

Industry Directory for On-Farm Biogas Recovery Systems

November 2008



ENERGY AND POLLUTION PREVENTION



INDUSTRY DIRECTORY FOR ON-FARM BIOGAS RECOVERY SYSTEMS

The AgSTAR Program produces this Industry Directory to assist livestock producers and others involved in the developing anaerobic digestion systems to identify consultants, designers, developers, equipment vendors, and other providers of biogas energy services.

If you are in the planning stages of project development, we recommend that you use the Industry Directory in combination with the AgSTAR Handbook (which is available on the AgSTAR website at <u>www.epa.gov/agstar</u>) as project development tools to begin the initial project planning process to increase the potential for success.

Commodity Organizations represent the interests of a specific crop or livestock commodity. Commodity organizations generally are involved in marketing or lobbying activities.

Consultants provide a variety of services related to biogas recovery systems, including feasibility analyses (e.g., technical, economic, and financial), nutrient management planning, system design, and environmental impact and regulatory assessments.

Developers design and install biogas recovery systems for livestock and other industries. In many cases, these are "turn-key" system developers who provide consultant services as part of the development package.

Financing specialists provide loans for biogas projects, funding on-farm biogas systems for profit, and brokering the sale of carbon offsets and renewable energy certificates.

Energy Service Providers are independently owned, municipal or co-operative electricity or natural gas companies that have an interest in providing biogas energy to customers. *Manufacturers/distributors* include entities that manufacture, distribute, and in some cases, install equipment used in biogas recovery systems, including covers, engines, tanks, and system components.

Publishers distribute journals and reports of interest to farm owners and others interested in biogas recovery systems.

Universities are educational institutions, including land grant colleges and universities, involved in developing and demonstrating onfarm biogas recovery systems and technologies.

The Directory is not all inclusive. We will update the Directory regularly as we learn of new businesses in the livestock waste market. These updates will be posted on the AgSTAR website, along with other AgSTAR products.

If you wish to be included in the Directory, go to <u>http://www.epa.gov/agstar/tech/form.html</u>. If you currently are on the list and want to update any information, go to <u>http://www.epa.gov/agstar/contact.html</u>.

Commodity Organizations	
Developers	
Energy Service Providers	
Financing	
Manufacturing/Distributors of:	
Covers	33
Engines	37
System Components	42
Tanks	-
Publishers	
Universities	50

The information in this Directory was provided by the listed organizations, and EPA does not guarantee the accuracy of the information. Inclusion in this Directory does not imply endorsement of any listed organization. All users of this Directory should employ due diligence before entering into a contract with any of the listed organizations



Commodity Organizations

Best Agri-marketing, Inc.

Todd Soares 3901 S.Mooney Blvd. Suite E Visalia CA 93277

Tel: (559) 733-9777 Fax (559) 733-9774 Email bestagri@aol.com WebSite N/A

Bulk cattle feed merchandising company interested in developing an environmental issues and resolution department for patrons. Interested in biogas projects.

Dairy Quality Assurance Center

Keith Carlson 801 Shakespeare Avenue 50249 Stratford IA

Tel: (515) 838-2793 Fax (515) 838-2788 Email kcarlson@dqacenter.org WebSite www.dgacenter.org

Year Established: 1994

Year Established: 1992

The Dairy Quality Assurance Center provides national publicity to dairy farmers.

Missouri Pork Producers Association

Don Nikodim 6235 W. Cunningham Drive Columbia MO 65202

Tel: (573) 445-8375 Fax (573) 446-2398 Email pork@mppa.net WebSite www.mppa.net

Year Established: 1956

The Missouri Pork Producers Association is an organization focused on agricultural commodities.

Consultants

Acterra Group, Inc.

Tad Cooper P.O. Box 160 Marion IA

52302

Tel: (800) 289-7371 Fax (319) 377-0075 Email tad@acterragroup.com WebSite www.acterragroup.com Year Established: 1958 # of Farm Projects: 1 # of Biogas Projects: 3

Providing consulting and construction services to the biogas industry.

Agricultural Engineering Associates, Inc.

John A. George, P.E. P.O. Box 4 KS 66779 Uniontown

Tel: (620) 756-4600 Fax (620) 756-1000 Email johng@agengineering.com

Year Established: 1974 # of Farm Projects: 20+ # of Biogas Projects: 20+

WebSite www.agengineering.com

Broad based engineering firm with 4 decades experience nationally and internationally. Focus is on systems integration, sand separation, manure solids separation, and processing. USDA qualified technical service provided - systems design and CNMP's.



Consultants

Agri-Waste Technology, Inc.

Lawson M. "Mac" Safley, Jr. 5400 Etta Burke Court Raleigh NC 27606 Tel: (919) 859-0669 Fax (919) 233-1970 Email mmottern@agriwaste.com WebSite www.agriwaste.com

Year Established: 1984 # of Farm Projects: 6 # of Biogas Projects: 3

Agri-Waste Technology, Inc. (AWT) is a full-service professional engineering and consulting firm, located in Raleigh, North Carolina. For over two decades, AWT has provided environmental services to agricultural, industrial, municipal, and residential clients nationwide. AWT is licensed to provide engineering services in 38 states throughout the country, with a full-time staff consisting of engineers, agronomists, licensed soil scientists, Technical Service Providers (TSP) and GIS/GPS mapping specialists. Over the past several years, AWT has worked effectively with over 350 producers in developing Comprehensive Nutrient Management Plans (CNMPs) for the NRCS in various states. AWT also has specialized experience and technical competence in manure nutrient management, designing, handling, storage, and transfer. AWT has been certified through the Chicago Climate Exchange (CCX) as an approved verifier for greenhouse gas offset projects. AWT has significant experience with digester projects including design specifications, greenhouse gas offsets consulting and carbon credit verifications.

Applied Technologies, Inc.

Mike O'Neil		Tel: (262) 784-7690	Year Established: 1986
16815 W. Wiscon	sin Avenue	Fax (262) 784-6847	# of Farm Projects: 15
Brookfield	WI 53005	Email mponeil@ati-ae.com	# of Biogas Projects: 35
		WebSite www.ati-ae.com	

Applied Technologies, Inc. (ATI) is an engineering design and consulting firm that has designed numerous anaerobic contact process systems for manure digestion. ATI has also co-sponsored several seminars throughout the last 20 years on the anaerobic treatment of agricultural and high-strength wastes.

BDS Technologies, Inc.

Freddie Guerra 12700 Park Central Drive, Suite 1415 Dallas TX 75251 Tel: (214) 747-2500 Fax (214) 747-2567 Email fguerra@bdstechnologies.com WebSite www.bdstechnologies.com

Year Established: 1996 # of Farm Projects: N/A # of Biogas Projects: N/A

BDS provides turnkey solutions to clients that include feasibility studies, permitting, engineering and design, construction, and start-up of biogas recovery systems.

BDS Technologies, Inc.

Taoreed O. Badmus 11325 Pegasus Street, E-200 Dallas TX 75238 Tel: (214) 747-2500 Fax (214) 747-2567 Email tbadmus@bdstechnologies.com WebSite www.bdstechnologies.com Year Established: 1994 # of Farm Projects: N/A # of Biogas Projects: 1

N/A



Consultants

BEST, LLC

Craig Frear 645 N. Grand Avenue Pullman WA 99163 Tel: (509) 332-2030 Fax N/A Email king.keving@gmail.com WebSite N/A Year Established: 2007 # of Farm Projects: N/A # of Biogas Projects: N/A

Provide consultant services related to Co-digestion, Digester related issues and Nutrient recovery process.

Biomass Energy Resource Center

Jeff Forward PO Box 1611 Montpelier VT 05601 Tel: (802) 262-1009 Fax (802) 223-7772 Email jforward@biomasscenter.org WebSite www.biomasscenter.org

Year Established: 1991 # of Farm Projects: 2 # of Biogas Projects: 2

Provides feasibility analysis and project management for the construction of anaerobic digesters for dairy farmers.

Bridgestone Associates, Ltd.

Martin C.T. Anderson P.O. Box 1299 Chadds Ford PA 19317
 Tel:
 (610) 388-6191

 Fax
 (610) 388-0394

 Email
 mcta@brdgstn.com

 WebSite
 www.brdgstn.com

Year Established: 1988 # of Farm Projects: 1 # of Biogas Projects: 30

Consultants in the evaluation, design, financing, construction and operations of animal manure anaerobic digestion and other disposal facilities and other renewable energy projects.

Brubaker Consulting Group, Inc.

 Michael Brubaker
 Tel: (717) 859-3276
 Year Established: 1979

 4340 Oregon Pike
 Fax (717) 859-3416
 # of Farm Projects: 3

 Ephrata
 PA 17522
 Email mikeb@brubakerag.com
 # of Biogas Projects: 3

 WebSite
 N/A

Brubaker Agronomic Consulting consults U.S. farmers in many areas within agriculture, and has three clients with biogas systems: two dairy farms and a swine farm.

Cavanaugh & Associates

John Bizic 130 N. Front Street, Suite 202 Wilmington NC 28401

 Tel: (910) 392-4462
 Year Established: 1995

 Fax (910) 392-4612
 # of Farm Projects: 3

 Email john.bizic@cavanaughsolutions.com
 # of Biogas Projects: 10

 WebSite
 www.cavanaughsolutions.com

Engineering, Utility Services, Surveying, Site Development, Wastewater Treatment, Anaerobic Digestion, etc. and Consulting Services.



Consultants

CEM Engineering

Martin Lensink, P.E. 26 Hiscott St. Ste. 201, St. Catharines Ontario Canada L24 1C6 Tel: (905) 935-5915 Fax (905) 935-7878 Email info@cemeng.ca WebSite www.cemeng.ca

Year Established: 2001 # of Farm Projects: 7 # of Biogas Projects: 18

Energy Audits; Proof-of-Concept Assessments (POCA) (both technical & economic); Identification and Implementation of Energy Management Opportunities (EMO's); Sub-metering of gas, power, and thermal use (within load centers); Feasibility Studies (including detailed financial analysis); Capital Cost Estimates; Conceptual and Preliminary Engineering (including high voltage electrical interconnect); Preparation of Design-Build, Turnkey Specifications & Bid Evaluations; Owners-Engineer Services (such as Due Diligence and Fatal Flaw Analysis); Implementation Alternatives (risk/reward, construction, financing, fuel management and procurement); Short-circuit Analysis, Arc Flash Studies, and Protective Device Coordination using the EasyPower® Software.

Cincas International

Ben Cruz P.O. Box 81163 San Diego CA 92138 Tel: (619) 520-0733 Fax (619) 295-6055 Email bcruz92312@aol.com WebSite N/A

Year Established: 1978 # of Farm Projects: 27 # of Biogas Projects: 14

Export technology and equipment to the agro industry of Mexico and others.

Climate Options Group

Charles Brasor	•	Tel: (202) 436-9886	Year Established: 2007
P.O. Box 38378		Fax N/A	# of Farm Projects: 4
Baltimore	MD 21231	Email cbrasor@climateoptionsgroup.com	# of Biogas Projects: N/A
		WebSite www.climateoptionsgroup.com	

Climate Options Group (COg) is a leading provider of regulatory services for the global Emissions Market. We offer a diverse range of services including project identification, management, design and engineering. Our services target the mandatory and voluntary markets, which ultimately lead to the generation of carbon credits to be sold in the global markets. COg works closely with companies in both the private and public sectors throughout the developed and the developing world to help find practical, efficient and value-added solutions that mirror environmental expectations of both the present and future. COg staff has over twenty combined years of experience in emission mitigation, project management, and financial markets. They have helped register more than 100 CDM projects globally and have successfully worked with UN certified Designated Operation Entities (DOEs). COg employees have managed projects that have significantly reduced air pollution in the United States via implementation of emission control devices, best management practices, and efficiency improvements at public and private industries throughout the United States. COg staff has successfully negotiated air quality compliance issues and obtained approximately 100 air quality permits from over 20 different Federal, State, and Local regulatory agencies of the United States.

Coffman Geosciences

Laura E. Coffman, F	R.G.	Tel: (615) 594-8657	Year Established: 2002
2050 East Wayland		Fax N/A	# of Farm Projects: 3
Springfield	MO 65804	Email lec56mail-GC@yahoo.com	# of Biogas Projects: 4
		WebSite <u>N/A</u>	

Coffman Geosciences provides renewable energy consulting services to agricultural producers, food processors, ethanol developers and other producers of organic waste streams. CG has also patented a novel method for media placement in highrate, suspended growth anaerobic digestion systems. CG also offers small scale, containerized AD systems to waste producers with smaller operations. Other services offered include AD feasibility studies, system planning and project management.



Consultants

Commercial Engineering Corporation - Anergen Division

Ashok Bendre

430 Lake Cook Road, Suite B Deerfield IL 60015 poration - Ane Tel: (847) 236-0900 Fax (847) 236-1790

Email arbend@aol.com

WebSite http://www.anergen.com

Year Established: 1986 # of Farm Projects: N/A # of Biogas Projects: 3

The Anergen Division of Commercial Engineering performs feasibility assessments for farmers interested in installing biogas systems. Anergen submitted several proposals to design and develop biogas systems for farms.

Conestoga-Rovers & Associates

Jason Haelzle 7086 N. Maple Avenue Fresno CA 93720 Tel: (888) 572-5885 Fax (559) 326-5905 Email jhaelzle@CRAworld.com WebSite www.CRAworld.com Year Established: 1976 # of Farm Projects: 6 # of Biogas Projects: 30

Founded in 1976, Conestoga-Rovers & Associates (CRA) provides comprehensive, multi-disciplinary services in the areas of engineering, environmental consulting, construction and information technology (IT). CRA offers a unique blend of technical expertise and project experience in technology evaluation/assessment and engineering design of anaerobic digestion and biogas collection, upgrading/treatment, and utilization systems for the municipal, agricultural, and food processing sectors. Supporting these areas of endeavor are CRA's considerable experience in landfill gas handling/utilization, waste pretreatment, energy production, municipal waste/wastewater treatment, air emissions, and economic analysis.

Dean Oliver International

Richard Watkins 4600 North Royal Atlanta Drive Tucker GA 30084 Tel: (770) 492-2660 Fax N/A Email Rwatkins@Dean-Oliver.com WebSite www.Dean-Oliver.com Year Established: 1983 # of Farm Projects: 12 # of Biogas Projects: 7

Multidiscipline design engineering firm, providing process and detail engineering for industrial plants.

Dennis Gerber, Consultant

Dennis Gerber 15870 Rose Avenue Los Gatos CA 95030 Tel: (408) 395-9020 Fax (408) 395-9020 Email dhgerber@comcast.net WebSite N/A Year Established: N/A # of Farm Projects: N/A # of Biogas Projects: N/A

Mr. Gerber designs and installs anaerobic digester covers. His Gas Collecting Floating Cover design, which holds a U.S. Patent, is the de-facto standard for flexible membrane anaerobic digesters.

Duke Engineering and Services

David Johnson 400 S. Tryon Street, P.O. Box 1004 Charlotte NC 28201 Tel: (704) 373-3384 Fax (704) 382-7669 Email rfgreen@dukeengineering.com WebSite N/A Year Established: 1989 # of Farm Projects: 1 # of Biogas Projects: 3

Duke Engineering is testing a method to digest manure, and assisted with developing a digester for a poultry farm.



Consultants

EA Engineering, P.C.

Christopher J. Kerlish			
3 Washington Center			
Newburgh	NY	12550	

Tel: (845) 565-8100 Fax (845) 565-8203 Email info@eaest.com WebSite www.eaest.com

Year Established: 1973 # of Farm Projects: 5 # of Biogas Projects: 5

EA Engineering, P.C. is a national environmental engineering and sciences consulting firm with more than 20 offices across the United States. Our headquarters is located in Hunt Valley, Maryland. Within the Northeast Region, EA has 6 offices to service clients. We have a 30-year history of supporting both private-and public-sector clients in their pollution prevention, environmental assessment, compliance, restoration, and risk management programs. We have a 30-year project corporate resume spanning a wide range of areas including sludge profiling of anaerobic lagoons, redesigning anaerobic lagoons for waste-to-energy objectives; and landfill investigations, design, and closure.

ecosur

Lazaroo Timothée 2 rue Greuze 75116 PARIS FRANCE 75116 Tel: 33-14-755-0678 Fax 33-14-505-2702 Email t.lazaroo@ecosur.fr WebSite www.ecosur.fr Year Established: 2005 # of Farm Projects: 22 # of Biogas Projects: 34

ecosur is a French based company that works in the Kyoto protocol's framework. We develop CDM and JI projects in the sector of methane capture and recovery: LFG (landfill gas flaring) and the AWMS (Animal Waste Management System - biogas combustion). We propose legal, financial and technical expertise to project developers that need to set up the carbon part of their projects and help them to select and implement the appropriate technologies. We help farming activities and local communities to benefit from the carbon credits system to enhance their environmental performances.

Electrigaz Technologies, Inc.

Eric CamirandTel: (819) 687-2875Year Established: 200117 ch MaryHillFax (819) 687-2875# of Farm Projects: 100+HarringtonQC J8G 2T3Email eric@electrigaz.com# of Biogas Projects: 200+WebSitewww.electrigaz.com

Electrigaz specializes exclusively in the research and development of biogas solutions, for the food and farming industries.

Environmental Resource Recovery Group, LLC (EnRRG)

Burt Tribble			Tel: (913) 886-8051	Year Established: N/A
15789 202 Street			Fax (913	660-0405	# of Farm Projects: N/A
Nortonville	KS	66060	Email btri	bble@enrrg.com	# of Biogas Projects: N/A
			WebSite	www.enrrg.com	

Environmental Resource Recovery Group (EnRRG) is a recently formed company whose partners have experience in anaerobic digestion and waste-to-energy in agriculture, agribusiness, and the food industry. EnRRG's business is identifying practical energy recovery, anaerobic digestion, and waste management projects, evaluating their economic potentials, and bringing together qualified projects with development partners. Qualified projects are those meeting technical requirements and economic investment guidelines.



Consultants

Fox Engineering Associates, Inc.

Dale Watson 1601 Golden Aspen Drive Ames IA 50010 Tel: (515) 233-0000 Fax (515) 233-0103 Email dwatson@foxeng.com WebSite www.foxeng.com

Year Established: 1967 # of Farm Projects: 2 # of Biogas Projects: 18

Fox Engineering specializes in environmental and civil engineering services for industrial, municipal, and agricultural sectors. The company focuses on water, wastewater, soil, and air media issues and has designed a digester for Crawford Farm (demonstration project), a swine farm in Nevada, Iowa.

Future Enviroassets, LLC

Larry Fradkin 922 Oregon Trail Cincinnati OH 45215 Tel: (513) 349-3844 Fax N/A Email If@futureenviroassets.com WebSite www.futureenviroassets.com Year Established: N/A # of Farm Projects: N/A # of Biogas Projects: N/A

Future Enviroassets, LLC is an environmental consulting firm with expertise and over 28 years experience in anaerobic digestion.

Gas Technology Institute

Diane Saber		Tel: (847) 768-0720	Year Established: 1950
1700 Mount Pros	pect Road	Fax (847) 768-0546	# of Farm Projects: N/A
Des Plaines	IL 60018	Email diane.saber@gastechnology.org	# of Biogas Projects: 10
		WebSite www.gastechnology.org	

Gas Technology Institute (GTI) and the Environmental Science & Technology Center have been carrying out research and development projects and technology demonstrations in the areas of anaerobic digestion and biogas generation since the 1970s. GTI holds a number of patents on the two-phase reactor system and other reactor designs and systems. The two-phase digestion technology has been in full-scale commercial use for activated sludge treatment for more than five years. The two-stage system has proven successful for swine and dairy manure in large-scale laboratory evaluations and GTI is preparing for farm demonstrations and full-scale deployments. Work is continuing on this technology and others to generate high-quality biogas for electricity generation and heat recovery using farmer-friendly, stable, and dependable systems.

General Bioenergy, Inc.

Phillip Badger		Tel: (256) 740-5634	Year Established: 2000
P.O. Box 26, 3115	5 Northington	Fax (256) 740-5635	# of Farm Projects: N/A
Florence	AL 35630	Email pbadger@bioenergyupdate.com	# of Biogas Projects: N/A
		WebSite www.bioenergyupdate.com	

Mr. Badger is the Technical Director for the Southeastern Regional Biomass Energy Program, which has funded a variety of projects related to farm-scale systems (mainly lagoon digester projects) and wastewater treatment plants. He publishes and sells the "Biogas Utilization Handbook." General Bioenergy has performed feasibility studies for farm biogas systems.



Consultants

GeoPacific Lining

William Wolfe 1300 Dexter Ave., N. #205 Seattle WA 98109 Tel: (206) 284-2378 Fax (206) 283-7068 Email geopacific@cresmont.com WebSite <u>N/A</u>

Year Established: 1994 # of Farm Projects: N/A # of Biogas Projects: 2

GeoPacific Lining performs feasibility assessments and consults farms on implementing digester systems, and is in the design phase of developing digesters for three farms in the U.S.

GeoSyntec Consultants, Inc.

Junchul Kim, Ph.D., P.E. 10015 Old Columbia Road Columbia MD 21046 Tel: (410) 381-4333 Fax (410) 381-4499 Email jkim@geosyntec.com WebSite www.geosyntec.com

Year Established: 1983 # of Farm Projects: N/A # of Biogas Projects: N/A

GeoSyntec provides private and public sector clients with earth and environmental sciences consulting services; environmental, geotechnical, and hydrological engineering consulting and design services; and construction management and quality assurance services for projects involving these practices. Our offices are located in 25 locations throughout the North America with more than 500 engineers, scientists, and technical specialists.

Hall Associates

Dr. John Martin 23 Evergreen Drive Georgetown DE 19947
 Tel:
 (302) 855-0723

 Fax
 N/A

 Email
 hallasso@dmv.com

 WebSite
 N/A

Year Established: 1980 # of Farm Projects: 15+ # of Biogas Projects: 15+

Speciality is Independent specialist in third party evaluation of the technical and financial feasibility of biogas projects for animal and food processing wastes.

IGT

J. Robert Paterek, Ph.D / Laurence M. Feder 1700 S. Mount Prospect Road Des Plaines IL 60016 Tel: NONE Fax NONE Email paterek@igt.org WebSite <u>http://www.igt.org</u> Year Established: N/A # of Farm Projects: N/A # of Biogas Projects: N/A

Energy and environmental research, development and education.

Kadrmas, Lee and Jackson

Mark Luther 128 Soo Line Drive Bismarck ND 58501 Tel: (701) 355-8400 Fax N/A Email mark.luther@kljeng.com WebSite www.kljeng.com Year Established: 1937 # of Farm Projects: N/A # of Biogas Projects: N/A

Kadrmas, Lee and Jackson provides alternative and renewable energy solutions through its facilitating, consulting, engineering, and project management services.



Consultants

Kouba Engineering, LLC

John Kouba 10296 W. Palmersheim Drive Hales Corners WI 53130 Tel:(414) 858-2399Year Established: 2005FaxN/A# of Farm Projects: 2Emailjohn_kouba@koubaengineering.com# of Biogas Projects: 10WebSitewww.koubaengineering.com

Kouba Engineering specializes in the treatment of high-strength waste, especially with anaerobic technologies, and biogas/biomass to energy projects. Our work space is throughout the USA as well as internationally. We're a young company, but with years of experience.

MacMillan & Associates

Roy MacMillan 17815 NE Courtney Road Newberg OR 97132 Tel: (503) 628-0277 Fax N/A Email rm@macmillan-group.com WebSite <u>N/A</u> Year Established: 1973 # of Farm Projects: 9 # of Biogas Projects: 6

MacMillan & Associates is an integrated engineering and consulting company that specializes in providing energy-related services to the agricultural community.

MCX Environmental Energy Corp.

Rasheed Mustakeem3500 Lenox Road, Suite 1500AtlantaGA 30326

Tel: (404) 419-2536 Fax (404) 816-7809 Email rasheed@mcxeec.com WebSite www.mcxeec.com

Year Established: 1988 # of Farm Projects: N/A # of Biogas Projects: N/A

Your distributed energy, infrastructure, and construction management services provider.

National Methane

William J. Lingo, Sr. 1823 Leo Street - Suite 100 Dayton OH 45404
 Tel: (937) 226-0340

 Fax (937) 226-0340

 Email nationalmethane@netzero.com

 WebSite
 N/A

Year Established: 1983 # of Farm Projects: 37 # of Biogas Projects: 13

National Methane holds a patent for a system that can verify the basis for each of the "multiple" avenues of income streams their system develops. National Methane provides complete farm evaluations and recommendations for incorporating biogas technology into a farm plan. National Methane has provided evaluations for more than 100 chicken farms, more than 60 swine farms, more than 25 dairy farms, and one sheep farm. The company also provides grant writing and public relations services related to on-farm biogas recovery and fee-based speakers for Community Groups and Agricultural Seminars.



Consultants

Omega-Alpha Recycling Systems

Robert Hamburg Route 1, Box 51 Orma W

WV 25268

Tel: (304) 655-8662 Fax N/A Email anomalous@citlink.net WebSite N/A

Year Established: 1979 # of Farm Projects: 2 # of Biogas Projects: 5

Omega-Alpha Recycling Systems (OARS) works on projects related to organic recycling and biogas systems integrated with organic farming and permaculture facilities. OARS has designed four small-scale, ambient temperature digesters: 1) Arcadia Farm, a goat, chicken, and horse farm in Orma, West Virginia with a Chinese style extended batch digester; 2) Urbanic Farm, a horse, cow, and chicken farm in Chloe, West Virginia with a Chinese style extended batch digester; 3) Agriculture Research Farm, a swine farm in Bamaco, Mali, West Africa with a Chinese style extended batch digester; and 4) the Mandali School, a school with cattle, in Chhopark, Nepal, an Indian design Gobar Gas demonstration project. OARS was also instrumental in halting a project that was environmentally and economically unsound.

Phase 3 Developments & Investments, LLC

Norma McDonald	Iorma McDonald Tel: (513) 265-2758		Year Established: 2005
7155 Five Mile Ro	ad	Fax (330) 319-8152	# of Farm Projects: 4
Cincinnati OH 45230		Email normacnc5@aol.com	# of Biogas Projects: 17
		WebSite www.phase3dev.com	

Phase 3 Developments & Investments, LLC (Phase 3) provides services to agricultural customers related to renewable energy and bio-based products. Services include financing and grant application preparation, business and technical feasibility studies, design, procurement, installation and commissioning services for anaerobic digestion and gasification.

Positive Energy Alternatives, LLC

Delroy Leslie			Tel: (715) 664-6162	Year Established: 2004
P.O. Box 11			Fax (715) 232-8824	# of Farm Projects: 1
Menomonie	WI	54751	Email leslied@posengalt.com	# of Biogas Projects: 2
			WebSite <u>N/A</u>	

Positive Energy Alternatives, LLC offers consultancy services and management of anaerobic digesters to farmers and communities. The company performs feasibility studies, farm evaluations and recommendations for farmers and/or organizations interested in biogas technology. Positive Energy Alternatives, LLC also assists farmers and organizations in completing grant applications to state and federal agencies.

R. K. Frobel & Associates

Ronald K. Frobel, P.E.		Tel: (303) 679-0285	Year Established: 1988
1153 Bergen Parkway	Suite M-240	Fax (303) 679-8955	# of Farm Projects: 30
Evergreen CO 80439		Email geosynthetics@msn.com	# of Biogas Projects: 4
		WebSite <u>N/A</u>	

Established in 1988, R.K. Frobel & Associates consulting engineers provides design and construction assistance in the growing field of geosynthetics including design assistance in both animal waste lining systems and waste / anaerobic digester cover systems. Design assistance is provided to full service engineering firms or facility / farm owners. As principal of R.K. Frobel & Associates, Mr. Frobel has over 25 years of experience in synthetic lining and cover systems including agricultural applications.



Consultants

R. M. Services & Associates

Robert M. Service 110 East Bremer Avenue, Suite A Waverly IA 50677

Tel: (800) 873-0679 Fax (319) 352-5765 Email rmsa@mchsi.com WebSite www.yourenergyoptions.com

Year Established: 1973 # of Farm Projects: N/A # of Biogas Projects: 1

Energy consulting and product development focused on electric power plant development (portable & stationary 70-700 Kw) and on hot water heating system development, all using low cost and ag waste fuels. Fuel conversions, audits, fuel surveys, arbitration/mediation technical support, and community development planning. Community development and community energy projects. Industry research reports.

Richard Chambers

Richard Chambers 1102 Don Cubero Ave. Santa Fe NM 87501

Tel: N/A Fax N/A Email rhcha@aol.com WebSite N/A

Year Established: 1961 # of Farm Projects: N/A # of Biogas Projects: N/A

Construction project administrator and engineer.

Richmond Energy Associates

Jeff Forward 2899 Hinesburg Road Richmond 05477 VT

Tel: (802) 434-3770 Fax (802) 434-2344 Email forward@gmavt.net WebSite N/A

Year Established: 1997 # of Farm Projects: 15 # of Biogas Projects: 15

Richmond Energy Associates is a renewable energy company specializing in anaerobic digestion feasibility analysis.

Russell J. Murray & Associates

Russ Murray 736 W. Pico Avenue Fresno CA 93705

Tel: (559) 224-7547 Fax (559) 224-7547 Email russjmurray@aol.com WebSite N/A

Year Established: 2003 # of Farm Projects: 2 # of Biogas Projects: 8

Design, construction supervision and start up of anaerobic digesters for the dairy, food processing and wine industries.

Selective Site Consultants, Inc.

Terry Super 8500 West 110th Street, Suite 300 **Overland Park** KS 66210

Tel: (913) 438-7700 Fax (913) 438-7777 Email terry.super@selectivesite.com WebSite www.selectivesite.com

Year Established: 1993 # of Farm Projects: N/A # of Biogas Projects: 3

Selective Site Consultants is a site development consultant that provides site acquisition, engineering and construction management services for several industries including renewable energy using the patented Advanced Anaerobic Digestion System (AADS).



Consultants

Sellew & Associates, LLC

Paul Sellew 84 Shady Brook Lane Carlisle MA 01741 Tel: (978) 371-0501 Fax (978) 371-0199 Email psellew@comcast.net WebSite <u>N/A</u>

Year Established: 1998 # of Farm Projects: 1 # of Biogas Projects: 1

Broad range of experience in manure and industrial organics anaerobic digestion.

Sharp Ei	nergy, Inc.		
Roy Sharp		Tel: (559) 688-2051	Year Established: 1983
24684 Road 14	48	Fax (559) 688-1111	# of Farm Projects: 5
Tulare CA 93274	Email rsharp6368@aol.com	# of Biogas Projects: 12	
		WebSite N/A	

Sharp Energy, Inc. consults, designs, and sets up effective and efficient waste management and energy production systems. Sharp Energy developed systems for the following farms: 1) Royal Farms, a 16,000-head swine farm in Tulare, California; 2) Sharp Ranch, a 5,000-head swine farm in Tulare, California; 3) Sharp Enterprises, an 8,000-head swine farm in Caruthers, California; and 4) Petrorio Farm, a 3,000-head swine farm in Skopje, Macedonia. Sharp Energy designed covers for the following farms: Cal Poly San Luis Obispo (an AgSTAR Demonstration Farm), a 300-cow dairy in San Luis Obispo, California; and Laurenco Dairy, a 1,200-cow dairy in Tulare, California.

Short Elliott Hendrickson

Russ Stammer			
3240 E River Road NE			
Rochester	MN	55906	

Tel: (507) 529-7200 Fax (507) 529-7201 Email jmickelson@sehinc.com WebSite www.sehinc.com Year Established: 1929 # of Farm Projects: N/A # of Biogas Projects: 50

Consulting Engineers.

SJH and Company, Inc.

Michael Masterovsky 8 Faneuil Hall Market Place, 3rd Floor Boston MA 02109 Tel: (617) 239-1120 Fax (617) 973-6406 Email masterovsky@sjhandco.com WebSite www.sjhandco.com

Year Established: 1990 # of Farm Projects: 3 # of Biogas Projects: 3

SJH's Renewable Energy Consulting Group has over 15 years of proven experience and expertise providing independent, thirdparty management consulting services to project developers and financial institutions operating in the ethanol, biodiesel, biomass (including anaerobic digestion) and co-generation sectors.

Stewart Environmental Consultants, Inc.

Fred Porter 3801 Automation Way Fort Collins CO 80525 Tel: (970) 226-5500 Fax N/A Email fred.porter@stewartenv.com WebSite N/A Year Established: 1957 # of Farm Projects: N/A # of Biogas Projects: 4

Environmental consulting firm specializing in wastewater treatment and reuse. Feasibility studies, anaerobic facility design, build, operate, financing available.



Consultants

Tetra Tech EM, Inc.

Charles Egigian-Nichols 1230 Columbia Street, Suite 1000 San Diego CA 92101

Tel: (425) 877-2802 Fax (425) 877-2899 Email charles.enichols@ttemi.com WebSite www.tetratech.com

Year Established: 1966 # of Farm Projects: 20+ # of Biogas Projects: 20+

Tetra Tech is a leading provider of consulting, engineering, and technical services worldwide. We are a diverse company, including individuals with expertise in science, research, engineering, construction, and information technology. Our strength is in collectively providing integrated services-delivering the best solutions to meet our clients' needs. In a complex world with competing demands for limited resources, Tetra Tech offers clear solutions made possible with sound science, understanding, innovation, and industry-leading approaches.

Tetra Tech NUS, Inc.

Junchul (JC) Kim, PH.D., P.E.		Tel: (312) 283-2235or7551	Year Established: 1966
240 Continenta	l Drive, Suite 200	Fax (302) 454-5988	# of Farm Projects: 2
Newark DE 19713		Email jc.kim@tetratech.com	# of Biogas Projects: 4
		WebSite www.tetratech.com	

Tetra Tech NUS, Inc. (Tetra Tech) is a wholly-owned subsidiary of Tetra Tech, Inc., which is a publicly traded corporation (NASDAQ-TTEK). Tetra Tech was founded in 1966 to provide engineering services related to waterways, harbors, and coastal areas. Over the past 40 years, the Company has substantially increased the size and scope of its business and expanded its service offerings through a series of strategic acquisitions and internal growth. With approximately 8,500 associates located in 275 offices in the United States and internationally, Tetra Tech is now a leading provider of consulting, engineering, and technical services that include, but are not limited to the following: global climate change, energy management, and carbon management; infrastructure and green infrastructure services; a wide variety of environmental and engineering services; geographic information systems (GIS); water, wastewater, and stormwater management; security design; disaster management and homeland security services; a wide variety of training services; health & safety consulting; and various other technical services. The Engineering News-Record magazine (ENR) recognized Tetra Tech as one of the top engineering firms in the nation. Tetra Tech's carbon management services focus on identifying, reducing, and strategically managing our customers' carbon footprint. Our services span customer operations (energy, environmental, and transportation), management (leadership), and finance (capital) to provide cost savings, manage regulatory impacts, institute operational efficiencies, develop new business opportunities, and drive corporate responsibility and reputation. These services support our customers' efforts to address global climate change and become carbon neutral-measures of whether an organization is green or sustainable. These objectives can be achieved by greening energy supplies, implementing opportunities for energy efficiency and resource conservation, using alternative fuels and transportation, sequestering and capturing carbon, and purchasing carbon offsets. Our experience in implementing these solutions has repeatedly proven that customers can reduce their carbon and environmental impacts and save money, while continuing to grow their business. In the past several years, Tetra Tech has successfully completed over \$25 million in Carbon/Energy Management and Renewable Energy projects.



Consultants

Triple Bottom Consulting, LLC

John Norwood 1611 Green Branch Circle West Des Moines IA 50265 Tel: 515-556-9765 Fax (515) 440-1440 Email jmnorwood@hotmail.com WebSite N/A

Year Established: 1998 # of Farm Projects: N/A # of Biogas Projects: N/A

John Norwood is an expert consultant engaged in the development of new business models, strategies and policies designed to stimulate the development of locally – and regionally – based food, fiber and energy systems, and other agriculturally-related specialty products. Mr. Norwood has more than 20 years of professional experience in program development and promotion, spanning the public, private and non-profit sectors. Mr. Norwood has a proven track record of driving organizations to achieve far reaching goals, by combining innovative business practices and systems, with rigorous data analysis, in-depth problem solving skills, and incentive-driven partnerships. A consensus builder, Mr. Norwood is known for his ability to provide creative, innovative leadership on multiple levels — from large picture "vision" to detailed focus. Mr. Norwood's past clients include Drake University's Agricultural Law Center and the Maxyield Cooperative (community-based approach to manure management and methane recapture). In connection with his innovative work, Mr. Norwood has successfully raised more than \$2 million in grant awards from federal and state sources, including the states of Iowa and California.

Universal Entech, LLC

Daniel Musgrove 5501 N. 7th Avenue, PMB 233 Phoenix AZ 85013-1756 Tel: 602-268-8849 Fax 602-268-9742 Email dmusgrove@earthlink.net WebSite <u>N/A</u>

Year Established: 1993 # of Farm Projects: 3 # of Biogas Projects: N/A

Universal Entech, LLC is an organic resource management company providing manure management and wastewater treatment services to the CAFO industry. The company focuses on developing turnkey solutions that comply with its clients' nutrient management plans and discharge requirements. Universal Entech's team has extensive experience in the development and operation of renewable energy systems utilizing biogas from municipal wastewater and landfill applications.

VerdiTech

Ken Abercrombie 12749 East Heather Drive Clovis CA 93611 Tel: (559) 297-7370 Fax (559) 297-7370 Email verditch@aol.com

Year Established: 2001 # of Farm Projects: N/A # of Biogas Projects: N/A

WebSite <u>N/A</u>

VerdiTech consults, designs, and manages systems to convert livestock manure into energy. Also provides services to develop quality monitoring for effective field application and crop production.

WAB associ	ates		
Wayne Bostick		Tel: 419-628-0321	Year Established: 2004
12570 Shelby Rd.		Fax N/A	# of Farm Projects: 3
Minster	OH 45865	Email wabassc@adelphia.net	# of Biogas Projects: 3
		WebSite <u>N/A</u>	

40 years of experience primarily in the technical and service aspects of power generation systems; diesel, gaseous, and biogas. Assistance with the selection, application, and operation of generation systems.

Consultants

Wilcox Professional Services, LLC

Dana M. Kirk

111 W. Edgewood Blvd, Suite 7 Lansing MI 48911

Tel: (517) 882-4359 Fax (517) 882-5137 Email dana.kirk@wilcox.us WebSite www.wilcox.com

Year Established: 1968 # of Farm Projects: 1 # of Biogas Projects: 1

Wilcox provides consulting, design, and construction services for agricultural waste management systems. We have worked with numerous landowners to assist in procuring Environmental Quality Incentives Program (EQIP) funding and other cost share incentives that are available through the United States Department of Agriculture-Natural Resources Conservation Service.

Developers

A.O. Smith Engineered Storage Products Company

Dave Friederick			Tel: (815) 756-1551	Year Established: 1951
345 Harvestore Drive			Fax (815) 756-1659	# of Farm Projects: 17
DeKalb	IL	60115	Email dfriederick@aosmith.com	# of Biogas Projects: 53
			WebSite <u>http://www.slurrystore.com</u>	

A.O. Smith performs feasibility assessments, and designs and installs biogas systems. A.O. Smith has designed biogas systems for 7 farms in the U.S. and 10 farms in Europe. Examples include: 1) Huntington Dairy, a 600 cow dairy in Cooperstown, NY; and 2) University of Florida, a 500 cow dairy in Gainesville, FL.

ACTIVA BioGreen, Inc.

Hyo Lee One Tiffany Pointe, Suite 100 Bloomingdale 60108 IL

Tel: (630) 238-3111 Fax (630) 238-3151 Email hyo.lee@activasns.com Year Established: 2003 # of Farm Projects: N/A # of Biogas Projects: N/A

Year Established: 1990

of Farm Projects: N/A

of Biogas Projects: 100

WebSite www.activasns.com

A new venture company specialized in wastes treatment, using a new concept of far infra-red rays.

ADI	Systems,	Inc.
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Albert A. Cocci 182 Main Street, Unit 6 NH 3079 Salem

WebSite www.adi.ca ADI Systems has been involved in approximately 100 full-scale anaerobic system installations throughout the world. Approximately 50 of these systems treat agri-waste from food-related processing, while the remaining systems treat brewery, beverage, and chemical wastes. Each of these systems involves biogas collection and flaring or utilization (in most cases via burning in a boiler to produce hot water and steam). In several instances, utilization has involved cogeneration.

Note: Listing in this directory does not imply endorsement by EPA.

Tel: (603) 893-2134

Fax (603) 898-3991

Email acocci@adi.ca





Developers

ADI Systems, Inc.

Stephen G. Bliss1133 Regent Street, Suite 300FrederictonNBE3B 3Z2

Tel: (506) 459-3954 Fax (506) 459-3954 Email sgb.@adi.ca WebSite <u>www.adi.ca</u>

Year Established: 1990 # of Farm Projects: N/A # of Biogas Projects: 100

ADI Systems has been involved in approximately 100 full-scale anaerobic system installations throughout the world. Approximately 50 of these systems treat agri-waste from food-related processing, while the remaining systems treat brewery, beverage, and chemical wastes. Each of these systems involves biogas collection and flaring or utilization (in most cases via burning in a boiler to produce hot water and steam). In several instances, utilization has involved cogeneration.

Ag Environmental Solutions

Carl Theunis 2768 Poplar Street Kaukauna WI 54130 Tel: (920) 532-4804 Fax (920) 532-5039 Email aes@athenet.net WebSite <u>aq-env-sol.com</u>

Year Established: 2000 # of Farm Projects: 1 # of Biogas Projects: 1

Ag Environmental Solutions employs a process patented by and licensed to Iowa State Research. Ag Environmental Solutions' Tinedale Project is one of the largest dairy farm biogas systems in the United States with a 2,500-head capacity. The process is a complete mix using thermophilic and mesophilic temperatures enabling the system to produce a Class A bio-solid.

AGAMA BiogasGreg AustinTel: 021-701-3364Year Established: 20009b Bell Crescent Close, Westlake Business ParkFax 021-701-3365# of Farm Projects: 6West Lake, S. Africa7945Email greg.austin@agama.co.za# of Biogas Projects: 18

WebSite www.agama.co.za

AGAMA Biogas is a fully owned subsidiary of AGAMA Energy, a long established and leading consultant to the energy sector with a clear focus on renewable energy and energy efficiency. AGAMA Biogas consults to the waste industry and other stakeholders that generate ongoing 'problem' waste that typically is difficult to manage and/or lands up in landfill sites. As an company focused on quality solutions, we design engineer and implement energy from waste projects. Our three core focus areas are the larger systems pertaining to animal wastes and wastes from the food and beverage industry, on site sanitation for the built environment, and provision of thermal energy to households using a prefabricated biogas digester. Please visit our website www.agama.co.za for further information, and email us with any questions you may have.

AgrEnerg	gy LLC			
Daniel DeBuhr			Tel: (262) 617-1570	Year Established: N/A
S79W16459 W	oods Road		Fax (262) 244-1455	# of Farm Projects: 2
Muskego	WI	53150	Email tes@wi.rr.com	# of Biogas Projects: 2
			WebSite <u>N/A</u>	
Anaerobic Kit si	upplier with t	full turnkev cap	abilities. Project financing capacility as sell.	



Developers

Agri Bio Systems

Richard Vetter, PhD, PAS, ACAN 2333 Tara Drive Elgin IL 60123 Tel: (847) 888-7854 Fax (847) 888-1484 Email r.vetter@sbcglobal.net WebSite N/A

Year Established: 1985 # of Farm Projects: 7 # of Biogas Projects: 7

Agri Bio Systems performs feasibility assessments and designs and installs biogas systems in the United States and abroad. Examples of biogas systems include: 1) Lindstrom Farm: a 50-cow dairy farm in Welch, Minnesota; 2) Leefer Farm, a 1,000cow beef confinement farm in Carbin Carlinville, Illinois; 3) Smith Farm, a 70,000-broiler poultry farm in Princeton, North Carolina; 4) Naser Farm, a 1,000-sow finishing swine farm in Sibley, Iowa; 5) Hamilton Farm, a 450-sow finishing farm and a 120,000-layer poultry farm in Iowa Falls, Iowa; 6) Huntington Dairy, a 300-cow dairy farm in Cooperstown, New York; 7) Cushman Farm, a 600-cow dairy in Franklin, Connecticut; and 8) International Project, Taiwan, Environmental Training Center for Waste Management. Agri Bio Systems also acts as a coordinator on numerous animal waste and food waste projects.

AgriClean, LLC

David Palmer			Tel: (615) 274-9797	Year Established: 2001
2925 Berry Hill Drive			Fax (615) 279-9740	# of Farm Projects: 1
Nashville	ΤN	37204	Email agriclean@agriclean.com	# of Biogas Projects: 4
			WebSite www.agriclean.com	

AgriClean, LLC designs and installs biogas systems in the U.S. and abroad. Although there are a number of waste treatment technologies in its portfolio, AgriClean is a licensee of a patented fixed-film AD system from the University of Florida. Examples of biogas systems include: 1) A fixed-film digester on a swine finishing farm that produces 30,000 animals per year (around 1600 animal units (AU) at steady-state) near Greenville, NC in partnership with the Animal and Poultry Waste Management Center of NC State University; 2) A fixed-film digester and biogas use system on a 400 head (around 560 AU) dairy in Hillsboro, MS in partnership with the Mississippi Alternative Energy Enterprise; 3) A fixed-film digester and biogas use system on a swine farrow-to-finish operation that produces 64,000 animals per year (around 3580 AU at steady-state) in Canada, and; 4) An in-ground ambient temperature earthen digester and biogas use facility on a 4000 head swine nursery farm in Montpelier, MS. AgriClean also acts as a project developer on numerous animal waste and food waste projects, including a biogas plant and piping system at a 1,000 head per day beef processing facility in Mississippi. AgriClean has also designed a unique "power-flush" system (AgriJet Patent Pending) that will reduce the total amount of water used to flush the barns by close to 70%. This means that manure collected from barns is close to 6% solids as opposed to the 0.7% that exists today, making any treatment system significantly more cost-effective.

AgroEnergien Meiners

Burkhard Meiners Brunner Street 18 26316 Varel Germany Tel: +49-4453-98-58-00 Fax +49-4453-98-58-02 Email meiners@agroenergien.de WebSite www.agroenergien.com Year Established: 2000 # of Farm Projects: 16 # of Biogas Projects: 16

Manufacturer and distributor of the self-mixed digester (SMD) biogas system. The SMD uses gas pressure for mixing and has no internal moving parts. A ground sludge separator is optional. For more information do not hesitate to contact us.



Developers

BBI International

Brian Duff 300 Union Blvd., Suite 325 Lakewood CO 80228 Tel: (303) 526-5655 Fax (303) 526-7776 Email bduff@bbibiofuels.com WebSite www.bbibiofuels.com Year Established: 1995 # of Farm Projects: N/A # of Biogas Projects: 6

Leading biofuels and renewable energy consulting firm involved in evaluation, design, and development of renewable energy technology applications. Core expertise includes biomass utilization for the production of fuels, power and chemicals, including anaerobic digestion and biomass gasification.

BioEnergy Solutions

David Albers 200 New Steine Road, Suite 220 Bakersfield CA 93309 Tel: (661) 617-6240 Fax (661) 617-6238 Email N/A WebSite www.bioensol.com Year Established: 1990 # of Farm Projects: 1 # of Biogas Projects: 6

BioEnergy Solution provides the infrastructure necessary to create renewable natural gas from animal waste at our expense, then share revenues from the sale of gas and carbon credits with the farmer or food processor. The result is a minimum 10-year revenue stream for the farmer or food processor. BioEnergy Solutions, based in California's agriculture-rich Central Valley, was founded by dairy farmers who understand the daily challenges farmers face.

BIOFerm Energy Systems

415 Venture Ct. P.O. Box 930277 Verona WI 53593

Sara Williams

Tel: (608) 845-2193 Fax (608) 845-0482 Email swilliams@BIOFerm-ES.com Year Established: 2001 # of Farm Projects: N/A # of Biogas Projects: 30

WebSite www.BIOFerm.ES.com

BIOFerm[™] Energy Systems, a Viessmann Company, is a world leader in the development of dry fermentation renewable energy facilities. BIOFerm[™] designs and constructs anaerobic digestion plants that use unique dry fermentation technology to produce biogas. Biogas can be utilized in a wide array of energy generation applications (heat, electric, fuel). Because organic waste and biomass are the primary inputs, energy is recovered from untapped sources creating carbon neutral energy production and waste management solutions.

Biofuel Industries, a Cogeneration Technologies Company

Monty Goodell, M.B.A.	_	Tel: (512) 220-1498	Year Established: 2001
12615 Jones Rd., Suit	e #209	Fax N/A	# of Farm Projects: 3
Houston	TX 77070	Email info@cogeneration.net	# of Biogas Projects: 5
		WebSite www.AnaerobicDigesters.com 8	k www.Biomethane.c

Biofuel Industries is a turnkey provider (design, build, finance, build, own, operate) of farm energy systems, including Anaerobic Digesters, Biomass Gasification and other "Waste to Energy" and "Waste to Fuel" Technologies.



Developers

Biogas Energy, Inc.

Brian Gannon 4509 Interlake Ave N #222 Seattle WA 98103 Tel: (815) 301-3432 Fax (815) 301-3432 Email info@biogas-energy.com WebSite www.biogas-energy.com Year Established: 2004 # of Farm Projects: 1 # of Biogas Projects: 1

Biogas Energy designs, builds, and operates anaerobic digesters using technology that is running in over 1000 digesters in Europe and North America.

Michael Groth 3900 Harney Street San Diego CA 92110 Tel: (510) 227-9186 Fax N/A Email groth@biogas-nord.com WebSite www.biogasnord-us.com

Year Established: 2000 # of Farm Projects: 155 # of Biogas Projects: 210

BIOGAS NORD is a leading provider of biogas recovery systems. Our team of 200 provides expertise and support in all areas of anaerobic digester technology. From concept development, detailed planning and construction to providing training and service, BIOGAS NORD is able to ensure your success.

Biogas Power		
Shelby Tyne	Tel: +27-31-7811051	Year Established: 2005
Kwazule-Natal	Fax +27-31-7811981	# of Farm Projects: N/A
South Africa	Email shelby@biogaspower.co.za	# of Biogas Projects: 1
	WebSite www.biogaspower.co.za	

We are in Kwazulu-Natal, South Africa. We do Projects in South Africa as well as other parts of the continent. Being innovitave leaders in the field we design and construct the cheapest and most cost effective biogas plants in the world. So much so that it would be cheaper for an interested party from the USA to import our digesters and CHP plants and our expertise than it would be for an American Firm to design and construct one. We have done Farm digesters, and are consulting on a city project at the moment. We also fully utilise the methane produced in the farm project and bottle it and run tractors and utility vehicles on excess methane. We have constructed the cheapest commercial biogas plant on the planet using boiler litter.

Biothane			
		Tel: (856) 541-3500	Year Established: 1987
2500 Broadway		Fax N/A	# of Farm Projects: 24
Camden	NJ 08104	Email sales@biothane.com	# of Biogas Projects: 25
		WebSite www.biothane.com	

Biothane specializes in biological treatment of industrial wastewater, and designs and builds anaerobic digesters for livestock manure. Biothane worked with E3 BioFuels, LLC to develop an integrated cattle manure management/ethanol project in Mead, Nebraska that is expected to revolutionize ethanol production by virtually eliminating the need for fossil fuels. Biothane designed a nutrient recovery that separates the effluent waste stream into two separate streams, one high in solids and phosphorous, which is well-suited for composting, and the other low in solids and high in nitrogen, which will be sent to an ammonia stripping column, with aqueous ammonia as a final product.



Developers

BioWaste Energy, Inc.

Zia Khan P.O. Box 8520 Stockton CA 95208 Tel: (209) 465-0296 Fax (209) 465-1605 Email ziakhan@pacbell.net WebSite home.pacbell.net/ziakhan Year Established: 1973 # of Farm Projects: N/A # of Biogas Projects: N/A

BioWaste Energy, Inc. and its predecessors have provided quality services to industries and municipalities since 1972 and have completed more than 300 power generation projects in the United States and abroad. The company develops and finances zero discharge projects utilizing anaerobic technology. These projects treat solid and liquid waste and produce saleable products, including electricity generated from methane, liquid fertilizer, CO2, soil amendments, and recycled potable water. These facilities provide zero solid and liquid discharge. The company offers a full range of services covering all phases of project development from planning, feasibility studies, engineering design, equipment and systems supply, and construction and installation to start-up and operations.

Biowatt-U.S., LLC

Kirk Akin 4644 South Warner Road Carson City MI 48811 Tel: (989) 584-6241 Fax (989) 584-6305 Email kakin@midmich.net WebSite www.biowatt.de

Year Established: 2003 # of Farm Projects: 16 # of Biogas Projects: 23

Biowatt-U.S. will plan and design your complete biogas project including: Design, engineering, permits, licensing, manufacturing, construction, all phases of your turn key biogas plant. We include the start-up (including training) and commissioning of the plant, with the end result being an operating turnkey facility.

Bruckner, Inc.

			Tel: (864) 234-7111	Year Established: 1987
10 Patewood Drive	, Patewo	od Plaza	I, Suite 450 Fax (864) 234-5511	# of Farm Projects: N/A
Greenville	SC	29615	Email brucknerusa@brucknerinc.com	# of Biogas Projects: N/A
			WebSite www.brucknerinc.com	

Bruckner is a German corporation that formed the Biotec division in 2006, drawing in experienced staff of smaller German biogas companies, to provide turn-key, biogas systems for agriculture and industry. CEO Dr. Markus Helm has built over 20 biogas plants. Bruckner presently has a 1.4 MW biogas project under construction (2007) in the Czech Republic and others under development in the US and elsewhere. Bruckner biogas systems are based on a highly efficient and reliable design and can use a variety of inputs including: manure; corn; grasses and other crops; food waste; sewage sludge and other wastes or byproducts.

Burns & McDonnell

Jeff Greig		Tel: (816) 333-9400	Year Established: 1898
9400 Ward Parkw	<i>l</i> ay	Fax (816) 333-3690	# of Farm Projects: N/A
Kansas City	MO 64114	Email jgreig@burnsmcd.com	# of Biogas Projects: N/A
		WebSite www.burnsmcd.com	

Burns & McDonnell provides engineering and construction services to a wide variety of clients in the fields of energy, infrastructure, and aviation. Burns & McDonnell specializes in project development assistance encompassing planning, design, and construction of power generation and renewal projects. Burns & McDonnell provides turnkey development, financing, design, and construction of anaerobic digester and generation projects.



Developers

California Power Partners, Inc.

Tom Moore 8525 Arjons Drive, Suite I San Diego CA 92126 Tel: (858) 271-5500 Fax (858) 271-5510 Email tomm@calpwr.com WebSite www.calpwr.com

Year Established: 1996 # of Farm Projects: 2 # of Biogas Projects: 8

Calpwr is a total turn-key provider of services to the distributed generation and cogeneration industry. Our services include financial and technical analysis, engineering, equipment supply, project management, construction, financing, O&M, etc.

Canada Composting, Inc.

Kevin Matthews 390 Davis Drive, Suite 301, Newmarket Ontario, Canada L37 7T8 Tel: (905) 830-1160 Fax (905) 830-0416 Email ccikevin@attglobal.net WebSite www.canadacomposting.com

Year Established: 1995 # of Farm Projects: N/A # of Biogas Projects: 2

Canada Composting Inc. is a private company that holds the exclusive rights to the BTA-Process throughout Canada and the United States. The BTA-Process technology employs anaerobic digestion for the production of biogas and compost from organic waste.

Cargill, Inc.

Jay Ritzen 12700 Whitewater Drive Minnetonka MN 55343 Tel: (800) 590-5581 Fax (952) 984-3475 Email cef@cargill.com WebSite www.cargillcarbon.com Year Established: 2005 # of Farm Projects: 22 # of Biogas Projects: N/A

Cargill Environmental Finance (CEF), a wholly-owned subsidiary of Cargill, Inc., innovators of the BioFactory[™], specializes in complete project development for emission reduction, waste to energy, "green" products, and operational synergies in the food and agriculture sectors. Our custom end-to-end solution set approach creates a holistic and enduring enterprise for our clients.

Chevron E	nergy Solutio	ons	
Alana O'Connell R	legg	Tel: (415) 733-4668	Year Established: 1997
345 California Stre	et	Fax (415) 733-4961	# of Farm Projects: N/A
San Francisco	CA 94104	Email cesfeedb@chevron.com	# of Biogas Projects: 2
		WebSite www.chevronenergy.com	

Chevron Energy Solutions' provides public intuitions and businesses with environmentally sound projects that increase energy efficiency, reduce energy costs and ensure reliable, high-quality power for critical operations. The company employs proven technologies to meet customers' specific needs. Its parent, Chevron Corporation, is investing across the energy spectrum to develop energy sources for future generations by expanding the capabilities of alternative and renewable energy technologies. Chevron spent about \$2 billion on alternative and renewable energy development between 2002 and 2006, and expects to spend more than \$2.5 billion on this between 2007 and 2009. For more information, please visit www.chevronenergy.com and www.chevron.com.



Developers

DMK Ingerieria, S.L.

Daniel Morris Kraut C/ Gutiérrez Herrero 52 Avilés - Asturias Spain Tel: +34 98-555-1833 Fax +34 98-551-1060 Email krautdm@dmkingenieria.es WebSite www.dmkingenieria.es

Year Established: 2006 # of Farm Projects: 4 # of Biogas Projects: 10

DMK Ingeniería, S.L. is an Environmental Engineering Company located in Northern Spain dedicated to the development of Biogas, Biodiesel and other Bioenergy Projects in Europe, Latin America and North America. DMK Ingenieria, S.L. is active in European Projects, and is interested in collaborating with North American Companies interested in joint collaboration projects.

EA Engineering, Science, and Technology

Robert Newman		Tel: (410) 771-4950	Year Established: 1973
15 Loveton Circle		Fax (410) 771-4204	# of Farm Projects: 20
Sparks	MD 21152	Email rnewman@eaest.com	# of Biogas Projects: 100
		WebSite www.eaest.com	

EA Engineering, Science, and Technology is a full service environmental consulting firm with offices nationwide. In addition to providing multimedia consulting services, EA has designed and built several large scale biogas projects (i.e., conceptualization, design, building), primarily at meat-processing facilities.

ECOCORP

Dr. John Ingers	on	Tel: (703) 979-4999	Year Established: 1998	
1211 South Ead	ds Street	Fax N/A	# of Farm Projects: 3	
Arlington	VA 22202	Email jginersoll@ecocorp.com	# of Biogas Projects: 15	
		WebSite www.ecocorp.com		

ECOCORP has extensive, international experience with the design and implementation of biogas facilities and the production of bio methane as a renewable, alternative fuel. Wet or dry as well as mesophilic or thermophilic anaerobic digestion processes are offered. Biogas upgrading to pipeline quality natural gas, carbon dioxide sequestration, organic fertilizer processing, and waste water treatment are also integral parts of the ECOCORP process. Services include project feasibility studies, substrate selection, sampling and testing, permitting, engineering, construction support and/or management, start up support, commissioning, facility operation and management. Additional services include greenhouse gas offset calculations and carbon credit verification. Clients include agricultural and industrial entities as well as communities and municipalities. The ECOCORP team of engineers, scientists and managers has been involved in the realization of over 15 large commercial biogas installations and several smaller ones, has a broad area of expertise, and will tailor the anaerobic digestion process and biogas facility design to meet the unique needs of your project.

Ecovation, Inc.

Eastgate Square, 50	Square	Drive Suite 200
Victor	NY	14564

Tel: (585) 421-3500 Fax N/A Email info@ecovation.com WebSite N/A Year Established: 2000

of Farm Projects: 1

of Biogas Projects: 6

Ecovation, Inc. delivers treatment of organic waste streams using proprietary and patented technologies that create opportunities for renewable energy utilization. Methane gas produced by the company's patented process is used at its treatment sites to operate boilers that heat wastewater for treatment. The methane can also be cleaned and used as a natural gas alternative.



Developers

Energies Direct, LLC

Michael Zander 431 Water Street Sauk City WI 53583

Tel: (608) 644-1112 Fax (608) 643-3234 Email zander@energies-direct.com WebSite www.energies-direct.com

Year Established: 2007 # of Farm Projects: 4 # of Biogas Projects: 4

After building four anaerobic digesters, Michael Zander partnered with Paul Soglin in 2008 in Energies Direct LLC (ED). The company constructs digesters on a turnkey basis for farms and commercial customers as well as investor owned facilities. ED is backed by years of German engineering in the biodigester industry. ED can provide a range of services from feasibility studies to construction and servicing. ED can work with all kinds of organic waste from manure to spoiled bakery goods, from switch grass to thin stillage.

Environmental Developers, Inc.

Herman P. Miller III, PE P.O. Box 2964 Yountville

CA 94599

Fax N/A Email HPMiller3D@aol.com WebSite www.vradenergy.com Year Established: 1995 # of Farm Projects: N/A # of Biogas Projects: 1

Patented technology for smallest, fastest, most efficient BioWaste to energy conversion with pure water and automatic carbon dioxide sequestering attributes; is completely enclosed; requires no waste ponding; and environmentally clean.

Tel: (707) 945-0149

Environmental Energy Company

Dennis Burke 6007 Hill Road NE Olympia WA 98516

Tel: (360) 923-2000 Fax (360) 923-1642 Email dennis@makingenergy.com Year Established: 1991 # of Farm Projects: N/A # of Biogas Projects: N/A

WebSite www.makingenergy.com

Environmental Energy Company, formerly Cyclus Envirosystems (a division of Western Environmental Engineering), solves waste management problems through innovative process technologies. The company developed and patented new anaerobic and flotation processes that allow them to solve waste management problems at significantly less cost and with better capture of components.

Environmental Products & Technology Company (EPTC)

Marvin Mears		Tel: (80
2219 E. Thousand C	Daks Blvd., Suite 373	Fax (81
Thousand Oaks	CA 91362	Email m

05) 492-6865 18) 865-2205 narvin@eptcorp.com

WebSite www.eptcorp.com

Year Established: 1994

of Farm Projects: 3

of Biogas Projects: 4

Environmental Products & Technology Company (EPTC) developed two anaerobic digester projects at Utah State University. Both systems are multi-tank systems with the objective of developing short HRT cycles. Short HRT can reduce both the size of the system and the associated costs. Developed an Aerobic Bio-reactor for the processing of manure into pathogen free, weed seed free, odor free, pasteurized, soil amendment or animal bedding with a process cycle of 72 hours.



Developers

GHD, Inc.

Steve Dvorak P.O. Box 69 Chilton WI

WI 53014

Tel: (920) 849-9797 Fax (920) 849-9160 Email corporate@ghdinc.net WebSite www.ghdinc.net

Year Established: 1985 # of Farm Projects: 30 # of Biogas Projects: 30

GHD provides engineering and system installation experience in the anaerobic digester industry. GHD has twenty-nine (29) operating anaerobic digesters utilizing its patented mixed plug flow digester design in the US and twelve (12) additional digesters under construction.

Hanusa Renewable Energy

Duane Hanusa E 12678 Hwy W Baraboo WI 53913 Tel: (608) 356-5078 Fax N/A Email duanehanusa@gmail.com WebSite N/A Year Established: 2004 # of Farm Projects: N/A # of Biogas Projects: N/A

Worked for 4 years Developing Alliant Energy's Digester Program projects. Developed 4 farm projects. I felt there was a need for projects on smaller farms in the 150-500 cow range. I have designed a system that will cash flow at that level and started my own company.

KEAN Project Engineering, Inc.

Kirk Nadeau			Tel: (207) 225-3688	Year Established: 2007
P.O. Box 303			Fax N/A	# of Farm Projects: N/A
Turner	ME	04282	Email knadeau@keanengineering.com	# of Biogas Projects: N/A
			WebSite <u>N/A</u>	

KEAN Project Engineering is a New England based firm specializing in Project Development, Project Management, Project Engineering and Maintenance Engineering. The company is actively developing AgEnergy and Wind Energy projects in New England.

Lock Four

Stacy Gettier			Tel: (804) 834-8317	Y
P.O. Box 474			Fax N/A	#
Waverly	VA	23890	Email swg@erols.com	#
			WebSite <u>N/A</u>	

Year Established: 1991 # of Farm Projects: 4 # of Biogas Projects: 4

Lock Four performs feasibility assessments, and designs and installs biogas systems. Examples include: Barham Farm, a 4,000 sow farrow-to-wean farm in Zebulon, NC; 2) Apex Pork, an 8,600 head finishing swine farm in Rio, IL; 3) Boland Farm, a 2,000 head nursery swine farm in Williamsburg, IA; and 4) a 2,800 head farrow-to-feeding swine farm in South Boston, VA.

Micro-Bac InternationalStephen R. HardenTel: (512) 310-9000Year Established:

3200 N. IH 35 Round Rock TX 78681-2410 Tel: (512) 310-9000 Fax (512) 310-8800 Email mail@micro-bac.com WebSite www.Micro-Bac.com Year Established: 1979 # of Farm Projects: 2 # of Biogas Projects: 2

We are a Biotechnology company specializing in microbial solutions that biodegrade hydrocarbon contaminants.



Developers

Microgy, Inc.

Michael Hvisdos One Cate Street, 4th Floor Portsmouth NH 60523 Tel: (603) 431-1780 Fax (603) 431-2650 Email mhvisdos@microgy.com WebSite www.environmentalpower.com Year Established: 1982 # of Farm Projects: N/A # of Biogas Projects: N/A

Microgy is a wholly owned subsidiary of Environmental Power Corporation. Microgy develops, owns and operates large-scale biogas facilities which can cost-effectively and reliably produce clean, renewable gas from agriculture and food industry wastes while simultaneously creating marketable carbon offset credits. Microgy's facilities produce biogas which can be used for a variety of applications: combusted in a generator to create power, used as is to offset fossil fuels, or cleaned to natural gas standards for pipeline interconnection and sale as renewable natural gas.

Millennium Power Group

Bill Meyer	Tel: (808) 938-2439	Year Established: 2003
PO Box 180247	Fax (915) 990-8470	# of Farm Projects: 1
Hawaii National Park HI 96718	Email N/A	# of Biogas Projects: 1
	WebSite <u>N/A</u>	

MPG integrates renewable energy technologies to create a renewable energy system appropriate to each customer's particular electrical power needs. MPG's products and services cover the analysis, development, manufacture, integration, installation, operation, service and marketing of complete renewable energy systems. MPG renewable energy system components include advanced tidal, wave, hydro, OTEC, solar, wind, bio-diesel, biomass, anaerobic digestion, geothermal, thermal electric generation, hydrogen generation and hydrogen fuel cell technology.

MWK Biogas North America Corp.

Sylke (Silka) Chesterfi	eld		Tel: (518) 283-1287	Year Established: 2007
32 Clearview Terrace			Fax (518) 283-1287	# of Farm Projects: N/A
Rensselaer	NY	12144	Email chesterfield@MWK-biogas.com	# of Biogas Projects: N/A
			WebSite www.MWK-biogas.com	

MWK specializes in highly efficient and reliable mixed-substrate anaerobic digesters that employ proven technology and extensive experience to maximize quantity and quality of methane production. MWK biogas systems offer the option of using various and variable combinations of organic waste inputs, the availability of remote process monitoring and controls, ongoing biological consultation, and safety standards that exceed European regulations. MWK develops, plans, and designs the systems, then partners with local resources to facilitate the system's construction and equipment installation. Systems are tailored to the owner's needs with a focus on maximizing returns while minimizing costs.

National Methane

William J. Lingo, Sr.		Tel: (937) 226-0340	Year Established: 1975
1823 Leo Street - Suite 100		Fax (937) 226-0340	# of Farm Projects: 3
Dayton OH 45404		Email bilingo5@netzero.com # of Biogas Pro	
		WebSite N/A	

Consult, design and install anaerobic digester systems for all livestock operations, fruit orchards and the waste pulp industry of fruit orchards. We take pride in knowing our patented process is the most profitable and has the quickest payback of all Anaerobic digesters.



Developers

New Vista Energy, Inc.

Thomas Seymour 7 Murrlin Drive Delmar NY 12054 Tel: (518) 528-3717 Fax (518) 475-1749 Email tseymour@newvistaenergy.com WebSite www.newvistaenergy.com

Year Established: 2008 # of Farm Projects: 1 # of Biogas Projects: 1

Specializing in small to medium scale system development, research, and education.

Orgo Syste	ems, I	nc.		
Mayyar Irani			Tel: (570) 374-4402	Year Established: 1998
16 White Block			Fax (570) 374-0487	# of Farm Projects: 1
Selingsgrove	PA	17870	Email mayyar@orgosystems.com	# of Biogas Projects: 1
			WebSite orgosystems.com	

Orgo Systems farm project is a 1,100 farrow-to-finish hog operation with a 4,000-hog capacity. The 24-kW engine currently supplies electricity to the barn. Orgo Systems designed this operational prototype that produces electricity, reduces odors, and separates solids for better handling of waste. Currently, Orgo Systems is working on plans for a second-generation digester system that will digest, separate, compost, and aerate for total nutrient management.

PlanET Biogas Solutions

Clare Riepma, P.E. 26 Hiscott St. Ste. 201, St. Catharines Ontario Canada L24 IC6 Tel: (905) 935-1969 Fax (905) 935-7878 Email info@planet-biogas.ca WebSite www.planet-biogas.ca Year Established: 2006 # of Farm Projects: 9 # of Biogas Projects: 20

Our services include project feasibility screening and economic analysis; permits & approvals; system design and cost estimating; construction management; and post-commissioning technical and maintenance support of the equipment.

Positive Energy Alternatives, LLC

Delroy Leslie		Tel: (715) 664-6162	Year Established: 2004
P.O. Box 11		Fax (715) 232-8824	# of Farm Projects: N/A
Menomonie	WI 54751	Email info@posengalt.com	# of Biogas Projects: N/A
		WebSite www.posengalt.com	

Determine Biogas Supply; Scope out the Project; Conduct Feasibility Analysis; Determine the Digester Type; Select Equipment; Create a Financial Pro Forma; Negotiate the Utility Agreement; Obtain Environmental and Site Permits; Gain Regulatory Approval; Assist in the Research of Financing; Contract with Engineering, Construction, and Equipment Supply Firms; Supervise the construction of the digester; Identify potential customers for Mulch & Fertilizer; and provide Equipment Maintenance.



Developers

Pro-Act Microbial, Inc.

Dr. Lin P.O. Box 345 Warren RI 028

02885

Tel: (401) 245-7004 Fax Email clin@proactmicrobial.com WebSite www.proactmicrobial.com Year Established: 1999 # of Farm Projects: 1 # of Biogas Projects: 100+

Pro-Act Microbial is a developer of anaerobic digesters for small farms. The digester is designed for comprehensive manure treatment to enhance fertilizer value, reduce odor, and collect biogas for on-farm use. In addition, Pro-Act provides afterinstallation services for digester owners and developers to trouble shoot digester problems for a more stable and/or enhanced gas production through its line of custom microbes and other products.

R. M. Services & Associates

Robert M. Service		Tel: (800) 873-0679	Year Established: 1973
110 East Bremer Aver	nue, Suite A	Fax (319) 352-5765	# of Farm Projects: N/A
Waverly	IA 50677	Email rmsa@mchsi.com	# of Biogas Projects: 1
		WebSite www.yourenergyoptions.com	

Energy consulting and product development focused on electric power plant development (portable & stationary 70-700 Kw) and on hot water heating system development, all using low cost and ag waste fuels. Fuel conversions, audits, fuel surveys, arbitration/mediation technical support, and community development planning. Community development and community energy projects. Industry research reports.

RCM International

Angie McEliece		Tel: (510) 834-4568	Year Established: 1982
P.O. Box 4716		Fax (510) 834-4529	# of Farm Projects: 49
Berkeley	CA 94704	Email amceliece@rcmdigesters.com	# of Biogas Projects: 50
		WebSite www.rcminternationalllc.com	

RCM International LLC has designed over 50 farm-scale biogas projects. Examples include: Schrack Farms, a dairy farm in Pennsylvania with a plug flow digester and extensive waste heat recovery from the genset; Patterson Dairy, a complete mix digester in New York for dairy manure and food-waste; Castelanelli Dairy, an ambient temperature Covered Lagoon in California; Wyoming Premium Farms, a complete mix digester for Swine waste in Wyoming; and a complete mix digester for beef feeder manure and ethanol stillage located at the E3 Biofuels ethanol facility in Mead, Nebraska.

RealEnergy, LLC

Kevin Best 6712 Washington Street Yountville CA 94599 Tel: (707) 944-2400 Fax (707) 944-2420 Email kbest@realenergy.com WebSite www.realenergy.com Year Established: 2000 # of Farm Projects: 30 # of Biogas Projects: 30

RealEnergy, LLC has developed, built, owned, and operated more small, clean and green onsite power plants than any other independent power producer or distributed energy developer in North America. The management team has developed 43 discrete in-city power plants with electric grid interconnections, and is laser focused on investing in clean, distributed and renewable power plants, including biogas plants and profiting at exit.



Developers

Resource Development Associates

Phillip D. Lusk 108 E. Missouri Avenue Pierre SD 57501 Tel: (605) 945-1311 Fax (605) 945-0194 Email plusk@primecapture.com WebSite N/A

Year Established: 2000 # of Farm Projects: N/A # of Biogas Projects: N/A

The proposed Resource Development Associates biorefinery includes a locally managed system comprised of a 20-million gallon/year ethanol plant that uses local crops and an adjoining 28,000-head confined cattle feedlot connected to an anaerobic digester. Independent contractors will run "backgrounding" operations with additional 13,000- to 15,000-head of cattle. The complex will produce fuel-grade ethanol, finished cattle, biogas, and biofertilizers. The biorefinery is economically attractive, with an estimated internal rate of return of approximately 30 percent, achievable through significant economies of scope. A commercial demonstration of this referenced biorefinery is undergoing final detailed engineering and project development at a site located outside of Pierre, South Dakota. Construction is scheduled to commence late spring of 2002 and start-up is scheduled for the summer of 2003.

Rose Energy Discovery, Inc.

Joseph SnodgrassTel: (765) 676-5117Year Established: 2004210 South Main StreetFax (765) 663-0706# of Farm Projects: 15AdvanceIN46102Email jody@roseenergy.com# of Biogas Projects: 25WebSitehttp://www.roseenergy.com

Rose Energy has licensed the "ET Process" for its implementation in the United States. This process utilizes bio-augmented bacteria in order to produce a much higher content biogas, typically in less than 5 days, containing virtually no hydrogen sulfide. Rose Energy is a developer providing engineering and design, construction, operation and, if needed, financing.

Rosenberg International, Inc.

Peter Rosenberg, engineer		Tel: (450) 533-4183	Year Established: 1976
2824 N.E. 33rd court	#10	Fax N/A	# of Farm Projects: several
Fort Lauderdale	FL 33306	Email peter.rosenberg@sympatico.ca	# of Biogas Projects: several
		WebSite Soon in America	

Rosenberg Int. Inc. is an engineering firm that has a 30 years existence. It has developed structures and engineering solutions worldwide. Was the first environmental firm specialized in pollution issues. This firm has developed a unique technology that not only transforms manure into fuel but also uses the residues into liquid and solid fertilizers that can be sold on the market. HIGH quality FERTILIZERS!!

Sansuy

Kazu Ohno		Tel: 55-11-2139-2602	Year Established: 1966
Rod. Regis Bittencourt, s/n-Km280		Fax 55-11-2139-2557	# of Farm Projects: N/A
Embu, Sao Paulo, 06830-900 Brazil		Email kazuohno@sansuy.com	# of Biogas Projects: 700

WebSite www.sansuy.com

Sansuy is a Brazilian public company and has established itself as the leading PVC manufacturer in Latin America. Sansuy's PVC flexible laminates have been used in various business segments such as agriculture, civil construction, transportation, visual communication, automotive, basic sanitation, etc. However, Sansuy has recently achieved a tremendous success in environmental solution business while securing several international patents on its biodigester. Since 2004, Sansuy has already posted approximately US\$20 million sales and has installed approximately 700 units of biodigester in various sizes covering 2.5 million m2 in Latin America. Although not every unit is implemented for the Kyoto Protocol CDM projects, Sansuy's biodigesters have been widely implemented for CDM projects and well-recognized among CMD project owners, developers and financiers.



Developers

Schmack BioEnergy, LLC

Mark Suchan 7624 Riverview Road Cleveland OH 44131 Tel: (216) 986-9999 x150 Fax (216) 986-9999 Email msuchan@schmackbioenergy.com WebSite www.schmackbioenergy.com

Year Established: 2005 # of Farm Projects: 161 # of Biogas Projects: 204

Schmack BioEnergy has partnered with the premier European biogas company, Schmack Biogas, and is dedicated to the development of sustainable green power and reliable renewable energy as a solution to environmental, economic and energy challenges facing the world today. SBE employs the best available AD technology existing in the world today to produce biogas from organic residuals.

Sustainable Technologies

Ernesto Montenero 1800 Orion Street Suite 101 Alameda CA 94501 Tel: (510) 523-1122 Fax (510) 523-1123 Email ernesto@sustainabletech.cc WebSite www.sustech.cc

Year Established: 1999 # of Farm Projects: 1 # of Biogas Projects: 1

Sustainable Technologies (ST) is a small minority owned environmental engineering and construction Company. ST designs and builds Digester, remediation systems and Solar electric systems for business.

Synagro

Paul Sellew 1800 Bering Drive, Suite 1000 Houston TX 77057 Tel: 978-371-0501 Fax (713) 369-1750 Email psellew@synagro.com WebSite <u>www.synagro.com</u> Year Established: 1987 # of Farm Projects: 1 # of Biogas Projects: 6

Synagro operates at over 1,000 wastewater treatment plants throughout the country, providing operations and residuals management services. Many of these wastewater treatment plants employ anaerobic digestion. The company is using this experience to expand into the agribusiness market with its first operational facility, which was designed and built in Chino, California. This digester is designed for 225 wet tons of fresh cow manure per day. It employs dewatering and onsite cogeneration using Capstone Microturbines.

Titan Energy Development, Inc.

Steven B. Hurt		
461 Burroughs		
Detroit	MI	48202

Tel: (313) 831-1979 Fax (313) 831-1989 Email shurt@titanenergy.com WebSite titanenergy.com Year Established: 2004 # of Farm Projects: N/A # of Biogas Projects: 2

Specialize in the development of renewable energy derived from methane gas. We will design and build a fully functional system at little or no cost to you.

UEM, Inc.

Hemang Shan		
1818 S Australian Ave	nue, S	Suite 200
West Palm Beach	FL	33409

 Tel:
 561-683-2273
 Year Established:
 1990

 Fax
 561-683-2996
 # of Farm Projects:
 many

 Email
 hshah@uemgroup.com, h_shah@be
 # of Biogas Projects:
 50

 WebSite
 www.uemgroup.com
 # of Biogas Projects:
 50

Financing and Turnkey Development of Anaerobic Digester and Biogas Recovery and Power Systems for Animal and Farm Wastes and other Organic Wastes from industries.



Developers

Valley Air Solutions, LLC

Robert Patrick P.O. Box 4517 Stockton

CA 95204

Tel: (877) 430-7600 Fax (877) 430-7600 Email robert.patrick@valleyairsolutions.co # of Biogas Projects: N/A WebSite www.valleyairsolutions.com

Year Established: N/A # of Farm Projects: N/A

Valley Air Solutions offers expertise and solutions to dairy waste incuagement problems and assistance with revenue-producing opportunities. We design and build digesters, anaerobic lagoons, and biogas cleaning systems.

Waste Energy Solutions, LLC

Stephen Dominick 205 McKnight Park Drive Pittsburgh PA 15237

Tel: 630-377-0662 Year Established: 2003 Fax (630) 377-2444 # of Farm Projects: N/A Email sdominick@fromwastetoenergy.com # of Biogas Projects: N/A WebSite www.fromwastetoenergy.com

Waste Energy Solutions, Inc is a turnkey supplier of community sized anaerobic digester plants. We are a Danish anaerobic digester design licensee. We promote thermophilic operation with co-digestion. We encourage CHP and other best uses for the biogas produced.

Williams Engineering Associates

Doug Williams 18039 Blue Winged Court Woodland CA 95695

Tel: (530) 669-7236 Fax (530) 669-7982 Email wmsengr@thegrid.net WebSite N/A

Year Established: 1985 # of Farm Projects: 10 # of Biogas Projects: 10

Williams Engineering Associates has been in the business of design, feasibility, research and supervision of start-up of anaerobic digesters for on-farm operation for 23 years. Doug Williams, principle and owner was a professor of BioResource and Agricultural Engineering for 22 years at Cal Poly.

Zoladz Const	truction		
Brian Swiatek		Tel: (716) 937-6575	Year Established: 1981
13600 Railroad Street		Fax (716) 937-6369	# of Farm Projects: N/A
Alden	NY 14004	Email bswiatek@zoladzconstruction.com	# of Biogas Projects: N/A
		WebSite www.zoladconstruction.com	

Landfill construction.

Energy Service Providers

Alliant Energy

			Tel: (608)) 742-0888	Year Established: 1998
2777 Columbia Drive			Fax (608) 742-0890	# of Farm Projects: 3
Portage	WI	53901-9483	Email cus	stomercare@alliantenergy.com	# of Biogas Projects: 6
			WebSite	www.alliantenergy.com	

Headquartered in Madison, Wisconsin, Alliant Energy Corporation is a growing energy-service provider with operations in the United States and abroad. The company provides electric, natural gas, water, and steam services to nearly three million customers worldwide.



AgRefresh

Jeffrey C. Frost P.O. Box 843 Burlington VТ

05402

Tel: (802) 859-0099 Fax (815) 291-1011 Email jfrost@agrefresh.org WebSite www.agrefresh.org Year Established: 2003 # of Farm Projects: 15 # of Biogas Projects: 15

AgRefresh is a carbon offset broker exclusively for farm energy systems. We also have a Section 9006 application success track record for grant writing for these projects.

Mitchell LeMasters 2120 West End Avenue Nashville TN 37203

Tel: (630) 308-1910 Fax (615) 341-3737 Email mitchell.lemasters@cat.com WebSite www.catpowerfinance.com

Year Established: 1981 # of Farm Projects: 5 # of Biogas Projects: 20+

Financial Services for renewable Energy projects utilizing Caterpillar power generation equipment.

Caterpillar Financial Services Corporation

Mitchell LeMasters		Tel: (615) 341-3737	Year Establishe
2120 West End Ave.		Fax (630) 308-1910	# of Farm Proje
Nashville	TN 37203	Email mitchell.lemasters@cat.com	# of Biogas Pro
		WebSite <u>http://finance.cat.com/cda/lay</u>	yout?m=97223&x=7

Year Established: N/A # of Farm Projects: N/A # of Biogas Projects: N/A

Financial and insurance services provider.

CBL Lending

Gordon Ledingham 841 Bishop St Ste 1516 Honolulu HI 96813

Tel: (808) 585-7337 Fax (808) 585-7447 Email gledingham@cbllending.com WebSite www.cbllending.com

Year Established: 1999 # of Farm Projects: 6 # of Biogas Projects: 2

Commercial and Business Lending (Hawaii Lending Specialists, LLC) is active in the Western US but covers all 50 states and US territories. We specialize in long-term asset finance utilizing conventional, USDA Rural Development, SBA 7a/504, and other loan programs, as well as tax credits. Our special interest areas are: Renewable Energy and Ag. As a full service advisor/broker, we provide loan origination, underwriting, and closing on business and commercial loans. Other industries/collateral financed includes industrial, agricultural, tourism & entertainment, C&I, retail/office, hospitality, and marine & aircraft. We work with national and regional lenders and investment banks, as well as specialty lenders, community banks, insurance companies.





Financing

Davenport Finance Company

E. Baker Davenport 11 South 12th Street, Suite 200 Richmond VA 23219 Tel: (804) 323-6061Year Established: 1999Fax (703) 832-0773# of Farm Projects: N/AEmail baker.davenport@davenportfinance.# of Biogas Projects: N/AWebSitewww.davenportfinance.com

Davenport Finance Company is an equipment leasing company specializing in the financing of energy projects. DFC delivers innovative and flexible financial products and structures to serve the needs of end-use customers and help them improve productivity and cash flow. Targeted projects include BOOM (Build, Own, Operate, Maintain) transactions for chilled water, steam, onsite power, and water treatment facilities as well as Power Purchase Agreements for landfill gas, biomass, solar, wind and geothermal. Depending upon the scope of work, terms up to 30 years may be available.

Edgewood Holdings

Durrell Mack 457 Cider Mill Road Cornwall VT 05753 Tel: (802) 462-3483 Fax (802) 462-3217 Email mack@edgewoodholdings.com WebSite edgewoodholdings.com Year Established: N/A # of Farm Projects: N/A # of Biogas Projects: N/A

Edgewood is a private equity firm that finances biogas projects.

Environmental Credit Corp.

Sharad Deshpande 1070 Cleveland Avenue Batavia IL 60510 Tel: (630) 326-9299 Fax N/A Email sharaddesh@hotmail.com WebSite <u>http://envcc.com</u> Year Established: 2005 # of Farm Projects: 50+ # of Biogas Projects: 50+

ECC partners with farmers to build and operate lagoon covers and biogas systems to reduce greenhouse gas emissions and create renewable energy. By covering the existing lagoons, two sources of revenues are created-renewable energy and carbon credits. In most cases, ECC pays for installation and operation of the system.

First Capital Risk Management, LLC

Will Babler		_	Tel: (815) 777-1129	Year Established: 1989
11380 Dandar Street			Fax (815) 777-3308	# of Farm Projects: 3
Galena	IL	61036	Email wbabler@firstcapitalrm.com	# of Biogas Projects: 3
			WebSite www.firstcapitoIrm.com	

First Capitol is a commodity trading and risk management firm that specializes in agricultural, energy and environmental commodities. First Capitol provides its clients with the opportunity to profit by participating in the greenhouse gas emissions trading market. As a registered aggregator of the Chicago Climate Exchange (CCX), First Capitol facilitates the verification, management and trading of carbon offset credits.

Integrys Energy Services, Inc. Ted Calvin Tel: (713) 580-4943 Year Established: 2008 1001 Fannin, Suite 1150 Fax (713) 358-0499 # of Farm Projects: N/A Houston TX 77002 Email eacalvin@integrysenergy.com # of Biogas Projects: N/A WebSite N/A

Integrys Energy Services, Inc. provides project financing for renewable and clean energy projects. We assist developers in marketing and obtaining off take of electricity, RECs, and pipeline quality gas.



Financing

Meridian Capital Investments, Inc.

Gino Hellizer 10220 River Road Potomac MD

MD 20854

Tel: (301) 983-5000 Fax (301) 983-9012 Email info@meridianinvestments.com WebSite www.meridianinvestments.com Year Established: 1988 # of Farm Projects: N/A # of Biogas Projects: 2

Meridian Investments is the largest provider of tax credit equity in America. Since 1992, the company has underwritten over \$8 billion worth of federal tax credits. Meridian Investments has experience in all major federal tax credit programs, including sections 42, 29, and 45. The company provides information on selling credits to clients with plants that currently generate or will be generating a qualifying fuel under section 29 or 45 of the IRC.

NativeEnergy, Inc.

Brian KillKelley 30 Kimball Avenue, Suite 301 S. Burlington VT 05403 Tel: (802) 861-7707Year Established: 2001Fax (802) 861-7717# of Farm Projects: 6Email brian.killkelley@nativeenergy.com# of Biogas Projects: 1WebSite www.nativeenergy.com

NativeEnergy, Inc. is a U.S. marketer of carbon credits and renewable energy credits. NativeEnergy directly sources from qualified renewable energy projects including wind, farm based anaerobic digesters, and landfill gas, typically under long term forward purchase contracts. The resulting carbon offsets and RECs are sold to business customers and individuals.

Vermont Energy Investment Corporation

Paul Scheckel 244 South Champlain St Burlington VT 5401 Tel: (802) 456-7097 Fax (802) 658-1643 Email scheckel@sover.net WebSite <u>http://www.together.net/~veic/</u>

Year Established: 1989 # of Farm Projects: N/A # of Biogas Projects: N/A

Vermont Energy Investment Corporation (VEIC) focuses on financing programs related to energy efficiency. VEIC is looking for ways to participate with the state of Vermont's project to initiate a farm-based methane digester program.

Manufacturer/Distributor of Covers

COMANCO

Artemas Larry Holmes III 4301 Sterling Commerce Dr. Plant City FL 33566 Tel: (813) 988-8829 Fax (813) 988-8779 Email lholmes@comanco.com Year Established: 1989 # of Farm Projects: 25

of Biogas Projects: 14

WebSite www.comanco.com

COMANCO specializes in the fabrication and installation of geosynthetic membranes associated with covered lagoons and anaerobic digesters an addition to various other waste and wastewater related applications. COMANCO operates from offices located in Florida, California, Louisiana, Nevada and Ohio.



Manufacturer/Distributor of Covers

Dennis Gerber, Consultant

Dennis Gerber 15870 Rose Avenue Los Gatos CA 95030 Tel: (408) 395-9020 Fax (408) 395-9020 Email dhgerber@comcast.net WebSite N/A

Year Established: N/A # of Farm Projects: N/A # of Biogas Projects: N/A

Mr. Gerber designs and installs anaerobic digester covers. His Gas Collecting Floating Cover design, which holds a U.S. Patent, is the de-facto standard for flexible membrane anaerobic digesters.

EC Applic	ations, Inc.		
Christopher For	e	Tel: (714) 921-9848	Year Established: 2005
700 E. Taft Ave,	Suite 3	Fax (866) 475-1225	# of Farm Projects: 12
Orange	CA 92865	Email cfore@biogascovers.com	# of Biogas Projects: 2
		WebSite www.biogascovers.com	

EC Applications, Inc. (ECA) designs, supplies and installs geosynthetic materials (liners and covers) for use in agriculture biogas projects. With our more than 20 years of experience, ECA will deliver quality, service and value to every project.

Engineered Textile Products

J			
Carter Damp		Tel: (800) 222-8001	Year Established: 1983
P.O. Box 7474		Fax (888) 222-8277	# of Farm Projects: 13
Mobile	AL 36670	Email cdamp2@aol.com	# of Biogas Projects: 20
		WebSite www.etpinfo.com	

Engineered Textile Products, Inc. manufactures and distributes lagoon covers. The company manufactured the covers for Martin's Farm, a swine farm with a covered lagoon in South Boston, Virginia, and Palmers Farm, a swine farm with a covered lagoon in Petite Jean Mt., Arkansas.

Environmental Fabrics, Inc.

Dennis Shanklin			Tel: (803) 551-5700	Year Established: 1997
85 Pascon Court			Fax (803) 551-5701	# of Farm Projects: 5
Gaston	SC 29	9053	Email N/A	# of Biogas Projects: 17
			WebSite www.environmentalfabrics.com	

Environmental Fabrics Inc. has manufactured covers for five farms, including: 1) Dowell Ramsey Farm, a swine farm in Nash County, North Carolina; 2) Gold 'N Plump Poultry, a poultry farm in Cold Springs, Minnesota; 3) Pelican Rapids, a farm in Pelican Rapids, Minnesota; 4) Apex Pork, a swine farm in Rio, Illinois; and 5) Barham Farms, a swine farm in Zebulon, North Carolina.

Firestone Building Products Company

William Johnson		-	Tel: (800) 428-4442	Year Established: 1989
575 Congressional Blvd.			Fax (317) 575-7002	# of Farm Projects: N/A
Carmel	IN	46032	Email JohnsonWilliam@firestonebp.com	# of Biogas Projects: N/A
			WebSite www.firestonebpco.com	

Firestone Building Products Company manufactures a variety of EPDM rubber geosynthetic products For use by agriculture. Firestone can recommend a network of independent installers familiar with agricultural installations and Firestone's products. Firestone Building Products Company can advise customers in the selection of a cost effective selection of EPDM rubber geosynthetic products for a number of agricultural uses including biogas recovery.



Manufacturer/Distributor of Covers

Firestone Speciality Products Company

Jeffrey Pankonie			
310 East 96th Street			
Indianapolis	IN	46024	

Tel: (800) 428-4442 Fax (317) 575-7002 Email pankoniejeff@firestonesp.com WebSite www.firestonebpco.com

Year Established: 1987
of Farm Projects: 20
of Biogas Projects: 2

Firestone Specialty Products manufactures a variety of EPDM and RPP geosynthetic products used within the agricultural arena. Firestone Specialty Products group has a well established network of independent installers familiar with agricultural applications throughout North America. Firestone geomembranes are engineered to provide dependable performance in a variety of critical containment applications such as livestock pit and ponds, lagoon covers and digester applications.

GeoPacific Lining

William Wolfe 1300 Dexter Ave., N. #205 Seattle WA 98109 Tel: (206) 284-2378 Fax (206) 283-7068 Email geopacific@cresmont.com WebSite <u>N/A</u> Year Established: 1994 # of Farm Projects: N/A # of Biogas Projects: 2

GeoPacific Lining performs feasibility assessments and consults farms on implementing digester systems, and is in the design phase of developing digesters for 3 farms in the U.S.

Groth Corporation

Curtis Hanzalik 13650 N. Promenade Blvd. Stafford TX 77477
 Tel: (281) 295-6800

 Fax (281) 295-6999

 Email JHart@Prosyssol.com

 WebSite
 www.grothcorp.com

Year Established: 1967 # of Farm Projects: N/A # of Biogas Projects: 500+

Manufacturer of Anaerobic Digester Gas Control Equipment--Cover Equipment, Gas Handling/Safety Equipment, Waste Gas Burners/Flares.

GSE Lining Technology, Inc.

Boyd Ramsey		
19103 Gundle Road		
Houston	ТΧ	77073

Tel: (800) 435-2008 Fax (281) 230-6739 Email marketing@gseworld.com WebSite www.gseworld.com Year Established: 1973 # of Farm Projects: 150+ # of Biogas Projects: 25+

Gundle/SLT Environmental, Inc. (GSE) is a leading manufacturer and marketer of geosynthetic lining products and services with a worldwide presence. For over 30 years, people around the world have looked to GSE products to make their projects easier and better. With an expansive line of geomembranes, geosynthetic clay liners, geonets, geocomposites, nonwoven geotextiles, concrete protection, and replicated grass turf products, GSE continues to develop solutions to meet our customers varying project requirements.



Manufacturer/Distributor of Covers

Industrial & Environmental Concepts, Inc.

Mike Morgan 6009 Chapel Drive Minneapolis MN 55439

Tel: (952) 829-0731 Fax (952) 829-9770 Email mmorgan@ieccovers.com WebSite www.ieccovers.com

Year Established: 1989 # of Farm Projects: 8 # of Biogas Projects: 250

Industrial & Environmental Concepts, Inc. (IEC) produces and installs five types of floating modular covers for ponds and tanks. IEC's patented systems utilize a variety of geomembranes to provide cost-effective solutions to control problems with heat loss, odor, algae growth, and gas production in basins, ponds, lagoons, or tanks.

Layfield Environmental Systems Corporation

1166 Fesler St. Suite B El Cajon CA 92020

Tel: (619) 562-1200 / (800) 377-8404 Fax (619) 562-1150 Email sandiego@layfieldgroup.com

WebSite www.layfieldgroup.com

WebSite www.mpccontainment.com

Year Established: 1978

of Farm Projects: N/A # of Biogas Projects: N/A

of Biogas Projects: 20+

Layfield has provided many years of service to Agriculture with pond liners, covers, baffle systems, and many other unique products.

MPC Cor	ntainment		
Edward Reicin		Tel: (773) 927-4120	Year Established: 1923
4834 South Oa	akley	Fax (773) 650-6028	# of Farm Projects: 50+
Chicago	IL 60609	Email ereic@aol.com	# of Biogas Projects: 20+

MPC Containment designs, fabricates, and installs floating-membrane liner systems, as well as other primary and secondary containment systems. The company also manufactures collapsible storage/pillow tanks for fuel, water, and waste.

Raven Engineered Films

Greg Anderson		Tel: (800) 635-3456	Year Established: 1956
1812 E Ave.		Fax (605) 331-0333	# of Farm Projects: N/A
Sioux Falls	SD 57108	Email greg.anderson@ravenind.com	# of Biogas Projects: N/A
		WebSite <u>http://www.ravenind.com</u>	

Raven Engineered Films manufactures and fabricates polypropylene covers for agricultural, industrial and construction applications. We also manufacture railcar liners for the removal of hazardous waste from contaminated sites. Raven has distributors in all 50 States, Canada and Mexico as well as Europe and Australia.

Reef Industries

Lynn Ciolli P.O. Box 750250 Houston TX 77275

Tel: (800) 231-2417 Fax (713) 507-4295 Email http://www.reefindustries.com WebSite N/A

Year Established: N/A # of Farm Projects: N/A # of Biogas Projects: N/A

Reef Industries manufactures and distributes covers for biogas systems.



Manufacturer/Distributor of Covers

Shand & Jurs, An L&J Technologies Co.

Michael Lanato 5911 Butterfield Road Hillside IL 60162 Tel: (708) 236-6000 Fax (708) 236-6006 Email mlandato@ljtechnologies.com WebSite www.ljtechnologies.com

Year Established: 1922 # of Farm Projects: 5 # of Biogas Projects: 100+

Shand & Jurs Biogas is a manufacturer of anaerobic digester cover and gas stream safety equipment including pressure and vacuum vents, flame arresters, sediment and drip traps, flame trap assemblies and waste gas burners.

Varec Bioga	S		
Regina M. Hanson		Tel: (714) 220-9924	Year Established: 1930
6101 Ball Rd., Suite 2	201	Fax (714) 952-2701	# of Farm Projects: 30+
Cypress	CA 90630	Email rhanson@varec-biogas.com	# of Biogas Projects: 1000+
		WebSite www.varec-biogas.com	

Varec Biogas is the world's leading supplier of gas handling and safety equipment to the Biogas Industry with countless installations in municipal and industrial wastewater treatment plants, and sanitary landfills. The wide range of equipment produced by Varec Biogas includes a comprehensive range of digester cover equipment, inline safety and pressure regulation devices, as well as Varec flare systems, which are unsurpassed in their reliability and flexibility. Varec Biogas has been meeting and exceeding the needs of our customers for over 75 years. With our history of innovation and industry leadership, it is no wonder that people turn to Varec Biogas to for the supply of gas safety equipment in on-farm biogas recovery systems.

Manufacturer/Distributor of Engines

Capstone Turbine Corporation

Rene M. Flores		Tel: (818) 734-5300	Year Established: 1984
21211 Nordhoff Stree	t	Fax (818) 734-5385	# of Farm Projects: >10
Chatsworth	CA 91311	Email rflores@capstoneturbine.com	# of Biogas Projects: >50
		WebSite www.microturbine.com	

Capstone manufactures microturbines that can burn biogas with as little as 35 percent methane content. The currently available biogas model is a 30-kW microturbine that was initially offered for natural gas, propane, oil field waste gas, and diesel. During early 2000, a demonstration test program was conducted with Los Angeles County Sanitation Districts at Puente Hills landfill and at Palmdale wastewater treatment plant. Successful testing during 2000 led to commercial operations at 20 biogas facilities, as of March, 2002, using a total of 117 Capstone microturbines. The Capstone microturbine achieves a combustion efficiency of 99.999 percent. The patented premix combustion system is uniquely designed to reduce emissions of NOx, CO, and hydrocarbons to extremely low levels.

Caterpillar, Inc.

Rob Schueffner			Tel: (309) 578-6376	
PO Box 610; AC6109			Fax (309) 578-7302	;
Mossville	IL	61525	Email schuerd@Cat.com	;
			We have a set of the s	

WebSite <u>www.cat.com/products/</u>

For more than 75 years, Caterpillar, Inc. has been building the world's infrastructure. In partnership with Caterpillar dealers, it is driving sustainable change in every continent. A Fortune 100 company, Caterpillar is the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, and industrial gas turbines. The company is a technological leader in construction, transportation, mining, forestry, energy, logistics, electronics, financing, and electric power generation.

Year Established: 1928 # of Farm Projects: 200 # of Biogas Projects: 50



Manufacturer/Distributor of Engines

CEC Consultants

John Puskar 6907 Brookpark Road Cleveland OH 44129

Tel: (216) 749-2992 Fax (216) 398-8403 Email cec@apk.net WebSite http://www.cec-consultants.com

Year Established: 1986 # of Farm Projects: 2 # of Biogas Projects: 4

CEC is a distributor for Jasper's alternative fuel automotive derivative packaged engine systems. CEC distributed the engine for 2 farm-scale biogas projects.

CGP Resour	ces,	LLC		
Peter J. Gallegos			Tel: (815) 479-9329	Year Established: 1991
4705 Tile Line Road			Fax (815) 477-9681	# of Farm Projects: 33
Crystal Lake	IL	60012	Email gallegospeter@sbcglobal.net	# of Biogas Projects: 80

WebSite www.tedom.com

Production of gas generator sets and cogeneration based on combustion engines. Manufacture of combustion engines for stationary application for natural gas and biogas.

Charles Equipment Company

Bob Conway			Tel: (630) 834-6000	Year Established: 1960
P.O. Box 388			Fax (630) 543-4174	# of Farm Projects: 8
Addison	IL	60101	Email bob.conway@charlesequip	ment.com # of Biogas Projects: 100+
			WebSite www.charlesequipmen	t.com

Charles Equipment Company supplies engines, generator sets, controls, switches and switchgear, and cooling systems for LFGTE projects. It also provides custom design services and furnishes operating cost studies, layouts, and specifications.

Coffman Electrical Equipment

Greg Mulder			Tel: (616) 452-8708	Year Established: 1947
3300 Jefferson SE			Fax (616) 452-1337	# of Farm Projects: 7
Grand Rapids	MI	49548	Email gmulder@steadypower.com	# of Biogas Projects: 7
			WebSite <u>http://www.steadypower.com</u>	

We are a distributor of a Variety of Biogas Generators and Micro-turbines. We are also work as a consultant in directing you to best possible digester design for maximum generation capability. We also offer a variety of gas scrubbing and material Drying systems.

Coffman Geosciences

Laura E. Coffmar	n, R.G.	Tel: (615) 594-8657	Year Established: 2002
2050 East Wayla	Ind	Fax N/A	# of Farm Projects: 3
Springfield	MO 65804	Email lec56mail-GC@yahoo.com	# of Biogas Projects: 4
		WebSite N/A	

Coffman Geosciences provides renewable energy consulting services to agricultural producers, food processors, ethanol developers and other producers of organic waste streams. CG has also patented a novel method for media placement in highrate, suspended growth anaerobic digestion systems. CG also offers small scale, containerized AD systems to waste producers with smaller operations. Other services offered include AD feasibility studies, system planning and project management.



Manufacturer/Distributor of Engines

Curtis Engine & Equipment, Inc.

Tony Jannotta 3920 Vero Road, Suite 1 Baltimore MD 21227-1516 Tel: (240) 472-7766 Fax (240) 209-0776 Email ajannotta@curtisengine.com WebSite www.curtisengine.com

Year Established: 1946 # of Farm Projects: 2 # of Biogas Projects: 8

We sell, service, and maintain bio-gas reciprocating engines; and we develop bio-gas projects on a turn-key basis.

Energy and Power Solutions

Shiva Subramanya			
150 Paularino Avenue			
Costa Mesa	CA	92626	

Tel: (914) 957-1087 Fax (914) 957-1093 Email shivas@energynpower.com WebSite www.energynpower.com

Year Established: 2001 # of Farm Projects: N/A # of Biogas Projects: N/A

Design, construction, installation, financing, operation and maintenance of cogeneration systems. EPS delivers financially compelling solutions to complex energy and power issues. We work with the customer to develop, understand and manage their energy costs and profile. EPS skills in each key element of the total energy picture: energy pricing, delivery and finance; intelligent project development; experienced project installation and commissioning; and comprehensive operations and maintenance, enable us to present a complete energy solution.

FlexEnergy, Inc.

Edan PrabhuTel: (949) 380-489922922 TiaguaFax (949) 380-8407Mission ViejoCA 92692Email edanprabhu@cox.netWebSitewww.flexenergy.com

Year Established: 2001 # of Farm Projects: 1 # of Biogas Projects: 5

FlexEnergy is developing the Flex-Microturbine® to expand the range of biomass-derived gases that can be converted to electricity. Proof-of-concept testing was successful, and several prototype units are currently being built for testing on dairy digester gas, landfill gas, and producer gas from wood and nutshell gasification. Flex-Microturbine accepts gases at atmospheric pressure. This technology will be commercially available in two years.

GE Jenbacher

Garrett Smith, P.E. 499 Nibus Street, Unit B Brea CA 92821 Tel: (503) 203-2695 Fax (866) 417-7513 Email gsmith@weesys.com WebSite <u>N/A</u> Year Established: 1892 # of Farm Projects: 150+ # of Biogas Projects: 250+

GE Jenbacher is a manufacturer of high efficiency reciprocating engine generators in the 300kW to 3000kW range with a wide range of solutions for biogas technologies including a complete containerized package.

Ingersoll Ra	and			
Holly Emerson			Tel: (704) 655-4051	Year Established: 1873
800A Beaty Street			Fax (704) 655-4327	# of Farm Projects: N/A
Davidson	NC	28036	Email holly_emerson@irco.com	# of Biogas Projects: N/A
			WebSite http://energy.ingersollrand.com	

Ingersoll-Rand EcoWorks microturbine systems turn digester gas into economical electricity and useful hot water. These compact, integrated cogeneration packages substantially reduce NOx emissions and odors associated with flaring. IR's unique solution includes a fuel conditioner to compress and clean the biogas for reliable long-term operation at very low O&M costs.



Manufacturer/Distributor of Engines

Inland Power Group

Jon Going 210 Alexandra Way Carol Stream IL 60197-5942 Tel: (262) 285-5562 Fax N/A Email jgoing@inlandpowergroup.com WebSite www.inlandpowergroup.com

Year Established: 1958 # of Farm Projects: 2 # of Biogas Projects: 20

Inland Power Group is the Midwest Distributor of GE Jenbacher gas engines. Jenbacher products, ranging from 330 kWe to 3 MWe, are highly developed and tested, and well matched to each customer's specific requirements. Our scope of delivery comprises generator sets for on-site power generation and cogeneration systems for decentralized power and heat supply. Both power systems are also available as fully containerized plants for maximum flexibility.

Kraft Power	r			
Tom Rodgers			Tel: (866) 713-2152	Year Established: 1965
519 W. Second Stre	et		Fax (989) 748-4042	# of Farm Projects: N/A
Gaylord	MI	49735	Email trodgers@kraftpower.com	# of Biogas Projects: 48
			WebSite <u>www.kraftpower.com</u>	

Industrial Engine & Power Generation Sales & Service. Waukesha Engine Distributor.

Martin Machinery, LLC

Marcus R. Martin		-	Tel: (660) 458-7000		Year Established: 1977
39425 Excelsior Drive			Fax (660) 458-7100		# of Farm Projects: 35
Latham	MO	65050	Email mmartin@martinmachinery.com	n	# of Biogas Projects: 37
			WebSite N/A		

Martin Machinery first entered the biogas industry in 1982 with the design and construction of 850-kW switch gear to parallel an induction generator to the utility. Additionally, the company supplies electric biogas generator systems 50 to over 1,000 kw. In 2004 Martin Machinery started the company GEN-TEC LLC to build Utility Paralleling gear and the Custom Designed Paralleling Switch Gear. The company currently custom designs new and rebuilt electric generator systems to operate using biogas. It also services biogas units powered by engines with 460-cubic-inch to 7,040-cubic-inch engine blocks.

Nixon Energy Solutions

Leo LeBlanc		Tel: (704) 588-1043	Year Established: 1945
14300 South La	ikes Dr.	Fax (704) 588-8373	# of Farm Projects: 5
Charlotte	NC 28273	Email lleblanc@nixonpower.com	# of Biogas Projects: 10
		WebSite www.nixonpower.com	

Nixon Energy Solutions is the exclusive distributor for GE Jenbacher power generation equipment and services in the Southeastern and Mid-Atlantic U.S. From totally turnkey to selectively customize, Nixon Energy Solutions specializes in making the most of every Methane-to-Energy opportunity. Unsurpassed resources, experience and integrity have helped Nixon set the gold standard in power generation equipment and service for more than 50 years. Let us show you the Green Power potential in your landfill.



Manufacturer/Distributor of Engines

Northeast Energy Systems

Fred Farrand 8330 State Road Philadelphia PA 19136 Tel: (215) 335-5010 Fax (215) 335-2163 Email ffarrand@neesys.com WebSite www.neesys.com

Year Established: 1994 # of Farm Projects: 2 # of Biogas Projects: 16

Northeast Energy Systems is GE Energy's authorized distributors for Jenbacher gas engine systems throughout the northeastern United States and the Caribbean region. Focused exclusively on gaseous fueled engine and power generation systems, NES provides comprehensive application, sales engineering, systems integration and parts and service capabilities.

Reflective Energies

Eden Prabhu 22922 Tiagua Mission Viejo CA 92692 Tel: (949) 380-4899 Fax (949) 380-8407 Email edanprabhu@msn.com WebSite <u>N/A</u> Year Established: 1999 # of Farm Projects: N/A # of Biogas Projects: N/A

Reflective Energies is developing a Flex-Microturbine (TM) that will improve the conversion of biogas to electricity. The technology will be available commercially in 2 years.

SDP Energy, LLC

Hank Leibowitz 5031 Birch Street, Suite J Newport Beach CA 92660 Tel: (925) 498-2501 Fax (925) 498-2520 Email hleibowitz@sdpenergy.com WebSite www.sdpenergy.com

Year Established: 2005 # of Farm Projects: 1 # of Biogas Projects: 2

Turnkey supplier of Biogas cogeneration systems based on MAN reciprocating engines. Package includes fully enclosed cabinet and hot water system for the anerobic digester or other uses.

TEDOM s.r.o.,

Lubos Nedvedicky Vycapy 195, Trebic 674 01 Czech Republic CZ Tel: 00420-568-837-111 Fax 00420-568-837-100 Email nedvedicky@tedom.cz WebSite www.tedom.eu Year Established: 1991 # of Farm Projects: 33 # of Biogas Projects: 80

Production of gas generator sets and cogeneration based on combustion engines. Manufacture of combustion engines for stationary application for natural gas and biogas.

US Energy Services (USES)

Jeff Sarrett 8245 E. Bell Road, Suite #132 Scottsdale AZ 85260

 Tel: (480) 661-1534
 Year Established: 1999

 Fax (480) 452-0238
 # of Farm Projects: N/A

 Email jsarrett@usenergyservices.net
 # of Biogas Projects: 5

 WebSite
 N/A

US Energy Services (USES) provides design/build services for the construction of and/or ownership of clean energy power generation systems. The industries served include, but are not limited to landfill gas, waste water treatment facilities, agriculture and live stock entities, and food waste. Our design/build projects typically combined the design and construction process into a single contract, which results in better Client control, expedited construction, reduced costs and faster return on investment. For our build-own-operate projects this allows USES to reduce its internal construction cost which in turn enhances the "no out-of pocket" program by supplying energy at a reduced cost to our Client.



Manufacturer/Distributor of Engines

Valley Power Products, Inc.

Robert A. Nehlsen Jr.		Tel: (800) 254-4557	Year Established: 1963
17192 Daimler St		Fax (949) 221-8185	# of Farm Projects: N/A
Irvine	CA 92614	Email Robert.Nehlsen@valleypsi.com	# of Biogas Projects: N/A
		WebSite www.valleypowersystems.com	

Valley Power Products is the West Coast distributor for GE Jenbacher and provides product sales, technical support and parts and service from multiple locations in California. As a distributor for GE Jenbacher, Valley Power Products employs factory trained applications, sales and service engineers. Our extensive parts inventory ensures that parts are available locally when they are required. Additional support, such as dial-out/paging services, remote monitoring and performance analysis, set Valley apart from other suppliers and distributors.

Western Energy Systems

Steve Hall / Garrett Smith 499 Nibus Street, Unit B Brea CA 92821 Tel: (714) 529-9700 Fax (714) 529-9700 Email shall@weesys.com WebSite www.weesys.com

Year Established: 1994 # of Farm Projects: 2 # of Biogas Projects: 16

Western Energy Systems is GE Energy's authorized distributors for GE/Jenbacher gas engine systems throughout California, Oregon, Alaska, and Hawaii. Focused exclusively on gaseous fueled engine and power generation systems, NES provides comprehensive application, engineering, systems integration, maintenance, and parts and service capabilities.

Manufacturer/Distributor of System Components

Bioprocess Control AB

Kristofer Cook	Tel: +46(0)46163950	Year Established: 2006
Scheelevagen 22	Fax N/A	# of Farm Projects: 1+
223 63 Lund Sweeden	Email kc@bioprocesscontrol.com	# of Biogas Projects: 4+
	WebSite www.bioprocesscontrol.com	

Bioprocess Control provides supervisory and control applications that optimise the production of biogas. Our prize winning flagship product Biogas Optimizer increases the profitability of biogas producers by: (1) increasing the amount and stability of gas production; (2) protecting the process from disturbances; (3) reducing the amount of time spent on process monitoring.

Clear Water Technologies, Inc.

Tim France			
7800 Main Street			
Minneapolis	MN	55432	

Tel: (763) 783-7344 Fax (763) 571-3372 Email admin@CWTIUSA.com WebSite www.CWTIUSA.COM

Year Established: 1986 # of Farm Projects: 3 # of Biogas Projects: 4

Provides a patented process which eliminates the hydrogen sulfide while increasing the methane generated in the anaerobic digester. The process also reduces the amount of sludge.



Manufacturer/Distributor of System Components

Conserval Systems, Inc.

Bob Rose 4242 Ridge Lea Road ,unit 28 Buffalo NY 14226 Tel: (716) 835-4903 Fax (716) 835-4904 Email infowallusa@solarwall.com WebSite www.solardrying.com

Year Established: 1990 # of Farm Projects: 50 # of Biogas Projects: 2

Conserval produces a solar drying system to dry manure. The Solarwall panels heat air which is passed over the manure removing the moisture. Dried manure can then be sold as a fertilizer.

Dresser F	ROOTS			
Jim Wolford			Tel: (832) 590-2406	Year Established: 1850
16240 Port Nort	hwest Drive		Fax (832) 590-2326	# of Farm Projects: N/A
Houston	ТΧ	77041	Email roots@dresser.com	# of Biogas Projects: N/A
			WebSite www.rootsblower.com	

Dresser ROOTS is a global supplier of rotary positive and centrifugal blowers and systems, operating two manufacturing locations, with factory authorized service locations worldwide. Dresser ROOTS produces air and gas moving equipment for a multitude of industries.

FCI Fluid Components International

Randall J. Brown	-	Tel: (760) 744-6950	Year Established: 1964
1755 La Costa Meado	ws Dr.	Fax (760) 736-6250	# of Farm Projects: N/A
San Marcos	CA 92078	Email randyb@fluidcomponents.com	# of Biogas Projects: N/A
		WebSite www.fluidcomponents.com	

Leading manufacturer of gas flow meters for digester gases, bio-gas, and all fuel gases for applications in Wastewater Treatment facilities, Landfills, farm waste-to-energy, ag-to-energy, etc.

Gas Technology Products

John Perry Dickso	n	Tel: (847) 285-3873	Year Established: 1978
846 East Algonqu	in Road - A100	Fax (847) 285-3888	# of Farm Projects: N/A
Schaumburg	IL 60173	Email JPD@merichem.com	# of Biogas Projects: 42
		WebSite www.gtp-merichem.com	

LO-CAT is an H2S removal technology, where we use liquid iron redox to reduce hydrogen sulfide from gas streams (some as high as 99%), to pipeline specification (less than 1 ppm in some instances). This process is safe, uses non-toxic chemistries, proven (we have over 170 units worldwide), and very cost-effective (LO-CAT removal of H2S generally costs between \$0.10 to \$0.15 per pound of sulfur recovered), and is probably most effective in the 500 pound per day to 20 long tons per day (of sulfur recovered). We have several operating LO-CAT units in biogas environments, as well as in odor control (in similar environments). We do have solid media technologies in our possession (similar to iron sponge), but the economics of LO-CAT generally far outweigh these types of processes (in most cases). In addition to LO-CAT, we are in the final process of coming out with a technology called mini-CAT (which will target applications with less than 500 pounds per day of sulfur), which is based upon LO-CAT technology, but on a much simpler, smaller scale. This technology will operate with the same success of LO-CAT, at a sulfur recovery cost of approximately \$0.35 to \$0.45 per pound of sulfur recovered (the higher cost is due to different solid sulfur filtering technologies, which makes for a "wetter" cake in mini-CAT, and therefore, a relatively higher chemical demand rate). This cost level is still very much less than aerobic iron sponge, which generally operates at levels of \$1.15 to \$1.25 per pound of sulfur recovered. By the way, when we talk about sulfur recovery...the sulfur that is formed in the LO-CAT or mini-CAT process is solid, elemental sulfur, that is very suitable as an agricultural adjunct. We are truly a "green" technology, as we remove a toxin from the air, promoting the removal of a harmful greenhouse gas (methane), in a completely safe environment, producing a product that is very desired by the agricultural industry. In addition to sulfur removal, we have several other unique gas processing technologies.



Manufacturer/Distributor of System Components

Guild Associates, Inc.

Mike Mitariten 5750 Shier-Rings Road Dublin OH 43016 Tel: (908) 752-6420 Fax (614) 798-1972 Email mike@moleculargate.com WebSite www.moleculargate.com Year Established: 1980 # of Farm Projects: N/A # of Biogas Projects: 3

Guild has several projects operating and offers the Molecular Gate PSA technology for the removal of water, CO2 and H2S from biogas.

Innovative Environmental Products

Frank Miller					
28 Main Street, PO Box 72					
Livonia	NY	14487			

Tel: (585) 346-3789 Fax (585) 346-9061 Email FCMiller-IeP@rochester.rr.com WebSite iepworld.com Year Established: 2001 # of Farm Projects: N/A # of Biogas Projects: N/A

Innovative Environmental Products provides a patented process for the capture and control of manure nutrients in liquid manure pre or post digestion. The can achieve remarkable manure nutrient and solids reduction. Levels of removal of constituents from the manure in the filtrate: Phosphate – 98+% reduction; Organic Nitrogen – 90% reduction; Fecal Matter – 99% reduction; and Manure Solids – >95% reduction.

Integrity Ag Systems

Tim RenschTel: (717) 261-5711Year Established: 20004755 Innovation WayFax (717) 263-7399# of Farm Projects: 20ChambersburgPA 17201Email trensch@intergrityagsystems.com# of Biogas Projects: 150+WebSitewww.integrityagsystems.com

INTEGRITY Ag Systems supplies clean tech solutions to the manure management needs of livestock producers. INTEGRITY anaerobic digestion systems profitably generate renewable energy from manure and significantly reduce greenhouse gases. INTEGRITY Ag has over 150 system installations throughout the US. With experienced management, engineering and service staff, INTEGRITY Ag Systems is the only U.S. supplier of comprehensive solutions to the environmental challenges facing livestock producers today.

Karl Dung	s, Inc.			
Erik Tate			Tel: (651) 792-8919	Year Established: 1997
524 Apollo Drive			Fax (651) 792-8912	# of Farm Projects: 6+
Lino Lakes	MN	55014	Email etate@karldungsusa.com	# of Biogas Projects: 6+
			WebSite www.dungs.com	

Karl Dungs, Inc. is a wholly owned subsidiary of Karl Dungs GmbH, a German manufacturer of Gas Controls. Our product line consists of fuel supply controls, suitable for Bio Methane, including: Manual & Automatic Shut-off Valves, Gas Filters, Pressure Reducing & Zero Governor Regulators. Dungs can also supply "Pre-Engineered" value added fuel trains from 1" (DN25) - 8" (DN200). Inventory in the U.S. carrying UL/UR, FM, CSA, and/or CE approvals, suitable for NFPA37, UL2200, and/or CSA B149.1 & B149.3. We service North & South American markets.



Manufacturer/Distributor of System Components

Kompogas AG

W. Schmid	
Rohrstrasse 36	
Glattbrugg	CH-8152

Tel: (411) 809-7100 Fax (411) 809-7110 Email info@kompogas.ch WebSite www.kompogas.ch Year Established: 1991 # of Farm Projects: 3 # of Biogas Projects: 30

Kompogas AG has developed an anaerobic process for the fermentation of biogenous yard and kitchen waste combined with energy production. Waste recycling using the Kompogas process offers numerous advantages. The end products obtained from the process include CO2-neutral renewable energy (biogas), as well as high-quality compost and liquid fertilizer. The biogas recovered provides energy in the form of heat, electric power, and vehicle fuel.

LANDTEC	2		
Michael Hardiso	on	Tel: (909) 783-3636	Year Established: 1982
850 S. Via Lata	, Suite 112	Fax (909) 825-0591	# of Farm Projects: N/A
Colton	CA 92324	Email mhardison@ces-landtec.com	# of Biogas Projects: 100+
		WebSite www.ces-landtec.com	

LANDTEC is a leading provider of monitoring systems for renewable energy and Green House Gas (GHG) reduction validation. LANDTEC designs & manufactures instruments, software and products for landfill gas extraction, biogas digesters and other Methane recovery projects. A certified ISO 9001:2000 company, The LANDTEC System includes; GEM portable gas analyzers, Accu-Flo wellheads, AEMS stationary monitoring systems, and the EnviroComp Report Service.

MT-Energie USA, Inc.

Mr. Ludwig Fries		Tel: (650) 421-2509	Year Established: 1995
460 Seaport Court	, Suite 101	Fax (302) 269-0926	# of Farm Projects: 300
Redwood City	CA 94063	Email ludwig.fries@mt-energies.com	# of Biogas Projects: 300
		WebSite us.mt-energie.com	

In the beginning of the 1990's, when the success story of renewable energy was still just over the horizon, Christopher Martens was already working hard to improve the economical efficiency of biogas plants. On his family farm in the township of Rockstedt in Lower Saxony, Germany, the young engineer developed innovative solutions to the early problems of biogas usage. Out of this passion, MT-Energie evolved into one of the leading producers of biogas technology. In 2006, the international expansion of MT-Energie began. In 2007, MT-Energie broke ground on its first offices outside of Germany. Beginning in 2008, MT-Energie has conducted business activities in the USA. Today MT-Energie has over 240 employees, who are setting the standard both in and outside of Germany. Contrary to the current market trend, MT-Energie continues to grow and expand. The Northern German Biogas specialists increased their sales 40% to over 60 million Euros in the 2007 business year, where one in five biogas plants built came from MT-Energie. In order to keep up this positive growth, the company is now building new headquarters in Zeven, in Lower Saxony. An office building is quickly growing on a large 15 acre compound next to a modern logistics center, production facility and laboratory building. From the passions of a young engineer for biogas technology sprang an economically sound, international company.

MWH Energy Solutions

Stephen Chippas	-	Tel: (630) 836-8977	Year Established: 2001
27755 Diehl Road		Fax (630) 836-8959	# of Farm Projects: 1
Warrenville	IL 6055	Email EnergySolutions@mwhglobal.com	# of Biogas Projects: 5
		WebSite www.mwhglobal.com	

MWH Energy Solutions has extensive experience in the recovery, cleaning, and combustion of biogas. This expertise includes wastewater treatment plants, landfills, and agricultural applications. MWH can provide complete turnkey services including planning, design, procurement, construction, financing, and O&M services.



Manufacturer/Distributor of System Components

Northern Lake Service, Inc.

Mal Gross 400 North Lake Avenue Crandon WI 54520-1298

Tel: (800) 278-1254 Fax (715) 478-3060 Email salesnls@nlslab.com WebSite www.nlslab.com

Year Established: 1974 # of Farm Projects: 4 # of Biogas Projects: 2

Certified environmental analytical laboratory offering analyses of manure and wastewater samples for chemical and biological constituents.

Norton Environmental Equipment, Ltd.

Steven Viny 6200 Rockside Woods Blvd. Independence OH 44131

Tel: (216) 447-0070 Fax N/A Email sviny@daladgroup.com

Year Established: 2000 # of Farm Projects: NA # of Biogas Projects: NA

WebSite N/A

Norton Environmental Equipment Company, Ltd. is the exclusive distributor for Komptech composting equipment in North America. Komptech's BFSC system is for digesting on-farm waste, including compost production and gas recovery. Several such systems have been installed and are operating successfully in Europe.

Pneumatech, LLC

Jim Donohue 4909 70th Avenue Kenosha WI 53144

Tel: (262) 658-4300 Fax (262) 658-1945 Email jdonohue@pneumatech.com WebSite www.pneumatech.com

Year Established: 1966 # of Farm Projects: 100+ # of Biogas Projects: 100+

Manufacturer of Biogas dryers/treatments equipment.

Pro-Act Microbial, Inc.

Bill Donohue		
P.O. Box 345		
Warren	RI	02885

Tel: (800) 772-3775 Fax (401) 633-6270 Email ChristaG@ProActMicrobial.com WebSite www.ProActMicrobial.com

Year Established: 1999 # of Farm Projects: 100+ # of Biogas Projects: N/A

Pro-Act Microbial, the leading supplier of bio-augmentation products, provides highly effective waste treatment systems for the concentrated animal feeding operation (CAFO) and the aquaculture industry.

Proteus Texas Power

Ken Kelley 8101 SW 34th Avenue Amarillo TX 79121

Tel: (806) 354-4970 Fax (806) 354-4997 Email kkelley@jbkweb.com WebSite www.jbkweb.com Year Established: 1993 # of Farm Projects: 1 # of Biogas Projects: 2

Experts in natural gas transportation, marketing, project development.



Manufacturer/Distributor of System Components

QuestAir Technologies

6961 Russell Ave Burnaby BC V5J 4R8 Tel: (604) 454-1134 Fax (604) 454-1137 Email info@questairinc.com WebSite N/A

Year Established: 1996 # of Farm Projects: N/A # of Biogas Projects: N/A

QuestAir is an emerging developer and supplier of advanced gas purification systems. The QuestAir™ M-3100 offers a lowcost solution for upgrading landfill gas, anaerobic digester gas and other sources of 'biogas' to either pipeline- or LNG-grade methane. The M-3100 can also be used to increase the Btu value of landfill gas for power generation. The M-3100 is currently available in a range of capacities up to 4,000 NCMH (product methane flow).

Siemens Bui	Iding Technolo	gies, Inc.	
Patrick Weller	-	Tel: (714) 816-1442	Year Established: 1891
10775 Business Cent	er Drive	Fax (714) 252-1327	# of Farm Projects: N/A
Cypress	CA 90630	Email patrick.weller@siemens.com	# of Biogas Projects: N/A
		WebSite www.siemens.com/buildingtech	nologies

Siemens' track record for delivery on performance guarantees is unparalleled across the United States. For more than 150 years, Siemens has built a culture of long-term commitment to customers through new ideas and technologies. Today, Siemens provides Biogas Digester Generation solutions, where our foremost objective is to develop environmentally friendly, world-class process control and power management systems. We manufacture fuel cells, power generation systems, gas holder systems, and SCADA technology. USFilter, a Siemens Company delivers cost-effective, reliable water and wastewater treatment systems and services using the most advanced anaerobic treatment technology.

Stewart Engineered Equipment Co., Inc.

Dave Stewart	Tel: (714) 840-0075	Year Established: 2000
16111 Warmington Lane	Fax (714) 840-9019	# of Farm Projects: 2
Huntington Beach CA 92649	Email dste170442@aol.com	# of Biogas Projects: 20
	WebSite wed site being built	

Engineer, design, manufacture, and service biogas gas compression and conditioning systems. System designs for engines, microturbines, gas turbines, fuel cells, and other processes. Equipment includes: blowers or compressors, liquid separators, chillers, heat exchangers, coalescing filters. All the equipment is mounted on a skid base with all electrical, controls and piping. Complete systems test are done in the shop before shipment. We are the nations leader in providing gas compression and conditioning systems for microturbines and fuel cells on biogas. Gas conditioning includes H2S and siloxane removal.

Vaughan Company, Inc.

Mike Panther	Tel: (360) 249-4042	Year Established: 1956
364 Monte-Elma Road	Fax (360) 249-6155	# of Farm Projects: 1000
Montesano WA 98563	Email mpanther@chopperpumps.com	# of Biogas Projects: 2000
	WebSite www.chopperpumps.com	

Vaughan Company, Inc. designs and builds complete mixing systems for methane digesters and sludge-storage tanks. Vaughan Company, Inc. also manufactures a complete line of heavy-duty chopper pumps.



Manufacturer/Distributor of System Components

Vogelsang

Rich Owens		
7966 SR-44		
Ravenna	OH	44266

Tel: (330) 389-9120 Fax (971) 223-2975 Email richo@vogelsangusa.com WebSite www.vogelsangusa.com Year Established: 1929 # of Farm Projects: 1200+ # of Biogas Projects: 2000+

Since 1929, Vogelsang has been a world leader, manufacturing a family of high quality, extremely dependable sludge & manure handling and pumping products for the world's industrial, municipal, and agricultural markets.

PUMPS

With the release of the HiFlo pulsation free rotors, used exclusively in the Vogelsang positive displacement, rotary lobe pump, Vogelsang once again marked itself as an industry leader. HiFlo's unique design allows for pulsation free operation through the entire range of pumping.

Additionally our pumps can pull a suction lift to 25ft (8m), run dry, pump in either direction, and feature a minimum of 25% more sealing lines per series, over other conventional designs.

Coupled with Vogelsang's uniquely designed rotary lobe pump, the combination will allow flows from 5 to 4,485 US gpm (1.1 1,020 m3/hr), and pressures up to 232psi (16 bar).

MACERATORS

Our series of high performance macerators, Rota Cut, effectively reduces solids to specific size requirements, and reduces the costs associated with the operation of downstream equipment. Objects and debris suspended in liquid such as plastic fragments, rubber, hair, rags, applicators, straw, plastic pens, string, wood, bones, etc. are drawn through the cutting screen and shredded by the self sharpening rotary blades into an acceptable size for the downstream equipment to pass. Optional cutter screen configurations provide the ability to condition solids to specific sizes, down to less than 1/4" (6mm).

Features include auto reverse, self sharpening blades, and reusable cutter screens. Rota Cut is 100% rebuildable inline, which eliminates the need to send out a cutter cartridge for reconditioning.

DIGESTER BIOMASS MIXING

The QuickMix is a combination of a dual auger and a rotary lobe pump. The dry solids are fed into the hopper at the top and the augers begin to break them down while advancing the material into the mixing area. The fitting at the base of the hopper flows liquid sludge/manure into the bottom of the hopper where it begins to mix with the dry solids as they advance toward the pump end of the unit. By the time the liquid gets to the pump, it has been thoroughly mixed with the dry solids creating slurry that is of an ideal mixture for delivery to the digester. QuickMix keeps the digester from being slug feed, and give an optimal mixture to increase overall gas production.

Manufacturer/Distributor of Tanks

Agrimass Enviro-Energy Inc.

Dan CostaTel: (559) 687-3306Year Established: 20022500 E. Tulare Ave.Fax (559) 687-3305# of Farm Projects: 12TulareCA 93274Email dancosta@agrimassenviroenergy.co # of Biogas Projects: 3WebSiteN/A

Provide integrated energy and environmental systems to dairy farms.



Manufacturer/Distributor of Tanks

Engineered Storage Products Company

Dick Nelles 345 Harvestore Drive DeKalb IL 60115 Tel: (815) 756-1551 Fax (815) 756-1659 Email dnelles@engstorage.com WebSite www.slurrystore.com

Year Established: 1945 # of Farm Projects: 17 # of Biogas Projects: 53

Engineered Storage Products Company manufactures glass fused to steel tanks and pressurized roofs used in methane digester applications. Tanks are installed and serviced by authorized dealers.

Industrial Solutions, USA

Kirk E. Jeffries	
5115 S. Rolling Green	Ave., Ste #211
Sioux Falls	SD 57108

Tel: (605) 274-9295Year Established: 2004Fax (605) 275-0072# of Farm Projects: N/AEmail kjeffries@industrialsolutionsusa.com# of Biogas Projects: N/AWebSitewww.industrialsolutionsusa.com

Industrial Solutions USA provides thick 100% solids sprayed on monolithic corrosion resistant, abrasion/impact resistant, chemical resistant, anti-static, antimicrobial linings. Our linings can be sprayed over geotextile, concrete, steel, wood or any other substrate to form an impervious primary and/or secondary lining containment system. The lining is tack free in one minute and can be pigmented any color. Our linings are EPA-SPCC compliant Title 40, Part 112.

Publishers

BioCycle Magazine

Jerry Goldstein	•		Tel: (610) 967-4135	Year Established: 1975
419 State Avenue			Fax (610) 967-1345	
Emmaus	PA	18049	Email biocycle@jgpress.com	
			WebSite www.biocycle.net	

Published since 1960, BioCycle, Journal for advancing composting, organics recycling and renewable energy is recognized as the foremost magazine on turning municipal, industrial and agricultural wastes into valuable end products including renewable energy, soil conditioners, and compost. Editorial reports on anaerobic digestion, methane recovery, large-scale composting, community digesters, regulations, research, and process control.



Universities

Cornell University, Workplace Health & Safety Program

Nellie J. Brown, MS, CIH, Director	Tel: (716) 852-1444	Year Established: N/A
300 Day Hall	Fax (716) 852-3802	# of Farm Projects: N/A
Ithaca NY 14853	Email njb7@cornell.edu	# of Biogas Projects: 4
	WebSite www.manuremanagement.cornell.edu	

The Workplace Health and Safety Program provides technically-based training and technical assistance services to assist management, labor, and medical and legal professionals in putting scientific and technical information to practical use in resolving work environment problems. We provide public and on-site courses and workshops for management, labor unions, and the public, serving approximately 2500 students per year with instruction. An even greater number of people are potentially reached through technical assistance. Examples of technical assistance services available are: on-site hazard evaluation including job hazard analysis, process failure analysis, overall workplace vulnerability assessments, and indoor air investigations; guidance for medical surveillance and periodic screenings; assistance in selection of engineering controls, administrative controls, protective clothing or equipment; and assistance in product or process substitution to reduce workplace hazards. The Program publishes health hazard manuals, fact sheets, and technical articles. Both training and technical assistance services are available on the safety and hazard assessment of farm digesters, including the manure handling system, anaerobic digester, and biogas handling system. Two hazard assessment documents developed for digester systems are available at the Cornell University Manure Management Program website: http://www.manuremanagement.cornell.edu/HTMLs/ Safety.htm

University of Florida, Soil and Water Science Department Dr Ann C Wilkie

P.O. Box 110960 Univ	ersity	of Florida - IFAS
Gainesville	FL	32611-0960

Fax 352-392-7008 Email acwilkie@ufl.edu

Tel: 352-392-8699

Year Established: N/A # of Farm Projects: 1 # of Biogas Projects: 1

WebSite http://biogas.ifas.ufl.edu

Dr. Ann C. Wilkie is a Professor in the Soil and Water Science Department at the University of Florida-Institute of Food and Agricultural Sciences. Her specialty is environmental biotechnology, with particular emphasis on anaerobic microbiology and biomass to biofuel conversion. She has conducted extensive research on the practical application of anaerobic digestion for waste treatment and renewable energy production from biomass and organic residues. Dr. Wilkie is an internationally recognized expert in biogas technology and the inventor of US Patent No. 6,811,701, Fixed-Film Anaerobic Digestion of Flushed Manure. Her fixed-film anaerobic digester system design has been operating continuously at the University of Florida's Dairy Research Unit since 2000 to treat flushed dairy manure, control odors, and produce biogas for on-farm use. Dr. Wilkie's major research interests include: livestock waste management technology for odor control, bioenergy production, nutrient recovery and water quality improvement; biogas generation from bioethanol and biodiesel by-products; biomass conversion/utilization for renewable energy generation; the investigation of microbial and environmental factors influencing biodegradation; and the development of practical approaches to bioremediation and agricultural/industrial waste treatment. She is a frequent guest speaker at national and international conferences dealing with biofuels, climate change and sustainability issues.