



Modern Ecological and Energy Efficient Solutions



evobios
We make the Earth better

St. Petersburg, Russia

Applications for our technology



Ecological Company EVOBIOS offers complete scope of solutions for organic waste disposal.

Application Industries:

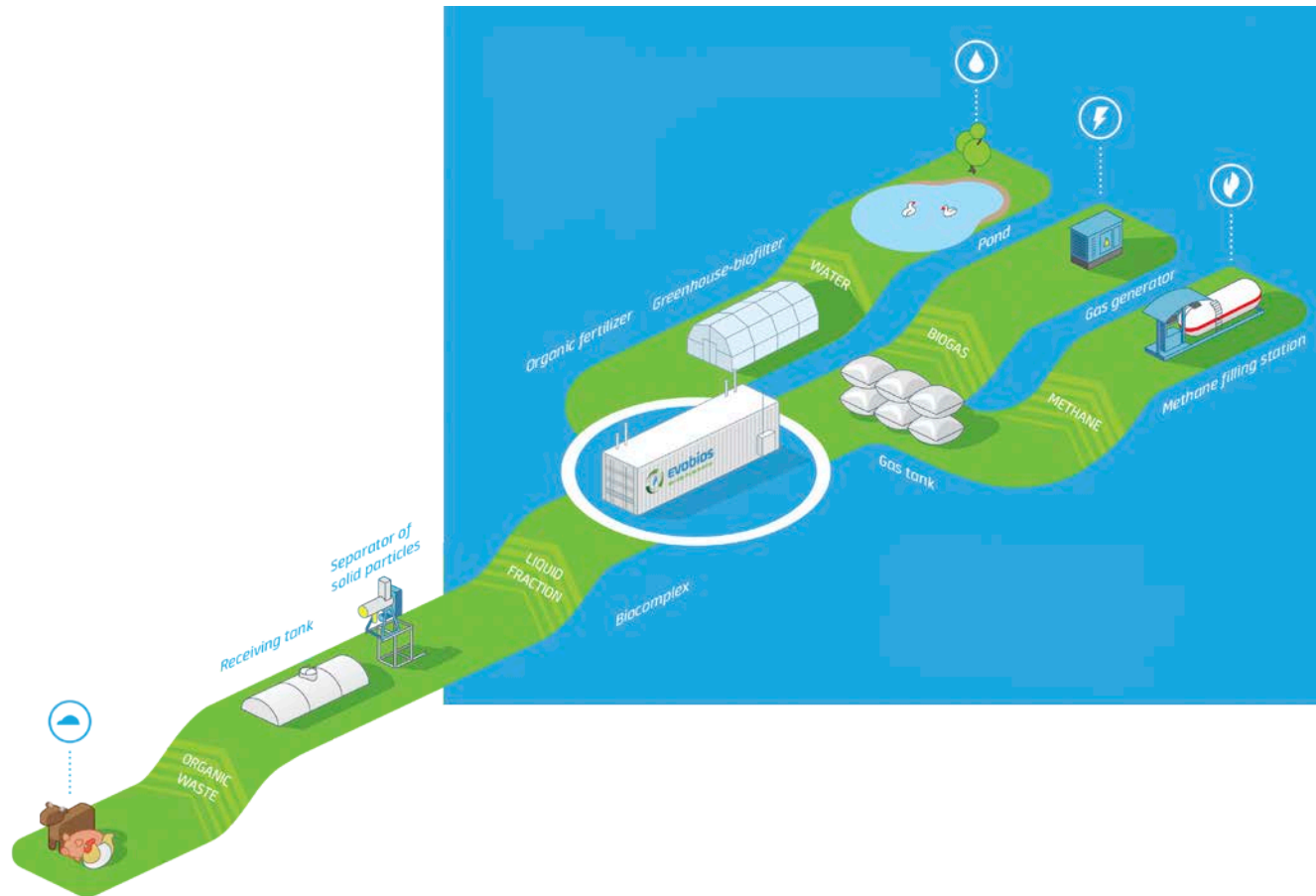
1. Agricultural: livestock sector, poultry industry etc.;
2. Municipalities: waste water treatment and infrastructure;
3. Food production: frozen food, dairy, meat production, fish processing plants;
4. Spirit/alcohol producers and breweries;
5. Other companies, having organic waste;
6. Production plants using gas for heating, technological process and generation of electricity.

Technological principles of EVOBIOS:



- Our system is working through anaerobic (oxygen-free) fermentation of biomass; which may be constituted by landfill waste, livestock waste (manure) and agricultural waste, slaughterhouse waste, distillery stillage, brewery grains, milk whey, sewage runoffs from water treatment facilities, particular crops (e.g., oilseed rape), and many others;
- As a result of fermentation, biomass decomposes under the effect of hydrolytic, acid-forming and methane-producing bacteria. The gas obtained contains above 80% of methane, 15-18% of carbon dioxide and about 1% of hydrogen and hydrogen sulfide;
- System provides almost complete absence of dry slurry or other type of waste as a result of its performance;
- Bacteria in biocomplex consumes major part of organic components contained in manure;
- Processing 1 ton of fresh livestock or pig manure can produce above 60 cubic meters of biogas, 1 ton of chicken manure - up to 100 cubic meters, various energy vegetation – 100-500 cubic meters. In terms of its calorific value, 1 cubic meter of biogas is equivalent to: 0.8 m³ of natural gas, 0.7 kg of fuel oil, 0.6 kg of gasoline, 1.5 kg of firewood;
- The methods and engineering solutions we have designed and used enable to make the organic feedstock processing rate dozens of times faster (in a time unit per volume unit), compared to “conventional” biogas complexes.

General Setup of a Biogas System



EVOBIOS Business Concept:



- We use bioreactor of a special design, which is an advanced know-how solution of Russian scientists. Its major distinguishing feature in comparison to traditional biogas systems is that it is extremely compact; delivering a very high capacity per volume at the same time. It is also supposed for a mono-culture operation;
- EVOBIOS does not erect utilization plants, and never requires customers to bring waste there;
- We move our equipment towards customer's site, and install our compact mobile biocomplex at their facilities next to the location of the organic waste source;
- EVOBIOS customer doesn't need capital investment and technically complicated projects in order to solve waste disposal issue. Customer doesn't have to purchase any piece of equipment. We install biocomplex at our own expenses;
- Customers pay for their organic waste disposal. Price is set up on a level to be lower than their traditional expenses on that issue; and based on a monthly tariff.

Additional Advantages of Collaboration with EVOBIOS:

- Customers may get gas (methane) for their needs, such as heating, generation of electricity etc. Gas price is lower than the one from traditional local suppliers;
- Water purification up to drinking level, based on the biofilter greenhouse (eychornia), is also possible. This plant might well be used as a protein additive to livestock husbandry food;
- We will assist to find right suppliers of boiler and gas generating equipment.





Biological Decontamination of Organic Waste:

- In case of our technology crumbling of waste structure is being produced by using either ultrasonic, magnet-striction, or plasma methods;
- Purpose is to destruct cell envelope in order to simplify access of our bacteria to its nutritional medium. The result/objective is that we destroy harmful pathogenic microorganisms;
- Bioreactor is being operated in thermophilic mode (about 55 deg.C). That is an additional factor of disinfection for biological environment contained in a manure;
- In order to convert already disposed waste (including dehydrated), it is possible to mix it with fresh manure. That will help us to get rid of all amounts of already existing manure in future.



Preliminary Working Conditions:

- The equipment we plan to install at your facilities, will be property of EVOBIOS and is not supposed to be paid from customer's side;
- These are compact mobile bioenergy systems assembled on a standard 40ft container base; systems will be installed at locations that we agree;
- Ground/territory for equipment will be paid (rented) by EVOBIOS on a commercial base;
- Tariffs will be preliminary agreed;
- On the initial stage our biocomplexes will in fact recycle waste for free. That will help to evaluate system performance. This initial period takes about 2 months. That is sufficient to accelerate system up to its nominal working regime, and for the customer to see/make sure the technology is fully functional, efficient and of satisfactory to meet their needs and ecological expectations;
- In parallel we will agree commercial conditions of further collaboration, such as: cost of waste conversion/disposal. As an additional option we will suggest to recycle slaughterhouse waste, if necessary;
- In case your company needs methane, which turns out to be a side product of biotechnology, we will agree its delivery price at special conditions;
- Percentage of methane in our biogas is not less than 80. Hydrogen sulphide, nitrogen and other non-desirable inclusions will be filtered out.

How to contact EVOBIOS?



The head office of EVOBIOS is located in Saint Petersburg. Our experts are always ready to go anywhere within the country, to study the situation on site and to develop specific proposals for cooperation.

Our contact details:

ООО «EVOBIOS»

5-7, 20th Liniya V. O., Saint-Petersburg, 199106, Russia

т. +7 (812) 336-92-91



Thank you very much for your attention!



St. Petersburg, Russia