



Date: September 20, 2016

COMPANY INFORMATION

Company Name: PlanET Biogas USA Inc.	
Phone: 1-877-266-0994	Web Site: Planet-biogas-usa.com
Address: 5937 State Route 11	City: Homer
State: NY	Zip Code: 13077

BUSINESS CONTACT

Name: Gregory Gray
Phone: 877.266.0994 x 108 (cell: 289.214.2651)
Email: g.gray@planet-biogas.com
Address: 5937 State Route 11
City: Homer
State: NY
Zip Code: 13077

TECHNICAL CONTACT

Name: Gregory Gray
Phone: 877.266.0994 x 108 (cell: 289.214.2651)
Email: g.gray@planet-biogas.com
Address: 5937 State Route 11
City: Homer
State: NY
Zip Code: 13077

BUSINESS HISTORY

How long have you been in business? PlanET Biogas Group (Germany) – 18 Yrs; Canada – 10 Yrs; NY State– 3 Years

Are you part of a larger company? Yes No

Did you exist as another company before this company was formed? Yes No

If so, what was that company's name?

Number of employees? 250 Employees (worldwide)

What is your business structure? Privately Held

What types of insurance and or surety do you provide?

Digester components come with specific parts and labor warranty

References. Please provide customers or colleagues with whom we can discuss your business and performance.

Please include a separate list with company name, location, contact name and contact information.

Bill Head, Owner, New Hope View Farm, Homer, NY,
607.345.2090
Stefan Michalski, Director, Lethbridge Biogas, Alberta
Canada, 403.328.1429

Describe your business service(s). *For example: consulting, development, engineering, equipment sales, finance, other.*

Engineering, Procurement, Construction, and Systems Servicing. In some circumstances, PlanET may also operate a larger biogas facility.

Area or region of operation.

Global

Does your company hold any patents or the rights to any patents? *Please identify.*

Yes – The patents are linked to digester components, such as the biological desulfurization systems, roofing track systems, etc.

Do you manufacture equipment? Yes No *Please describe.*

Basic digester system is designed and constructed by PlanET with many in-house designed components; major auxiliary system components are manufactured by others and integrated into the biogas system (CHP, Separator, Filtration),

Do you integrate equipment manufactured by others? Yes No

If you integrate, please list the names of the companies you represent.

PlanET does not “represent” any company, but works closely with 2G Energy, Boerger, Vogelsang, and others

How do you answer potential customer's question about financial strength of your company?

PlanET Biogas Group sole focus is in the development of biogas systems to the biogas market. We are a privately held company with our headquarters in Germany and subsidiaries in the US, Canada, UK, France. PlanET has constructed over 400 biogas plants worldwide and more than 99% of our plants are still in operation.

Do you offer technical/service support? **Yes** **No** *If so, what methods?*

PlanET offers technical service support directly or through service partnerships with local providers. All PlanET control systems accessed remotely for system overview and troubleshooting, system performance and on-line technical support. PlanET offers support and on site servicing to all of our customers, and many of our competitors customers.

Do you offer design services? **Yes** **No** *Please describe.*

PlanET offers design services for digester facilities or components that it supplies. PlanET does not offer design only services.

Do you offer financing? **Yes** **No** *If so, what terms?*

PlanET does not offer financing, however we will support customers to secure financing elsewhere.

Are you a full stop shop? *Design to construction to operate?* **Yes** **No** *Please describe.*

PlanET Biogas Group is a full solution provider. We are partners with our customers through securing government agreements, permitting support, engineering, construction, commissioning and service. Most owners operate their own facilities. PlanET will consider operating large facilities when it makes sense to do so.

Do you have preferred partners? **Yes** **No**

If so, please list and provide contact information/identify partners by name.

2G Energy

Do you have any third-party verification/research that has been done on this technology? Yes No

If so, please describe.

There has been third party system performance reviews conducted in Germany. Please find support details attached.

Do you provide a performance guarantee? Yes No

If so, what are you guaranteeing? For example: up time, methane production, biogas production, parasitic load, throughput, O&M cost, percent recovery, other.

While PlanET does not offer a performance guarantee, we do offer biological, technical and CHP service agreements. If a customer would like optimal biogas production, and longevity in the life of their equipment, they are encouraged to sign up for a service agreement.

Are there any other aspects of your business that you feel should be included in this document?

PlanET has full time microbiological support.

INITIAL TECHNOLOGY OVERVIEW

This information is to guide in the development of a more specific and detailed Technology Information Request. Please answer the following questions for each Technology or Service Provided.

What is the name of the technology or service?

Biogas Systems Design, Installation and Servicing

What unit process is the technology used in?

For example: initial collection/transfer manure storage, energy recovery, primary/coarse solids recovery, advanced suspended/fine solids recovery, drying, struvite production, nitrification denitrification, ammonia stripping, algae, vermi composting, membrane filtration, evaporation, other.

Manure digestion and solids recovery

How many systems have you installed on dairy farms or other livestock operations?

No response given

Size of farm(s)?

No response given

Location of farm(s)?

No response given

What's the smallest/largest farm for your system?

The smallest size constructed in North America is 45kW; the largest is 2.8MW

Input material description/characteristics:

For example: raw manure, digestate, screened digestate, suitable non-farm feedstocks, other.

The PlanET digesters accept liquid and solid manures, separated solids, off-farm organic wastes (clean), liquid off-farm materials that require pre-pasteurization. Packaged organic wastes and SSO require foreign material separation before introduction into the digester or optional pasteurization system.

Does the technology treat the full manure stream for a farm or a fraction of the stream?

The system design can treat the full manure stream (solids and liquids)

Do you consider this a mature system or ongoing farm development?

Mature with continuous review and improvement of systems and component design and/or application

Any weather constraints? Yes No *Please describe.*

Any bedding constraints? Yes No *Please describe.*

Sand bedding needs to be pretreated to remove sand before digestion

Is this process scalable and to what extent (top and bottom limits)? Yes No *Please describe.*

In most cases, the systems start at 250kWe size and can go up to multi-megawatt size.

Do you have a known scaling factor? Yes No *Please describe.*

Most systems scale by increments of 1,000,000 – 1,500,000 gallon digestion capacity increments

Input and output of your unit/system – do you have a mass balance analysis? Yes No *Please describe.*

Typical in-tank TS maximum is around 10% - 11%; conduct in-house biological analysis to ensure mass balance and biological stability

Do you consider this technology part of a larger system that you provide? Yes No *Please describe.*

No; the digestion system is the primary system and we add peripheral systems to add additional operational and/or economic benefits

Has your technology been accepted by the NRCS? Yes No *Please describe.*

Not sure what this means.

Would you be willing to provide information for a technical review? Yes No

Would you be willing to respond to a Request for Quotation (RFQ) on a generic project for comparison of your technology against other technologies in the same unit process? Yes No

Are there any other facts about this technology that you feel should be included in this document?

Our technology is really a system that has been designed and upgraded over the course of hundreds of projects.