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Wir geben Bio Gas. EnviTec Biogas.

The EnviTec Biogas newsletter

>>ForumBiogas

EDITORIAL

Dear readers,

we can already say today that 2009 represents a successful expansion in terms of internationalization for EnviTec Biogas. This was initiated with Olaf von Lehmden's trip to Asia, which served to strengthen our Asian partnerships, and also includes the first contracts in Latvia and Slovakia amounting to some 10 million euros as well as the approved 28 cents per kWh for the first projects in Italy. These examples serve to demonstrate that biogas is increasingly gaining acceptance as an environmentally compatible energy source, also internationally. We profit from this and are able to continue the expansion of our Europe-wide activities.

However, the national market is also in a constant state of flux. Recently, leading companies from the biogas field joined together to form a biogas association, in order to offer politics and sciences an adequate contact. We will also be making a decisive contribution in this area.

Kunibert Ruhe
CTO, EnviTec Biogas AG

Italy: First plant in operation

28 cent compensation for electricity fed into the mains network make biogas an attractive proposition in Italy

Renewable energy is gaining ground fast in Italy. In doing so, the Italian government is increasingly looking to biogas as a renewable energy source. By the year 2020, Italy intends to cover 25% of the nation's electricity requirements from renewable energies, and subsidises this with a corresponding feed-in tariff for electricity fed into the mains network. This year the compensation tariff for biogas was set at 28 cents per kilowatt-hour and this is guaranteed for the next 15 years. This means that Italy has the highest compensation for electricity for electricity made from biogas fed into the mains network in Europe. In addition, the state grants plant operators tax allowances, which further serve to create attractive conditions.

Biogas plant in Volta Mantovana

1 MW plant delivered to operator near Verona

In July this year, the Lohne based company delivered a biogas plant with an installed electrical capacity of 1 megawatt (MW_{el}) to the operator Volta Energia in Volta Mantovana near Verona. The electricity generated is fed entirely into the public mains network. Cattle slurry, manure, maize and whole plant silage are used as input substances. In order to reduce the internal consumption of the plant, EnviTec Biogas has implemented fermenter separation in Volta Mantovana. This is a process control whereby part of the dry solid matter is separated from the liquid phase from the fermenter. The liquid phase is subsequently fed back into the process. The aim here is to maintain a consistent level of dry matter content in the fermenter, under which conditions the fermenter's agitators are able to operate optimally. An additional feature of the plant is is the crossing of the feeding lines, which serve to significantly reduce the risk of failure.

Second plant in warming-up phase

A further EnviTec plant with an installed electrical capacity of 250 kilowatts (kW_{el}) is currently in the warming-up phase. The operator for this plant is an agricutltural company based in Casaletto Ceredano near Cremona. The plant will be operated exclusively with pig slurry and residual pigfeed. The farm operator is to cover the annual requirement of some 45,000 m^3 slurry from the farm's own production.

EnviTec sees great growth potential in Italy

„The conclusion of our initial projects in Italy have successfully positioned us in this fascinating market", states Olaf von Lehmden, chairman of EnviTec Biogas. „Italy is undergoing a significant upswing in terms of biogas, which offer new opportunities for farmers as a result of attractive conditions and rewarding investment options. For this reason, we anticipate a positive market development which we will accompany with our technological and process-oriented expertise." Further plant projects are already being planned in Italy.

The biogas plant has been providing heat for the own agricultural business since the end of 2007

Multitalented biogas plant

Micro-gas network for decentralised heat provision in Bohmte

The latest example of our innovative corporate culture can be found in Bohmte, Lower Saxony, in the rural district of Osnabrück. The biogas plant simultaneously implements numerous specific technical features.

Elaborated concept for using the waste heat

Plant operator Ulrich Wessel-Ellermann's first combined heat and power plant was already commissioned back in November 2007. It provides heat for the concern's own agricultural operations - domestic buildings, halls, stabling and fermenter. The second combined heat and power plant is located on the site of the local mechanical engineering firm - Oelgeschläger - and has been supplying heat to both the company's buildings as well as a neighbouring agricultural operation since January 2008. In doing so, farmer and businessman Wessel-Ellermann has created an impressive, independent micro-gas network which serves as perfect example of a decentralised energy supply and simultaneously for optimal thermal use, whereby an additional combined heat and power plant is not to be ruled out.

Performance-enhancing technical innovations are to be found in practically all of the operational units. For example, in addition to a walking floor for maize silage, EnviTec has also installed one of its first vertical mixers as an additional solid matter feed. The cereal

State-of-the art technology for all parts of the plant

/ whole plant silage, CCM (corn-cob mix), moist grain and maize is conveyed from here via screw conveyors into the two mixing containers. Distribution of the input substances is realised by a reversible screw, while slurry and water is fed in by means of pumps.

The two mixing containers can be loaded simultaneously. The material charge is precisely weighed, controlled and recorded by means of scales on the bases of the mixing containers. After the mixing process, the fermentation substrates are pumped into the fermenter, a process which is also controlled by a special weighing system.

Additional features include a separate gas drying system in the underground pipelines to the combined heat and power plant and the gas-tight, heatable digestate storage tank, which enables inspections to be undertaken in order to ascertain how much gas is still in the digestate after the fermentation process. However, no appreciable amounts have been detected. The biogas plant is also innovative in terms of visualisation and logging, for example, it offers a particularly clear three-dimensional view.

Minimizing the effort with a maximum of efficiency

Plant operator Wessel-Ellermann is extremely satisfied with his plant. „The advanced computer-based management system, the clarity and easy operation of the overall system provides for minimal effort and reliable operation.“, he said. The optimal technical combination of all of the operational units results in maximum efficiency.“

Heat as by-product of two plants for a community

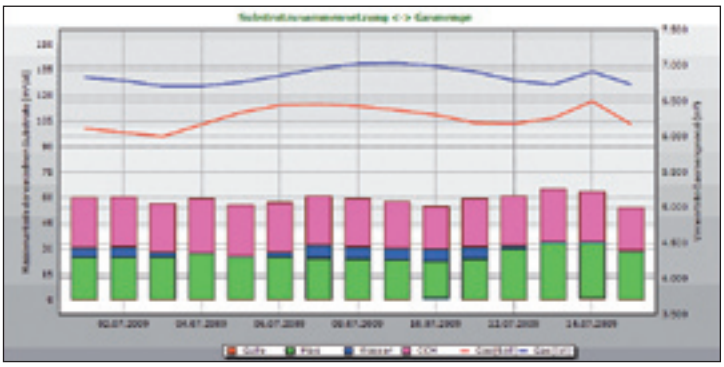
The inhabitants of Lüsche, in the rural district of Vechta will be able to switch on their heating systems with a good conscience for the first time during Christmas 2009. The 150 households will then be able to heat their homes from two biogas plants, created as a by-product from electricity generation. Lüscher Fernwärme GmbH & Co. KG cut the first sod for the construction of the district-heating distribution system in the presence of CDU member of the Bundestag Franz-Josef Holzenkamp on 24 August. The construction period is expected to last four months.

Both biogas plants with an electrical power output amounting to 500 kilowatts each generate environmentally compatible electricity and have been in operation on site for many years. In the future, the plants - which were constructed by Lohner EnviTec Biogas AG - will supply Lüsche with approximately 7 million kilowatt hours (kWh) of heat. „This amount corresponds to approximately 650,000 litres of heating oil and will save the atmosphere 2,000 tonnes of CO_2 per annum. This will mean Lüsche is well on the way to becoming a bio-energy village“, explains Kunibert Ruhe, CEO of Lüscher Fernwärme. However, this not only protects the environment, rather, it also serves to reduce dependence on fossil fuels. An additional positive side effect is that is saves money for the inhabitants due to cheaper provision of the new bio-heating. Heating prices are fixed for the long-term and are cheaper than heating with oil and gas. This makes Lüsche a showpiece project for the regional provision with renewable energy.

The planned district-heating distribution system will be approximately 12 km long and will be laid throughout the entire village. Not only will domestic properties be connected, in addition, companies and the village's public facilities will benefit. The investment for all this amounts to some 2.4 million euros. In addition to Lüscher district heating, all of the households intending to obtain the environmental friendly heating are contributing to covering these costs. Furthermore, it is planned to support the project with subsidies.

EnviTec Biogas Portal

Everything available at a glance



After intensive development, the biogas portal for EnviTec biogas plant operators has now been released. The biogas portal is a comprehensive database which contains information about the customer's biogas plant, updates it daily and prepares it visually. All that is needed to view the data is internet access and the corresponding user name and password. This has the advantage that the biogas data can be called up by the plant operator at any time and regardless of location.

The user of the portal can call up all of the important characteristic data such as gas productivity, energy production and feeding volumes. In addition, biological service partners can call up vital analysis results for the fermenter at any time. A weekly hit list of the plants is created with which the operators can ascertain how well their plant is working in comparison to the other biogas plants constructed by EnviTec.

It is also possible to create an economic overview at any time based on individually entered data. All of the data can be exported, in order to, for example, carry out additional analysis with Excel. Moreover, a daily data backup of the biogas plant data is carried out, which is especially significant for environmental experts.

Biogasrat e.V. with ambitious aims

The biogas industry seals a new branch institution

Leading firms from the biogas sector met up in Berlin in June to sign the statues for the new Biogasrat e.V association. From now on this will act as counsellor and contact for politicians and science based in Berlin and will represent the interests of its members. In doing so, it is extremely important for the founder members to integrate all market participants throughout the value creation chain - from plant manufacturers and component suppliers to project financers, plant cultivators, agriculture and energy providers. The top priority of the association is to promote the agricultural, industrial and efficient orientation of biogas technology and to present a mutual and powerful voice in relation to the subject of biogas to politicians and the public. In addition, competitiveness is to be strengthened, both nationally and internationally, and the respective authorities are to be supported Europe-wide in terms of creating environmental framework conditions for the purpose of sustainable environmental protection.

The founder members of the biogas association

Inclusion of all market participants

The managing committee consists of Kunibert Ruhe (EnviTec Biogas AG), Dr. Thomas Stephanblome (E.ON Bioerdgas GmbH) and Norbert Hetebrüg (Jenbacher GmbH). „Our intention is to make Biogasrat into an instrument that draws participants from business, science and politics together, and not only in Germany, but Europe-wide", explains Kunibert Ruhe.

In addition to the managing committee, in the future there will also be a managing director working for the association. It is also planned to create a working team consisting of approximately 15 to 20 members within the biogas association to be available as consultants for politicians on a regular basis.

SHORT NOTICES

International investment

The open day on the estate of Pieter Theunissen in Bergharen (NL) at the beginning of June marked the official start of EnviTec's first international investment project. Over 1,000 visitors attended the event in order to take a look at the biogas plant and obtain information about the technology. In addition to guests from the local area, many operators and interested parties came from all over the nation, due to the fact that the government has recently significantly increased subsidies for biogas plants operated in the Netherlands. The biogas plant in Bergharen has a capacity of 625 kW_{el}. In addition to dry poultry dung and maize silage, the farm's own cattle slurry is used in the biogas plant.

New building in Saerbeck

The new wing of the EnviTec Biogas AG building at the Saerbeck location was officially opened at the end of June. Currently some 210 staff work here in sales and development ensuring that EnviTec sales and construction remains the market leader in the field of biogas technology. A total of 53 new work places have been created during the past months as well as modern conference rooms and a large canteen in the 1,300 square metre building. In total, staff at the Saerbeck location now have approximately 5,000 square metres available to them. The cost of the expansion amounts to some 1.5 million euros.

Exhibitions

10. – 13. September 2009
Agromalim, Arad, RO

11. – 13. September 2009
17th Autumn International Bjelovar fair,
Bjelovar, HR

15. – 18. September 2009
Space 2009, Rennes, F

21. – 23. October 2009
Expobioenergia,
Valladolid, ES

28. – 31. October 2009
KEY ENERGY, Rimini, IT

10. – 14. November 2009
Agritechnica 2009,
Hannover, D

24. – 27. November 2009
Poleko, Poznan, PL

25. – 27. November 2009
Ecomediu, Arad, RO

Biogas: decentralised energy source

CEO Olaf von Lehmden on trip to Asia

The CEO of EnviTec Biogas AG visited Korea, Thailand and India in the middle of June 2009, in order to obtain information regarding current local economic developments and to demonstrate the potential of biogas as a decentralised and environmentally compatible energy source for the future.

Together with ministers, ambassadors, and high-ranking representatives from Korean corporations, von Lehmden opened the „Environmental Technologies Exhibition“ international trade fair (ENVEX) in Seoul on the 9th June. EnviTec has had its own branch in the Korean capital since February 2009. „The Korean market is developing extremely positively and we are receiving a great deal of interest from the business community“, commented von Lehmden regarding perspectives in Korea. The Korean government intends to support the collaboration between EnviTec and domestic companies.

Good prospects in Korea

The trip continued promisingly in Thailand. The EnviTec delegation was received by one of the largest food concerns in Asia. During discussions, the partners confirmed their intentions to continue cooperation in terms of biogas projects.

The final stop on the tour was India. Last year EnviTec received the largest foreign contract in the company‘s history from here. The joint venture with MPPL Renewable Energy Pvt. Ltd. is taking place in the Punjab region – an area where large sections of the community still live without electricity - where biogas plants with an installed electrical capacity amounting to a total of 30 megawatts will be built.

The final stop on the tour was India.

Electricity supply for an Indian federal state

Continued international success

Orders from Latvia and Slovakia

Biogas is becoming increasingly popular in Eastern Europe. Now EnviTec‘s first contracts from Slovakia and Latvia are signed and sealed. The total volume of contracts amounts to some 10 million euros. „We have invested early in terms of internationalization. The development of new markets takes time, however, we are now increasingly reaping the rewards“, explained CEO Olaf von Lehmden. The customer in Latvia is a pig farm operator. They have placed an order for two plants with electrical connected loads of one megawatt each. Slurry and sustainable raw materials will be used as input substances. The Baltic republic is one of the EU member states which can no longer cover its needs for electricity with its own power plants. It is also relies on imported gas, which is why options for independent energy production are currently being sought. In addition to fossil fuel sources, the country intends to secure its requirements primarily with renewable energies. For this reason, the Latvian government is providing compensation for electricity made from biogas fed into the mains network amounting to the equivalent of 15 to 25 cents per kilowatt hour. EnviTec will also be constructing two biogas plants in Slovakia of one megawatt each. Slurry and maize will be used as input substances. Compensation is also attractive in Slovakia at 15 cents per kilowatt hour. Hendrik van der Tol, Area Manager at EnviTec Biogas explains: „The excellent framework conditions for biogas production in Latvia and Slovakia offer plant operators long-term secured income. For this reason, we expect further orders from both countries.“

Latvian government counts on renewable energy

Hendrik van der Tol is responsible for the markets in Eastern Europe

Imprint

>> ForumBiogas
Boschstr. 2
48369 Saerbeck
Tel. +49 (0) 2574 88 88 0
info@envitec-biogas.com
www.envitec-biogas.com

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