 x 100 m³	Dual fuel go-generator, 45 kWel	Biogas plant digesting organic waste: 2 digester, gas bag	Basic evaluation, pre-, draft-, approval and execution planning, site management/project controlling, start-up (for TBW GmbH)
Biogas Plant KRAFT	Germany	1994/ 1995	Manure, fats, distillery residues	Concrete tanks, 800 m³ and 1,000 m³	Gas engines 90 kWel, 200 kWel	Biogas plant digesting organic waste: 2 digester	Basic evaluation, pre-, draft-, approval and execution planning, site management/project controlling, start-up (for TBW GmbH)
Biogas Plant WEISS	Germany	1994/ 1995	Manure, other organic waste	Concrete tank, 350 m³	Dual fuel co-generator, 45 kWel	Biogas plant digesting organic waste: 1 digester, gas holder above 600 m³ manure storage tank	Basic evaluation, pre-, draft-, approval and execution planning, site management/project controlling, start-up (for TBW GmbH)

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant HUSSENETHER	Germany	1994/ 1995	Manure, other organic waste	Concrete tank, 500 m³	Dual fuel co-generator, 27 kWel	Biogas plant digesting organic waste: 1 digester, gas bag	Basic evaluation, pre-, draft-, approval and execution planning, site management/project controlling, start-up (for TBW GmbH)
Biogas Plant SCHULTES	Germany	1994	Manure, other organic waste	Concrete tank, 200 m³	Dual fuel co-generator, 45 kWel	Biogas plant digesting organic waste: 1 digester, freese system, gas holder above 1,500 m³-manure storage tank	Basic evaluation, pre-, draft-, approval and execution planning, site management/project controlling, assembly of mixer and gas holder, start-up (for TBW GmbH)
Digestion Plant Technical University of HAMBURG-HARBURG	Germany	1993/ 1994	Biowaste, separately collected in households	Steel tank, 100 m³		Pilot biogas plant: 1 digester, ATF-dry fermentation	Basic evaluation, pre-, draft-, approval and execution planning, site management/project controlling, start-up (for TBW GmbH)
AGROKOMPLEX SIRVINTOS	Lithuania	1993	Liquid phase after separation of manure	Basin, 1,000 m³, covered with gas holder membrane		Agricultural biogas plant: 1 digester, psychrophilic digestion, mixing by gas, heating for green houses	Basic evaluation, pre-, draft-, approval and execution planning, assembly of mixing device, heating and gas systems
Biogas Plant SCHLÖTTER	Germany	1992/ 1993	Manure, other organic waste	Glass fiber tank, 100 m³	Dual fuel co-generator, 27 kWel	Biogas plant digesting organic waste: 1 digester, Baader system, gas holder above 400 m³ manure storage tank	Pre-, draft-, approval and execution planning, site management/project controlling, start-up
Biogas Plant v. BODELSCHWING' SCHE ANSTALTEN	Germany	1991	Manure, kitchen waste	Steel tank, 100 m³	Dual fuel co-generator, 27 kWel	Biogas plant digesting organic waste: 1 digester, gas bag	Assembly of tubes, pumps, mixers, heating and gas systems
Biogas Plant BLANC	Germany	1991	Manure, straw	Concrete tank, 300 m³	Gas engine, 15 kWel	Agricultural biogas plant: 1 digester, gas bag	Assembly of tubes, pumps, mixers, heating and gas systems

Biogas Plant	Location	Constr. period	Input	Digester	Biogas utilisation	Features	Responsibility
Biogas Plant RETZBACH	Germany	1991	Manure, straw, other organic substrates	Steel tanks, 2 x 100 m³	Gas engine, 15 kWel	Biogas plant digesting organic waste: 2 digester, gas bag, separation	Basic evaluation, pre-, draft- and execution planning, site management/project controlling, start-up
Biogas Plant ZIPPER	Germany	1990	Manure, straw	Steel tanks, 2 x 60 m³	Gas engine, 15 kWel	Agricultural biogas plant: 2 digester, gas holder above 400 m³ manure storage tank, separation	Basic evaluation, pre-, draft- and execution planning, site management/project controlling, start-up
Biogas Plant GANSLOSER	Germany	1990	Manure, straw, other organic substrates	Steel tank, 50 m³	Dual fuel co-generator, 27 kWel	Biogas plant digesting organic waste: 1 digester	Assembly of mixers, heating system and gas system
Biogas Plant HEYNOLD	Germany	1986	Manure, straw	Steel tank, 60 m³	Gas engine, 15 kWel	Agricultural biogas plant: 1 digester, gas holder above 400 m³ manure storage tank	Construction, installation, start-up