

# >> ForumBiogas

EnviTec Biogas newsletter

## EDITORIAL



Dear Readers,

A lot has happened at EnviTec in the past three months. A very moving experience was the departure of Executive Board member Kunibert Ruhe, a true pioneer of the biogas sector. The new Chief Technology Officer (CTO), Technical Director Jürgen Tenbrink, joined the Board in early July, and we are pleased to welcome him on the management team.

Moreover, we have initiated many new projects – for instance in Rogerstone, Wales, where the government funds the construction of an EnviTec biogas plant, which will help to use waste from the food industry for the production of energy, thus reducing the region's waste volume. The plant will serve as a role model for others. EnviTec has already built numerous plants worldwide that use a very high percentage of food waste, e.g. in Belgium and France. But the Rogerstone plant is a debut in that it is the first to run exclusively on food waste.

Roel Slotman  
CCO, EnviTec Biogas AG

> **New CTO at EnviTec**  
Biogas pioneer Kunibert Ruhe hands over to Jürgen Tenbrink.  
..... page 2

> **Outstanding technology**  
New agitator and desulphurization plant boost efficiency.  
..... page 3

> **Breakthrough in Czech**  
EnviTec is building five plants in growth market this year.  
..... page 4

## EnviTec builds its first biogas plant in Great Britain

### Reference project: Cutting the first sod in Wales

EnviTec Biogas continues its international expansion. The company will build its first British biogas plant in Rogerstone, a district of Newport, Wales, for UK waste processor InSource Energy. The new plant will be built in the immediate vicinity of the Rogerstone Park ready-meals factory of UK food giant Premier Foods. It will generate heat and electricity from food waste and cover about ten percent of the factory's energy requirements.

The project supports the ambitious plan of Environment Minister Jane Davidson to make Wales

one of the greenest regions in the world. The country aims to cover its total electricity requirements from local and renewable sources in 20 years' time at the latest. "We

*Wales aims to be completely waste-free by the year 2050.*

want to reduce the use of fossil energy sources by 80 to 90 percent and want to achieve a comparable reduction in greenhouse gas emissions," Jane Davidson announced on the occasion of the cutting of the first sod for the biogas plant in Rogerstone. At the same time, Wales aims to increase the waste

reuse rates to 70 percent by the year 2025 and plans to be totally waste-free by the year 2050.

The construction of the biogas plant is a double debut for EnviTec Biogas. The reference project in Rogerstone, UK, not only marks the company's entry into a new market but is also the first plant to produce biogas solely from food waste. "The project is a role model for other food and drinks manufacturers on the way towards a sustainable use of their production waste," said EnviTec Export Manager Dennis Nahuijsen.



Environment Minister Jane Davidson (r.) and Roel Slotman (l.), CCO of EnviTec, are pleased about the start of construction of the biogas plant in Rogerstone, Wales.

# Fresh country air instead of office smell

## CTO and biogas pioneer Kunibert Ruhe hands over to Jürgen Tenbrink



Former CTO Kunibert Ruhe will remain available to EnviTec as a consultant.

Management change at EnviTec: The pioneer of the biogas sector, Kunibert Ruhe, co-founder as well as Chief Sales and Technology Officer, resigned from office at the end of June. The company's new Chief Technology Officer (CTO) is Technical Director Jürgen Tenbrink. „I have the feeling that EnviTec is outstandingly positioned in its central areas,” says Kunibert Ruhe. “It is a good time

*Kunibert Ruhe was  
“Entrepreneur of the Year”.*

to return to my previous career, to the agricultural sector. I am looking forward to breathing fresh country air again.”

Kunibert Ruhe founded today's EnviTec Biogas AG in 2002 together with Olaf von Lehmden. “A small boat with a crew of 18 staff members has turned into a fine, sea-worthy ship that is underway in international waters, and employs more than 400 members of staff,” says a proud Kunibert Ruhe.

Kunibert Ruhe was primarily responsible for sales and research & development. His philosophy of turning „customers into fans“ encountered great success. According to an independent study conducted by the College of Hildesheim as part of a customer survey, 86 percent of the buyers would choose a plant from EnviTec again. This is an excellent result compared to the company's competitors (72 percent on average). In 2007, the Oldenburger Münsterland Association awarded Kunibert Ruhe and Olaf von Lehmden its coveted „Entrepreneur of the Year“ prize for his outstanding corporate achievements.

“It was one of the most difficult decisions I have ever taken,” says Kunibert Ruhe. “In this case, I paid greater attention to my gut instincts, and less to my head, and was finally convinced that this is the right way. A philosopher once said that intuition is highly accelerated intelligence, and I have had very good experience with gut decisions to date.”

Kunibert Ruhe will not leave EnviTec entirely but will remain available to the company as a consultant. “We greatly regret that Kunibert Ruhe is stepping down from the company's Executive Board. His consultancy activity will allow us to continue to benefit from his expertise in the biogas area, as well as from his function as a shareholder,” says Olaf von Lehmden, CEO of EnviTec. Kunibert Ruhe's future tasks comprise research & development and cooperation ventures with universities. He will also represent the company's interests on the Biogas Council in Berlin.

*Jürgen Tenbrink  
is EnviTec's new CTO.*

EnviTec's new CTO comes from within the company. At the beginning of July, Jürgen Tenbrink assumed responsibility for project management, research and development, purchasing and quality assurance. Responsibility for domestic sales was transferred to Olaf von Lehmden, while CFO Jörg Fischer is responsible for marketing and public relations.



Jürgen Tenbrink is EnviTec's new CTO.

“I am pleased about the confidence that has been placed in me, and I will aim to bring EnviTec Biogas further forward,” says 44-year-old Jürgen Tenbrink,

who looks back on more than 20 years of plant engineering experience. Following undergraduate supply engineering studies with a focus on local authority and environmental technology, the ap-

*Tenbrink wants to further increase the company's efficiency.*

plied sciences graduate started his career in the early 1990s at a Koblenz-based engineering office where he planned and designed landfill gas technology plants. From 1991 to 1997, Tenbrink was director for process technology for waste air and waste removal at Geo Tec GmbH in Greven, and was responsible for aerobic process technology at waste plant constructor Schwarting Uhde from 1997 until 2000. Before becoming a technical director at EnviTec in 2002, Tenbrink held the position of departmental head for biogas at EnviTec-Mall Umweltsysteme GmbH, where he played a decisive role in bringing the biogas segment forward.

In his capacity as Technical Director, Tenbrink has already accomplished significant development and expansion work at EnviTec Biogas over the past eight years. “I would like to concentrate on strengthening the company within my business areas. This also includes expanding our technology leadership, and our lead in terms of know-how,” he says. “I also want to push ahead with the standardisation of biogas plant construction in order to enhance efficiency within the Group.”

Tenbrink is married, has two grown-up sons, and lives in Steinfurt. His experience in the planning and technical refinement of biogas plants makes him a much sought-after speaker, for instance at meetings of the German Association of Engineers (VDI).



Biogas plant operators achieve high purification with the new external desulphurisation plant.

SHORT NOTICES

**Extension in Lohne**

EnviTec not only builds biogas plants worldwide, but also own facilities: for the second time, the company has enlarged its headquarters in Lohne to accommodate the steadily growing workforce. While the sales and order processing staff are located in Saerbeck, the company's administration is located in Lohne. Work on the new extension started in spring and will accommodate more than 30 members of staff.



**Retrospective: Open Day in Lüsche**

Find out more, ask questions, be there - many of the roughly 10,000 visitors who came to the "Open Day" in Lüsche, Lower Saxony, in June listened eagerly as members of the EnviTec staff explained the two biogas plants on the Sommer family farm. The furthest distance covered in the balloon competition organised by EnviTec was 330 kilometres, for which the first prize – a voucher for a weekend in Berlin – was recently presented to the winners.



**Major advances thanks to better technology**

**Outstanding new agitator and desulphurisation plant**

Engineers in the R&D department at EnviTec Biogas are constantly working on technical optimisations for biogas plants. Promising new equipment and technologies boosting efficiency in plant operation are being tested and improved by the experts in collaboration with external manufacturers. EnviTec is now presenting two new components yielding major ad-

vances: one is an agitator of the latest generation, the other a biological trickling filter to desulphurise the biogas.

The so-called mid-size agitator is installed in the fermenter to mix the substrates and is characterised by a number of advantages over the other agitators used in biogas plants to date. Its most important advantage is the outstanding efficiency: "A mid-size agitator delivers more thrust with lower consumption," says EnviTec's CTO Jürgen Tenbrink, summarising the results of a comprehensive comparative study. With its large-diameter propeller of glass fibre-reinforced polyurethane, the mid-size agitator achieves a higher efficiency at lower speed and with lower friction losses than conventional agitators. At the same time, the

lower speed reduces propeller wear, thus extending the agitator's maintenance interval.

The biological trickling filter which has been developed to desulphurise biogas outside the fermenter also delivers considerable added value for biogas plant operators: in order to protect the motor in the combined heat and power unit (CHP), the concentration of

*New agitator boosts efficiency.*

hydrogen sulphide in the biogas can be considerably reduced with the aid of a biological purification process using microorganisms to oxidise the sulphur. These microorganisms settle on film strips in the trickle filter; biogas streams up through the trickle filter which is regularly moistened. The oxidation product (elementary sulphur) built up on the film strips drops to the bottom of the filter and is then discharged. The plant has a desulphurisation performance of more than 94 percent on average.

The so-called mid-size agitator delivers more thrust with lower consumption.

## Exhibitions

13. – 17. September 2010  
IFAT ENTSORGA  
Munich, DE

14. – 17. September 2010  
SPACE 2010  
Rennes, FR

06. – 07. October 2010  
EBEC & REA conference  
Warwickshire, UK

27. – 29. October 2010  
Expobioenergía  
Valladolid, ES

02. – 04. November 2010  
Rundvee Relatiedagen  
Hardenberg, NL

03. – 06. November 2010  
Key Energy 2010  
Rimini, IT

16. – 19. November 2010  
EuroTier 2010  
Hanover, DE

23. – 25. November 2010  
Rundvee Relatiedagen  
Gorinchem, NL

30. – 03. November 2010  
Pollutec  
Lyon, FR

# Czech market taking off

## EnviTec builds five plants in growth market

Biogas remains a success story in Central and Eastern Europe. EnviTec Biogas currently benefits from this trend particularly in the Czech Republic where the company has maintained a branch since 2006. One EnviTec Biogas plant has been built so far, four more are currently under construction at different sites. The total contract volume in this country amounts to more than EUR 13 million.

“We are now reaping the rewards of several years of groundwork we have done in this country,” says EnviTec CEO Olaf von Lehmden. The Czech government

*Four projects are currently under construction.*

has clearly recognised the numerous benefits of biogas-based energy production. In addition to the guaranteed feed-in tariff equivalent to 16.5 euro cents per kwh, the government launched a biogas subsidy scheme in June.



EnviTec opened its Czech branch already back in 2006.

Once the subsidies were approved, EnviTec Biogas was able to sign numerous contracts within a short time and commenced construction on four projects in August. This followed the completion of the 703 kW plant Klucenice. While Jarošovice II is a contract for an expansion (635

kW<sub>e</sub>) of a biogas plant operated since January of this year, the projects in Olešník (703 kW<sub>e</sub>), Slapy (526 kW<sub>e</sub>) and Vysoké Studnice (625 kW<sub>e</sub>) are first-time orders. All plants are located in agricultural regions and will be fed with liquid manure and renewables.

## Change of tasks

### Profile: Carsten Steentjes

In early August Carsten Steentjes took office as EnviTec Biogas AG's Area Manager North West Europe, having previously served as the company's Technical Sales Manager. In his new position 35-year old Steentjes will initially manage sales in the Netherlands and in Belgium. As of January 2011 he will also oversee sales in the UK and France. “I look forward to this new challenge and appreciate the confidence placed in me by EnviTec,” Carsten Steentjes says.

An environmental technician by training, Carsten Steentjes joined EnviTec in 2003 as a specialist

planner. In his most recent position as Technical Sales Manager he worked in close conjunction with colleagues on the sales side, advising customers on technical matters and assessing the tech-

*Carsten Steentjes joined EnviTec in 2003.*

nical feasibility of projects. Responsibilities in his new function will include final negotiations for contracts in his assigned sales regions.

Carsten Steentjes lives with his wife and two children in Dülmen.

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Carsten Steentjes is EnviTec's new Area Manager North West Europe.