

References Biogas: Concepts and Consultations

Project	Location	Substrat	Technical Data	UTECH Services	Customer	Year
Consultancy Chile	Chile	organic wastes manure energy crops	Realisation of Biogas plants for agriculture and Industry	Engineering, conceptions, backstopping, detail planning	Fondo Waste to Eney, Santiago Chile	2012 2014
Technical Due Diligence	Germany	Energy crops	Cogeneration and upgrading to biomethane	Technical expertise of the dimensioning, the economic numbers and the contracts	BPIE GmbH	2012 2013
Technical Due Diligence	Mecklenb.-Vorp.	Energy crops	Existing plant of an private fionds	Expertise of the technical and economic situation	DEKRA	2012
Biogas Plant Wüsthof	Soltau Niedersachsen	organic wastes	Biogas Plant for organic wastes 40.000 t/a, ca. 2,6 MW electr. power	Consultancy of all aspects	Wüsthof Biogas GmbH	2011 -2013
Biogas Plant and composting	Santiago de Chile	organic sludges	Biogas Plant for organic sludges of food processing companies, combination with an existing composting plant	Determination of biogas potential, concept, dimensioning of the plant, economic evaluation	Genera4 S.A. Santiago	2011
Technical Due Diligence	Mecklenb.-Vorp.	Energy crops	3 existing plants of a private fionds	Expertise of the technical and economic situation	DEKRA	2011
Biogas Plant for whey	Bremen Niedersachsen	Acid whey	Feasibility study and tests in UTECH laboratory for the digestion of whey; Mono digestion in long-term	Potential of biogas, batch tests, continuos tests in CSR and Fixed bed, economic evaluation	Hansewasser Bremen UTECH	2010 -2011
Biogas Plant for wastes of fish industry	Puerto Montt Chile	organic sludges	Biogas Plant fior organic wastes, mainly from fish industry, potential of cogeneration, combination with composting and deposit,	Test in the UTECH Laboratory - biogas potential, concept, technical and economic evaluation, possibiloties of N-elinimation, use of digestate	Genera4 S.A. Santiago	2010
Biogas Plant Avandgard	Bremen	organic wastes	Biogas Plant 2 Mwel, use of heat for malthouse nearby	Concept, selection of substrates, dimensioning of the plant, local adaption, economic evaluation	Hansewasser Bremen	2010

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Biogas Plant for whey	Bremen Niedersachsen	Acid whey	Pre-tests in UTECH laboratory for mono digestion	Batch tests, evaluation of basic data	UTECH	2010
Biogas Plant Bispingen	LK Soltau-Fallingb. Niedersachsen	Energy crops	Feasibility study for the optimisation of 10 biogas plants near Bispingen	concept, economic evaluation	Gemeinde Bispingen	2010
Biogas Plant poultry	Región V Chile	Chicken manure and poultry manure	Biogas Plant and upgrading to biomethane, 450 m ³ raw gas/h N-Elimination by recirculation flow, combination with composting plant	Check of existing ideas, concept, bids for tender, dimensioning and detailed planning, economic evaluation, recommendations	Schwager Biogas S.A. Valparaiso	2010
Biogas Plant Heudorf	Landkreis Osterholz	Energy crops	Concept for use of the exhaust heat of cogeneration of a Schmack-plant	feasibility study	BEKS Energie-effizienz GmbH	2010
Biogas-tests Wine industry	Chile	pomace	Energetic use of wastes from the wine industry in Chile, combination with composting	Laboratory tests in UTECH laboratory, concept, dimensioning, recommendations	Genera4 S.A.	2009-2010
Biogas Plant Wastewater of wool industry	Uruguay	Wastewater of wool processing	Anaerobic treatment of wool-wastewater	Concepts, potential, laboratory tests, Pilot plant in Uruguay, recommendations	Top Fray Marco S.A. Montevideo	2009
Upgrading of Biogas	Zeven	Energy crops	Upgrading of biogas to biomethane and use for communal buildings in the town of Zeven	Tenders, selection of the process and the manufacturer, injection plant	Stadtwerke Zeven	2009
Biogas Plant and upgrading	LK Diepholz Niedersachsen	Energy crops	Repowering of the Fangmeier plant to 1,4 Mw _{el} , gas line of 7 km and upgrading	Feasibility study	Fangmeier Biogas GmbH & Co KG	2009
Biogas Plant Pig manure	Chile	Pig manure	Separation, Fixed bed digester 1.000 m ³ , and CSR 1.500 m ³	Laboratory scaled pilot plant on site in Chile, concept of digestion and use of digestate for land application	Wetland S.A. AASA S.A.	2008

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Biogas Plant Honduras	Honduras	water hyacinths	laboratory tests to digest water hyacinths, draft planning of a biogas plant, organic waste sludge and fat	laboratory tests, evaluation, report, recommendations	Grubo Terra	2008
Biogas Plant Dom.-Rep.	Dominican Republic	bagasse org. sludge	laboratory tests with cachaza and bagasse; draft planning of a biogas plant	laboratory tests, evaluation, report, recommendations	CAEI	2008
Biogas Plant vinasse	Bremen	wheat vinasse	biogas production from vinasse of bioethanol plants, thick and thin vinasse fraction, CSR and fixed bed digester	laboratory tests, evaluation, report, recommendations	e.on	2008
Owners Training	Niedersachsen	--	teaching and seminars for biogas plant owners and employees in Niedersachsen	lecturer	LEB Niedersachsen	2004 -2008
Training of Foreign Skilled Workers	Bremen	diverse	Teaching of former biogas plant owners and employees in the important aspects of biogas technology, theoretical and practical works, technique and biochemical basics, full scale plants, laboratory analytics	creation of training materials, implementation and organization of training	Diverse	2004 -2008
Zero-Emission Oil Mills	Southeast Asia	waste and wastewater from palm oil mills	zero-emission concept for palm oil mills of southeast asia through recycling and the use of anaerobic technology in combination with composting. Realization of all components in technical scale, chances for CDM trading	concept, economical calculation, report, publications, work in cooperation with FAL Braunschweig	BMBF	2004 -2006
Biogas Potential Study	Dominican Republic	oil mills slaughter houses feedstocks	project evaluations with calculation of biogas potentials in oil mills, slaughter houses, agricultural farms, combination with composting, CDM-qualifications of projects	data research, concepts, economical evaluations, recommendations	MercaSid	2007

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Biogas Plant Torun	Poland	organic waste materials	feasibility study for a biogasplant with organic waste materials, electrical capacity from 500 to 2.500 kW	feasibility study with dara research, concept, economical evaluations, recommendations	City of Torun	2007
Biogas Plant and Gas Feed into Pipeline	Rotenburg/W. Niedersachsen	organic waste materials	biogas plant on the basis of energy crops > 3,0 MWel with biogas treatment to feed it into the natural gas pipeline, gas utilization in decentral cogeneration plants	feasibility study with dara research, concept, economical evaluations, recommendations	Stadtwerke Rotenburg	2006
Biogas Potential Study	Chile	diverse	biogas potentials in agriculture, industry and municipalities, adaption of german technique to chilenean requirements	feasibility study with dara research, concept, economical evaluations, recommendations	UTECH	2006
Biogas Plant Mardorf	LK Marburg Hessen	cow manure maize silage	concept for a district heating system in combination with a biogas plant	dimensioning, cost estimation, evaluation of alternative solutions, economical evaluation, recommendation	private	2006
Biogas Plant Hohenkirchen	Niedersachsen	cow manure maize silage	feasibility study with technical and economical aspects for a biogas plant	data research, dimensioning, site evaluation, permission requirements, cost estimation, subsidies, ecemical evaluation	Farmers	2006
Biogas Plant Haendorf	Niedersachsen	maize silage	feasibility study with technical and economical aspects for a biogas plant	data research, dimensioning, site evaluation, permission requirements, cost estimation, subsidies, ecemical evaluation	Farmers	2006
Fixed Bed Digester	Niedersachsen	vinasse	implementation of a fixed bed digester to reduce industrial organic wastewater	laboratory tests as batch and continuous tests, report, concept for a technical scale biogas plant	BASF	2005
Biogas Plant Ardorf	Niedersachsen	maize silage	feasibility study with technical and economical aspects for a biogasplant	data research, dimensioning, site evaluation, permission requirements, cost estimation, subsidies, ecemical evaluation	Farmers	2005

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Biogas as Fuel	Niedersachsen	diverse	evaluation of treating biogas to fuel and operating of CNG filling stations as well as feeding it into the natural gas pipeline. Several project, sponsored by BMU	data researches in Germany and Europe, collection and evaluation of technical systems, economical evaluations, applications for subsidies	Wüsthof Biogas GmbH	1998-2002
Biogas Plant CSH Jakarta	Indonesia	slaughterhouse waste and wastewater	accompanying the installation and commissioning of a pilot biogas plant of the slaughterhouse Jakarta (CSH), concept within a R&D-project of BMBF	accompanying the installation and commissioning, waste and wastewater concept	TÜV Rheinland	1998-1997
Biogas Laboratory University of Tunis	Tunesia	diverse	installing a biogas laboratory in Ecole Nationale d'Ingenieurs de Tunis (ENIT).	installation, teaching	gtz GmbH Eschborn	1985-1987
Help with Operation of Biogas Plants	east Germany	diverse	R&D project "process control and operation of agricultural biogas plants with dynamic operation". Financed by FNR from a BMVEL-fund	R&D-works, calculations, report, presentations and publications	UTECH / FNR	2001-2002
Biogas Plants Neue Bundesländer	east Germany	diverse	R&D-project from BMFT "stocktaking and future applications of biogas technology in east Germany"	data research, analysis, interviews with operators, potential survey, economical evaluation, report	BMBF	1992
Biogas Plant Slaughterhouse	Niedersachsen	organic waste materials	feasibility study to the anaerobic digestion of slaughterhouse waste materials within a plant to treat dead animal bodies	feasibility study with data research, concept, economical evaluations, recommendations	Westfleisch	1991
Biogas Potential Study	Niger	slaughterhouse waste wastewater manure, crap	feasibility study to the anaerobic digestion of slaughterhouse waste materials and farms in Niger	feasibility study with data research, concept, cost estimations, economical evaluations, recommendations in cooperation with BORDA/Bremen	gtz GmbH Eschborn	1986
Biogas as Tractor Fuel	Ivory Coast global	diverse	feasibility about the implementation of biogas-driven tractors in developing countries	data research, technical and economical evaluation	gtz GmbH Eschborn	1985

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<i>Transportable Biogas Storage Bags</i>	India	--	field test with flexible biogas storage bags in Wardha, India	data research, construction of test bags, report and recommendations	gtz GmbH Eschborn	1985
<i>Biogas Plant Nuakschott</i>	Mauretania Bremen	waste fish material	R&D-works about the anaerobic digestion of waste fish material taking different salt concentrations into account; laboratory tests with one- and two-step digestion	Laborversuche mit Analytik, Auswertung, Bericht	gtz GmbH Eschborn	1985
<i>Biogas Plant Coetivy Island and Mahe</i>	Seychellen	diverse	Prüfung der Einsatzmöglichkeiten einer Biogasanlage auf Coetivy Island und Möglichkeiten der Biogaserzeugung aus industriellen Abwässern auf der Insel Mahe	data research, concept for the utilization of energy and sludge, report, recommendations	gtz GmbH Eschborn	1985
<i>Flow Tests</i>	Bremen	cow manure	flow tests in a lying digester without agitator, R&D-project financed by BML	scientific research, measurements with tracer materials	BML Bonn	1985
<i>Biogas Manual</i>	global	diverse	biogas manual for decision makers in developing countries	translation and writing chapters new, layout and translation in cooperation with BORDA/Bremen	gtz GmbH Eschborn	1984
<i>Plastic Materials and Biogas</i>	global	diverse	feasibility study about the application of plastic materials in biogas plants; R&D-project comparing new with aged materials	data research, decision and procurement of suitable material, laboratory tests in cooperation with ETH Zürich, report and recommendations	gtz GmbH Eschborn	1984
<i>Biogas Plant Ingelstad</i>	Sweden	cow manure pig manure	feasibility study with technical and economical aspects for a biogas plant	data research, dimensioning, site evaluation, permission requirements, cost estimation, subsidies, economical evaluation	farmer	1983
<i>Biogas Plant Ågard</i>	Sweden	pig manure	feasibility study with technical and economical aspects for a biogas plant; 500 SVU	data research, dimensioning, site evaluation, permission requirements, cost estimation, subsidies, economical evaluation	private	1983

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Biogas Plant Bjersgård	Sweden	pig manure organic waste material	feasibility study with technical and economical aspects for a biogas plant	data research, dimensioning, site evaluation, permission requirements, cost estimation, subsidies, economical evaluation	farmer	1982
Biogas Plant Oestergaard	LK Flensburg Schl.-Holstein	pig manure	storage digester system, 70 SUV	concept, draft planning, economical evaluation	farmer	1981
Biogas Plant Reitlingstal	LK Wolfenb. Niedersachsen	horse manure	biogas tests in pilot plant scale to digest horse manure with psychrophil temperature	trial concept, test works, concept for pilot plant scale biogas plant		1981
Internatiopnal Fair Grüne Woche	Berlin	manure	"biogas - energy for the farmers" special exhibition at the Grüne Woche fair 1981 together with Bundesarbeitsgemeinschaft Biogas	preparation, installation and operating a small scale biogas plant on the fair, presentation	Grüne Woche Messe GmbH	1981
Biogas in Lübeln	LK Lüneburg Niedersachsen	manure, scrap	decentral biogas plant with central gas utilization	data research, dimensioning, site evaluation, permission requirements, cost estimation, subsidies, ecemical evaluation	Landkreis Lüchow- Dannenberg	1980